# 1AC

### Adv – The Senate

#### Plan: The appropriation of outer space by the Trade Federation via orbital blockade of Naboo is unjust.

#### The blockade kickstarts Palpatine’s creation of a galactic fascist regime – the relationship is causal

Sharma 21 Rakesh Sharma, 10-3-2021, "Star Wars: The Economics of the Galactic Empire," Investopedia, <https://www.investopedia.com/articles/investing/120815/star-wars-economics-galactic-empire.asp> mvp

How the Economic Blockade of Naboo Transformed the Republic Into the Empire

In response to increased taxation of trade routes, the Trade Federation blockaded the planet of Naboo with a fleet of battleships.7 The exact reason for the blockade is uncertain, but there are several theories regarding this.

In his novel Star Wars: Darth Plagueis,8 James Luceno outlined a possible reason for the Naboo invasion: plasma energy. According to Luceno, Naboo was rich in plasma and had a major mining and refining facility financed with a loan from the Intergalactic Banking Clan. The planet sold plasma energy to the Trade Federation at fixed prices. In turn, they marked up the prices for a substantial profit.

Luceno’s novel is no longer part of Star Wars canon following Disney’s restructuring of the extended universe, but it makes logical sense. Remember, Naboo was situated in the Outer Rim of the galaxy and probably had little to no taxation. Taxation of trade routes would have increased transportation costs for members of the Trade Federation and cut into their profits.

That said, their blockade was simply an excuse for the Trade Federation to invade Naboo. The Trade Federation was under the influence of Darth Sidious, who was also Senator Palpatine of Naboo. The invasion set off a chain of events that led to Palpatine being named Supreme Chancellor and declaring himself Emperor.

Here’s how it happened: Palpatine voted for the trade routes to be taxed, giving the Federation a reason to invade Naboo. That had the effect of making Supreme Chancellor Valorum look weak. Valorum was kicked out of office with a vote of no confidence (basically, they impeached him). Palpatine was then elected out of sympathy for the suffering of his home planet of Naboo. Eventually, Palpatine would convince the Galactic Senate (in a move spearheaded by Jar Jar Binks) to give him emergency powers to deal with the ongoing separatist crisis. Of course, Palpatine also was behind the separatist movement as Darth Sidious. With these new powers and the Jedi eliminated following Order 66, Palpatine had little trouble installing himself as Emperor and reshaping the galaxy in his image.

#### Only blockade escalates to a failed invasion – the Trade Federation wouldn’t violate Republic law by invading Naboo unless it was already forced to illegally kill the Republic’s Jedi envoy sent to observe the blockade

Galle 16 u/Galle, Reddit, 2016, "r/StarWars <https://www.reddit.com/r/StarWars/comments/3qg053/serious_a_full_understanding_of_the_trade/> mvp

We can tell from the name and some of the dialogue that the Trade Federation is some kind of interplanetary shipping company. Their characterization is established fairly early on: they're greedy and profiteering scumbags, but also spineless and cowardly. They're cautious opportunists, who strongly dislike taking risks, and prefer to wait for the best opportunity to arise.

We're told in the opening crawl that the Senate has raised taxes on interplanetary trade, and that the Trade Federation is angry about this for obvious reasons.

So the Trade Federation has two goals:

Get a tax cut.

Avoid getting in trouble.

1 is why they seek out Sidious, 2 is why they talk about "legality" so much. They want to make absolutely sure they don't break Republic law. This will be important later.

The Blockade

The blockade is interesting. We know it's legal, so the Trade Federation probably isn't actually firing on approaching ships. More likely, they have a virtual monopoly on shipping to and from Naboo, and have simply gone on strike and parked their ships in orbit as a symbolic gesture.

Planets in Star Wars are not self-sufficient. Interplanetary trade is hugely important. We don't know exactly what it is that the blockade's stopped getting through to Naboo, but we know from our own history that a successful blockade can most definitely cause death and suffering. At a bare minimum, I imagine Naboo probably imports most of its medical supplies.

What's strange, however, is that the Trade Federation chose Naboo. Naboo is an unimportant planet in the midrim. Coruscant doesn't care what happens to it. If the Trade Federation's goal was to put pressure on the Senate, they made a very strange choice.

What the Trade Federation really wants is to get a bill passed in the Senate. To do that, they need allies. Powerful allies. Allies who can influence politics on a galactic scale.

Allies like Darth Sidious.

I believe that the Trade Federation made a deal behind the scenes with Sidious: if they created a crisis on Naboo for him, he would use his influence to get them the tax cut they wanted.

To the Trade Federation, this must have seemed like a great deal. They get their tax cut, and all they have to do is park some ships in orbit around a planet. It's not even illegal! Totally risk free!

They really should have thought twice before making a deal with the devil.

The Invasion

Valorum sends out two Jedi as a token attempt to resolve the crisis. This where that spinelessness comes in. The Trade Federation freaks. They do not know how to deal with Jedi. The blockade might be legal, but they're associating with a Sith Lord, and that can't be good. And Sidious is telling them to kill the Jedi, so they do.

Or at least they try to.

Sidious now has the Trade Federation right where he wants them. They've clearly and unambiguously violated Republic law by destroying a Republic ship and attempting to murder two Jedi. Forget tax cuts, Sidious is their only hope of getting out of this mess without being shut down. So when he tells them to use their security department to invade and occupy Naboo, they don't really have a choice.

#### Lack of a Republic response to the invasion causes queen Amidala to give current leadership a vote of no confidence and put Palpatine into power

Wookieepedia, "Invasion of Naboo," <https://starwars.fandom.com/wiki/Invasion_of_Naboo> mvp

Exasperated by the Republic's inefficiency and corruption, Amidala shocked the Senate by moving for a [vote of no confidence](https://starwars.fandom.com/wiki/Vote_of_No_Confidence) in the leadership of Chancellor Valorum, as it had been suggested to her by Palpatine himself. The proposal caused an uproar in the Senate, with many senators calling to proceed to the vote immediately, while Amedda vainly called for order.[[3]](https://starwars.fandom.com/wiki/Invasion_of_Naboo#cite_note-Episode_I-3)

Within hours, Amidala's motion of no confidence was passed and Valorum removed from power. Palpatine was nominated as one of the candidates to succeed Valorum and promised Queen Amidala to clean up the rampant corruption; [Bail Antilles](https://starwars.fandom.com/wiki/Bail_Antilles) and [Ainlee Teem](https://starwars.fandom.com/wiki/Ainlee_Teem" \o "Ainlee Teem) were nominated as well.[[3]](https://starwars.fandom.com/wiki/Invasion_of_Naboo#cite_note-Episode_I-3)

#### That greenlights Palpatine to begin restructuring the Republic into the Galactic Empire. Invasion also creates the Separatist alliance which starts the Clone Wars, accelerating the Republic’s collapse.

Wookieepedia, "Invasion of Naboo," <https://starwars.fandom.com/wiki/Invasion_of_Naboo> mvp

The Federation and Valorum were faced with most blame for the invasion, and every subsequent anti-Republic speech called out the "debacle at Naboo."[6] Following the invasion, the Federation's monopoly on shipping in the Outer Rim Territories was broken. This, combined with Valorum Shipping's loss of prestige due to scandals and Chancellor Valorum's truncated term, allowed Eriadu Mining and Shipping to prosper.[9]

Upon his appointment to Chancellor, Palpatine had promised the galaxy that Gunray, his colleagues and the Federation would be penalized for their actions taken towards the Naboo.[3] However, while indicted for his crimes in the Republic, Gunray was eventually acquitted by the Supreme Court following four trials, but,[20] to add insult to the crisis that had occurred,[11] the Federation remained active with Gunray still acting as its leader.[20] After being acquitted, the Federation continued to exert their influence over the Free Trade Zones, and while the taxation issues were seemingly resolved following the Naboo invasion, the corporation had still continued to block regulations, laws, and taxes. It has also been speculated by historians and accountants that Gunray and the Federation had only sent a third of the taxes it owed to the Republic, after having tied the process up through bureaucracy.[11]

With the Federation's evasion of Republic laws, several worlds decided to create their own trade deals with the corporation, despite their previous oppositions towards them.[11] A short time prior to his final trial, Amidala's term as Queen expired. Although the Naboo people were willing to amend the Constitution, Amidala stepped down and former Queen Réillata was elected her successor. The new Queen offered Amidala a position as Senator to replace the outgoing Oshadam, which she accepted.[21] Eventually, Count Dooku was apprenticed to Darth Sidious, but became the public face of the Separatist Crisis. Gunray continued to despise Amidala for her part in his defeat and sought revenge against her.[20]

The ascension of Palpatine to the post of Supreme Chancellor was part of his grand scheme[3] to put himself in total control of the galaxy.[10] Thanks to the invasion, three major flaws in the Republic government—the lack of an official military, the weak central authority, and layers of bureaucracy—were all exposed on the full galactic stage, but Palpatine was gifted a reputation of being a crusader for reforms to the Republic government.[6] Although Maul was believed to have died, he had in fact survived,[5] but was crippled, and ended up going into hiding until he was found by his brother, Savage Opress. During all those years, Maul grew obsessed with the concept of having revenge on Kenobi, blaming the Jedi Padawan for his misfortune.[22]

#### Preventing the empire’s creation is an ethical D rule – planetary destruction, imperialism, slave labor, and forced sterilization

Rudoy 19 Matthew Rudoy, 8-30-2019, "Star Wars: The 10 Worst Things The Empire Has Ever Done," ScreenRant, <https://screenrant.com/star-wars-worst-things-empire-ever-done/> mvp

The Galactic Empire is the original evil in Star Wars. Emperor Palpatine and Darth Vader operated through this tyrannical institution that oppressed the galaxy, whose evil called heroes Luke Skywalker, Leia Organa, and Han Solo to action in the first place.

Fans saw the Empire do terrible things in the original film trilogy. The Empire's injustices have only grown over the years, though. Rogue One, Solo, Star Wars Rebels, and a combination of canon novels, comics, and video games showcase more of the wicked deeds done by Imperial forces. The focus here will be on the horrors committed by the Empire as a whole.

10

Military Occupation

Star Wars Rogue One Star Destroyer Jedha

The Imperial military occupied countless planets, through which many civilians suffered. Most of the time these planets weren't even rebelling against the Empire. Sometimes they had resources the Empire wanted for themselves, but oftentimes it was just about putting the planet under their tyrannical control.

Many civilians lost their freedom, their way of life, and many even lost their lives. Jedha in Rogue One, Bespin in The Empire Strikes Back, Lothal in Star Wars Rebels, and Mimban in Solo are among the many planets that suffered from Imperial occupation.

9

Massacring Rebels

Darth Vader Takes on the Rebel Army in Darth Vader Comic

The Empire was never gentle in how they dealt with the Rebellion. Emperor Palpatine, Darth Vader, Grand Moff Tarkin, and Grand Admiral Thrawn made an example of the Empire's might by crushing the Rebellion whenever they could. Rogue One, the novel Lords of the Sith, and the Vader Down comics all highlight how Vader massacred rebels when given the chance.

Tarkin and Thrawn swiftly rose through the Imperial ranks because of their efficient brutality when dealing with insurgents, all of which Palpatine condoned. Palpatine often left the dirty work to others, but he did his fair share as well, such as working with Vader to squash the Free Ryloth Movement in Lords of the Sith.

8

Killing Their Own Soldiers & Officers

Star Wars: Darth Vader Force chokes Admiral Ozzel and promotes Piett to Admiral

It's hard enough knowing you might be killed by Rebels, but even harder knowing you might be killed by your superiors. Many Imperial officers and soldiers faced this grim reality. Grand Moff Tarkin ordered the Death Star to fire on Scarif in Rogue One, even though he knew Director Krennic and a number of Imperial forces were still on the planet. When Imperial officers Aresko and Grint failed to deal with the Ghost crew in Star Wars Rebels, Tarkin had the Grand Inquisitor execute them.

Both Admiral Ozzel and Captain Needa were lethally Force-choked by Darth Vader in The Empire Strikes Back. In the Darth Vader comics, he also massacred clone troopers serving the Empire. Even Vader wasn't exempt from this dynamic as Emperor Palpatine pitted him against potential apprentices and Vader would have to best them in order to survive and keep his position.

7

Razing Planets For Their Resources

Many planets were stripped of their natural resources in order to benefit the Empire. This most frequently happened to planets with kyber crystals, as they were used to power the Death Star's superlaser. The planet of Ilum - once a sacred a place where Jedi younglings went to get the kyber crystals for their lightsabers - was strip-mined by the Empire.

In the novel Catalyst, Lyra Erso saw how verdant planets like Samovar and Wadi Raffa were razed of their resources, which the Empire had taken to build the first Death Star. Samovar and Wadi Raffa had been Legacy planets - meaning they were environmentally-protected and legally shielded to safeguard their resources - but the Empire found a way to remove these planets' Legacy status and destroy their environments anyway.

6

Operation: Cinder

Operation: Cinder was Emperor Palpatine's way of ensuring that the Empire would not outlive him in the event of his death. Imperial planets - such as Palpatine's homeworld of Naboo - were targeted by satellites that caused electrical storms and other severe weather events that ravaged the planets. Loyal Imperial soldiers were forced to condemn their own planets, just as Iden Versio was ordered to help carry out Operation: Cinder against her homeworld of Vardos in 2017's Star Wars Battlefront II.

Even though these were worlds that had been loyal to the Empire, many civilians were killed and their cities destroyed, as the remaining leaders of the Empire honored Palpatine's wish. Killing your own for such a vain reason is ruthless even by the Empire's standard.

5

Kidnapping And Eliminating Force-Sensitive Children

Inquisitors from Star Wars Rebels

Hunting down and killing Jedi was only part of an Inquisitor's job description. They were also tasked with abducting Force-sensitive children, even those who were infants. If the children wouldn't dedicate themselves to the dark side and the Empire, the children were killed. The only "crime" these children committed was being born Force-sensitive.

Fortunately, Ahsoka Tano and the Ghost crew were able to rescue some kidnapped infants from the Fifth Brother and Seventh Sister in the second season of Star Wars Rebels. Not all children were so lucky, though, with many families having their kin ripped away from them to meet a ghastly fate.

4

Sterilizing Geonosis

The Empire forced the Geonosians to help construct the first Death Star. Once the Geonosians were of no further use to them, the Empire sterilized the planet and their people, intent on wiping out their entire species in order to keep the Death Star a secret from the rest of the galaxy.

Exterminating an entire species is monstrous and unforgivable. Star Wars Rebels revealed the Empire wasn't completely successful as the Ghost crew encountered a survivor they named Klik-Klak. He held onto a Geonosian queen egg which later hatched, though the Darth Vader comics showed the Geonosian queen named Karina was tragically born sterile.

3

Slavery

The Empire enforced slavery upon many planets and upon many alien species throughout the galaxy. Wookies were one of the species that were particularly subjugated to the barbaric conditions of slavery, in addition to species like Bodach'i and Twi'leks.

These slaves were forced to do things like help build the Imperial war machine and mine resources, contributing to the prosperity and military might of the Empire that enslaved them in the first place. This included the slaves used to keep the Empire's largest weapons factory running on Cymoon 1, or toiling in the spice mines of Kessel.

2

The Destruction Of Jedha & Scarif

Both Jedha and Scarif had a significant portion of their surfaces obliterated by the Empire in Rogue One. After all the kyber crystals had been extracted from Jedha City, the Empire evacuated their forces but left all the civilians behind. Using single reactor ignition, the Death Star then annihilated Jedha City and its surrounding areas, purely as a demonstrative test of the battle station's destructive power.

In order to resolve the situation on Scarif, the Empire resorted to the single reactor ignition approach again. This time, the superlaser's blast killed both Rebel and Imperial forces on the planet's surface. When Luke Skywalker and his allies went to Jedha in The Ashes of Jedha comic, which takes place after the events of A New Hope, Jedha was still suffering greatly from the destruction and ruin, and would likely never recover, which is probably true of Scarif as well.

1

Blowing Up Alderaan

The Destruction of Alderaan from Star Wars A New Hope

It doesn't get much more evil than blowing up an entire planet. On Grand Moff Tarkin's orders, the Death Star obliterated Alderaan in A New Hope, demonstrating the battle station's full potential and that the Empire would not hold back in using the Death Star to get what they wanted. Despite her best efforts to save her homeworld, Leia Organa was forced to watch the eradication of her parents, her planet, and her people.

The Organa family was heavily involved in the Rebellion against the Empire, but Alderaan was mostly made up of peaceful civilians just going about their lives; at least, until the Death Star annihilated them. This was the height of the Empire's evil and further united the Rebellion against their enemy.

#### The Clone Wars alone kills billions

Golden 15 Christie Golden 7-7-2015 "Dark Disciple" Ask me and I’ll give you the PDF, it’s a good read. (Absolute Star Wars Expert Second Only to Max Perin)//Elmer

For years, the galaxy-wide conflict known as the Clone Wars has raged. The struggle between the rightful government of the Galactic Republic and the Confederacy of Independent Systems **has claimed the lives of untold billions**. The Force-wielding Jedi, for millennia the guardians of peace in the galaxy, have been thwarted at nearly **every turn by the Separatists** and their leader, the Sith Lord Count Dooku. With the war showing no signs of ending, and the **casualties mounting each day**, the Jedi must consider every possible means of defeating their cunning foe. Whether some means are too unthinkable—and some allies too untrustworthy—has yet to be revealed… Ashu-Nyamal, Firstborn of Ashu, child of the planet Mahranee, huddled with her family in the hold of a Republic frigate. Nya and the other refugees of Mahranee braced themselves against the repercussions from the battle raging outside. Sharp, tufted Mahran ears caught the sounds of orders, uttered and answered by clones, the same voice issuing from different throats; keen noses scented faint whiffs of fear from the speakers. The frigate rocked from yet another blast. Some of the pups whimpered, but the adults projected calm. Rakshu cradled Nya’s two younger siblings. Their little ears were flat against their skulls, and they shivered in terror against their mother’s warm, lithe body, but their blue muzzles were tightly closed. No whimpers for them; a proud line, was Ashu. It had given the Mahran many fine warriors and wise statesmen. Nya’s sister Teegu, Secondborn of Ashu, had a gift for soothing any squabble, and Kamu, the youngest, was on his way to becoming a great artist. Or had been, until the Separatists had blasted Mahranee’s capital city to rubble. The Jedi had come, in answer to the distress call, as the Mahran knew they would. But they had come too late. Angry at the Mahranee government’s refusal to cooperate, **the Separatists had decided that genocide**, or as close a facsimile as possible, would solve the problem of obtaining a world so rich in resources. Nya clenched her fists. If only she had a blaster! She was an excellent shot. If any of the enemy attempted to board the ship, she could be of use to the brave clones now risking their lives to protect the refugees. Better yet, Nya wished she could stab one of the Separatist scum with her stinger, even though it would— Another blast, this one worse. The lights flickered off, replaced almost instantly by the blood-red hue of the backup lighting. The dark-gray metal of the bulkheads seemed to close in ominously. Something snapped inside Nya. Before she really knew what she was doing, she had leapt to her feet and bounded across the hold to the rectangular door. “Nya!” Rakshu’s voice was strained. “We were told to stay here!” Nya whirled, her eyes flashing. “I am walking the warrior path, Mother! I can’t just sit here doing nothing. I have to try to help!” “You will only be in the…” Rakshu’s voice trailed off as Nya held her gaze. Tears slipped silently down Rakshu’s muzzle, glittering in the crimson light. The Mahran were no telepaths, but even so, Nya knew her mother could read her thoughts. I can do no harm. We are lost already. Rakshu knew it, too. She nodded, then said, her voice swelling with pride in her eldest, “Stab well.” Nya swallowed hard at the blunt blessing. The stinger was the birthright of the Mahran—and, if used, their death warrant. The venom that would drop a foe in his tracks would also travel to his slayer’s heart. The two enemies always died together. The words were said to one who was not expected to return alive. “Good-bye, Mama,” Nya whispered, too softly for her mother to hear. She slammed a palm against the button and the door opened. Without pausing she raced down the corridor, her path outlined by a strip of emergency lighting; she skidded to a halt when the hallway branched into two separate directions, picked one, and ran headlong into one of the clones. “Whoa, there!” he said, not unkindly. “You’re not supposed to be here, little one.” “I will not die huddled in fear!” Nya snapped. “You’re not going to,” the clone said, attempting to be reassuring. “We’ve outrun puddle-jumpers like these before. Just get back to the holding area and stay out of our way. We’ve got this in hand.” Nya smelled the change in his sweat. He was lying. For a moment, she spared compassion for him. What had his life been like when he was a youngling? There had been no one to give him hugs or tell stories, no loving parental hands to soothe childhood’s nightmares. Only brothers, identical in every way, who had been raised as clinically as he. Brothers, and duty, and death. Feeling strangely older than the clone, and grateful for her own unique life that was about to end, Nya smiled, shook her head, and darted past him. He did not give chase. The corridor ended in a door. Nya punched the button. The door slid open onto the cockpit. And she gasped. She had never been in space before, so she was unprepared for the sight the five-section viewport presented. Bright flashes and streaks of laserfire dueled against an incongruously peaceful-looking starfield. Nya wasn’t sufficiently knowledgeable to be able to distinguish one ship from another—except for her own planet’s vessels, looking old and small and desperate as they tried to flee with their precious cargo of families just like her own. A clone and the Jedi general, the squat, reptilian Aleena who had led the mission to rescue Nya’s people, occupied the cockpit’s two chairs. With no warning, another blast rocked the ship. Nya went sprawling into the back of the clone’s chair, causing him to lurch forward. He turned to her, his eyes dark with anger, and snapped, “Get off this—” “General Chubor,” came a smooth voice. Nya’s fur lifted. She whirled, snarling silently. Oh, she knew that voice. The Mahran had heard it uttering all sorts of pretty lies and promises that were never intended to be kept. She wondered if there was anyone left in the galaxy who didn’t recognize the silky tones of Count Dooku. He appeared on a small screen near the top of the main viewport. A satisfied, cruel smirk twisted Dooku’s patrician features. “I’m surprised you contacted me,” his image continued. “As I recall, Jedi prefer to be regarded as the strong, silent type.” The clone lifted a finger to his lips, but the warning was unnecessary. Nya’s sharp teeth were clenched, her fur bristled, and her entire being was focused on the count’s loathed face, but she knew better than to speak. General Chubor, sitting beside the clone in the pilot’s chair, so short that his feet did not reach the floor, likewise was not baited. “You’ve got your victory, Dooku.” His slightly nasal, high-pitched voice was heavy with sorrow. “The planet is yours…let us have the people. We have entire families aboard, many of whom are injured. They’re innocents!” Dooku chuckled, as if Chubor had said something dreadfully amusing over a nice hot cup of tea. “My dear General Chubor. You should know by now that in a war, there is no such thing as an innocent.” “Count, I repeat, our passengers are civilian families,” General Chubor continued with a calmness at which Nya could only marvel. “Half of the refugees are younglings. Permit them, at least, to—” “Younglings whose parents, unwisely, chose to ally with the Republic.” Gone was Dooku’s civilized purr. His gaze settled on Nya. She didn’t flinch from his scrutiny, but she couldn’t stifle a soft growl. He looked her up and down, then dismissed her as of no further interest. “I’ve been monitoring your transmissions, General, and I know that this little chat is being sent to the Jedi Council. So let me make one thing perfectly clear.” Dooku’s voice was now hard and flat, as cold and pitiless as the ice of Mahranee’s polar caps. “**As long as the Republic resists me, ‘innocents’ will continue to die**. Every death in this war lies firmly at the feet of the Jedi. And now…it is time for you and your passengers to join the ranks of the fallen.” One of the largest Mahranee ships bloomed silently into a flower of yellow and red that disintegrated into pieces of rubble. Nya didn’t know she had screamed until she realized her throat was raw. Chubor whirled in his chair. His large-eyed gaze locked with hers. The last thing Ashu-Nyamal, Firstborn of Ashu, would ever see was the shattered expression of despair in the Jedi’s eyes. — The bleakest part about being a Jedi, thought Master Obi-Wan Kenobi, is when we fail. He had borne witness to scenes like the one unfolding before the Jedi Council far too many times to count, and yet the pain didn’t lessen. He hoped it never would. The terrified final moments of thousands of lives played out before them, then the grim holographic recording flickered and vanished. For a moment, there was a heavy silence. The Jedi cultivated a practice of nonattachment, which had always served them well. Few understood, though, that while specific, individual bonds such as romantic love or family were forbidden, the Jedi were not ashamed of compassion. All lives were precious, and when so many were lost in such a way, the Jedi felt the pain of it in the Force as well as in their own hearts. At last, Master Yoda, the diminutive but extraordinarily powerful head of the Jedi Council, sighed deeply. “Grieved are we all, to see so many suffer,” he said. “Courage, the youngling had, at the end. Forgotten, she and her people will not be.” “I hope her bravery brought her comfort,” Kenobi said. “The Mahran prize it. She and the others are one with the Force now. But I have no more earnest wish than that this tragedy be the last the war demands.” “As do all of us, Master Kenobi,” said Master Mace Windu. “But I don’t think that wish is coming true anytime soon.” “Did any ships make it out with their passengers?” Anakin Skywalker asked. Kenobi had asked the younger man, still only a Jedi Knight, to accompany him to this gathering, and Anakin stood behind Kenobi’s chair. “Reported in, no one has,” Yoda said quietly. “But hope, always, there is.” “With respect, Master Yoda,” Anakin said, “the Mahran needed more than our hope. They needed our help, and what we were able to give them wasn’t enough.” “And unfortunately, they are not the only ones we’ve been forced to give short shrift,” Windu said. “For almost three standard years, this war has raged,” said Plo Koon, the Kel Dor member of the Council. His voice was muffled due to the mask he wore over his mouth and nose, a requirement for his species in this atmosphere. “**We can barely even count the numbers of the fallen**. But this—” He shook his head.

### FW

**Moral Realism is true – there is an ethical truth that exists permanently and metaphysically in all hypothetical worlds - regressive moral debates always terminate in an end line objective value or devolve to skeptical conclusions that are repugnant for their inability to condemn things**

#### The normative supervenes on the natural – natural facts like whether brains develop to permit rationality or subjectivity determine whether non naturalist moral facts can be premised on things like capacity for reason

#### The introspective connection between pain and pleasure and phenomenal conceptions of intrinsic value and disvalue is irrefutable – everything else regresses – robust neuroscience proves.

Blum et al. 18 Kenneth Blum, 1Department of Psychiatry, Boonshoft School of Medicine, Dayton VA Medical Center, Wright State University, Dayton, OH, USA 2Department of Psychiatry, McKnight Brain Institute, University of Florida College of Medicine, Gainesville, FL, USA 3Department of Psychiatry and Behavioral Sciences, Keck Medicine University of Southern California, Los Angeles, CA, USA 4Division of Applied Clinical Research & Education, Dominion Diagnostics, LLC, North Kingstown, RI, USA 5Department of Precision Medicine, Geneus Health LLC, San Antonio, TX, USA 6Department of Addiction Research & Therapy, Nupathways Inc., Innsbrook, MO, USA 7Department of Clinical Neurology, Path Foundation, New York, NY, USA 8Division of Neuroscience-Based Addiction Therapy, The Shores Treatment & Recovery Center, Port Saint Lucie, FL, USA 9Institute of Psychology, Eötvös Loránd University, Budapest, Hungary 10Division of Addiction Research, Dominion Diagnostics, LLC. North Kingston, RI, USA 11Victory Nutrition International, Lederach, PA., USA 12National Human Genome Center at Howard University, Washington, DC., USA, Marjorie Gondré-Lewis, 12National Human Genome Center at Howard University, Washington, DC., USA 13Departments of Anatomy and Psychiatry, Howard University College of Medicine, Washington, DC US, Bruce Steinberg, 4Division of Applied Clinical Research & Education, Dominion Diagnostics, LLC, North Kingstown, RI, USA, Igor Elman, 15Department Psychiatry, Cooper University School of Medicine, Camden, NJ, USA, David Baron, 3Department of Psychiatry and Behavioral Sciences, Keck Medicine University of Southern California, Los Angeles, CA, USA, Edward J Modestino, 14Department of Psychology, Curry College, Milton, MA, USA, Rajendra D Badgaiyan, 15Department Psychiatry, Cooper University School of Medicine, Camden, NJ, USA, Mark S Gold 16Department of Psychiatry, Washington University, St. Louis, MO, USA, “Our evolved unique pleasure circuit makes humans different from apes: Reconsideration of data derived from animal studies”, U.S. Department of Veterans Affairs, 28 February 2018, accessed: 19 August 2020, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6446569/>, R.S.

**Pleasure** is not only one of the three primary reward functions but it also **defines reward.** As homeostasis explains the functions of only a limited number of rewards, the principal reason why particular stimuli, objects, events, situations, and activities are rewarding may be due to pleasure. This applies first of all to sex and to the primary homeostatic rewards of food and liquid and extends to money, taste, beauty, social encounters and nonmaterial, internally set, and intrinsic rewards. Pleasure, as the primary effect of rewards, drives the prime reward functions of learning, approach behavior, and decision making and provides the **basis for hedonic theories** of reward function. We are attracted by most rewards and exert intense efforts to obtain them, just because they are enjoyable [10].

Pleasure is a passive reaction that derives from the experience or prediction of reward and may lead to a long-lasting state of happiness. The word happiness is difficult to define. In fact, just obtaining physical pleasure may not be enough. One key to happiness involves a network of good friends. However, it is not obvious how the higher forms of satisfaction and pleasure are related to an ice cream cone, or to your team winning a sporting event. Recent multidisciplinary research, using both humans and detailed invasive brain analysis of animals has discovered some critical ways that the brain processes pleasure [14].

Pleasure as a hallmark of reward is sufficient for defining a reward, but it may not be necessary. A reward may generate positive learning and approach behavior simply because it contains substances that are essential for body function. When we are hungry, we may eat bad and unpleasant meals. A monkey who receives hundreds of small drops of water every morning in the laboratory is unlikely to feel a rush of pleasure every time it gets the 0.1 ml. Nevertheless, with these precautions in mind, we may define any stimulus, object, event, activity, or situation that has the potential to produce pleasure as a reward. In the context of reward deficiency or for disorders of addiction, homeostasis pursues pharmacological treatments: drugs to treat drug addiction, obesity, and other compulsive behaviors. The theory of allostasis suggests broader approaches - such as re-expanding the range of possible pleasures and providing opportunities to expend effort in their pursuit. [15]. It is noteworthy, the first animal studies eliciting approach behavior by electrical brain stimulation interpreted their findings as a discovery of the brain’s pleasure centers [16] which were later partly associated with midbrain dopamine neurons [17–19] despite the notorious difficulties of identifying emotions in animals.

Evolutionary theories of pleasure: The love connection BO:D

Charles Darwin and other biological scientists that have examined the biological evolution and its basic principles found various mechanisms that steer behavior and biological development. Besides their theory on natural selection, it was particularly the sexual selection process that gained significance in the latter context over the last century, especially when it comes to the question of what makes us “what we are,” i.e., human. However, the capacity to sexually select and evolve is not at all a human accomplishment alone or a sign of our uniqueness; yet, we humans, as it seems, are ingenious in fooling ourselves and others–when we are in love or desperately search for it.

It is well established that modern biological theory conjectures that **organisms are** the **result of evolutionary competition.** In fact, Richard Dawkins stresses gene survival and propagation as the basic mechanism of life [20]. Only genes that lead to the fittest phenotype will make it. It is noteworthy that the phenotype is selected based on behavior that maximizes gene propagation. To do so, the phenotype must survive and generate offspring, and be better at it than its competitors. Thus, the ultimate, distal function of rewards is to increase evolutionary fitness by ensuring the survival of the organism and reproduction. It is agreed that learning, approach, economic decisions, and positive emotions are the proximal functions through which phenotypes obtain other necessary nutrients for survival, mating, and care for offspring.

Behavioral reward functions have evolved to help individuals to survive and propagate their genes. Apparently, people need to live well and long enough to reproduce. Most would agree that homo-sapiens do so by ingesting the substances that make their bodies function properly. For this reason, foods and drinks are rewards. Additional rewards, including those used for economic exchanges, ensure sufficient palatable food and drink supply. Mating and gene propagation is supported by powerful sexual attraction. Additional properties, like body form, augment the chance to mate and nourish and defend offspring and are therefore also rewards. Care for offspring until they can reproduce themselves helps gene propagation and is rewarding; otherwise, many believe mating is useless. According to David E Comings, as any small edge will ultimately result in evolutionary advantage [21], additional reward mechanisms like novelty seeking and exploration widen the spectrum of available rewards and thus enhance the chance for survival, reproduction, and ultimate gene propagation. These functions may help us to obtain the benefits of distant rewards that are determined by our own interests and not immediately available in the environment. Thus the distal reward function in gene propagation and evolutionary fitness defines the proximal reward functions that we see in everyday behavior. That is why foods, drinks, mates, and offspring are rewarding.

There have been theories linking pleasure as a required component of health benefits salutogenesis, (salugenesis). In essence, under these terms, pleasure is described as a state or feeling of happiness and satisfaction resulting from an experience that one enjoys. Regarding pleasure, it is a double-edged sword, on the one hand, it promotes positive feelings (like mindfulness) and even better cognition, possibly through the release of dopamine [22]. But on the other hand, pleasure simultaneously encourages addiction and other negative behaviors, i.e., motivational toxicity. It is a complex neurobiological phenomenon, relying on reward circuitry or limbic activity. It is important to realize that through the “Brain Reward Cascade” (BRC) endorphin and endogenous morphinergic mechanisms may play a role [23]. While natural rewards are essential for survival and appetitive motivation leading to beneficial biological behaviors like eating, sex, and reproduction, crucial social interactions seem to further facilitate the positive effects exerted by pleasurable experiences. Indeed, experimentation with addictive drugs is capable of directly acting on reward pathways and causing deterioration of these systems promoting hypodopaminergia [24]. Most would agree that pleasurable activities can stimulate personal growth and may help to induce healthy behavioral changes, including stress management [25]. The work of Esch and Stefano [26] concerning the link between compassion and love implicate the brain reward system, and pleasure induction suggests that social contact in general, i.e., love, attachment, and compassion, can be highly effective in stress reduction, survival, and overall health.

Understanding the role of neurotransmission and pleasurable states both positive and negative have been adequately studied over many decades [26–37], but comparative anatomical and neurobiological function between animals and homo sapiens appear to be required and seem to be in an infancy stage.

Finding happiness is different between apes and humans

As stated earlier in this expert opinion one key to happiness involves a network of good friends [38]. However, it is not entirely clear exactly how the higher forms of satisfaction and pleasure are related to a sugar rush, winning a sports event or even sky diving, all of which augment dopamine release at the reward brain site. Recent multidisciplinary research, using both humans and detailed invasive brain analysis of animals has discovered some critical ways that the brain processes pleasure.

Remarkably, there are pathways for ordinary liking and pleasure, which are limited in scope as described above in this commentary. However, there are **many brain regions**, often termed hot and cold spots, that significantly **modulate** (increase or decrease) our **pleasure or** even produce **the opposite** of pleasure— that is disgust and fear [39]. One specific region of the nucleus accumbens is organized like a computer keyboard, with particular stimulus triggers in rows— producing an increase and decrease of pleasure and disgust. Moreover, the cortex has unique roles in the cognitive evaluation of our feelings of pleasure [40]. Importantly, the interplay of these multiple triggers and the higher brain centers in the prefrontal cortex are very intricate and are just being uncovered.

Desire and reward centers

It is surprising that many different sources of pleasure activate the same circuits between the mesocorticolimbic regions (Figure 1). Reward and desire are two aspects pleasure induction and have a very widespread, large circuit. Some part of this circuit distinguishes between desire and dread. The so-called pleasure circuitry called “REWARD” involves a well-known dopamine pathway in the mesolimbic system that can influence both pleasure and motivation.

In simplest terms, the well-established mesolimbic system is a dopamine circuit for reward. It starts in the ventral tegmental area (VTA) of the midbrain and travels to the nucleus accumbens (Figure 2). It is the cornerstone target to all addictions. The VTA is encompassed with neurons using glutamate, GABA, and dopamine. The nucleus accumbens (NAc) is located within the ventral striatum and is divided into two sub-regions—the motor and limbic regions associated with its core and shell, respectively. The NAc has spiny neurons that receive dopamine from the VTA and glutamate (a dopamine driver) from the hippocampus, amygdala and medial prefrontal cortex. Subsequently, the NAc projects GABA signals to an area termed the ventral pallidum (VP). The region is a relay station in the limbic loop of the basal ganglia, critical for motivation, behavior, emotions and the “Feel Good” response. This defined system of the brain is involved in all addictions –substance, and non –substance related. In 1995, our laboratory coined the term “Reward Deficiency Syndrome” (RDS) to describe genetic and epigenetic induced hypodopaminergia in the “Brain Reward Cascade” that contribute to addiction and compulsive behaviors [3,6,41].

Furthermore, ordinary “liking” of something, or pure pleasure, is represented by small regions mainly in the limbic system (old reptilian part of the brain). These may be part of larger neural circuits. In Latin, hedus is the term for “sweet”; and in Greek, hodone is the term for “pleasure.” Thus, the word Hedonic is now referring to various subcomponents of pleasure: some associated with purely sensory and others with more complex emotions involving morals, aesthetics, and social interactions. The capacity to have pleasure is part of being healthy and may even extend life, especially if linked to optimism as a dopaminergic response [42].

Psychiatric illness often includes symptoms of an abnormal inability to experience pleasure, referred to as anhedonia. A negative feeling state is called dysphoria, which can consist of many emotions such as pain, depression, anxiety, fear, and disgust. Previously many scientists used animal research to uncover the complex mechanisms of pleasure, liking, motivation and even emotions like panic and fear, as discussed above [43]. However, as a significant amount of related research about the specific brain regions of pleasure/reward circuitry has been derived from invasive studies of animals, these cannot be directly compared with subjective states experienced by humans.

In an attempt to resolve the controversy regarding the causal contributions of mesolimbic dopamine systems to reward, we have previously evaluated the three-main competing explanatory categories: “liking,” “learning,” and “wanting” [3]. That is, dopamine may mediate (a) liking: the hedonic impact of reward, (b) learning: learned predictions about rewarding effects, or (c) wanting: the pursuit of rewards by attributing incentive salience to reward-related stimuli [44]. We have evaluated these hypotheses, especially as they relate to the RDS, and we find that the incentive salience or “wanting” hypothesis of dopaminergic functioning is supported by a majority of the scientific evidence. Various neuroimaging studies have shown that anticipated behaviors such as sex and gaming, delicious foods and drugs of abuse all affect brain regions associated with reward networks, and may not be unidirectional. Drugs of abuse enhance dopamine signaling which sensitizes mesolimbic brain mechanisms that apparently evolved explicitly to attribute incentive salience to various rewards [45].

Addictive substances are voluntarily self-administered, and they enhance (directly or indirectly) dopaminergic synaptic function in the NAc. This activation of the brain reward networks (producing the ecstatic “high” that users seek). Although these circuits were initially thought to encode a set point of hedonic tone, it is now being considered to be far more complicated in function, also encoding attention, reward expectancy, disconfirmation of reward expectancy, and incentive motivation [46]. The argument about addiction as a disease may be confused with a predisposition to substance and nonsubstance rewards relative to the extreme effect of drugs of abuse on brain neurochemistry. The former sets up an individual to be at high risk through both genetic polymorphisms in reward genes as well as harmful epigenetic insult. Some Psychologists, even with all the data, still infer that addiction is not a disease [47]. Elevated stress levels, together with polymorphisms (genetic variations) of various dopaminergic genes and the genes related to other neurotransmitters (and their genetic variants), and may have an additive effect on vulnerability to various addictions [48]. In this regard, Vanyukov, et al. [48] suggested based on review that whereas the gateway hypothesis does not specify mechanistic connections between “stages,” and does not extend to the risks for addictions the concept of common liability to addictions may be more parsimonious. The latter theory is grounded in genetic theory and supported by data identifying common sources of variation in the risk for specific addictions (e.g., RDS). This commonality has identifiable neurobiological substrate and plausible evolutionary explanations.

Over many years the controversy of dopamine involvement in especially “pleasure” has led to confusion concerning separating motivation from actual pleasure (wanting versus liking) [49]. We take the position that animal studies cannot provide real clinical information as described by self-reports in humans. As mentioned earlier and in the abstract, on November 23rd, 2017, evidence for our concerns was discovered [50]

In essence, although nonhuman primate brains are similar to our own, the disparity between other primates and those of human cognitive abilities tells us that surface similarity is not the whole story. Sousa et al. [50] small case found various differentially expressed genes, to associate with pleasure related systems. Furthermore, the dopaminergic interneurons located in the human neocortex were absent from the neocortex of nonhuman African apes. Such differences in neuronal transcriptional programs may underlie a variety of neurodevelopmental disorders.

In simpler terms, the system controls the production of dopamine, a chemical messenger that plays a significant role in pleasure and rewards. The senior author, Dr. Nenad Sestan from Yale, stated: “Humans have evolved a dopamine system that is different than the one in chimpanzees.” This may explain why the behavior of humans is so unique from that of non-human primates, even though our brains are so surprisingly similar, Sestan said: “It might also shed light on why people are vulnerable to mental disorders such as autism (possibly even addiction).” Remarkably, this research finding emerged from an extensive, multicenter collaboration to compare the brains across several species. These researchers examined 247 specimens of neural tissue from six humans, five chimpanzees, and five macaque monkeys. Moreover, these investigators analyzed which genes were turned on or off in 16 regions of the brain. While the differences among species were subtle, **there was** a **remarkable contrast in** the **neocortices**, specifically in an area of the brain that is much more developed in humans than in chimpanzees. In fact, these researchers found that a gene called tyrosine hydroxylase (TH) for the enzyme, responsible for the production of dopamine, was expressed in the neocortex of humans, but not chimpanzees. As discussed earlier, dopamine is best known for its essential role within the brain’s reward system; the very system that responds to everything from sex, to gambling, to food, and to addictive drugs. However, dopamine also assists in regulating emotional responses, memory, and movement. Notably, abnormal dopamine levels have been linked to disorders including Parkinson’s, schizophrenia and spectrum disorders such as autism and addiction or RDS.

Nora Volkow, the director of NIDA, pointed out that one alluring possibility is that the neurotransmitter dopamine plays a substantial role in humans’ ability to pursue various rewards that are perhaps months or even years away in the future. This same idea has been suggested by Dr. Robert Sapolsky, a professor of biology and neurology at Stanford University. Dr. Sapolsky cited evidence that dopamine levels rise dramatically in humans when we anticipate potential rewards that are uncertain and even far off in our futures, such as retirement or even the possible alterlife. This may explain what often motivates people to work for things that have no apparent short-term benefit [51]. In similar work, Volkow and Bale [52] proposed a model in which dopamine can favor NOW processes through phasic signaling in reward circuits or LATER processes through tonic signaling in control circuits. Specifically, they suggest that through its modulation of the orbitofrontal cortex, which processes salience attribution, dopamine also enables shilting from NOW to LATER, while its modulation of the insula, which processes interoceptive information, influences the probability of selecting NOW versus LATER actions based on an individual’s physiological state. This hypothesis further supports the concept that disruptions along these circuits contribute to diverse pathologies, including obesity and addiction or RDS.

#### Evolution proves the reliability of phenomenal introspection – when we introspect on data from our eyes or ears, such as whether one sees or smells food or a predator, we use the same part of the brain that introspects on hedonic tones and identifies their moral relevance.

#### Thus, the standard is consistency with hedonic act utilitarianism.

#### Effective sci-fi narratives are crucial to global progress - empirics based thinking leads us facing backwards into an increasingly technological time period

Hollinger 10, Veronica. "A History of the Future: Notes for an Archive." Science Fiction Studies 37.1 (2010): 23-33. (Professor of Cultural Studies at Trent University in Peterborough, Ontario, co-editor of the journal Science Fiction Studies, past chair of the Cultural Studies Program and past Director of Trent's MA Program in Theory, Culture and Politics)

I take it for granted that a history of sfs futures would be a cultural history—much like Roger's Science Fiction and De Witt's Astrofuturism. That there is complex and ongoing feedback between present and future is a very familiar idea—representations of the future in science fiction, whatever else they are. **are significant responses to the political, social, and cultural conditions of their production**; to borrow a phrase from Elizabeth Grosz, sfs futures are "readable pictures of the present that produced them" ("Histories of a Feminist Future" 1017). At the same time, "**visions of the future**, especially in technologically advanced eras, **can dramatically affect present developments**," as N. Katherine Hayles has noted of the dialectical interplay—movements of reflexivity and feedback—between present and imagined futures ("Computing the Human" 131). Jacques Derrida has addressed this in his thinking about the supplement; some sf writers have addressed this in their attempts to imagine futures of significant difference.2 For many people—at least in the technologically driven west—the future feels much closer than it used to. In a review of Gibson's Pattern Recognition (2003), an sf novel set in the present, John Clute memorably writes: "Sf is no longer about the future as such, because 'we have no future' that we can do thought experiments about, only futures, which bleed all over the page, soaking the present" ("The Case of the World, Two" 403). This in turn suggests to me the continued usefulness of the overused but usefully multivalent phrase "future-present."3 It's inside the framework of the "future-present" of postmodernity that I see my history of the future taking shape. Science Fiction as the Future Not all of [sf], to be sure, is or need be set in the future.... But without that possibility as a formal resource, and without an audience disposed to look ahead rather than to the past, science fiction could never have achieved anything like its full powers.—Paul K. Alkon, Science Fiction Before 1900 (20) Science fiction is conventionally understood to be a future-oriented genre; in David Harvey's terms, it is a modern literature of becoming (359). Harvey quotes approvingly from Renato Poggioli's Theory of the Avant-Garde: "for the moderns, the present is valid **only by virtue of the potentialities of the future**, as the matrix of the future, insofar as it is the forge of history **in continued metamorphosis**" (qtd Harvey 359). Most historians associate the emergence of science fiction with the emergence of a sense of history, past and future, that gradually developed during the eighteenth and nineteenth centuries. In his Origins of Futuristic Fiction, Alkon points out that "It was extrapolation to a geological and evolutionary past envisioned as ever more remote from the present that by the nineteenth century had widened temporal perspectives in a way favoring tales of the future no less than historical novels" (46).4 Fredric Jameson has referred to science fiction "as a symptom of a mutation in our relationship to historical time" ("Progress Versus Utopia" 149). In his 2006 acceptance of the SFRA's Pilgrim Award, Jameson noted that "SF marks the moment in which a society realizes that it has a future, and that it is itself in its very nature and structure becoming, a vast being in perpetual continual change and transformation" (15).5 But writing about the future has its risks. If we take H.G. Wells at his word, sf has always struggled with the future, even though that struggle might seem more critical in our own present of radical technocultural metamorphosis. In 1938, as if he were preparing to write a version of Gibson's "The Gcrnsback Continuum" (1981), Wells noted the sheer impossibility of trying to tell stories about the future: Maybe no literature is perfect and enduring, but there is something specially and incurably topical about all these prophetic books; **the more you go ahead, the more you seem to get entangled with the burning questions of your own time**. And all the while events are overtaking you. ("Fiction about the Future" 246) "And all the while events are overtaking you." In 2001 sf writer Judith Berman diagnosed a kind of exhaustion with the future in some recent short sf. The title of Wells's 1938 essay is "Fiction about the Future"; the title of Berman's 2001 essay is "Science Fiction without the Future." In it, Berman discusses her survey of some recent American sf stories published around the turn of the millennium.6 "As a group," she concludes, "the stories are full of nostalgia, regret, fear of aging and death, fear of the future in general, and the experience of change as disorienting and bad" (Berman). Her article raises a host of questions about generic exhaustion, generational fatigue, technoscientific acceleration, sf s "proper" relationship to the future—and so on. "Science Fiction without the Future" won the SFRA's Pioneer Award for best critical essay of 2001. "The Future Is Always History" The future is always history.—Darren Tofts and Annamarie Jonson, "Futuropolis: Postmillennial Speculations" (210) My epigraph for this section is taken from the editorial introduction to a group of essays on "Postmillennial Speculations" in a very large and valuable collection titled Prefiguring Cyberculture: An Intellectual History (2002). The editors remind readers that 'The future is always history" because speculations about the future can only ever be evaluated once the future has arrived (as with key "future" moments such as 1984 and 2001—"when the present caught up with and became the image or relic of a projected future" 1210]). In addition, they note Marshall McLuhan's aphorism: "**We look at the present through a rear-view mirror**. We march backwards into the future." The future is inevitably imagined within the framework of past experience, so that it is literally implicated in history even as it is also the product of imaginative anticipation. "The future is always history" might also recall Jameson's unhappy conclusion from the early 1980s that science fiction, especially contemporary science fiction, is incapable of imagining futures of authentic (Utopian) difference: what is indeed authentic about [sf] ... is not at all its capacity to keep the future alive, even in imagination. On the contrary, its deepest vocation is over and over again to demonstrate and to dramatize our incapacity to imagine the future, to body forth ... the atrophy in our time of what Marcuse has called the Utopian imagination, the imagination of otherness and radical difference.... ("Progress Versus Utopia" 153) Not surprisingly, given their own particular commitments to futurity, feminist sf writers and critics have tended to take exception to this position. Jenny Wolmark has recently argued that "it is the dynamic relationship between Utopian longings and critical memory lhat enables both past and future to remain open to feminist intervention" (162). She writes approvingly of feminist sf that "accept[s] the risks that are entailed in moving forward into a future that is open because it is not shaped by the needs of the past" (169).7 This is a vision of imagined futures that is free of at least some of the political and imaginative contraints that, in Jameson's view, trap us inside our own histories. And it gives added resonance to the title of one of the foundational studies of women's science fiction— Marleen Barr's 1981 Future Females: A Critical Anthology. "The future is [also] always history" when it plays a role in an sf story-world; it becomes part of **an imagined past-tense narration** even as it tells of events still to come. Frank Kermode has called history "the imposition of a plot on time," and we might consider how sf stories are impositions of imaginative plots on time future.8 It is this imposition of plot, of narrative structure, that transforms **nonsignificant future time into meaningful future history**, into a future of and for human beings. In itself, time future is nothing; but "the future" in science fiction is an element of story and the story is always, no matter how alien, a story about us. Arguably, it is the fact of our absence on the terminal beach of the far future that makes the final vision in The Time Machine at once so poignant and so chilling—the anachronistic presence of the Time Traveller only serves to **emphasize that crucial absence**. That same absence **gives tragic impact to the far-future vision of tireless machines carrying on long after the last human has disappeared** in John W. Campbell's 1934 story, "Twilight": "When Earth is cold, and the Sun has died out, those machines will go on. When Earth begins to crack and break, those perfect, ceaseless machines will try to repair her—" (45).

#### Dialogue over sci-fi creates more productive and educational communication models within public dialogue

Sweet 3, Derek R. Star Wars in the public square: The Clone Wars as political dialogue. Vol. 50. McFarland, 2015. (an associate professor of communication studies at Luther College and writes, primarily, about the intersection of rhetoric, popular culture, and politics.)//Elmer

Keeping this in mind, Bakhtin describes the traditional sender/receiver, speaker/ listener, or author/audience **communication models as deeply flawed** in that these conceptualizations appear to grant a great deal of agency to the **sender but little to the receiver**. Rejecting the passivity of the listener, Bakhtin highlights "an actively responsive understanding" that requires full collaborative attention and participation of all those involved in a discursive exchange.31 While a person might initiate a line of thought in a particular context, she does not expect her interlocutor(s) to sit idly and accept whatever ideas, worldviews, and opinions are articulated. The initiator anticipates, and expects, a response. When a listener encounters an utterance, she or he engages it, mulls it over, analyzes it, and "either agrees or disagrees with it (completely or partially), augments it, applies it, prepares for its execution, and so on."-32 The active scrutiny of an utterance, as well as the formulation and deployment of an immediate, or even delayed response, is the hallmark of responsive understanding: Of course, an utterance is not always followed immediately by an articulated response. An actively responsive understanding of what is heard (a command, for example) can be directly realized in action (the execution of an order or command that has been understood and accepted for execution), or it can remain, for the time being, a silent responsive understanding (certain speech genres are intended exclusively for this kind of responsive understanding, for example, lyrical genres), but this is, so to speak, responsive understanding with a delayed reaction. Sooner or later what is heard and actively understood will find its response in the subsequent speech or behavior of the listener. Bakhtin's insistence that a listener will respond transforms that individual from one toward whom an utterance is directed to one who directs an utterance toward others. Put simply, "the listener becomes the speaker." Thus, in the coordinated give and take of human communication the boundary between sender/receiver, author/audience, creator/viewer becomes blurred; every author is an audience member and every audience member is an author. Understanding, for Bakhtin, manifests in the ongoing call and response integral to every dialogic encounter. Having detoured into a general discussion of dialogics, I want to refocus attention on Bakhtin's treatment of popular culture. Although he modeled his conception of discursive dialogics on the routine face-to-face exchanges of everyday life—interactions in the workplace, discussions in the classroom, conversations in the home—Bakhtin was interested, primarily, with the dialogism of artistic discourse. While Bakhtin identifies the novel as the artistic form most capable of capturing the complex, dialogic contentiousness of social heteroglossia, an assertion Kay Halasek attributes to the pervasive cultural, historical, and political influences at work within the fledgling Soviet Union, contemporary scholars apply his conceptions to a wide array of popular culture texts.3S In the early twenty-first century, the narrated realities present in Bakhtin's novel materialize in such wide ranging popular culture texts as film, television, music, public art installations, and social media. Contemporary popular culture, suggests Hirschkop, is awash with narrative "templates **for a life worth living**," templates that encourage individuals to "savour and enjoy their lives 'aesthetically." Had Bakhtin written in the early part of the twenty-first century, I would like to think he would see dialogism at work in an almost limitless number of popular culture texts. Just as the novel calls readers to participate in the constitution of their social world, contemporary forms of popular culture invite individuals "to engage with other aspects of social experience and other members of the interpretive community, generating a network of 'creative perception' and dialogic participation.„7 The author, argues Bakhtin, stands in a position unique among writers, speakers, and creators as he or she simultaneously resides within a particular historical and cultural context and yet also stands as "omnipresent witness” to the ideologies, social mores, and worldviews intimated within a narrative.38 When inhabiting an authorial role, an individual is both part of, and apart from, his parent culture. Likewise, he is part of the work he creates yet oddly apart from that same work; the author cannot inhabit the world that springs forth from his own imagination. The author constructs a represented world populated by multiple characters who display a rich polyvocality resonant with the social world at large. Although the author facilitates an ongoing dialogue between the broader culture and the novel's represented culture, his own voice "remains outside the world he has represented in his work:' Despite the inability to inhabit the worlds and voices springing forth from her imagination, the author's **creative efforts do impact the social world in which she lives**. Conversely, the social world surrounds the author and cannot help but seep into the contours of a creative work. As Bakhtin remarks, The work and the world represented in it enter the real world and enrich it, and the real world enters the work and its world as part of the process of its creation, as well as part of its subsequent life, in a continual renewing of the work through the creative perception of listeners and readers. The dialogic give and take between represented world and real world, between author and listener, underscores the polysemy at work within **inter-oriented discourse** and illustrates how a particular text takes on multiple meanings and, through the responsivity of audiences, weaves its way into broader cultural conversations. A nineteenth-century novel, for example, takes on new meanings as the text is encountered by twenty-first-century readers immersed in their particular moment of historical, cultural, and personal understanding. The same holds true for contemporary popular culture texts. While one person might interpret the original Star Wars film as both culturally and politically conservative, connecting the film's black and white morality to the "renewed American conservatism" of the early 1980s, another might perceive the underdog story of ragtag rebels standing against the immense might of a military superpower as ideologically liberal.il Others, like several authors in Douglas Brode and Leah Deyneka's edited collection exploring the cultural resonance of the Star Wars franchise, associate the films with such diverse genres as science fiction, the Western, and fairy tales. Depending on one's interpretation, the represented world of Star Wars enters the responsive understanding of viewers and makes its way into discussions of politics, fundamental cultural values, and the life lessons of children. As Martin Flanagan points out in his exploration of dialogism and film, whether one is reading a book, listening to music, or watching a movie "we commune with various speaking agents behind the textual utterance:743 Also important to note is how the discursive inter-orientation insinuates a creative, dialogic relationship between artistic texts; previous texts "enrich" the real world and, as a result, contribute to the creative emergence of new texts. Building on Bakhtin's work, Julia Kristeva highlights this point when she writes, "Any text is constructed as a mosaic of quotations; any text is the absorption and transformation of another."4 An example of this intertextuality, and one most relevant for this current project, is Anne Lancashire's examination of The Phantom Menace as part of a broader "narrative, mythological, and metaphoric whole." In her piece, Lancashire calls attention to the fact that the first film of the Star Wars prequel trilogy is intended to be understood as part of a six film narrative arc. Pointing out numerous parallels in terms of narrative structure, characterizations, and visual symbols, she argues the film calls on viewers to recognize "intertextual patternings" between The Phantom Menace and the films of the original trilogy. 46 In doing so, Lancashire makes explicit the intersubjective dialogue occurring between texts as well as between viewers of the texts. Recognizing the responsive understanding at work, she argues, results in a more meaningful filmic experience. Brooker makes a similar argument regarding the mediated constitution of Batman. Giving Bakhtin's dialogism a direct nod, Brooker suggests texts in conversation with other texts are an important, and often overlooked, element of responsive understanding. Batman's meaning and cultural significance does not spring forth from a single text but emerges from a mediated melange. From Batman's first appearance in 1939 to Christopher Nolan's theatrical trilogy the cultural understanding of the Dark Knight arises from the intersection of tens of thousands of texts. Batman is accomplished "between author and reader" and "in the relationship between the text and other texts." Jeffrey Bussolin's observations regarding the constitutive intertextuality of numerous Joss Whedon projects parallel those of Lanchashire and Brooker. Describing constitutive intertextuality as structural, visual, and linguistic dialogue occurring between mediated texts, Bussolini illustrates how Buffy the Vampire Slayer, Angel, and Firefly made significant contributions to the creation, production, and interpretation of such diverse television programs as Deadwood, Eureka, and Torchwood. These conversations between texts, coupled with the interactions between author/ creator, text, and audience, suggest an underlying intertextuality permeating every moment of responsive understanding. Bakhtin describes this space where interlocutors, texts, and culture come together in responsive understanding as the public square. Patterned after the medieval public square, a space that served numerous public functions (e.g., marketplace, festival grounds, political assembly), Bakhtin's public square is a heteroglossic discursive space where the official and vernacular ideologies, viewpoints, lifestyles, and politics of a stratified society mix and mingle, collide and divide, converge and diverge. Unlike Habermas' conception of the public sphere, Bakhtin's public square makes no pretense toward the idealization of rational deliberation. The public square is a messy place, populated by individuals and groups from various cultural segments who employ a variety of official and vernacular communicative forms—face-to-face conversations, public speeches, social media, television, film, radio, novels, newspapers, magazines—to engage matters of communal importance and consequence. To be certain, the dialogic public square is not a space of equal participation and formalized debate where interlocutors square off with the intention of achieving victory or even consensus. As Hirschkop contends, "It's not that the conversation of the public square, now idolised, isn't composed of dialogues, it's just that it is valued not for the equal rights embodied within it, but for its quasi-Nietzschean 'liveliness, it's earthiness and vulgarity, its imbrication with interests and struggles Already echoing with the official discourse of political speeches, congressional debates, media pundits, and corporate spokespersons, the public square is the discursive space where the vernacular voices of authors, artists and fans participate in creating a "connection between the interlocking plots of a nation-state, a class, a family, and an individual life."50 Such a connection brings the Bakhtinian public square into a direct dialogue with rhetoric. Rhetoric and the Dialogic Public Square My turn to Bakhtin in an effort to reconceptualize the rhetoricalness of popular culture may, at first glance, seem like an odd choice. As I suggested in the introduction, Bakhtin decries rhetoric as a monologic affair consisting of individual players who wish to impart their particular truths on members of an audience. Monologism, suggests Bakhtin, "pretends to possess a ready-made truth, and it is also counterposed to the naive self-confidence of those people who think they know something, that is, who think they possess certain truths. Truth is not born nor is it to be found inside the head of an individual nercnn it is horn hotweon nent)lp rnllectivelv cearchina fnr truth in the process of their dialogic interaction: This emphasis on imparting one particular truth or another and the resulting clashes between the unyielding advocates of these truths implicates a communicative exchange wherein one person is declared a victor and all others are losers. He states, "In rhetoric there is the unconditionally innocent and the unconditionally guilty; there is complete victory and destruction of the opponent.”2 To further his indictment of rhetoric, Bakhtin also characterizes rhetorical practice as displaying an insidious, faux dialogue: it appears dialogic when it is not. In other words, rhetors frequently make use of the language of others—quoting another person, summarizing a particular policy position, or articulating a shared concern—in the course of their utterances. This proves problematic, maintains Bakhtin, when such double voicedness (rearticulating another's position) is employed by an individual pursuing a singular goal. A rhetor might incorporate the voices of other participants in a particular exchange (e.g., a debate over the legality of human reproductive cloning) but, in the final analysis, the political and cultural complexity of these voices is muted in service to the rhetor's every whim. Uprooted and transplanted from the salient discursive context, pseudo dialogue "is not fertilized by a deep-rooted connection with the forces of historical becoming that serve to stratify language, and therefore rhetorical genres are at best merely a distanced echo of this becoming, narrowed down to an individual polemic."53 Polemic, adversarial, and focused on the personal whims of a rhetor, the rhetoric described in Bakhtin's writings is more about championing individual interests than deliberating the public good. To some extent, Bakhtin's articulation of rhetoric is a fair assessment. Rhetoric, not unlike the power of the Force, can be used for nefarious or honorable ends. Murphy makes this clear in his assessment of Bakhtin's dislike for the communicative art: "Rhetoric is scary" 54 Bakhtin's apprehension regarding rhetoric is well founded: "Rhetoric crafts languages and voices; rhetoric demands answers; rhetoric noisely intervenes in human affairs."55 An individual utilizing the art of rhetoric for personal gain may indeed articulate static, reified truths designed to persuade audiences to see the world in particular ways. In making his forceful assertions regarding rhetoric's tendency to manifest monologically, however, Bakhtin runs afoul of his own writings. As Kay Halasek writes, Bakhtin's insistence on depicting rhetoric as a communicative exchange focused on "creating a combative and confrontational relationship between itself and other discourses" illustrates a contradiction within his own works. While Bakhtin criticizes rhetoric for its monologic orientation he also argues that no communicative exchange occurs without an interlocutor who participates in the dialogic formation of responsive understanding. And while I concede there are a great many rhetorical interactions where a self-absorbed individual crafts a text with little or no apparent regard for other voices, Bakhtin's work insinuates that a self-centered rhetor is still situated within the ebb and flow of historical, political, and cultural contexts. Attempting to draw parallels between the world of the face-to-face encounter and the artistic world of creative endeavors, Bakhtin makes clear that all utterances—a conversation, a novel, a television program—display a constitutive quality. Bakhtin centralizes the dialogic socialness of communicative exchanges when he describes discursive utterances as part of an ongoing language game located at the intersection of everything from formal linguistic structures to official/vernacular declarations to cultural norms, values, and expectations. He makes the collaborativeness of dialogism explicit when he states, "Discourse—in any of its forms, quotidian, rhetorical, scholarly —cannot fail to be oriented toward the 'already uttered, the 'already known, the `common opinion' and so forth. The dialogic orientation of discourse is a phenomenon that is, of course, a property of any discourse. It is the natural orientation of any living discourse What emerges from Bakhtin's work, then, is a conflicted account of rhetoric. On the one hand Bakhtin describes all communicative encounters, including rhetorical interactions, as dialogic. On the other hand, he denounces rhetoric as a monologic enterprise. In an attempt to sort through this apparent contradiction, I turn to James P. Zappen's working concerning Bakhtin, rhetoric, and dialogue. While some rhetorical scholars point out the apparent contradiction in Bakhtin's work, James P. Zappen's approach to rehabilitating the relationship between rhetoric and dialogue hinges on what he suggests is a misreading of Bakhtin's position. Rather than interpreting his work as antithetical to rhetoric, Zappen situates Bakhtin's criticisms as a call to reimagine rhetoric as a dialogic practice infused with a "multiplicity of voices" and oriented toward the "testing and contesting and creating of ideas."51 According to Zappen, Bakhtin's indictment of rhetorical practice is not directed as much toward rhetoric itself as it is toward the way both rhetors and rhetoricians (rhetorical critics) interpret the practice pragmatically and theoretically. Conceptualizing rhetoric as an isolated, instrumental means of moving an immediate audience dismisses the situatedness of all discourse and denies the collaborativeness that defines dialogism. Thomas B. Farrell makes a similar observation when he writes, "We misunderstand rhetoric if we assume that it begins and ends as merely directive or manipulative discourse Joining this chorus is the aforementioned Calvin Schrag who, like Zappen and Farrell, rejects a monologic understanding of rhetoric. Conversely, Schrag describes rhetoric as "a creative activity that displays discernment and insight" and characterizes rhetorical communication "as a collaborative and creative activity of deliberation and discourse against the backcloth of the common good of the polis." Linking Bakhtinian dialogics and rhetorical communication directly, Schrag offers an understanding of rhetoric grounded in the supposition that all human communication hinges on responsivity. When a rhetor engages in the act of invention, he references previously articulated meanings, understandings, and discernments; he collaborates with others, albeit indirectly, and incorporates those responsive understandings within the present rhetorical encounter. No matter the subject matter or rhetorical situation, a rhetor draws on previous utterances, anticipates future utterances, and orients his present utterance toward others. And these others, who cannot help but assume the position of rhetor themselves as they formulate a response (this response might be immediate or delayed), participate in these same dialogic acts. James Jasinski describes these responsive understandings as "the need to maintain discursive and deliberative 6 I space.„ — Put simply, the participants in a rhetorical performance work together "to make sense of the world inhabited by both.” In all the variations of rhetorical accomplishing, interlocutors direct their utterances toward one another and participate in the vigorous activity of self-constitution. As Schrag remarks, We converse and write in a variety of manners and modes. In the different involvements of our shared communal existence our words, spoken and written, lend themselves to elucidating, describing, explaining, contesting, critiquing, dissenting, agreeing, praising, consoling, admonishing—and a variety of combinations of each in colorful genres of mixed discourse. We script our lives in poetry and prose, in letters and electronic mail, in diaries and memoirs, in eulogies and orations, in sermons and scientific discourse. Building on Schrag's work, I would also add non-discourse forms of communication such as television, film, dance, music, and visual art. Schrag himself alludes to additional modes when he makes reference to "images" as part of the human communication repertoire. If one conceptualizes rhetoric as dialogic, a communicative practice simultaneously responding to previous utterances and anticipating future utterances, then even a political polemic is understood as part of an ongoing process of meaning-making. As self-serving as a particular utterance might be, the invention and declamation never occur within a vacuum; no matter how much a speaker, author, or filmmaker might wish it were so, a rhetorical utterance can never be disconnected from the surrounding historical, political, and cultural context. This shared sense of communal responsibility, which Schrag highlights in his reference to "the common good of the polls," distinguishes rhetoric from other communicative acts. Rhetorical communication is always about matters of public concern and, by definition, is directed toward "an understanding, accommodation, and modification of social practices." Whether rhetoric takes the form of a congressional hearing on the potential dangers of human cloning, a presidential speech concerning military action in a foreign land, or a television program representing torture as an effective tool for intelligence gathering the utterance solicits audiences to acknowledge their communal responsibility and participate in relevant public deliberations. What values should the scientific community consider when conducting biogenetic research? When and how should a government use military force in the name of justice? To what ends should an intelligence apparatus go to protect citizens? In a broader sense, the rhetorical dialogue surrounding these questions contributes to important discussions concerning such salient public issues as reproductive rights, civil liberties, and definitions of citizenship. In the spirit of Bakhtin's public square and dialogic rhetoric, the remainder of this project focuses on how science fiction texts (The Clone Wars, specifically) speak with a critical voice, and sometimes multiple voices, on such important political issues as human cloning, torture, and drone warfare. Often dismissed as melodramatic spectacle, the sometimes understated and sometimes forthright speculations, criticisms, and possibilities associated with the science fiction genre rarely engage matters of public interest directly. The thoughtful social commentary offered by a television program or film is not the same as offering testimony before a congressional sub-committee or "taking the floor on the House of Commons."66 That does not mean, however, that science fiction texts do not contribute thoughtful perspectives on important social and political issues. Chris Pak's examination of the discursive interplay between representations of genetic engineering and ongoing, real-world deliberations about biogenetics, for example, illustrates how science fiction texts provide "metaphorical 67 portals to ongoing debates.” — Films like Pacific Rim, with its subtle denunciation of U.S. immigration policy (e.g., the use of a wall to protect citizens from "aliens"), or Star Trek: Into the Darkness, with its direct criticism of a state's legal right to assassinate citizens deemed enemy combatants, are not meant to be engaged directly by policy proponents or opponents. The questions posed by both films, however, do call on audience members to make connections between the political arguments of a represented world and the broader conversations reverberating throughout the public square. Indirectly, then, the speculative viewpoints of science fiction enter the public imagination and become part of the broader political conversation. As Flanagan remarks, Consumption of a filmic text, under any set of viewing conditions, gains us entrance into an interpretive community based around that text. Our "take," or reading, on the text is projected outwards into a discourse sustained by other members of that community. There are many outlets for such opinions with varying degrees of "official" stamp—review in magazines and newspapers, polls on websites, academic seminars, fan clubs, informal discussion with friends and so on. Bakhtin would have it that once we have voiced our opinion on a text—once we have formulated our answer to it—that response becomes part of the discourse associated with the text, becomes on of many framing voices, contending, conflicting, clamouring to be heard..°. The important feature of this dialogic exchange is not whether a popular text contributes to an immediate resolution of a public controversy. Such resolutions rarely occur. Instead, the important feature of Bakhtin's dialogic public square is the continued existence of social and political tensions via the articulation of varying viewpoints. Filled with the simultaneously dissonant and harmonious sounds of contention, engagement, and deliberation, the public square resonates with a multitude of inter-oriented voices engrossed in responsive understanding. In the chapters that follow, I make explicit the inter-oriented voices of the dialogic public square and illustrate how the imagined worlds, characters, and plots of Star Wars: The Clone Wars implicate U.S. American post-9/11 realities. Rather than making broad generalizations about the way The Clone Wars enters the public imaginary, I make direct connections between real-world rhetorical texts—congressional hearings, news editorials, presidential discourse, pamphlets, and human rights reports—and the perspectives and positions offered by the television series. Concentrating on the emergent themes developed by the creators of The Clone Wars, I delve into five politically-salient issues: human cloning, torture, Just War Theory, peace, and drone warfare. By putting the series into direct dialogue with other rhetorical texts, I illustrate how The Clone Wars emerges as "a link in a very complexly organized chain of other utterances."69 Linked to ongoing discussions in the public square, the series presents a number of engaging questions for audience consideration. How do representations of clone troopers address some of the same public concerns articulated during congressional hearings on human cloning? Is Anakin Skywalker's propensity for violent interrogation analogous to Dick Cheney's warning that the U.S. might need to embrace the "dark side" of the war on terror? How might characters like Master Yoda offer a direct criticism of President Obama's justification of military action? Do Senator Padme Amidala and Duchess Satine Kryze, with their calls for nonviolence and peaceful negotiation, reverberate with the sounds of former congressional representative and peace activist Jeanette Rankin? Like Rankin's efforts in the early to mid-twentieth century, do these two secondary characters in The Clone Wars narrative attempt to give voice to frequently silenced arguments of the early twenty-first century? How might the ubiquity of droids throughout the Star Wars universe mirror, or challenge, various human rights concerns pertaining to the United States' increased dependence on drone warfare? In visiting this deeply developed segment of a galaxy far, far away and exploring these questions, I want to suggest that a rhetoric based in Bakhtin's dialogics might provide a new way of thinking about discourse, deliberation, and debate in the public square.

#### Objective reality is inconclusive – the future is based off of different perceptions of the world, so the star wars galaxy exists

MIT Technology Review ’19 (Emerging Technology from the arXiv archive page; Covers latest ideas from blog post about arXiv; 03/12/2019; “Emerging Technology from the arXiv archive page”; <https://www.technologyreview.com/2019/03/12/136684/a-quantum-experiment-suggests-theres-no-such-thing-as-objective-reality/>; *MIT Technology Review*; accessed: 11/19/2020; MohulA)

Back in 1961, the Nobel Prize–winning physicist Eugene Wigner outlined a thought experiment that demonstrated one of the lesser-known paradoxes of quantum mechanics. The experiment shows how the strange nature of the universe allows two observers—say, Wigner and Wigner’s friend—to experience different realities. Since then, physicists have used the “Wigner’s Friend” thought experiment to explore the nature of measurement and to argue over whether objective facts can exist. That’s important because scientists carry out experiments to establish objective facts. But if they experience different realities, the argument goes, how can they agree on what these facts might be? That’s provided some entertaining fodder for after-dinner conversation, but Wigner’s thought experiment has never been more than that—just a thought experiment. Last year, however, physicists noticed that recent advances in quantum technologies have made it possible to reproduce the Wigner’s Friend test in a real experiment. In other words, it ought to be possible to create different realities and compare them in the lab to find out whether they can be reconciled. And today, Massimiliano Proietti at Heriot-Watt University in Edinburgh and a few colleagues say they have performed this experiment for the first time: they have created different realities and compared them. Their conclusion is that Wigner was correct—these realities can be made irreconcilable so that it is impossible to agree on objective facts about an experiment. Wigner’s original thought experiment is straightforward in principle. It begins with a single polarized photon that, when measured, can have either a horizontal polarization or a vertical polarization. But before the measurement, according to the laws of quantum mechanics, the photon exists in both polarization states at the same time—a so-called superposition. Wigner imagined a friend in a different lab measuring the state of this photon and storing the result, while Wigner observed from afar. Wigner has no information about his friend’s measurement and so is forced to assume that the photon and the measurement of it are in a superposition of all possible outcomes of the experiment. Wigner can even perform an experiment to determine whether this superposition exists or not. This is a kind of interference experiment showing that the photon and the measurement are indeed in a superposition. From Wigner’s point of view, this is a “fact”—the superposition exists. And this fact suggests that a measurement cannot have taken place. But this is in stark contrast to the point of view of the friend, who has indeed measured the photon’s polarization and recorded it. The friend can even call Wigner and say the measurement has been done (provided the outcome is not revealed). So the two realities are at odds with each other. “This calls into question the objective status of the facts established by the two observers,” say Proietti and co. That’s the theory, but last year Caslav Brukner, at the University of Vienna in Austria, came up with a way to re-create the Wigner’s Friend experiment in the lab by means of techniques involving the entanglement of many particles at the same time. The breakthrough that Proietti and co have made is to carry this out. “In a state-of-the-art 6-photon experiment, we realize this extended Wigner’s friend scenario,” they say. They use these six entangled photons to create two alternate realities—one representing Wigner and one representing Wigner’s friend. Wigner’s friend measures the polarization of a photon and stores the result. Wigner then performs an interference measurement to determine if the measurement and the photon are in a superposition. The experiment produces an unambiguous result. It turns out that both realities can coexist even though they produce irreconcilable outcomes, just as Wigner predicted. That raises some fascinating questions that are forcing physicists to reconsider the nature of reality. The idea that observers can ultimately reconcile their measurements of some kind of fundamental reality is based on several assumptions. The first is that universal facts actually exist and that observers can agree on them. But there are other assumptions too. One is that observers have the freedom to make whatever observations they want. And another is that the choices one observer makes do not influence the choices other observers make—an assumption that physicists call locality. If there is an objective reality that everyone can agree on, then these assumptions all hold. But Proietti and co’s result suggests that objective reality does not exist. In other words, the experiment suggests that one or more of the assumptions—the idea that there is a reality we can agree on, the idea that we have freedom of choice, or the idea of locality—must be wrong. Of course, there is another way out for those hanging on to the conventional view of reality. This is that there is some other loophole that the experimenters have overlooked. Indeed, physicists have tried to close loopholes in similar experiments for years, although they concede that it may never be possible to close them all. Nevertheless, the work has important implications for the work of scientists. “The scientific method relies on facts, established through repeated measurements and agreed upon universally, independently of who observed them,” say Proietti and co. And yet in the same paper, they undermine this idea, perhaps fatally. The next step is to go further: to construct experiments creating increasingly bizarre alternate realities that cannot be reconciled. Where this will take us is anybody’s guess. But Wigner, and his friend, would surely not be surprised.

#### The status quo results in the collapse of all political action - only a reinvigoration of science fiction stories can create new paradigms and possibilities

McCalmont 12 Jonathan McCalmont 10-3-2012 “Laziness and Irony: How Science Fiction Lost the Future” ruthlessculture.com/2012/10/03/cowardice-laziness-and-irony-how-science-fiction-lost-the-future/ (Film Critic and Author)//Re-cut by Elmer

While many of these books are excellent examples of their styles of writing, I cannot help but yearn for books that plunge us into the world rather **than aid our flight** from it. The thing that unites humanity is not the trappings of popular culture, but the realities of a world that needs to be both **confronted and understood** if it is ever to change. It is now almost a cliché to say that we are living in a science fictional world but it is genuinely astonishing to think about how much science fiction writers have got right over the years: Every morning, I sit at my desk and fire up a Twitter client that allows me to communicate with people around the globe in real time. Both a sounding board and a source of information, Twitter has me bouncing my ideas off Australian graduate students and Indian journalists while other people retweet links to their latest blog posts for the people living in different time zones. Cory Doctorow’s Eastern Standard Tribe (2004) predicted much of what it meant to have one’s community exist in entirely different places and yet hardly any contemporary science fiction novels acknowledge the existence of social media let alone engage with the social and psychological changes heralded by such a radically different types of community. Having grown afraid of the political repercussions of putting soldiers in harm’s way, American political elites have increasingly come to rely on the use of remote controlled planes as a means of imposing American political hegemony on remote parts of the globe. Increasingly sophisticated at the level of both software and hardware, these drones are beginning to resemble the drones that appeared in Iain M. Banks’ Culture novels but while Banks’ predictions of a hard robotic hand inside a velvety human glove come to pass, Banks himself seems more interested in reimagining the Culture as a fantastical backdrop similar to that of Vernor Vinge’s Zones of Thought series. I used the examples of Doctorow and Banks as both are writers whose careers have played out against a background of ironic detachment. Indeed, between Doctorow’s fondness for Disney’s Magic Kingdom and Banks’ increasing fondness for epic quest narratives, both Doctorow and Banks demonstrate how even the most detached of writers can sometimes connect directly to the world around them. Indeed, the point of this essay was never to make monolithic statements about the true nature of science fiction but rather to draw attention to a broad narrative of detachment that has transformed the mainstream of science fiction into an airless postmodern vacuum. Science fiction never completely stopped commenting on the world… it’s just that the works that do comment on the world do not get as much attention as those that pointedly ignore it. Similarly, few writers have completely abandoned writing about either the future or science, it is just that these ideas now lurk on the periphery rather than in the foreground of the text. I am not calling for a complete re-think of the science fictional enterprise, rather I would like to see the genre seize this historic opportunity and rediscover its heritage of engagement and prediction. Part of what makes this moment so special is the fact that we have seen cracks appear in the façade of neoliberalism. Francis Fukuyama once wrote of the end of history having been achieved but the economic, social and political turbulence engulfing the world make it clear that history is very much alive and kicking. The challenge facing contemporary science fiction is to widen the cracks and to peer through the fractured veneer of neoliberalism in an effort to see what could one day come to pass. These futures, though speculative, must always remain anchored in the present moment as the real challenge facing science fiction is not merely to create a possible future, but to create the type of possible future that is **currently deemed unthinkable**. As Mark fisher puts it: The long dark night of the end of history has to be grasped as an enormous opportunity. The very oppressive pervasiveness of capitalist realism means that even glimmers of alternative political and economic possibilities can have a disproportionately great effect. The tiniest event can tear a hole in the grey curtain of reaction which has marked the **horizons of possibility under capitalist realism**. From **a situation in which nothing can happen, suddenly anything is possible again**. My greatest source of optimism for the future of science fiction lays in the fact that science fiction has handled precisely this type of situation before. Back in the 1950s, the British science fiction author John Wyndham wrote a series of novels attempting to make sense of the end of the British Empire. Snarkily dubbed ‘Cosy Catastrophes’ by Brian Aldiss, these works painted a memorable image of middle-class folk struggling to cling to their old lifestyles as the world fell apart around them. In The Day of the Triffids (1951) Wyndham describes middle-class people being shackled to the sick and blind in a misguided effort to create a more equal society. Confronted by this nightmare of post-Imperial socialist egalitarianism, Wyndham’s characters retreat to the Isle of Wight where they begin to draw up plans to re-impose their middle-class values on the world. A similar terror of unchecked social change pervades Wyndham’s The Midwich Cuckoos (1957) as a group of villagers realise that their brilliantly gifted children are in fact a group of inhuman monsters that must be destroyed lest their difference taint the entire planet. Looking back on Wyndham’s work, it is easy to laugh at the astonishing narrow-mindedness of his concerns. Less than a decade after the publication of The Midwich Cuckoos, Stan Lee and Jack Kirby would take the idea of a generation of radically Other children and turned it into a franchise that sold millions of comics and inspired the creation of a series of vastly successful blockbuster movies. We laugh at Wyndham’s social conservatism and cheer the X-men’s celebration of difference in part because Wyndham did his job as a science fiction writer. By using genre techniques to isolate social trends and force them out into the open where they can be discussed and analysed in a fictional context, Wyndham was helping an entire generation process and come to terms with a period of intense social unrest, a period very similar to our own. We are living through a period of instability. As government and businesses teeter on the brink of collapse and individuals acquire fortunes so vast that they beggar belief, our cosy Western reality is beginning to fall apart. For the first time in decades, the next generation of Westerners will be less well off than their parents as jobs, housing and opportunity decline across the board. Devoid of ideas and clearly terrified by the responsibility of having to keep a decaying system together, Western leaders tear up a century of political reform and strip the state back to its feudal origins: Armies to fight foreigners and a police force to fight everyone else. Faced with such terrifying instability and the shadow of a hideous future being born, Western culture has responded by dutifully ignoring the warning signs and encouraging us to buy more stuff. Don’t worry about your job… picture yourself as a Victorian airship captain! Don’t think too much about what the government is doing with your taxes… read a series of novels about bloggers fighting zombies! Don’t pay attention to real world inequalities… moan about how oppressed and mistreated you are for wanting to watch a cartoon about magical ponies and friendship! Never has the term ‘cosy catastrophe’ seemed more fitting than it does today. Just as Joe Haldeman once used science fictional tropes to process the experience of returning from Vietnam to find America completely changed in The Forever War (1976) and Joanna Russ’s The Female Man (1975) addressed the changing nature of female identity, contemporary science fiction must find a way to confront, process and make sense of the world as it is today. We are living in a science fictional world and this means that science fiction is in a unique position to help us **to make sense of a dangerously unstable world**. By rediscovering its ties to reality and using old tropes to explore new problems, science fiction can provide humanity with its first draft of future history.

#### Creative engagement with political decisionmaking is critical to human survival

Stannard 6 Matt Stannard 4-18-2006 “Deliberation, Democracy and Debate” <http://theunderview.blogspot.com/2006/04/deliberation-democracy-and-debate.html> (Department of Communication and Journalism at the University of Wyoming)//Re-cut by Elmer

The complexity and interdependence of human society, combined with the control of political decisionmaking—and political conversation itself—in the hands of fewer and fewer technological "experts," the gradual exhaustion of material resources and the organized circumvention of newer and more innovative resource development, places humanity, and perhaps all life on earth, in a precarious position. **Where we need creativity and openness**, **we find rigid and closed non-solutions**. Where we need masses of people to make concerned investments in their future, we find (understandable) alienation and even open hostility to political processes. The dominant classes manipulate ontology to their advantage: When humanity seeks meaning, the powerful offer up metaphysical hierarchies; when concerned masses come close to exposing the structural roots of systemic oppression, the powerful switch gears and promote localized, relativistic micronarratives that discourage different groups from finding common, perhaps "universal" interests. Apocalyptic scenarios are themselves rhetorical tools, but that doesn’t mean they are bereft of material justification. The "flash-boom" of apocalyptic rhetoric isn’t out of the question, but it is also no less threatening merely as a metaphor for the slow death of humanity (and all living beings) through environmental degradation, the irradiation of the planet, or the descent into political and ethical barbarism. Indeed, these slow, deliberate scenarios ring more true than the flashpoint of quick Armageddon, but in the end the "fire or ice" question is moot, because the answers to those looming threats **are still the same**: The complexities of threats to our collective well-being require **unifying perspectives based on diverse viewpoints,** in the same way that the survival of ecosystems is dependent upon biological diversity. In Habermas’s language, we must fight the colonization of the lifeworld in order to survive at all, let alone to survive in a life with meaning. While certainly not the only way, **the willingness to facilitate organized democratic deliberation, including encouraging participants to articulate views with which they may personally disagree**, is one way to resist this colonization.