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Can a whole day be felt in an image? Maybe a whole season?

11” x 15”, Pastel on Paper, 2024

Submitted by Alison Fox, an Art Therapy Graduate student at Syracuse University.
Her work is concerned with expressing the feeling aspects of everyday life.

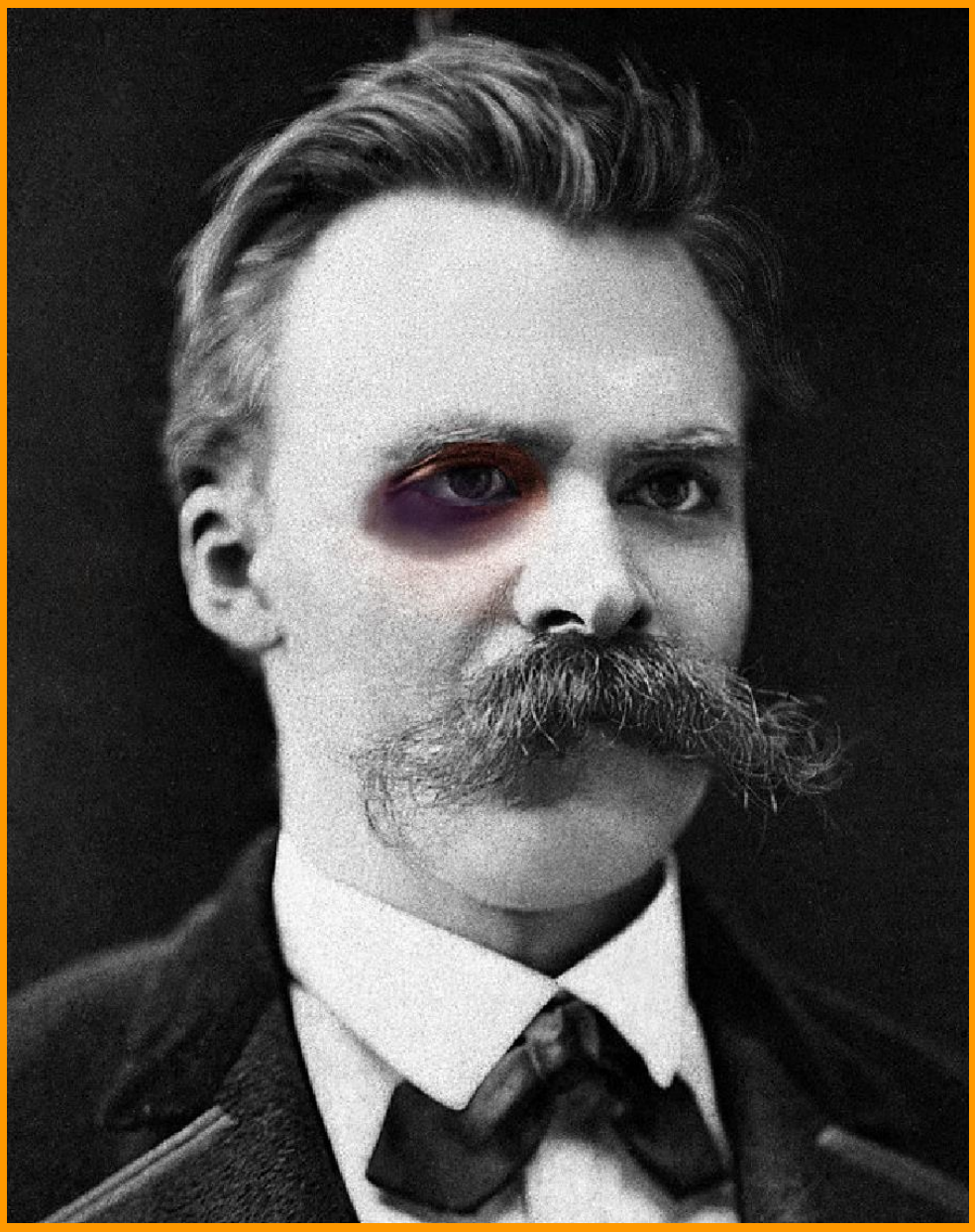
As an editing team, we are astounded and elated by the success and support this edition of *Aurantium* has garnered. Last semester, we were able to release our first issue comprising of submissions only from Syracuse students. This time we took a risk opening this issue up to the larger philosophical community. The response was over thirty submissions from around the world and from some of the most prestigious programs. Each of these papers were selected for standing apart from an excellent field. They are as well written as they are thought provoking. We are so grateful for everyone who has helped us along the way and for all of the burgeoning philosophers who shared their ideas and works with us.

However, we would be remiss if we did not acknowledge that this edition is being released in a time of global crisis. Philosophy in its true essence is occurring around us at this very moment. Our conceptions of ethics, politics, power, and human rights are being stressed and put on full display on college campuses, in legislative chambers, and in mass graves. It is in times like these that too many turn away from critical thought and their moral foundations and turn towards dogma and ideology. We urge our readers, authors, and supporters to take some of the ideas written in journals like these and think about how they ought to apply to our current struggles. Approach this edition, your lives, and global conflicts with reason, compassion, and humanity. It is when philosophy seems most trivial that philosophical minds are most needed.

Graciously,

Aurantium Editing Team

We acknowledge with respect the Onondaga Nation, firekeepers of the Haudenosaunee, people and rightful owners of the land on which Syracuse University now stands.



Fight Club and Nietzsche's, *The Gay Science*: A Comparative Exploration of Existentialist Themes

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Existentialism, Philosophy of Art

Abstract

This paper aims to show how the film, *Fight Club* represents Nietzschean themes specifically mentioned in his book, *The Gay Science*. The main character, Jack, experiences psychological breaks from reality after developing depression from his unsatisfying life-style. In doing so, he imagines a character named Tyler Durdin, who influences him to rebel against the capitalist structures that promote conformity. Together, they go on to create an underground club where men fight one another to cope with their mundane lives, and reject authority. However, Nietzsche warns readers about the difficulty of accepting the freedom that follows consequently from the basis of God's death, insinuating that no preacher, tragedian, higher power, virtue or objective moral compass is dependable. Invariably, this kind of rejection results in two possible scenarios: One, the newfound freedom would grant a person the prerogative to use their creativity in becoming their most authentic self, or two, the person feeling overwhelmed by their freedom would submit to nihilism. In the latter case, perceiving the world's grim realities–accepting the death of God–would instead lead them towards a new and unconventional authority. By returning to their comfortable instinct, they would likely alienate for a common cause. *Fight Club* depicts both scenarios and yet, the characters fail to escape the consequences of nihilism, and use their freedom unwisely.

Section One: Nihilism, Creation of Values in a Valueless Society, and Convalescence

Nietzsche understands that humans instinctively form herds and hierarchies in society. To prevent this, he strongly believes we should create a unique and authentic style. More specifically, we ought to mirror an artist's perception: by making beautiful what would otherwise not be.[1] In the beginning, fight club embraced artistic identity, as Tyler Durden preached:

> You're not your job. You're not how much money you have in the bank. You're not the car you drive. You're not the contents of your wallet. You're not your f****** khakis. You're the all-singing, all-dancing crap of the world.[2]

[1] Nietzsche and Kaufmann, *The Gay Science*, (New York: Random House, 1974), 132-33
[2] *"Fight Club (1999) - Quotes - IMDb."* 1:24:27

In a society that depicts certain qualities as desirable, Tyler Durden recognized their inherent valuelessness, that these supposed values do not comprise a person's worth. Rather, he wants members to celebrate the sides of them that society deems worthless to balance the scale. Tyler's philosophy was unique, but most of all it was unserious. Comparatively, Nietzsche thought we should value comedy in the face of tragedy, to appreciate and emulate irony. So in withdrawing from capitalist values, and embodying their worst parts, member's of fight club liberate themselves from conformity through acts of self-destruction, and self-deprivation.

It's important to note however, that the philosophy of fight club was founded from a pessimistic and defeatist stance towards life, despite the ways it initially valued authentic individuality. Members joined because they experienced the grimmer aspects of society, and yet, sought refuge by embracing these un-admirable qualities. While it seemed odd, they did it to gain back power over their circumstances; they found freedom through self-destruction. To liberate themselves from the values the world has dealt them, to rebel against them, they professed their worthlessness in an inherently valueless society. They found the equilibrium between the valueless-self in a valueless-society.

For Nietzsche, philosophy is a product of deprivation. He argued that because an essential part of the human condition is sickness–be that physical or mental– humans are motivated to turn towards convalescence, or recovery from sickness though whichever means.[3] But in the beginning, such was not the case for Jack. He accepted his mental disbalance between him and the world, but deflected his suffering externally. He developed a spitefulness towards the structures that disempowered him by deferring the responsibility for his own unhappiness. Hence, why the spirit of fight club started with a vengeful purpose. The goal was not necessarily to get better, but to project their anger through fighting each other; to feel catharsis from their bitterness towards the world. At a glance, it appears contradictory by nature to convalescence. However, Jack's nihilistic outlook helped him and the other men learn to cope with the absurdity of society's values in a way that recognized its deceitfulness. They used self-destruction to find relief, gain perspective, and attain freedom.

Section Two: The Death of God

[3] Nietzsche and Kaufmann, *The Gay Science*, (New York: Random House, 1974), 32

Nietzsche uses the analogy of the madman who professes to the crowd that, "God is dead" as a critique of human's dependability on moral philosophies that preach a categorical imperative and religion.[4] In his perspective, these ideologies are a product of herd instinct. Yet, the crowd lacks capacity to register this statement, and the madman discovers that the world is not ready to bear the weight of the news. Thus, he states he's come too early.[5] Although skepticism towards religion had gained some prevalence in early 20th century Europe around this time, the better part of western society still preached and practiced religion, which still remains today. But for the sake of *Fight Club*, suppose that the characters understood the madman's message, and their consequent freedom. This idea first emerges during a critical scene, when Tyler intentionally threw a chemical substance on Jack's hand, causing a burning sensation. Instead of immediately helping, he used it as an opportunity to explain:

> Tyler: Our fathers were our models for God. If our fathers bailed, what does that tell you about God?...You have to consider the possibility that God does not like you. He never wanted you. In all probability, he hates you. This is not the worst thing that can happen.
> Jack: It isn't?
> Tyler: We don't need him…F*** damnation, man! F*** redemption! We are God's unwanted children? So be it![6]

In rejecting the notion of a caring God, and the promise of an after-life(whether that be good or bad), Tyler presumed the role of the madman in *The Gay Science*. He admitted this, and yet alluded to the potential positive side, suggesting it cannot be not the worst thing. If God was dead, it could be thought that they now had infinite freedom. However, Tyler's words also take a defeatist stance on the matter. God's neglectful nature implies with it the sad truth that there is no-one, and nothing to depend upon, or look up to. Depicting him as an absent father figure emphasizes this nihilistic attitude. Since their fathers left them, and there was never a God to ease the overwhelming sensation that nothing matters, what's to say that anything really does? Tyler insists that they've been abandoned, and that alone is something to be angry about–;let alone their disappointment with society and their role in it.

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[4] Nietzsche and Kaufmann, *The Gay Science*, (New York: Random House, 1974), 279
[5] Nietzsche and Kaufmann, *The Gay Science*, (New York: Random House, 1974), 181
[6] *"Fight Club (1999) - Quotes - IMDb."* 1:03:07

By this time, Fight Club was well underway, continuing to grow as more men aligned themselves with the group's values. But has the time come yet? There's a strong possibility that upon being told that God is dead, humans would still struggle in understanding their newly-granted freedom, and what to make of it. Considering that they're acceptance was fueled by nihilism, and they're method of coping was self-destruction, there was plenty of room to stray away from flourishment and self-actualization from the start.

Section Three: Herd Instinct

The members of the fight club fell into the same trap that Nietzsche warned about: That accepting God's death is nearly incomprehensible, besides that it is only part of the problem. Even after establishing this idea, the responsibility of deciding how to properly rebuild civilization from the ground up becomes the next relevant task. Members of fight club had already disowned their authorities, and whatever position they held in society. With it, the hope that there is an identifiable meaning in their lives. Still, these men are very much human, and as Nietzsche understands, are likely victims of their own social instincts; they are prone to follow the loudest, most authoritative voice in the room–Tyler Durden's voice. As Nietzsche believed that religion is most needed when there is a lack thereof, although God is dead, there will still be caves in which the shadow of God prevails. Then, we must also find a way to vanquish God's shadow.[7]

Herd instinct details that as one authority falls, a new one gives way through its ruins. We see this play out as members now look to Tyler as their God, rather than using their own inner-compass. This shift from the path of individuality towards group-think occurs when the very name of "fight club" evolves to "project mayhem". The primary focus of this group now takes the form of a terrorist organization whose goal is to undermine the structures that once undermined the members. The rules change too, with the first one being, "don't ask questions". However, to blindly follow Tyler's order's contradicts the original philosophy of the club; the whole reason it started was through questioning the values society deemed admirable. Instead now, the members over-glorify their leader(Tyler) to such a degree that he becomes the defining consciousness of the group. He takes on the role of any other preacher of morality. All the same, the men alienate from inner-selves by fulfilling their functions to the whole. This is the shadow of God.

[7] Nietzsche and Kaufmann, *The Gay Science*, (New York: Random House, 1974), 108

Tyler initially preached the non-traditional, and rebellious virtue of *self* destruction. However this core practice loses its meaning in the cult-like nature of the group. So then, it never occurs to the men what destroying monuments, vandalizing cities and exploding blanks might further imply because the question of whether these actions will liberate the men becomes irrelevant. They trust their commander, and they fall in line and emulate his preachings:

> Tyler Durden: Listen up, maggots. You are not special. You are not a beautiful or unique snowflake. You're the same decaying organic matter as everything else.[8]

Through de-valuing the individuals of the club, he encourages a group-think mentality for the now cult-like, project mayhem. This critical turning point in the film shows the shift of the group's values as it morphs into a radical pseudo-religion. Arguably, a terrorist group who is especially committed to their cause, and readily willing to accept the principles of their leader's unquestioned ideal clearly follows some categorical imperative. Now that the men idealize a strong authority, he trains them to become a mere function, putting them in the same position as they were before joining fight club. Accept this time, it's far more insidious. Perhaps, being as nihilistic and self-degrading from the start made it far easier for men to self-alienate. The self-destructive tendencies primed the men for causing outwards-destruction, which made the decision to commit grand-scale criminal acts against corporate structures not too far off. Transitioning from "fight club" to "project mayhem" is analogous to Nietzsche's theory that most people are inclined to serve a higher ideal, even if it leads them to alienate from their personal judgment. He would frown upon the member's for not questioning their beliefs, and blindly following their herd instincts. Here, we see the shadow of God prevail in *Fight Club*.

Section Four: Slave Morality

Nietzsche believed that teachers of morality will commit themselves to the unconditional duties of an objective moral or ethical system, so as to escape serving another person.[9] Meaning, he sees preaching a virtue as an act of defiance against servitude towards others. However, in carrying out unconditional duties in the name of a virtue, one becomes obligated to that categorical

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[8] *"Fight Club (1999) - Quotes - IMDb."* 1:30:31

[9] Nietzsche and Kaufmann, *The Gay Science*, (New York: Random House, 1974), 80

imperative. So, they cannot escape submissiveness to another person by ways of preaching morality, as this puts them in the same position to conform to a higher entity. Once the preacher makes their strong views known to the public, the critical eye is on them. Any breach of that virtue would pose consequences for their reputation, and public persona. We see this constantly in politicians or religious leaders, who act against what they seemingly believe. This is the consequence of preaching a categorical imperative, and what Nietzsche calls "slave morality". That is, we become enslaved to what we preach. He even defers this idea onto other philosophers who don't practice their own philosophical conclusions. Here we see a paradox: to maintain a powerful position in society, an individual must submit to an unconditional categorical imperative, and become its servant. Thus, one never obtains real power.

Jack ultimately predicts his future ironically when he writes a haiku during work. The concept of the haiku emulates the same idea that the ruler is really the servant, which reads, "Worker bees can leave. Even drones can fly away. The Queen is their slave."[10]. The Queen bee symbolizes the shift in power dynamics from the powerful's responsibility to uphold their reign, to the powerless's freedom to revolt, or dissent.

This concept later takes hold of the plot once Jack realizes that Tyler is not a real person, but rather a figment of his ego playing out its most desirable state of being. Upon this breakthrough, he comes to understand that everything spoken through Tyler were his own words. Instead, Jack himself started fight club(which became project mayhem) and also held full responsibility for conspiring against the banks, and other corporate entities. Such were products of his doing. Not only this, but he had just begun to understand the extent of his influence as blue collar workers from everywhere recognized him as Tyler Durdin.

However, upon this realization, came with it a shift in his own morality. Suddenly, he felt an overwhelming responsibility for the wide-spread influence of what he preached. He then does everything in his power to stop these acts of terrorism before it is too late. But by that point in time, he could not reverse the damage. He had already bound himself to certain principles, and there was no stopping his followers from carrying out his plans against his will. Looking back on Jack's attitude in the beginning of the film, he had always had problems with authority, which led to his active rebellion against it. However, in rejecting authority, and servility towards capitalist society, his job and his boss, he clung to the unconditional duties of rebellion. In doing so, he became obliged

[10] "*Fight Club (1999) - Quotes - IMDb.*" 0:55:00

to these principles to the point of no escape. So even with a shift of values granted by his realizations, nothing could prevent his doings because he had already preached them to the masses of the lower class. Therefore, Jack failed to ever truly free himself from the unconditional duties he preached by. He became the Queen bee, and a slave to his hive.

Final Remarks

The goal of this paper was to draw connections from the film, *Fight Club*, to Nietzsche's perspectives outlined in *The Gay science*. From looking at the critical themes, we can admire the film's nod to the analogy of the death of God, nihilism, values in a valueless society, herd instinct, and slave morality. Even more, how the film manifests a scenario drawn from these concepts, even while the plot amplifies what tends to happen in real life. After all, cinema often deals with relevant concepts while simultaneously exaggerating what is possible, or at least likely to occur in reality. However, if there is anything meaningful to deduct from the film, it would be the questions it begs the audience to consider: Can we escape conformity? Can we take on the challenge to be our most authentic, and individual selves? But most of all, can we handle the burden of freedom? If we do choose to reject society's ideals and deem them as undependable, we have to think critically about how to rebuild from that point and what the proper next steps are. Otherwise, we may fall prey to social instincts, nihilism, or self-destruction. Perhaps then, it is always easier to critique a system than it is to come up with a better one.

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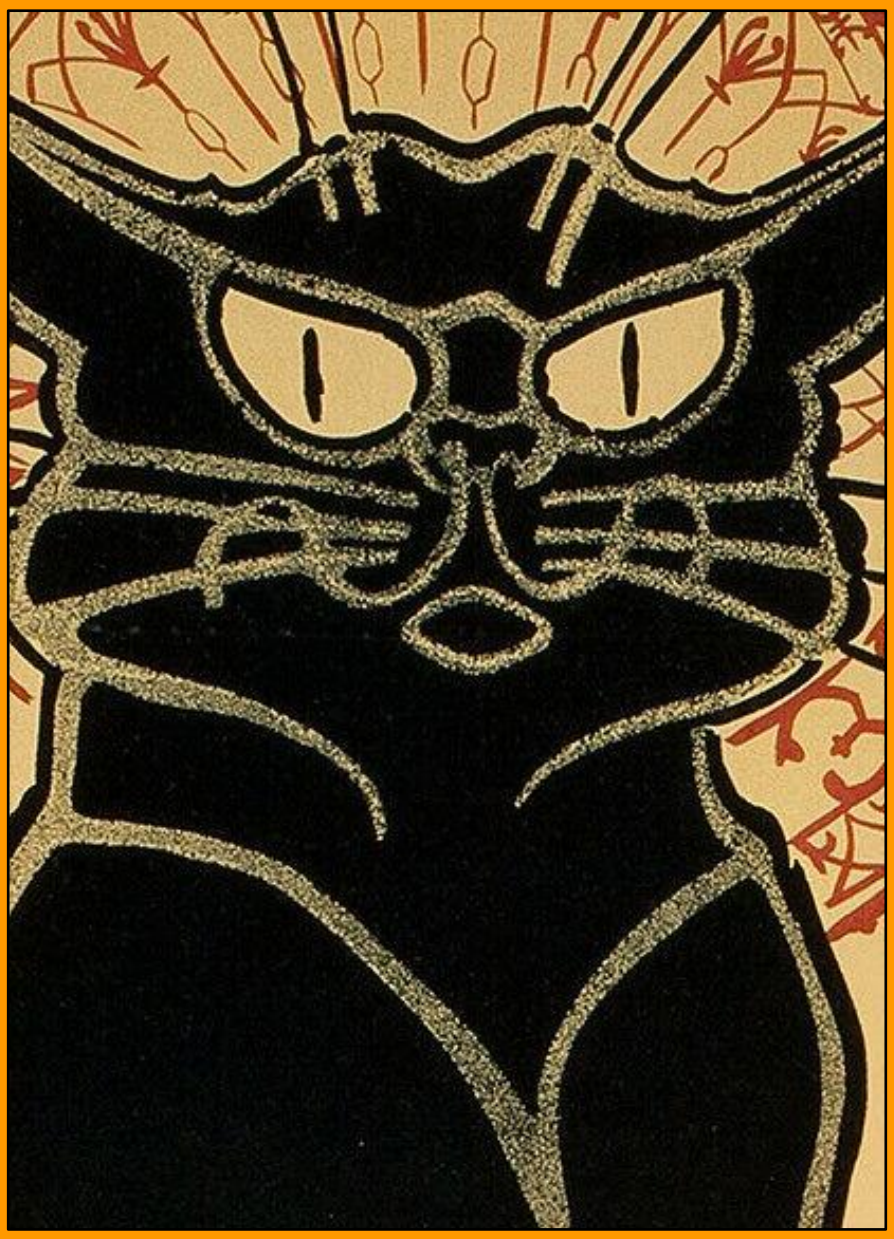

When Cats Stay Outdoors: A Look into Wildlife Ethics

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Ethics, Animal Rights

Introduction

In the multifaceted realm of wildlife management and conservation, ethical considerations very often go beyond the welfare of individual animal populations. Australia is no exception to this complexity, as non-native species, particularly ones that were brought in by European settlers, have introduced a variety of environmental concerns over the centuries. Among them, feral cats have proven to be especially problematic. While predation by cats (both pets and feral) is not an issue exclusive to Australia, they have been shown to be remarkably successful in the continent. With a fluctuating population between 2.1 and 6.3 million covering a land area of 99.8%. [1] Feral cats are efficient ambush predators and obligate carnivores, meaning that they can hunt anything smaller than themselves (usually <200g) from all vertebrate classes and arthropods. [2] On top of that, they are habitat generalists, meaning that they can develop hunting specializations and pass those preferences across generations.

fig ***the numbers of Australian vertebrate species known to be killed or consumed by cats, based on recent compilation of large datasets of cat dietary studies and other research.***

Taxonomic group	No. of native species known to be consumed by cats (% of Australian terrestrial total)	Source
Fish	Not compiled	Not applicable
Frogs	30 (13%)	Woinarski *et al.* (2020)
Reptiles	250 (23%)	Woinarski *et al.* (2018)
Birds	338 (46%)	Woinarski *et al.* (2017a; 2017b)
Mammals	151 (52%)	Woolley *et al.* 2019

With these findings, both feral and domestic cats have had a large detrimental impact on Australia's biodiversity. A recent assessment report highlights the role of domestic cats, revealing that Australia's pet cats alone kill over 545 million mammals, reptiles, birds, and frogs annually. [3] In

[1] Legge 2017
[2] Woinarski 2019
[3] Legge 2020

light of this, the *Australian Department of Climate Change, Energy, the Environment and Water* (DCCEEW) listed predation by feral cats as a key threatening process under the Environmental Protection and Biodiversity Conservation Act of 1999 (EPBC Act) in 2008, launching the threat abatement plan (TAP), which in their 2015 draft aims to cull approximately 2 million feral cats by 2020. This policy went through multiple drafts over the years, with their most recent one coming from late 2023.

For this paper, we will be going over the TAP, as it raises common yet contentious ethical questions regarding wildlife management. We will explore arguments for and against this policy, evaluate the ethicality and risks of population control methods, and draw insights from similar case studies and diverse schools of thought. We will then conclude by examining a set of international principles that can be used to help formulate proper policy around introduced species control.

Ethical Arguments for the Threat Abatement Plan for Predation by Feral Cats

Given the land area of Australia and the pervasiveness of both feral and domestic cats, it appears we are given with a predicament that, whether we choose to engage or not, will result in widespread death for either side of this conflict. In a vacuum, those invested in animal ethics might be adverse toward advocating for a direct culling of the cat population in Australia, however the need for policies like the TAP can be underscored by multiple value systems, including the non-consumptive use value of native species. The vision statement behind the TAP is to safeguard the cultural, aesthetic, and existence values associated with threats to native species and biodiversity. Australia is home to a wide range of species whose extinction would represent a loss for all. One of which includes the now-extinct paradise parrot *Psephotellus pulcherrimus*, whose striking blend of turquoise, aqua, scarlet, black, and brown feathers can no longer be admired in the wild.[4] This is to say that native animals like the paradise parrot possess moral status that is derived from their cultural, aesthetic, and existence values, all of which are compromised by the threat of feral cat predation. This thus provides a justification for interventions like the TAP to protect and preserve Australia's biodiversity.

Another point that can further justify the need of such wildlife management is the need to

[4] McGregor 2021

protect the indirect instrumental value associated with the ecology of Australia. That is, ecosystems are valuable insofar as they can provide humans with "ecosystem services" which can include the provision of resources and natural protection. In this view, ensuring the continued existence of native species, for the sake of maintaining a flourishing system, is valuable to humans. One of the most famous proponents of this idea comes from Aldo Leopold, who in his essay "The Land Ethic," argues that we should shape our ethical framework in such a way that recognizes the inherent value of the natural environment and all living things in it, including humans. [5]As a concluding statement in this essay, Leopold states:

> A thing is right as it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong as it tends otherwise.

If one were to take up the moniker of a land ethic, one should have their actions guided in a way that benefits both humans and the natural environment, and to do that the preservation of natural ecosystems and biodiversity is necessary. Because Leopold is a major proponent of "wilderness" areas, he would likely view the feral cat issue in Australia as a symptom of human activity, and therefore view policy that concerns their population management as permissible. Even so, Leopold's writing appears to be claiming that ecosystems hold value beyond their instrumental use to humans – that biotic communities have moral status. It should also be noted that the principles Leopold posits does not make him inherently against nonnative species, however they are not evolving "in place" of a specific ecological community makes it reasonable to assume that, at best, they will not be providing any immediate benefits. [6] This is especially true for the case of feral cats, as their adaptability and hunting style makes the window for coevolution extremely difficult for native species, making them a net destabilizer, according to Leopold.

This idea is further elaborated in his other famous essay "Thinking like a Mountain," stating that when taking on the perspective of the whole land community, humans should "play wolf" in order to ensure that an ecological community thrives. The DCCEEW appears to agree with this sentiment, as they have been reaching out to Indigenous land managers in southern Australia to support their efforts in controlling feral cats in recent years.

The threats posed by feral cats to the instrumental and intrinsic values associated with the

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[5] Leopold 1949
[6] Simberloff 2012

ecology and welfare of native animals seems to necessitate the need for interventions like the TAP. However, the implementation of such strategies is not without their share of ethical criticisms. Let's explore some of these challenges.

Ethical Challenges Against the Threat Abatement Plan for Predation by Feral Cats

The ethical concerns surrounding the TAP stem from both anthropocentric considerations and the humaneness behind wildlife control methods. One of the key concerns is that the extensive use of human intervention in ecosystems can inadvertently raise the misconception that feral cats are solely responsible for declines in native animal populations. When going over the ecological curses Australia faces, it becomes clear that introduced animals are only one component of anthropogenic ecological issues. Going back to our earlier discussion regarding the extinction of the paradise bird, accounts have shown that cats were not the only contributors to the species' extinction. Indeed, in addition to the ecological pressures associated with the predation of feral cats, other main causes to the parrot's sharp decline include the inappropriate burning of grasslands in the parrot's habitat and excessive trapping due to their demand in pet trading. [7]

Such an idea can be further expanded upon by relating it to the perspective of Peter Singer, an Australian philosopher that argues that we should act in a way that recognizes the equality of nonhuman animals because of their ability to suffer and experience pain. That is to say, all sentient beings have an interest not to suffer, and not being able to acknowledge that interest paves way to speciesism. [8] Speciesism, according to Singer, refers to an attitude of prejudice or bias against beings because of their species. We can see such an attitude in a similar case in Australia's neighbor, New Zealand. New Zealand has a very unique ecological profile, as the islands lack any native mammals (with the exception of some bat and marine species). However, the country now has many introduced mammalian "predators" including, but not exclusively, stoats, common brushtail possums, and rats. The native species have evolved for millions of years in the complete absence of mammals, making them extremely vulnerable to introduced species, which sometimes lead toward the extinction of some native animals.[9]

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[7] McGregor 2021
[8] Singer 2016
[9] Office of the Minister of Conservation 2016

As a response to this ecological crisis, the then Prime Minister of New Zealand, John Key announced the country's effort to make New Zealand "predator free" by 2050. Known as Predator Free New Zealand (PFNZ), it was created as a national initiative to eradicate introduced. predators with the goal of allowing native species to thrive and restore ecological balance. Putting the methods by which they achieve this goal aside, free-roaming domestic cats are excluded from the scope of PFNZ. Unlike Australia's case, despite their negative ecological impact on birds, reptiles, and amphibians, they are left out of the policy's vision statement, likely due to cats' status as a companion animal. Putting this all together, it can be argued that the need to examine and open conversation about this inconsistent attitude towards animals is necessary in order to avoid the worst externalities of speciesism.

In addition to the concerns related to anthropocentric biases and policy-making, similar to the earlier argument in favor of the TAP that emphasizes the nonuse intrinsic value of native animals, one can make the argument that free-roaming cats hold a similar value, and thus their status as a moral patient can potentially match the native animals. This comes around to the question of how to manage the cat population in a way that is considered "humane." There exist many strategies related to the control of feral cats (some of which we will go over in a later section), however there are some that have been shown to cause a significant amount of suffering before death. Poison baits are especially popular in remote areas, as they can be aerially broadcasted in rough and rugged country. Of these poisons, ones that are fluoroacetate (or known by their catalog number "1080") are the most common. 1080 is a fast-acting poison that kills via neuroexcitation; [10] 1080 interferes with the citric acid cycle (or the Krebs cycle), a process critical to cellular respiration. This eventually leads to an overstimulation of the central nervous system, resulting in seizures, convulsions, then death, which can take several hours and is very likely to cause significant distress and pain. Going back to Peter Singer, because his moral philosophy is largely utilitarian (specifically focused on the net suffering caused by an action), he is very likely to argue that such culling is not a humane solution.

Lastly, the third challenge that concerns the TAP puts aside the immediate ethical consequences of using cruel control methods, and focuses on the issues related to strategic outcomes. While culling (hunting, trapping, and poisoning in particular) is commonly used against pest animals that pose a threat against wild populations, over time studies have shown that not only

[10] Sherley 2007

do these tactics cause unnecessary suffering but were shown to be impractical and can often backfire severely. A study [11] conducted in the state of Tasmania tried testing their ability to reduce the population of feral cats. While surveying the cat population among four large areas of native forest, they trapped and removed animals for a year in two of said areas. Initially, it appeared that this method proved effective as they caught many cats, however over time the trap success rate dropped off. On top of that, by observing remote cameras around the area, it was shown that even more new cats entered the area. These new cats also avoided these traps, and as a result the cat population in areas that were trapped ended up higher than those without.

Along with inadvertently increasing the population of feral cats by creating vacant territories via culling, it also runs the risk of causing population booms for other species (including small mammals like rabbits and rats) which can lead to further ecological harm. [12] This type of blowback as a result of direct human intervention exemplifies one of the bigger arguments against human stewardship over nature. This emergent problem closely follows the principles posited by James Lovelock, known as the Gaia hypothesis, which views the natural world in its totality as an incomprehensibly complex, self-regulating system to the extent that it can easily hasten negative ecological consequences if not managed properly. [13] The history of feral cats in Australia is an incredibly short one on a global timescale, however only a few centuries is enough time for them to become integrated into the continent's web of life.

Alternative Wildlife Control Methods: Apex Predator Management

A big takeaway from that is that wildlife management is complex, and involves difficult tradeoffs between costs, success rates, timescales, collateral, and social acceptability. In the previous section, we considered several "in-principle" ethical challenges, along with shining a light on the logistical challenges TAP faces. Given the size of the continent and surrounding islands, ethical concerns with traditional technologies and methodologies are brought into question. Indeed, exploring strategies outside of hunting, trapping, or poisoning can be helpful in drawing better strategies and outcomes for the TAP. One of these other strategies asks us to take a look at another

[11] Lazenby 2015
[12] *Department of the Environment and Energy* 2016
[13] Lovelock 2003

predatory mammal that once was considered invasive to Australia but is now considered a cornerstone to the continent's food chain: the dingo.

Dingoes are a type of wild dog that was likely introduced by seafaring people from Southeast Asia only around 4,000 years ago. It didn't take long before they quickly spread across the continent and since then they have contributed to the decline of some native species (ground dwelling mammals in particular). Although they are an introduced species, they have inhabited Australia long enough to become a functional part of its ecological system as an apex predator10. However, as time went on, dingoes proved a challenge to the country's livestock industry as they would hunt sheep-grazing areas in the southeast.

As a response to this hunting behavior, a fence that stretches over 5,000 kilometers through the Australian continent was built, separating the southeast from the rest of the country. While the fence has proven successful in reducing dingoes in the southeast, dingoes, as apex predators, have the ability to structure communities, and as such can leave a biotic community at risk in the event of their removal. These changes can include higher kangaroo density, changes to vegetation, and lower abundances of small mammals.[14] Putting this together, a strategic reintroduction of dingoes has the potential of reducing cat density by hunting them directly, or alter their behavior in a way that lessens their predation pressure on at-risk species. [15]

Those who have an ecocentrist lean toward wildlife management might find this strategy appealing, as introducing apex predators in an effort to stabilize a biotic community can sometimes prove effective. Yellowstone national park exemplifies this idea, where in 1995 wolves were reintroduced after being absent for nearly 70 years. Prior to their reintroduction herbivore populations, namely elk, went unchecked which led to a crisis of overgrazing which entails a large swath of ecological issues. Because the presence of wolves pressured elk to avoid areas where they would be more vulnerable to predation, vegetation in those areas were given enough breathing room to recover. [16]

Going back to our dingoes, while the prospect of curbing the behavior of free-roaming cats in a game of ecological judo seems plausible, there are several challenges with this strategy.

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[14] Morris and Letnic 2017
[15] Brook 2012
[16] Farquhar 2023

For one, dingoes favor larger prey than cats and will eat carrion, making their predation profile on native communities different from that of cats.[17] Additionally, they were also historically present when cats spread across the continent and caused problems for other native species. Putting those together, dingoes appear to be insufficient to protect threatened species against predation from cats.

Concluding Thoughts

While the DCCEEW may enact imperfect policies, human-influenced ecosystems are entrenched in Australia, and completely eradicating the feral cat population in Australia is unfeasible. That being said, an indefinitely extended killing program will invariably cause significant suffering to thousands, if not millions, of mammals, which brings tension against the principles behind wildlife mutualism – an idea that has been gaining traction in industrialized countries that posits that wild animals are worthy of care and ethical consideration. It also goes against the ideas behind the compassionate conservation movement, whose main principle of "first do no harm" runs counter to the prospect of using poisons indefinitely. In spite of these challenges, however, we can take comfort in that ongoing research still offers hope on a sustainable solution. As we continue to explore and develop wildlife management strategies (gene drives, prey management, etc.), it is crucial to prioritize ethical and compassionate approaches that respect all species involved.

[17] Paltridge 2002

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Illusory Time: Spinoza's Conception of Time and its Alignment with Contemporary Physics

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Metaphysics, Philosophy of Time, Ethics

Explorations into temporality have been undertaken since the very inception of philosophical inquiry. Beginning in the 20th century, the introduction of scientific accounts of the topic has fueled discussion between philosophers and physicists alike, leading to an ongoing distillation of time's own standing in reality from its more readily accessible realization through our own perception. My aim in this essay is to examine the compatibility between Baruch Spinoza's philosophical conception of time and contemporary physical theories. I seek to establish a parallel between Spinoza's view, which regards both time and temporal flow as being illusory, with some of the major perspectives in modern physics which present time as being an emergent phenomenon, and to ultimately show that Spinozistic time finds itself aligned with modern physics in numerous ways.

In Section I, I reconstruct Spinoza's conception of time alongside its relation to duration, and also discuss how Spinoza is able to maintain the existence of mind-independent durations for modes. In Section II, I discuss time in accordance with Einstein's General Theory of Relativity, and how the implications of this theory result in the block universe account of time.[1] In Section III, I discuss time in accordance with Quantum Mechanics, which contrasts the prior account by treating time as an absolute background against which fundamental particle interactions are measured, and how the disagreements between these two theories result in the problem of time in physics. In Section IV, I introduce contemporary discussions in quantum gravity, which seek to reconcile the problem of time.

In Section V, I conclude with a comparative analysis between Spinozistic time and leading research in contemporary physics, arguing that the two find themselves compatible primarily based on their agreements regarding time being an emergent phenomenon.

I. Spinozistic Time

Spinoza's philosophical project relates duration with time. Specifically, Spinoza is able to eventually showcase that the latter becomes manifest as a sort of illusory consequence of the former. At the onset of Book 2 of the *Ethics*, Spinoza defines duration as "the indefinite

[1] The block universe theory stands as being the current predominant theory of temporality in physics; it is an eternalist theory of time.

continuance of existence,"[2] and in the explication to this definition, he further states that the word 'indefinite' is used because duration cannot in any manner be determined through the nature of the existing thing, and neither can it by the thing's efficient cause. Spinoza also maintains that infinite modes themselves possess a mind-independent duration; specifically, it should be noted that this sort of duration would not entail any form of temporality, but instead signifies the constant and unchanging existence of the modes insofar as substance exists.[3]

Proceeding further into Book 2, Spinoza introduces his conception of time as fundamentally being an illusion. He writes that "nobody doubts that time, too, is a product of the imagination, and arises from the fact that we see some bodies move more slowly than others, or more quickly, or with equal speed."[4] Spinoza further discusses his conceptions of time and duration in his Letter 12 to Meyer, where he writes that "when we conceive [quantity] abstractedly as apart from substance" and then "separate [duration] from the manner whereby it flows from things eternal,"[5] we may then consequently generate both time and measure; time, in this case, stands as being a limit for duration, and conversely, measure as a limit for quantity. Spinoza concludes this section of the letter by stating that time and measure, generated in accordance with the description above, stand as being "merely modes of thinking, or, rather, of imagining."[6] Time then seems to be a sort of accidental consequence of duration, itself only becoming manifest via the existence of motion, coupled with the lens of the
human mind; it is a defined portion of duration measured against motion and does not uniquely exist on its own. This account of time, in which temporal flow is viewed as a consequence of the human mind alongside the mind-independent durations of infinite modes, comprises the fundamental framework of Spinozistic time.

II. Time in General Relativity

General Relativity (GR) introduces a spacetime model of the universe; it combines three

[2] Benedict de Spinoza, *The Ethics*, "Book 2," Definition 5, 1677
[3] Infinite modes, which are expressions of the substance's attributes, have an 'eternal duration.' This is not duration in our usual sense of experiencing time but rather signifies the enduring nature of these modes in the context of being caused by substance (which is itself eternal).
[4] Benedict de Spinoza, *The Ethics,* "Book 2," 44
[5] Benedict de Spinoza, Letter 12, page 5
[6] Benedict de Spinoza, Letter 12, 7

dimensions of space and one dimension of time into a single 4-dimensional spacetime manifold. Upon this manifold we are able to chart every possible event in accordance with spatio-temporal coordinates corresponding to our four dimensions.[7] The spacetime manifold thereby describes the totality of events across time, and we have ways of visualizing this in reality.

In *The Fabric of the Cosmos*, the physicist Brian Greene describes how we may actually go about visualizing the spacetime manifold by analyzing relativistic effects. Relativistic effects on the macroscopic scale are often described by employing a framework of very high velocities, but in Greene's example, we observe the same effects by employing low velocities over very large distances.

Greene introduces a scenario in which the *nows*[8] of two observers are described as time slices; he explains that "observers moving relative to each other have different conceptions of what exists at a given moment, and hence they have different conceptions of reality" (Greene 134). The various relative motions, in this case, result in the *now*-slices being oriented at different angles with respect to each other in spacetime—at non-relativistic speeds and everyday distances (for example, within the span of California) the angle between the two observers' *now*-slices is minuscule, hence why any discrepancies between the *nows* of the two observers remain unobserved (on a macroscopic scale). However, when applying these same low, non-relativistic speeds to very large distances (universal scales) we may observe large deviations between the observers' *now*-slices; the observers would find themselves in significant disagreement over what their respective *nows* would entail.

By producing a large collection of *now*-slices by situating a variety of observers at various distances from earth, each with their own varying velocities, we can paint over significant chunks of the spacetime manifold. Greene further explains that if we extend space infinitely (with our *now*-slices also stretching infinitely) then our collection of rotated *now*-slices may be positioned arbitrarily far away, thereby sweeping through all points in the manifold (Greene 138-139). If we agree that the *now* of any given observer is no less valid than our own, then the above account shows us that our intuitive conception of temporal flow[9] is essentially illusory—events on the manifold are all

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[7] For example, we can chart the existence of a human on the manifold, starting with his birth and ending with his death, by combining this timeframe with every point he may have occupied in space; the line drawn by this human across the manifold is known as a worldline, encompassing all of these above points in spacetime. [4] Relativistic effects such as length contraction and time dilation occur at relativistic speeds, which are significant fractions of the speed of light (or, *c*).

[8] That is, each observer's own sense of the present.

[9] That is, our conception of time as distinguished by a past-present-future as well as its resembling an "arrow," or having a directional flow

equally real regardless of their time coordinates. This organization of events is known as the "block universe" theory, alluding to the picture of spacetime as an unchanging four-dimensional block, and stands as being the predominant theory of temporality accepted by most contemporary physicists.[10]

III. Time in Quantum Mechanics

The introduction of Quantum Mechanics (QM) resulted in a revolutionary shift in physics and offered the first functional account of particle interactions; its nascent stages in the mid-1920s occurred shortly following the introduction of Einsteinian relativity, and fundamental aspects of these two theories have yet to be reconciled to this day. The account of time in QM is contrasted sharply with its peer in GR. In quantum theory, time is treated as a fundamental, absolute entity that is essential for the framework's internal coherence. Unlike the malleable and relative nature of time in GR, QM employs a steady, unwavering temporal flow acting as a backdrop against which the fundamental interactions of particles may be viewed; in this framework, the steady progression of time is indispensable for understanding how these interactions and entanglements between particles actually evolve, and the time parameter is itself not subject to the dynamic curvature of spacetime as in GR. Both GR and QM have been wildly successful in their physical predictions, and these differences in their respective pictures of time have resulted in the ongoing problem of time in physics: despite being successful theories, we seem to be presented with two conflicting accounts of temporality—these disagreements bring forth the questions of what the nature of time entails in reality and why we seem to experience a temporal flow (past → future) within the block universe.

IV. Time as an Emergent Phenomenon

Numerous theories in physics have ultimately implied that temporal flow is not a fundamental aspect of reality. At the forefront of contemporary research in theoretical physics, scholars have sought a possible reconciliation of GR and QM by attempting to analyze links between their differing notions of time. Quantum gravity is the currently developing subfield in physics that seeks to merge the relative notion of time in GR with the absolute background time

[10] Brian Greene, *The Fabric of the Cosmos,* Alfred A. Knopf, 2003

of QM, and central to this pursuit is the treatment of spacetime itself as an emergent phenomenon. Leading physicists have proposed that a curved spacetime can be generated via the fundamental quantum framework of the universe; Mark Van Raamsdonk, a physicist at the University of British Columbia, has stated that "we now understand that space-time really is just a geometrical representation of the entanglement structure of these underlying quantum systems." Physicists have further described a universal boundary possessing one fewer spatial dimension, upon which exists a network of qubits (quantum bits of information) whose entanglements are able to model and generate our 3D interior as well as a dimension of time; this description is analogous to how a complex 3D environment in a video game, with its own built-in time cycle, emerges from the binary code on a computer chip. It should be noted that the underlying quantum structure described by Raamsdonk is itself timeless, yet still entirely consistent with the pre-established physics of both GR and QM.

Another means of viewing time as an emergent phenomenon can be seen in the Second Law of Thermodynamics, which states that time flows in the direction of increasing entropy; specifically, isolated systems evolve towards thermodynamic equilibrium, where the entropy is highest—by extension, time can be seen as existing only as a result of entropy's existence, and in a state of maximum entropy, in which we observe a maximal dissipation of mechanical energy (motion) into thermal energy, temporal flow can be seen as ceasing. Physicists have predicted that in the far future when matter in the universe has become diluted and thermodynamic equilibrium has essentially been reached,[11] there will no longer be a distinct sense of time: there will no longer be a way to determine a flow of time in either direction, and time will have essentially un-emerged. In this description, the absence motion seemingly results in time losing its sense.

V. Spinozistic Time Aligned with Contemporary Physics

I believe the most significant compatibilities between Spinoza's conception of time and the account of time in contemporary physics can be readily showcased in accordance with two relationships:

1. The illusory nature of temporal flow in both Spinozism and reality (Objective)
2. The timeless origin of temporal flow in both Spinozism and reality (Formal)

[11] Also known as the "heat death of the universe," in which matter and energy have both been spread throughout space in the most even possible distribution; specifically, the universe now lacks any possible motion due to a complete and uniform mechanical → thermal energy conversion.

The first relationship can be seen as emphasizing the role of the human mind as perceiver and observer; in this case, the human mind (a finite mode) seems to manifest a sense of time as an inadequate idea of actual duration (the sort of duration possessed by infinite modes, described in Section II). Here, time seems to resemble its relative and relational nature as seen in GR, in which an actual background temporal flow is an illusion. The second relationship links Spinozistic time with current developments in physics; both seem to employ a strikingly similar explanation in regard to resolving the issue, in which the origin of time (alongside our perception of temporal flow) is described as stemming from an underlying, timeless structure. Spinoza pictures duration (alongside illusory time) as emerging from his inherently timeless and eternal framework of substance → attributes → modes,[12] while contemporary physicists have managed to model spacetime as emerging from an underlying, timeless quantum structure.

In the same sense that time is viewed as an emergent phenomenon, I interpreted Spinoza's thoughts regarding modes as having mind-independent durations as showcasing an analogous sort of emergence; the modes (and their respective durations), in this case, stem from substance, which is fundamentally timeless, and in physics we observe a similar relationship between the flow of time and mass-energy, in which the former is caused by the presence of the latter, in accordance with entropy and the Second Law of Thermodynamics—both the flow of time and mass-energy thereby stem from spacetime (in which matter exists), which itself emerges from the underlying, timeless quantum structure.

In summary, time, and our perception of temporal flow, seem to find their origins in a "timeless substance"—both in Spinoza's philosophical project and the framework of current physics—and I found it essentially remarkable that one of the most cryptic accounts of time in modern philosophy finds itself compatible with the very forefront of developments in physics.

[12] In this case, given that Spinoza describes time as a relational concept of motion, the existence of time thereby seems to specifically stem from the attribute of extension.

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Challenging the Issue of Political Authority: A Justification for the Coercive Nature of Governments Seen Through Mitigating Effects of Climate Change

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Political Philosophy, Environmental Ethics

For governments to exist and exercise authority over its people, citizens and their governments necessarily enter a social contract. That social contract typically reflects certain liberties being surrendered to a governing authority in exchange for protection of their remaining rights and services provided by the government. Governments in modern civilization have been structured to provide protections from crime and economic distress in return for taxation and obedience. This is best seen in the forms of law enforcement and social safety nets, which are recognized to promote the general welfare of societies. On the surface, the social contract appears to be a natural phenomenon, which establishes a perfectly infallible citizen-to-government relationship that forms a society where all subjects can adequately pursue their life goals. However, the social contract comes under scrutiny when citizens feel the government has not provided adequate protections for their lives, liberty, and property in return for what has been paid in taxation and the liberties that have been surrendered through obedience to legislation. Citizens also dissent from their role in the social contract as authorities begin to pursue coercive measures as a means of compliance, such as threat of imprisonment, or a stripping or diminution of rights to uphold their end of the contract without making any improvements to the protections and services that citizens have found to be inadequate.

Dissenters from the social contract argue that consent was never given to engage in this social contract in the first place, and the government has failed to uphold their end of the implicit bargain. Adherents argue that consent is given to a coercive authority by merely existing under that authority or engaging in the services or protections provided. This same school of thought holds that governments enable us to perform higher duties of justice than when we are without them. Although no one explicitly consents to the coercive nature of political authority, it is completely necessary for societies to innovate and prosper; this concept is seen all throughout the history of civilization.

In recent years the globalization of the world's economy and the rapid industrialization of many societies has been shown by scientists to be detrimental to our ecosystem and has, some say, put humanity on a fast track to extinction. Rapid global warming has been related to countless advents of modern self-destruction. Scientists have noted that these gruesome and terrifying effects of global warming are a direct result of human behavior that have become virtually irreversible. It is reasonable to assume that a chain of environmental catastrophes driving humanity to extinction and leaving planet earth uninhabitable is undesirable. From this it is fair to say that, per the social

contract theory, the governments under which we reside are responsible to protect us from an impending death caused by the destruction of our ecosystem.

Despite governments failing to prevent the current climate change crisis, and arguably creating circumstances that accelerated the crisis, governments' use of coercion to enact climate change mitigation to redress the current situation is justified and necessary. In this final paper I will challenge the claim that any political authorities' use of coercion is not justified through the collective action solution governments offer to ensure the greatest duty of justice: ensuring our species isn't annihilated.

In opposition to government-led efforts to mitigate global warming through authoritative means, a significant proportion of dissenters argue against measures that entail increased taxes and the curtailment of certain rights, such as the freedom to drill for oil. The main point of their dissent is the prioritization of personal freedoms over collective environmental considerations. In this view, individual rights are paramount, critics of political authority hold that government intervention, particularly through environmental regulations, encroach upon citizens' fundamental liberties. Additionally, dissenters assert that efforts made by non-profits and private groups are more effective than government initiatives, citing belief that these entities exist to be more agile and efficient in addressing environmental challenges than governments can. This opposition holds that individuals should retain autonomy to make decisions regarding environmental resilience without government interference. Additionally, there is a strong skepticism about the actual benefits of government measures, critics have expressed doubt that regulatory measures will effectively mitigate climate change.

But those dissenters are wrong. Ineffective regulation of the environment is the largest barrier to addressing climate change to the degree that's necessary for avoiding global catastrophe. Only governments are large enough to wield sufficient coercive measures to effect real change. Ensuring others' rights are protected, through mitigating the effects of climate change, requires creating and supporting a government. Buchanan's theory of a robust duty of natural justice is a limited moral obligation to help ensure that all persons have access to institutions that protect their basic rights,[1] this supports the need for government action, even if coercive. To fulfill their essential commitments to its citizens, and prevent our planet from killing us, governments of the world must

[1] Buchanan, James M, (1976) "The Justice of Natural Liberty," 703.

begin acting as a cohesive body to protect and regulate the environment as well as begin making major contributions to environmental protection research.

This can only be achieved through the collective action solution governments offer. Governments are the only authorities that can ensure the greatest duty of justice: ensuring our species isn't annihilated. Fulfilling this duty of justice requires entities that wield political power. The collective action of private individuals and non-profits has shown itself to be less effective than government policy. Because these non-governmental entities lack authority, the majority of their efforts to mitigate climate change tend to be small-scale and without coercive backing.

Governments are the only viable solution to this problem of climate change because they hold distinctive powers and capabilities, such as coercion, that non-governmental actors do not hold. Entities with no authoritative capabilities such as non-profits and tech-influencers may contribute to mitigating the effects of climate change through efforts of activism and sustainability. However, the impact of these entities will never amount to that of a government because a government can enable its citizens to achieve greater justice through coercive measures.

Five mass extinction events have occurred in the history of planet earth, four of which have been caused by climate change produced by greenhouse gas emissions. 252 million years ago: carbon warmed the planet by 5 degrees and killed 97% of life on earth, currently we are adding carbon to the atmosphere ten times faster than what was happening then.[2] Not only is failure to protect its citizens a breach of social contract, but it is also a direct impediment to humanity engineering an effective way to mitigate a catastrophe of our own making. The time period we exist in is the only period in planet earth's history where humanity wields the technology and collective power to prevent an extinction level threat posed by nature. Governments have authority in virtue of mitigating climate change, it is imperative that authority is exercised so that citizens and industries are compelled to perform higher duties of justice. Whether these authoritative measures be coercive or not, they are justified in virtue of mitigating climate change.

[2] Wallace-Wells, David, 2019, *The Uninhabitable Earth.*

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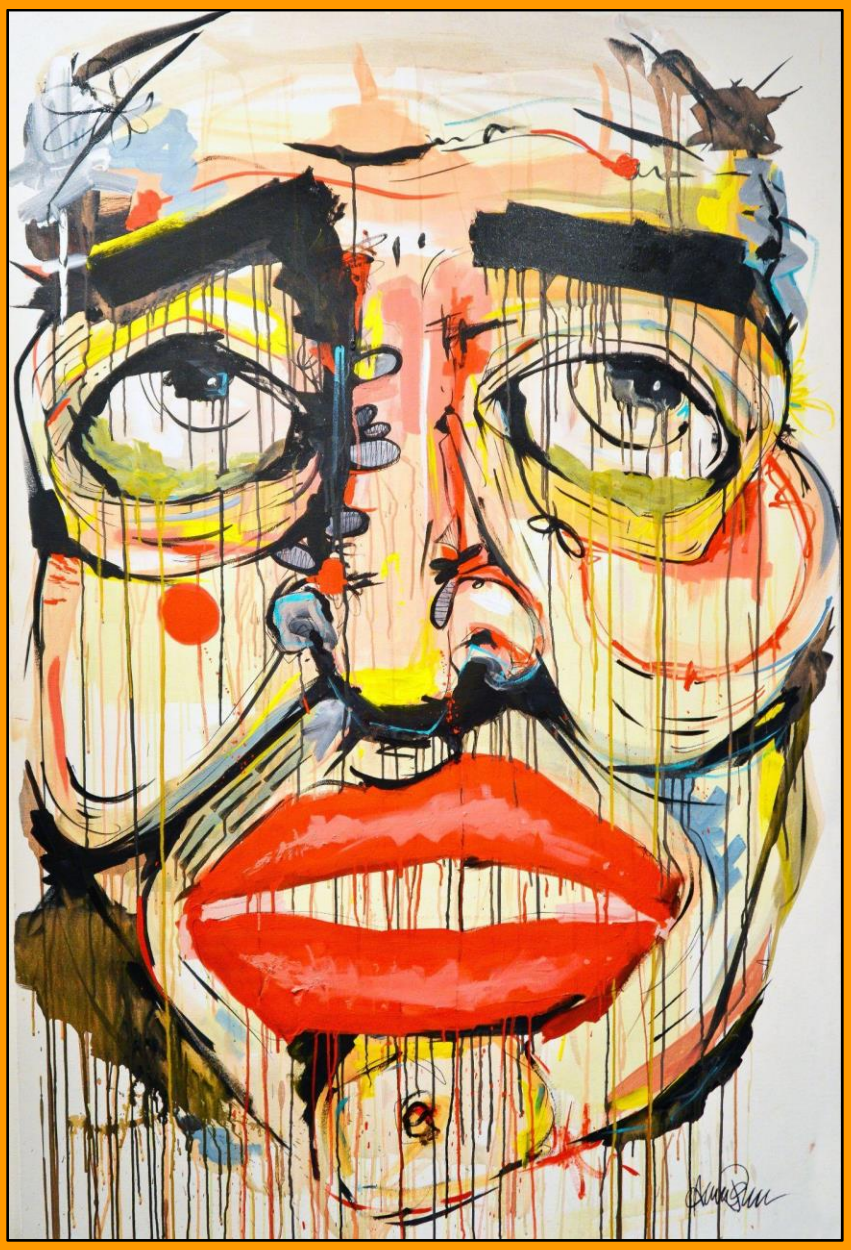

A Social Intuitionist Understanding of Dehumanization

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Ethics, Personal Identity

In "Dehumanization, the Problem of Humanity and the Problem of Monstrosity," David Livingstone Smith defines dehumanization as a process of regarding other humans as condemnable monsters. Though humans are endowed with an inability to commit violent acts towards other species members, dehumanizers can justifiably circumvent this inhibition and use violence to exploit out-group members for in-group gains. A component of this justification for violence concerns morality: dehumanized groups are not stripped of their humanity, but regarded as evil moral agents, deserving of "punishment for their moral failings" in the form of violence.[1] Yet, Smith does not elaborate on how dehumanizers specifically arrive at these moral evaluations of target groups. Jonathan Haidt's social intuitionist model of moral judgment explains how automatic, socially molded moral evaluations of target groups shape dehumanizing attitudes towards those groups. The social intuitionist model's 'reasoned persuasion link' explains the process of epistemic deference observed in dehumanization, the 'social persuasion link' explains the voracious spread of dehumanizing attitudes, and the 'post hoc reasoning link' defends the existence of parallel representations in the mind of the dehumanizer. The social intuitionist model fortifies Smith's claim that target groups do not need to be perceived as sub-human to be dehumanized and provides an explanation for how negative moral judgments can diffuse despite insufficient evidence.

The social intuitionist model of moral judgment, set forth by Haidt in 2001, is a counterproposal to the rationalist model of judgment. Moral judgment is the process of placing a person or action somewhere on the spectrum of morally commendable to morally condemnable, and the rationalist model posits that moral judgment is the product of deliberate reasoning. Haidt begins his counter to this claim by identifying two well-studied systems of human cognition: the fast, effortless, consciously inaccessible 'intuitive system,' and the slow, effortful, consciously deliberate, and logically driven 'reasoning system.' Haidt argues an eliciting situation first engages the intuitive system, triggering automatic moral judgments, and then engages the reasoning system after a judgment is made, as people feel inclined to provide a fitting verbal justification for their intuition. One becomes a "lawyer trying to build a case rather than a judge searching for the truth."[2] The verbal moral reasons we offer then influence the intuitions of other people. Haidt labels the four main steps of this process: (1) intuitions drive judgments in the 'intuitive judgment link' (2)

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[1] Smith, D. L. (2021) "Dehumanization, the Problem of Humanity and the Problem of Monstrosity" *Routledge Handbook of Dehumanization,* London and New York: Routledge. Page 2.

[2] Haidt J. (2001) "The emotional dog and its rational tail: a social intuitionist approach to moral judgment." *Psychol Rev. 2001* Oct;108(4):814-34. doi: 10.1037/0033-295x.108.4.814. PMID: 11699120. Page 3.

deliberate reasoning seeks to explain the intuitive output in the 'post hoc reasoning link' (3) the voiced moral reasoning of others is persuasive, causing us to adapt our intuitions in the 'reasoned persuasion link' and (4) even in the absence of persuasive language, others' voiced moral decisions subliminally mold our moral intuitions via the 'social persuasion link.'

The reasoned persuasion link of moral judgment provides a mechanism for the dominant role of epistemic deference in forming dehumanizing attitudes. Smith writes humans tend to epistemically defer matters of categorization to arbitrarily designated 'experts' (celebrities, politicians, religious leaders). In the case of dehumanization, nefarious political 'experts' may strategically disseminate fear-evoking ideas about target groups to terrify and thus mobilize their audience. For example, in Nazi Germany, leaders of the Third Reich exploited cultural stereotypes of Jewish people, depicting them as extremely scheming, intellectually-sophisticated enactors of evil: notably, this conception of dehumanization did not strip Jewish people of their humanity (and thus moral agency) but instead painted them as worthy of moral judgment by the audience. The social intuitionist model explains that moral judgment of others is a fast and automatic process of the intuitive system. Moral judgment is not reasoned but depends on immediate "attitude formation" which often recruits moral existing stereotypes of target populations[3] formed through cultural learning and observation. Haidt's "reasoned persuasion link" holds that the attitudes driving moral judgment have an inherent affective component to them, and one's opinion on what and who is moral is more easily influenced by others' voiced affective judgments rather than voiced logical reasoning. In Nazi Germany, 'experts' did not need to concoct logical antisemitic arguments to swiftly influence large populations. By voicing their own fears of Jewish malevolence, 'experts' sparked "new affectively valenced intuitions in the lister"[4] that undergirded negative moral evaluations and thus dehumanizing attitudes.

The social intuitionist model further explains the widespread contagion of dehumanizing mental states with the "principle of least effort" and the reasoned persuasion link. Haidt cites Shelly Chaiken's heuristic-systematic model of persuasion to demonstrate that humans prefer to reserve cognitive resources and often take others' word if it means taxing reasoning processes are evaded. When making moral evaluations, we are easily persuaded to agree with "the people I like"[5] and 'the people just like me' to avoid superfluous cognitive labor–this occurs regardless of the veracity of

[3] Haidt 12
[4] Haidt 10
[5] Haidt 12

another in-group member's moral claim–and is known as "the principle of least effort." Dehumanizers may not just make misinformed moral evaluations of target groups–they may sometimes override the judgment process and default to the opinion of in-group 'experts' and members. Moreover, the social persuasion link of the social intuitionist model accounts for the fact that people are highly sensitive to group norms, and even without explicit persuasion, "the mere fact that friends, allies, and acquaintances have made a moral judgment exerts a direct influence on others"[6]. The social persuasion link explains how even the person most resistant to epistemic deference has private moral intuitions that are sensitive to in-group norm shifts; their moral evaluations of target groups are still malleable, which explains how dehumanizing mental states and attitudes swiftly spread within populations.

A post hoc account of moral reasoning can account for dehumanizers' abilities to hold contradictory representations of dehumanizing targets. Smith attempts to address the concerns that dehumanizers regard targets as simultaneously human and subhuman, which skeptics deem logically impossible. Smith counters that it is a "psychological fact we are all able to entertain contradictory beliefs"[7] and writes the mind of the dehumanizer accomplishes this by "foregrounding humanity of the other and backgrounding their sub-humanity at some moments" only to shift the salient representation at other moments[8]. Smith concludes that because dehumanized targets do not fit into any one natural human or nonhuman category, the targets uncannily transgress natural category guidelines, and are thus viewed as monsters. While the monster proposal may provide an understanding of how dehumanizers grapple with contradictory representations, it does not elucidate the mechanism by which one representation is made more salient than another at a given time. Haidt's social intuitionist model of moral reasoning may provide a more thorough account of this cognitive ability. In matters of moral judgment, dehumanizers consciously view targets as humans to subject them to moral evaluation, while subconsciously applying absorbed negative sub and supra-human stereotypes in their automatic intuitive moral judgment: this is human foregrounding and subhuman backgrounding. When dehumanizers must justify their moral reasoning post hoc, which is the biased "search for arguments that will support the already-made judgments"[9] dehumanizers then seem to swing the pendulum, foregrounding the claims of the

[6] Haidt 10
[7] Smith 4
[8] Smith 4
[9] Haidt 9

target's sub-and supra-human abilities to solidify just how morally reprehensible targets are. If deliberate moral reasoning precipitated moral judgment, this may cause friction between two salient representations of targets as judge-worthy humans and threatening non-humans: a post hoc account of moral reasoning solves this issue.

One may retort that this social intuitionist portrayal of dehumanization depicts our evolutionarily derived moral intuitions as too easily corruptible. There is no way the illogical testimonies of arbitrary 'experts' and the voiced judgment-shifts of acquaintances could sway our innate morality to the extent that it motivates violent behavior. To this rebuttal I would reference Smith's recognition that there is often semantic confusion when it comes to discussing "dehumanization," and despite its frequent colloquial use and dilution, the dehumanization tactics that promote large-scale violence arise from large-scale political regimes. These regimes leverage *existing* cultural stereotypes to manipulate cultural thought and practice at every level of learning. Children are especially malleable targets for these dehumanizing lessons: Haidt writes that children shed their unpracticed moral intuitions and hone the culturally relevant ones when they are immersed in "custom complexes" and subjected to peer socialization[10]. The efficacy of Hitler Youth programs in Nazi Germany is evidence of the social intuitionist claim that "moral development is primarily a matter of the maturation and cultural shaping of endogenous institutions"[11]. Thus, a social intuitionist understanding of dehumanization does not claim there are no universal morals, or that humans are spineless moral beholders, but rather emphasizes the role socialization, culture, and fear have in pruning morality.

Smith's theory on dehumanization is fortified by the social intuitionist model of moral judgment. The intuitive judgment link, post hoc reasoning link, reasoned persuasion link, and social persuasion link contextualize the dehumanization theories of epistemic deference and contradictory representation maintenance. In his concluding remarks, Smith cites a future challenge of his work is finding a viable theory that can simultaneously address the psychological, cultural, and political realms that underlie the phenomenon of dehumanization. While Haidt's social intuitionist model only manages to comprehensively straddle psychological and cultural domains, it provides detailed mechanisms that corroborate each of Smith's claims.

[10] Haidt 24
[11] Haidt 26

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Denying Free Will and Punishing Suspects

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Theories of Justice, Metaphysics

This paper investigates the implications of rejecting free will for criminal justice. Many understand free will as the level of control agents must have over their actions to non instrumentally deserve blame/praise/reward/punishment for them. Thus, if we do not have free will, we must seek models of criminal justice that do punish/incarcerate criminals because they deserve it. For example, Gregg Caruso and Derk Pereboom's quarantine model argues that criminals threaten society and so our right to self-defence justifies incarcerating them. This paper contributes to Caruso and Pereboom's project by developing a specific, plausible account of what it means to be a threat. However, I argue that, on this account, non-criminals and mere suspects can qualify as threats because they can be significantly likely to do substantial harm in the future. Thus, I conclude that the quarantine model justifies harming mere suspects. Although this may make some hesitant to adopt the model, I ultimately support the quarantine model. After all, to pose a significant threat simply by being a suspect, one likely already possesses traits that warrant detention. Additionally, the quarantine model only justifies a rehabilitative, minimally harmful type of incarceration, ensuring that convicts are not significantly harmed.

Introduction

Free will is associated with the level of control agents must have over their actions to (non instrumentally) deserve praise, blame, rewards, or punishment for their actions.[1] Recently there has been a proliferation of views that hold that free will can hold neither under deterministic nor indeterministic laws of nature. Given the growing appeal of these arguments, we should consider the consequences of rejecting free will. By extension, we should take seriously the merits of optimistic skepticism, i.e., the view that rejecting free will, if it does not exist, is conducive to good consequences.

One objection to optimistic skepticism, posed by Saul Smilansky (1990, 2019) and John Lemos (2016), is that denying free will blinds us to the inherent, special wrongness of punishing non-criminals.[2] They start by recognizing that, without free will, no one can become more or less

[1] This is the most common understanding of the relationship between free will and the idea of being deserving of certain treatment based on our actions. It is also the understanding held by Smilansky, Lemos, Pereboom, Caruso and many more (see for an overview Caruso and Pereboom 2022: 20), so I take it as granted in this paper. For alternative understandings of these concepts and common objections, see Caruso and Pereboom (2022: 2-19).

[2] Optimistic skepticism is generally contrasted with illusionism, which is the view that, even if free will does not exist, we should maintain the belief in it to promote good consequences. Thus, an objection to optimistic skepticism can be seen

deserving of punishment through their actions. As such, both criminals and non-criminals are equally (un)deserving of punishment, so it seems as though we cannot recognize the inherent, special wrongness of punishing non-criminals. The inability to recognize this special wrongness may lead free will deniers to mistakenly see some policies that punish too many non-criminals as net-positives, which is a problem for optimistic skeptics since people tend to implement seemingly net-positive policies.

In response, optimistic skeptics have provided justifications for criminal justice that maintain the special wrongness of punishing non-criminals without relying on free will or desert. The most prominent justification is Gregg Caruso and Derk Pereboom's quarantine model, which justifies punishment/harm on the grounds that criminals pose a threat that we are justified in neutralizing out of self-defense.[3] Since non-criminals are not threats, it is especially wrong to harm them.[4] Thus, free will deniers have the tools to reject policies that too easily harm non-criminals.

This paper argues that justifying harm on the grounds of self-defense does *not* recognize the intrinsic, special wrongness of punishing non-criminals because evaluating someone as a threat does not require that they are, or ever would be, a criminal. Thus, the quarantine model may uphold the special wrongness of harming non-threats, but it does not uphold the special wrongness of punishing non-criminals.

However, I argue that the quarantine model's blindness to the special wrongness of punishing non-criminals is not particularly *bad*, and so it is not a problem for optimistic skeptics. On the theoretical side, this special wrongness is either unimportant or unrelated to free will denial. In either case, it is not a problem for optimistic skepticism. On the practical side, the quarantine model will rarely justify harming mere suspects, and when it does, it will not be particularly harmful to them. For these practical and theoretical reasons, I ultimately side with the optimistic skeptics, but I will begin by elaborating on Smilansky and Lemos's argument against them.

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as indirect support for illusionism. While I do not return to illusionism in this paper, this context may be helpful to some readers.

[3] The quarantine model's aim is to rehabilitate criminals, so the broader term "harm" may be more appropriate than "punishment," which typically implies desert. However, I sometimes use the term "punishment" to make it clear that I am talking about harm done by the criminal justice system, rather than all harm. Furthermore, for the purpose of this paper I consider incapacitation a kind of "harm" in that it limits inmates' freedoms.

[4] There are some exceptions to this, which I note in Section 3.

1. Against Optimistic Skepticism – From Denying Free Will to Punishing Innocents

A prominent concern for optimistic skeptics is that free will denial blinds us to the intrinsic wrongness of punishing non-criminals, misleading us in our moral evaluations of criminal justice policies. This concern is put well by Smilansky (1990, 2019) and Lemos (2016), who argue something like the following:

1. Everyone is born equally innocent (undeserving of harm/punishment) and only becomes guilty (deserving of harm/punishment) through their freely willed actions.
2. There is no free will (accepted by optimistic skeptics).
3. No one is guilty; everyone is equally undeserving of harm/punishment (from 1. and 2.).[5] [6]
4. Non-criminals and criminals are equally undeserving of harm/punishment (from 3.).
5. However, non-criminals *are* inherently less deserving of punishment than criminals (contra 4.) and so it is especially wrong to punish them.[7]
6. Since denying free will implies 4., and 4. contradicts 5., denying free will likely cause us to (wrongly) reject 5 in favor of 4.

C. Free will deniers, including optimistic skeptics, will see non-criminals as less undeserving of punishment than they really are (from 4., 5. and 6.).

In other words, free will deniers will see harming criminals and non-criminals as equally unjust (4.), even though harming non-criminals is a greater injustice (5.). As such, free will deniers will see policies that harm some non-criminals as less costly (morally speaking) than they really are.

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[5] Maintaining the notion of innocence while doing away with free will may seem dubious, especially to those who think that morality requires free will. However, Smilansky, Lemos, and optimistic skeptics agree that morality is *not* lost if we deny free will (Smilansky 2000, Vilhauer 2013, Caruso 2021, Caruso and Pereboom 2022). For Smilansky, deserving certain treatment based on our actions (a concept he refers to as "control-based desert"; 2019: 33, while Vilhauer refers to it as "action-based desert"; 2013) is only how we justify diverging from the pre-existing "moral baseline" – i.e., the kind of treatment morality prescribes to each person just because they are a person. Thus, the next question becomes what kind of treatment the moral baseline grants each person, and Smilansky believes that the baseline of innocence (i.e., each person being undeserving of punishment)[5]also has widespread appeal (2019: 33). The baseline of innocence is not objected to by optimistic skeptics, so I will take premises 1.-3. as generally agreed upon.

[6] Smilansky and Lemos's argument against optimistic skepticism can also be applied to those (such as Bruce Waller 2014) who reject moral responsibility and control-based desert (the kind of desert guaranteed by typical understandings of free will) directly, while maintaining a modified understanding of free will. This is because the concept of control-based desert is what allows people to become guilty (and diverge from the innocent baseline).

[7] Smilansky and Lemos consider this to be obvious (Lemos; 468, 473).

This will likely lead to some policies which are net-negatives falsely appearing to free will deniers as net-positives. Given the reasonable assumption that we implement policies that we consider net-positives, free will deniers will implement these bad policies, giving us good reason to doubt optimistic skepticism.

2. Self-Defence and the Quarantine Model

The dominant theory of criminal justice that is both compatible with denying free will and purportedly avoids Smilansky and Lemos's argument is Pereboom and Caruso's quarantine model. On this model, punishment is justified by the right to harm threats out of self-defense.[8] To demonstrate this justification's compatibility with free will denial, Caruso and Pereboom note that carriers of dangerous diseases are not considered deserving of harm. Nevertheless, we are justified in quarantining carriers out of self-defense and the defense of others. Similarly, we are justified in detaining threatening/dangerous criminals, even if they do not deserve harm/punishment for their crimes (Caruso and Pereboom 2022: 57; Caruso 2021: 185). Extending the quarantine analogy makes numerous prescriptions for the treatment of criminals. First, as fairness demands that we seek a cure for those we quarantine, fairness similarly demands that we seek to [9] rehabilitate those we incarcerate (Caruso 2021: 186).[9] Second, just as carrying a less dangerous disease justifies less restrictive measures, being a less threatening/dangerous criminal justifies less restrictive measures (such as monitoring behavior rather than incarceration: 195-186). In sum, the quarantine model justifies a criminal justice system that only identifies those who are threats as acceptable targets of harm (since these individuals can be subjected to harm out of self-defense),[10] and prioritizes their rehabilitation as the optimal means of defusing said threats.

However, if one focuses on the analogy to quarantine, as Lemos (2016) does, the quarantine model may seem to have immoral implications, casting doubt on optimistic skepticism. Lemos

[8] The right to harm out of self-defense (and defense of others) can be seen as guaranteed by the moral baseline or personhood-based desert. In other words, all persons deserve/possess the right to self-defense, just in virtue of being persons. As such, rejecting control-based/action-based desert does not call into question the right to self-defense.[9]Where Caruso uses the term "fairness," Smilansky might instead use the term "moral baseline" (i.e., what people deserve before they take any freely willed actions; 2019: 33).

[9] Where Caruso uses the term "fairness," Smilansky might instead use the term "moral baseline" (i.e., what people deserve before they take any freely willed actions; 2019: 33).

[10] This also prohibits scapegoating or framing non-threats for good consequences, since non-threats do not pose a danger to society.

argues: It is not true that in matters of public health we detain only those known to carry infectious disease. Rather, we also detain those who are likely carriers of the disease, as sometimes people may have a disease and spread it before showing symptoms. Thus, the quarantine model... allows for [the quarantine of those] likely to be criminals. (469)

In other words, we also quarantine *likely* carriers to protect ourselves. By analogy, the quarantine model seems to allow us to incarcerate those who are *likely* threatening criminals to protect ourselves (472). However, this kind of policy – where simply being a likely criminal is enough to warrant incarceration – constitutes a lowering of evidentiary standards to a mere preponderance of evidence, which seems deeply immoral. In fact, the lowering of evidentiary standards seems to exemplify the kind of policy that Smilansky and Lemos argued would only seem like a net benefit once free will denial blinds us to the special wrongness of harming non-criminals (469). Thus, the quarantine model seems to face the same objection of not sufficiently protecting innocents/non-criminals as described in Section 1.

In response, Caruso argues that the right to self-defense does not justify harming *likely* threats, and so the quarantine model can prohibit policies that too easily harm non-criminals, such as lower evidentiary standards. Caruso first states that the only harm permitted by the right to self defense is eliminative harm – i.e., where someone is harmed "to eliminate a threat they pose" (2021: 162, 194).[11] But when it comes to *likely* criminals, Caruso writes:

> The finding of facts remains extremely important since we need to know that we have correctly identified the person who is causally responsible for [a given crime]. This is the only way we can then proceed to judge whether the individual is a serious threat to society and if the right to self defense and defense of others justifies incapacitation. (318)

Combining this with the concept of eliminative harm, incarcerating those who are *likely* criminals creates a higher chance of non-eliminatively harming them, since there is a possibility that they are not threats (192-194). As such, the quarantine model can easily reject the lowering of evidentiary standards, since it would lead to more non-eliminative/unjustified harm (just free will believers reject lower evidentiary standards because it would lead to more undeserved punishment; Lemos: 468). Thus, the quarantine model seemingly helps optimistic skeptics maintain the special wrongness

[11] Borrowing from Tadros (2011), Caruso contrasts eliminative harm with manipulative harm. Manipulative harm is done to eliminate a threat that exists *beyond* the individual/group that is harmed. For example, quelling an angry mob by framing an unrelated innocent person is a case of manipulative harm, since someone is harmed to stop an effectively unrelated threat. However, the concept of manipulative harm is not important to my purposes.

of harming non-criminals by grounding this special wrongness on non-eliminative harm (which is compatible with free will denial), rather than on the idea that non-criminals are especially undeserving of harm (which is incompatible with free will denial).[12]

3. Threat Evaluation and Limited Information

To evaluate Caruso's argument that determining criminality (via high evidentiary standards) is "the only way we can judge whether the individual is a serious threat," we need a clear account of "threat." An account of "threat" is particularly important, as it may have implications for the difference between "actual threats" (those who can be justifiably/eliminatively harmed) and "likely threats" (where harming risks being unjustified/non-eliminative). Unfortunately, neither Caruso nor Pereboom provide a clear account, but I will argue that the best account of "threat" dissolves the distinction between "likely" and "actual" threats.[13] Consequently, harming those Caruso calls "likely" threats is just as likely to be eliminative as harming "actual" threats. Thus, harming both "likely" and "actual" threats can be justified on the quarantine model and so the model will justify lower evidentiary standards in these cases. I will unpack this line of reasoning by starting with what I believe to be the best account of "threat," which is:

> An agent *s* is a threat if there is a substantially high[14] likelihood that *s* will do substantial harm[15] in the future.

This account seems to be implied in Caruso's treatment of the following example:

> Imagine that someone has involuntarily been given a drug that makes it virtually certain that he will murder at least one person during the one-week period he is under its influence. There is no known antidote, and because he is especially strong, mere monitoring would be

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[12] To return to Smilansky and Lemos's argument, Caruso effectively modifies premise 5. to something like the following: "5. Harming non-criminals is uniquely non-eliminative, and so it is especially wrong to do so." This modified version of 5. does not contradict 4., and so optimistic skeptics can accept this modified version of 5.

[13] Lemos distinguishes between "likely"/"potential threats" and "actual threats" (2016: 473). Caruso distinguishes between "likely"/"potential threats" and "threats" (2021: 321). I join Caruso in calling the latter category "actual threats" for clarity.

[14] If our account of "threat" did not require a certain level of likelihood of future harm, then almost anyone could be harmed out of self-defense, since there is a very small chance that anyone might do substantial future harm.

[15] The harm must be substantial or else almost everyone could be a threat, since almost everyone has a high chance of at least doing minor harm in their lives. This also seems to be in agreement with Caruso and Pereboom's assertion that less dangerous people warrant fewer restrictions. Presumably there becomes a point where the danger someone poses is so minimal that no restriction is warranted.

ineffective. (2021: 293)

According to Caruso, this person, who I call Orange, *can* be considered a threat and so the "quarantine model may allow for [his] preventative detention" (Caruso 2021: 293). In fact Caruso considers this a perk of the quarantine model, as he notes that many share the intuition that we are justified in detaining Orange, even though he has not yet done anything to deserve detention by the time that he has taken the drug (2021: 293).

Of course, considering Orange as a threat implies an account of "threat" that requires neither intention (the example says nothing about whether Orange will spontaneously or intentionally commit his murder),[16] nor does it require any criminal history (the example says nothing about Orange's history before the one-week period). As such, it seems as though the only requirement to be a threat, according to an account that marks Orange as a threat,[17] is that one poses a substantial likelihood of doing substantial harm (murdering, in this case) in the future (over the one-week period).[18] Thus, an account that considers Orange a threat would seem to be something like the account I provide above.

After accepting "threat" as having a substantial likelihood of doing substantial future harm, we must ask how this likelihood ought to be evaluated. I believe incomplete information can be used to evaluate someone as a threat, as requiring complete information (such as the exact laws of nature that will govern the person's future actions) before evaluation is unworkable. Thus, there must be a point, short of acquiring complete information, at which we have done our "epistemic duty" and can justifiably evaluate someone as a threat. For example, consider Plum, who has with 100% certainty committed a murder. To evaluate Plum's likelihood of doing substantial future harm (i.e., to evaluate whether he is a threat), we should turn to the best resources available, such as analyses of general trends in crime, evidence gathered from Plum's previous crime, and psychological, economic, etc.

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[16] Orange demonstrates that prohibiting non-eliminative harm (as the quarantine model does) does not exactly make harming all non-criminals especially wrong. This is because some non-criminals, such as Orange, can still be threats and so they can still be eliminatively harmed. However, since many believe it is acceptable to detain Orange until he is no longer a threat, I do not think this is a significant drawback of Caruso's response to Lemos.

[17] Understanding "threat" as independent of intentions and past crimes also fits how we apply the word to non-persons. For example, a forest fire threatens a nearby town despite the fire having no intentions and having committed no crimes. Orange seems to pose this kind of threat that is independent of intentions and past crimes.

[18] One might suppose that being certain to do future harm is required to be a threat. However, if the laws of nature are indeterministic, this certainty may be rare. Since Caruso, Pereboom, and the quarantine model are agnostic on whether determinism or indeterminism is true, their account of "threat" should be compatible with indeterministic laws. Thus, we should not require that someone will certainly do substantial future harm to evaluate them as a threat.

evaluations of Plum.[19] Of course, these resources are fallible, and they may become more accurate as more time, money, and energy is put into evaluating Plum. Nevertheless, there comes a point, short of having complete information, where we have learned enough about Plum (i.e., where we have done our "epistemic duty") and can thus estimate the likelihood with which he will do substantial future harm. Suppose we conclude that there is a 55% likelihood of Plum committing another murder. I think most would agree that Plum has a substantially high likelihood (55%) of doing substantial future harm (murder), and so on my account he is a threat (and thus can be eliminatively harmed out of self-defense).

Unfortunately, allowing incomplete information to factor into threat evaluation will imply that mere suspects can also be threats and can be harmed out of self-defense. For example, suppose there is a string of murderers where the evidence suggests that a single serial killer was behind each of them (perhaps each of the victims were of the same ethnicity and gender, and were each found next to a note reading "1/10," "2/10," etc.). Furthermore, suppose that it is clear from the evidence that the murderer will seem like a non-violent, onthreatening person (perhaps the evidence indicates that the killer works a social job, suggesting that the murderer may be able to hide the hatred that drove them to kill). Finally, suppose that the evidence suggests that the murderer will nevertheless kill one more random person with 100% certainty (while the evidence is unlikely to generate this degree of certainty, my argument only requires that the likelihood future harm is very high – 100% was chosen for simplicity). After investigators follow all available leads, the evidence points to a man named Apple as the prime suspect.[20] Apple demonstrates no violent tendencies but the evidence, exclusively built on physical similarities to descriptions of the killer and Apple's location at the time of the murders (and perhaps also that Apple and the killer both work social jobs), provides a 55%

[19] This epistemic duty is different from typical evidentiary standards, such as requiring evidence of guilt beyond a reasonable doubt. The epistemic duty in question here is a minimum of how many resources we ought to put into finding evidence and interpreting whether it makes someone a threat. Conversely, evidentiary standards as they are currently understood in criminal law dictate the minimum amount of evidence (pointing towards a suspect having committed a crime) required to convict someone. Thus, the continued importance of the former kind of epistemic duty is not the same as the continued importance of the kind evidentiary standards that aim at ensuring that only criminals are harmed.

[20] My argument could instead use an example that is more precise, but somewhat science fiction. For instance, suppose there is a pill that will cause someone, sometime after consuming the pill, to kill one person. Additionally, the pill ensures that whoever consumes it will seem completely normal and non-threatening (especially because the pill is completely undetectable once it begins to affect the human system). Obviously, this pill is dangerous, and so the government tracks its location with a precise GPS that could only ever lose the location of the pill once a human consumes it. However, the GPS has lost the location of the pill. Based on shaky circumstantial evidence (such as his location at the time the pill's location was lost), Apple is suspected to have consumed the pill with a 55% certainty. However, besides investigating his past (such as his location when the pill was lost), investigating Apple in the present would be futile, since there is no way of knowing whether he is being affected by the pill.

likelihood that he is the killer. Thus, given the information we have (especially that the killer will commit another murder with a 100% certainty), there is a 55% likelihood that Apple will commit one more murder.

Furthermore, it seems unreasonable to look for any more evidence, as there are no more leads (all potential eyewitnesses have already been interviewed). Of course, investigators could keep searching for new evidence, but this seems at least as futile as running endless psychological tests on Plum (especially since we know that the killer will likely be able to hide their hatred/motives, creating a limit on the usefulness of psychological tests). Thus, in the case of Apple, it seems that we have also fulfilled our epistemic duty and so we can now evaluate whether Apple is a threat. In this case, the mere suspect Apple has the same likelihood (55%) of doing the same harm (murder) as the confirmed murderer Plum. Since most would consider Plum a threat (after exhausting all leads), it follows from my account that, after exhausting all leads on Apple, he is equally threatening.[21] Thus, on the most plausible account of "threat," Apple and Plum are equally threats (and can equally be eliminatively harmed), even though Caruso and Lemos would consider Apple merely a "likely" threat. Thus, Apple and Plum are equally acceptable targets of harm out of self-defense.

Overall, the examples of Plum and Apple indicate that, once we have collected a reasonable amount of evidence, incomplete information about an agent's future (in the case of Plum) *or past* (in the case of Apple and other mere suspects) will factor into our predictions of an agent's future actions. However, since agents' future actions (and the harm they do) is all there is to evaluating someone as a threat, both mere suspects and known criminals can both be threats. In this light, Caruso's previous attempt to characterize mere suspects as likely threats seems flimsy because, on the best account of "threat," being a likely threat just means being likely to have another given likelihood. These likelihoods can be multiplied together and reduced to one likelihood. Thus, "likely" threats are reduced to (definite) threats or not threats, depending in part on whether the final likelihood is substantial or not.[22] By extension, "likely" threats (including mere suspects) can be reduced to acceptable targets of harm out of self-defense. As such, the quarantine model justifies harming mere suspects (even if just to rehabilitate them), and so it does justify lower evidentiary

[21] Apple would also have the same likelihood if there was a 61% chance that he is a serial killer who will murder again with a 90% likelihood – this is why my argument does not rely on the 100% certainty I have used in my examples.
[22] For example, if there is a 50% chance that Person A has a 50% of being a good person, then there is a 25% chance that Person A is a good person. Similarly, if there is a 50% chance that Person B has a 50% chance of doing substantial future harm, then there is at least a 25% chance that Person B will do substantial future harm. At this point, it can be debated whether 25% is a substantial likelihood, but that will determine whether Person B is a threat or is not a threat (being a "likely" threat is no longer an option).

standards (at least when suspects are sufficiently threatening).

One may object that the probabilities of Plum and Apple doing substantial future harm are not the same kind of probability. More specifically, one may note that the likelihood of Apple being a murderer is created by a lack of knowledge about who he is. In other words, the probability is measuring whether our beliefs align (about Apple) with the world – call this epistemic probability. Conversely, Plum's likelihood is generated by future events being random. This is not a probability of whether our beliefs are true, but instead it is a kind of probability that reflects chanciness in the world itself – call this objective probability. Thus, Plum and Apple's likelihood of committing substantial future harm may seem equal, but they are of fundamentally different kinds. Next, one may argue that we are justified in incarcerating Plum because his overall likelihood of doing substantial future harm is constituted by objective probability, whereas we are not justified in incarcerating Apple because his is constituted by epistemic probability. However, this seems mistaken because both Apple and Plum's overall likelihoods are constituted by epistemic and objective probability.

On one hand, Apple's overall likelihood being constituted by epistemic probability cannot prohibit us from eliminatively harming him, as Plum's overall likelihood is also constituted in large part by epistemic probability. This is evident from the fact that, in everyday life our knowledge is extremely limited, which frequently generates epistemic probabilities. For example, if Plum's criminal psychologist says "Plum will murder again if his alcoholism relapses – I'd give that a 60/40 chance of happening," they clearly are not claiming to know that the laws of nature generate this objective probability. Instead, their limited information generates a probability that their belief will not be true (40% specifically). Thus, the prevalence of epistemic probability in everyday life cannot be grounds for prohibiting eliminative harm.

On the other hand, there seems to be no reason why Plum's overall likelihood containing some objective probability would make eliminatively harming him more justified than eliminatively harming Apple. After all, if the laws of nature allow for objective probability (if some of the laws of nature are indeterministic/chancy), then this would apply to Apple and Plum. Thus, both Apple and Plum's overall likelihood would be constituted in small part by objective probability. Overall, it seems as though Apple and Plum's likelihood of doing substantial future harm are equally capable of making them a threat.

At this point, we can return to Caruso's response that "know[ing] that we have correctly identified the person who is causally responsible for [a given crime]… is the only way we can…

judge whether the individual is a serious threat to society" (318). If my argument is correct, we do not need to know beyond a reasonable doubt whether an agent is causally responsible for a crime to know, beyond a reasonable doubt, that they are a threat. All we need is to have gathered enough information to have done our epistemic duty and that, from this information, the agent seems substantially likely to do substantial future harm. Thus, while it is especially wrong to harm non threats, many mere suspects (and by extension, many non-criminals) can still be threats. Consequently, the quarantine model does not recognize the special wrongness of harming non criminals, and fails to rebut Smilansky and Lemos's original argument that free will deniers cannot recognize this moral fact.

4. The False Problem of Punishing Suspects for Optimistic Skeptics

I have argued that Caruso's attempt to limit the quarantine model to harming those who are criminals (beyond a reasonable doubt) is inadequate because it uses a distinction between threats and "likely" threats that is undermined by the best account of "threat." However, the resulting lower evidentiary standards must be a *bad* outcome to threaten optimistic skepticism, and there are reasons why this may not be the case (although I can only cover a few here).

First, our methods of predicting violent tendencies, besides looking at past criminal behavior, create serious moral concerns. Along these lines, Caruso argues:

> "[S]ince the available psychiatric methods for discerning whether an agent is likely to be violent… are not especially reliable and are capable of producing false positives, we should adopt an attitude of epistemic skepticism when it comes to judging the dangerousness of someone who has not committed a crime" (2021: 320).

In other words, the resources we are limited to in our assessment of whether non-criminals and mere suspects are threats (i.e., psychiatric tests) are on average less reliable than the resources available for our assessment of criminals (including their past crimes). While, the above passage is working with a different understanding of "threat" than my own, it remains true that threats whose past is not clearly criminal (i.e., non-criminals, mere suspects) are more likely to not be threats *if* we had greater information about them (when compared to equally threatening known criminals) because our methods of assessing them are less reliable.

Additionally, if it is wrong/bad to harm a person when complete information would reveal

them to not be a threat (which does seem intuitively tragic) then the obligation to avoid this kind of "mistaken harm" provides a reason to avoid harming non-criminal threats and mere suspects. Thus, optimistic skepticism and the quarantine model may justify harming fewer non-criminals and mere suspects than one might think at first.[23] [24] Second, I have argued that the quarantine model justifies harming mere suspects only when they pose a threat. However, there is good reason to believe that *mere* suspects rarely pose a threat. For instance, if one is merely suspected of being an "ordinary murderer," there is both a good chance that the agent is not the murderer and, even if they are, there is also a good chance that they will not murder again (since many murderers do not murder again). Thus, it is plausible that most mere suspects of ordinary murder are unlikely to be a threat. Conversely, few crimes (such as the one Apple is suspected of) suggest that the criminal will reoffend with certainty, and so simply being a mere suspect will rarely result in one being a threat.

Additionally, whoever is really behind the serial murders (in my example where Apple is the prime suspect) is stipulated as showing no violent tendencies. While I largely included this to keep the example simple (it neatly explains why evaluating Apple in the present is insufficient to settle whether he is the killer), it seems unlikely in the real world. Instead, mere suspects are likely to be suspects also because evaluations of them in the present indicate a tendency for violence (independently of whether they committed a crime in the past). For example, in the real world we might suspect Apple of being the killer not only because he was at a specific location at the time of the murders, but also because he has demonstrated violence/bigotry towards the ethnicities of the victims. Regardless of whether Apple is the killer, these traits independently suggest a likelihood that Apple will do substantial future harm. Thus, in the real world, some mere suspects may pose a threat

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[23] In fact, harming mere suspects is morally risky for multiple reasons besides the unreliability of psychiatric assessments. As I have discussed in previous versions of this paper, suppose that we want to avoid harming someone out of self-defense who, if we had complete information about them *at the current time*, we would know that they would not do substantial future harm. Call this kind of harm "realistic mistaken harm." Next, consider the fact that, for two equal threats who are equally likely to commit one murder in the future, there is a possibility that they will *not* commit one more murder. For a threat who is a known criminal, this possibility in part represents the chance that the world is governed at least in part by indeterministic laws of nature *and* indeterminism creates a chance that the agent will not commit another murder. However, for mere suspects, such as Apple, future indeterminism will play a smaller role in the chance that they will not commit a murder in the future. This is because the uncertainty of whether they will commit a murder in the future comes more from a lack of information about their past. Thus, more of the uncertainty around mere suspects would be eliminated by complete information about the past and present. Consequently, harming mere suspects out of self-defense is more likely to be realistically mistaken than harming equally threatening known criminals. If we want to avoid realistic mistaken harm because we think it is morally wrong, then it constitutes an additional reason why harming mere suspects is more morally risky than harming known criminals.

[24] Of course, it would be impractical to require that mistaken harm be avoided beyond a reasonable doubt, as criminals like Plum still have a substantial chance – 45% – of being mistakenly harmed. Thus, mistaken harm does not allow optimistic skeptics to prohibit the harming of all non-criminal threats.

because they are similar to Orange – because they have a potential for future harm that is independent from any criminal past. Since we found it acceptable to harm Orange out of self-defense, the same should go for mere suspects who also display independently threatening behavior.

Finally, if we are to convict some mere suspects under the quarantine model, they will be treated much better than convicts currently are. As I described earlier, the quarantine model only justifies treating convicts as harshly as is needed to rehabilitate them. Furthermore, pointless labor, humiliation, and isolation are counterproductive to rehabilitation (Caruso 2021: 168). Thus, the quarantine model focuses on less harmful techniques, such as medical treatment, community service (342), and therapy (290-291). Not only are these methods less harmful, but test whether a convict is still (or ever was) a threat. For example, consider the scenario where a mere suspect is convicted, even though complete information would have revealed that they have never committed a crime and, if let free, they never would. After a few months of therapy, it may become clear that this mere suspect is extremely unlikely to do substantial future harm because they show strong self-control, a respect for the law and the wellbeing of others, etc. Under the quarantine model, they ought to be pardoned because they have been discovered to not be a threat. Thus, the very harm/treatment that the quarantine model prescribes also serves as a repeated investigation into whether the harm is unnecessary and ought to be stopped. As such, the quarantine model will not be particularly harmful to its convicts and will even work towards ending wrongful convictions.

Overall, the worry that denying free will and adopting the quarantine model will lead to bad outcomes (outcomes that are blind to the special wrongness of harming non-criminals, such as lower evidentiary standards) is less pressing than Smilansky and Lemos make it seem, since it will harm few mere suspects, and it will not be particularly harmful. This being said, I believe optimistic skeptics can also object to the assertion that there is an inherent wrongness to harming non-criminals, and that denying free will leaves us blind to it. Recall that Smilansky and Lemos argue that, because everyone is equally undeserving of harm/punishment if we deny free will, then denying free will leaves blind to the special inherent wrongness of harming/punishing non criminals. In brief, this blindness will likely lead to bad consequences, such as policies that harm too many non-criminals (such as lower evidentiary standards). However, I believe that the source/details of the special wrongness of harming non-criminals (premise "5." in their argument) will indicate whether optimistic skeptics can or ought to recognize 5. and, by extension, whether the quarantine model's (in)ability to recognize 5. is actually bad.

First, consider the implications of 5. being fully independent of whether free will exists. If

this is the case, then it is possible for 5. to be true while free will is false. As such, we could both deny free will and affirm 5. Thus, there is no clear reason why denying free will should blind us to 5., since they would not be mutually exclusive. Thus, free will not existing would not lead to bad outcomes since there is no clear reason why its non-existence would blind us to the free will independent moral truth of 5. While Caruso, Pereboom, and other optimistic skeptics have not yet explained why 5. is true, this does not mean that they cannot. In fact, if 5. is fully independent of free will and 5. is *prima facie* true (the latter of which Smilansky and Lemos assert), then optimistic skeptics/free will deniers could similarly recognize this moral fact without further explanation. Thus, the quarantine model can state something like this: "We are justified in incarcerating/harming those who are threats out of self-defense (just as we are justified in quarantining the dangerously sick). However, we are not justified in incarcerating threats who are not criminals because that is *prima facie* wrong." Overall, 5. being fully independent of the existence of free will is not a problem for optimistic skepticism.

Next, consider the implications of 5. being dependent on free will existing (in conjunction with free will being false, as is the assumption of the debate). If 5. being true depends on free will being true, then free will being false also makes 5. false. As such, there would be no reason why we ought to believe 5. and so free will deniers' supposed inability to recognize 5. is not morally significant. To make a stronger claim, believing 5. would mean holding a mistaken moral belief (akin to believing in the special wrongness of harming anyone whose name ends in "p") and so, insofar as we ought not to hold mistaken moral beliefs, optimistic skeptics actually *ought not* to believe 5. Using Smilansky and Lemos's argument, someone who believes in 5. would be too *un*willing to harm non-criminals, since they cannot recognize that harming non-criminals is not intrinsically more wrong than harming criminals. Thus, 5. being dependent on free will is not a problem for optimistic skepticism, as, even if they cannot recognize 5., doing so would have no moral importance if free will does not exist.

Overall, the source of 5. threatens to neutralize Smilansky and Lemos's argument.[25] Either 5. being independent from free will makes the idea that free will blinds us to 5. unfounded; or 5. being

[25] I only argue that the source of 5. *threatens* to neutralize Smilansky and Lemos's argument because Smilansky may argue that 5. is truly independently of free will, but a belief in free will (even if it is false) is the only means by which we can recognize 5. – Smilansky's views of "illusionism" and "fundamental dualism" may open the possibility for this kind of argument (2000, 2011). Since I cannot address these views here, I will simply note that, if they are needed to fully explain why 5. is important/true, then the argument given by Smilansky 1990, 2019 and Lemos 2016 (and the one I reconstruct in this paper) is incomplete and not a convincing problem for optimistic skeptics. Instead, optimistic skeptics would need to accept Smilansky's other views for this argument to be convincing.

dependent on free will makes 5. false (within the context of optimistic skepticism and free will denial). As such, the quarantine model's potential to punish/harm non-criminals/suspects is either avoidable or not bad, respectively. Thus, Smilansky's argument does little to convince the optimistic skeptic that a *bad* outcome is likely if we deny free will.

Conclusion

If this paper is correct, the quarantine model does justify the harming/incarcerating of some mere suspects, since mere suspects can be threats. However, this is not significant issue for optimistic skepticism because the quarantine model justifies harming very few mere suspects, it will not harm them as much as one might expect, and the special wrongness of harming non-criminals (which harming mere suspects risks) does not seem important once one rejects free will. I believe the broader takeaway is that, to convincingly oppose optimistic skepticism, one's argument cannot assume the existence of moral facts (such as non-criminals being inherently especially undeserving of harm) that may rely on agents having free will.

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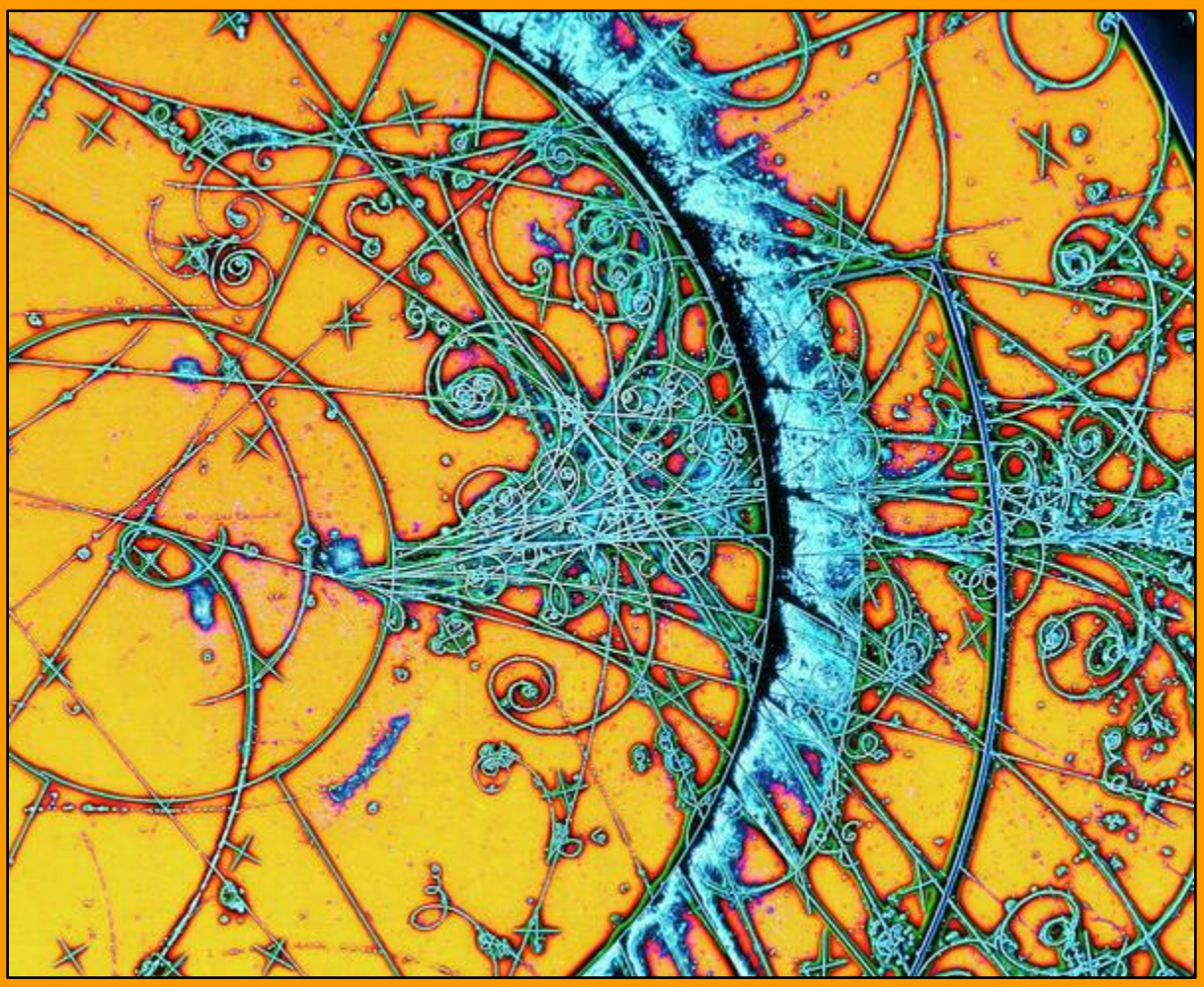

We Don't Have to Know What It Is: On the History of Physics and the Future of Metaphysics

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Metaphysics, Ontology

In a 2011 talk on Isaac Newton and philosophy of mind given at the University of Oslo, Noam Chomsky observed, "There hasn't been any concept of 'physical' for hundreds of years. [...] The physical these days are things that Newton would have regarded as total absurdities."[1] This essay illustrates the historical and metaphysical contingency of our concept of the physical by comparing 19th-century work on energy with the natural philosophy of earlier centuries as well as with modern physics. Section 1 briefly summarizes the historical context surrounding James Joule's 1847 argument for the mutual convertibility of natural powers, paying special attention to its metaphysical motivations and challenges. Section 2 contrasts the concept of the physical developed by Joule and his contemporaries with earlier, Cartesian and Newtonian notions of mechanical physics. Conversely, section 3 contrasts Joule's energy-conservative concept of physics with our modern notion of 'physical' spacetime. Finally, section 4 considers the implications of this history for contemporary philosophy of science: Over time, physics has become more predictively powerful at the same time as it has become less tangibly 'physical'.

1 - ENERGY

By the time of Joule's pivotal 1847 lecture at St. Anne's Church School in Manchester, the interrelatedness of diverse natural powers was well established.[2] Examples of this experimental work include Humphry Davy's on the connection between chemistry and electricity, Michael Faraday's on electricity and magnetism, and Sadi Carnot's on mechanical work and heat. Although Joule himself had helped establish the relationship between heat and work, his task at St. Anne's was not so much to convey experimental results as it was to weave them into a unifying vision of Nature. In this address, Joule identifies familiar phenomena including the behavior of shooting stars, the cycle of air between oceans and forests, and the physiology of the human body each as manifestations of the interconvertibility and indestructibility of natural powers.[3] He takes God's unique sovereignty over Nature as "decisive", *a priori* evidence of this indestructibility.[4] Joule's empirical arguments at St. Anne's function primarily as scaffolding to support his theological and metaphysical convictions.

Joule's philosophical interpretation of the empirical results of the early-mid 19th century met theoretical resistance. Faraday, for example, was familiar with Joule's experiments and shared his

[1] Chomsky, "The Machine, the Ghost, and the Limits of Understanding."
[2] Bowler and Morus, Making Modern Science.
[3] Joule, "On Matter, Living Force, and Heat," 78-88.
[4] Joule, "On Matter, Living Force, and Heat," 78-88.

theological faith in the indestructibility of natural powers; but Faraday interpreted these considerations as evidence merely of some conserved quantity, not actual conversion between powers. Similarly, Carnot's conclusion was that caloric (ie, heat) is conserved as it generates work by moving from a hot to a cold body – not that caloric material literally becomes mechanical work. Indeed, for Faraday, such literal becoming would itself constitute a heretical destruction of heat. These metaphysical disagreements reflected real conceptual ambiguity and were significant in shaping our eventual understanding of energy.[5]

Into this metaphysical ambiguity entered William Thomson (aka The Lord Kelvin). Thomson was the first natural philosopher to develop 'energy' as a specific, quantitative term used to describe the conservation of natural powers. Interpretively reconciling Carnot with Joule (by siding largely with the latter), he provided an influential formulation of the first law of thermodynamics: conservation of energy. Thomson viewed his nascent dynamics of heat and energy as even more foundational to Nature than Newtonian force. Not everyone was sympathetic to this theoretical synthesis, however. John Herschel, for instance, saw energy merely as a convenient mathematical device with insufficient tangibility to usurp concrete, 'physical' forces.[6]

The eventual ascent of 'energy' as a unifying concept illustrates the importance of metaphysics to our evolving understanding of physics. Joule's experimental verification that the "living force" of a given motion correlates with a predictable temperature increase was not enough to establish the indestructible unity of energy.[7] Instead, Joule and his contemporaries – much like the Newtonians who came before them – had to rely as well on philosophical arguments to legitimize their new notion of the physical.

2 - MATTER

Herschel's focus on the unique tangibility of Newtonian force is ironic given Newton's own departure from the earlier, Cartesian vision of physics. The material 'body' of Descartes' original mind/body problem is 'physical' in a stricter sense than of Newton's time – let alone Joule's or our own. There is no *vis viva* in Cartesian matter. The world's "quantity of motion" is conserved only by the immutability of God Himself.[8] Descartes dedicated much of his mechanical philosophy to

[5] Bowler and Morus, Making Modern Science.
[6] Bowler and Morus, Making Modern Science.
[7] Nature Physics, "A century of correct predictions," 415.
[8] Descartes, "Part II: Of the principles of material objects," 39-69.

demonstrating that the new science could do without the occult powers of Renaissance Naturalism; he conceived of diverse phenomena – including magnetism and celestial motion – in terms of direct collisions between tiny, vortexical particles.[9] To the students of this mechanical tradition, treating interactions between material bodies as inanimate impulses – imparted by direct, 'physical' contact – empowered the rational mastery of Nature.

Unlike Cartesian collision forces, the attractive forces of Newton do not require 'physical' contact. Newton's system of the world revises material bodies by endowing them with the property of mass, which exerts universal force at a distance. Thus he envisioned a unification of celestial motion with all the phenomena of physics. This theoretical generalization, despite its predictive success, was seen by some scientists of the time as insufficiently 'mechanical'. European 'continental' philosophers, in particular, saw in Newton an unfortunate return to Renaissance occultism.[10]

Newton's universal force attraction and Thomson's law of energy conservation are both unitary mathematical generalizations. In both historical cases, the metaphysical implications of these abstract devices were controversial. In both cases, resistance was articulated along the lines of insufficient 'physicality'. In order to defend their new physics against Newtonian prejudices, Thomson, Joule, and their contemporaries developed more concrete accounts of energy theory.[11] For example, James Clerk Maxwell recast the electromagnetic æther in terms of tiny, mechanical vortices reminiscent of Descartes.[12] This articulation of the æther was Maxwell's attempt to ground the new science of universal energy in a material substance.[13] In this way, he both paid homage to the earlier mechanical tradition and stepped further into the unknown future. Alas, the conceptual success of the æther turned out to be temporary.

Before discussing the famous demise of the æther, we have already observed two distinct shifts in 'physical' ontology: from Descartes' impulsive collisions to Newton's distantly attractive forces, and from Newtonian mechanics to the 19th century's emphasis on an all-pervading energetic medium. This medium may have been treated in self-consciously material terms at first, but its predictive power only ascended to modern heights when it became substrate-independent.

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[9] Westfall, "The Mechanical Philosophy," 25-42.
[10] Guicciardini, "Natural Philosopher, 1684–1695," 143-179.
[11] Bowler and Morus, Making Modern Science.
[12] Descartes, "Part II: Of the principles of material objects," 39-69.
[13] Bowler and Morus, Making Modern Science.

3 - SPACETIME

The luminiferous æther was the last of the fading subtle fluids of 19th-century physics.[14] When the influential Michelson-Morley experiment of 1887 at last ruled it out, the energetic medium of electromagnetism had to be recognized as some sort of subtle field. Light and related phenomena must somehow be able to operate in the absence of matter.[15] As surprising as this result was at the time, Maxwell's electromagnetic equations nonetheless enabled enormously successful empirical predictions. Preserving the predictive power of fields without casting them as 'nonphysical' turned out to require a radical revision of matter, energy, space, and time.

By taking the fixed speed of light as an axiom, Albert Einstein eliminated the need for æther even in principle. Within around the last century, his theories of special and general relativity have once again utterly recast 'physical' reality. Gravity is now understood as a manifestation of the curvature of four-dimensional spacetime, which defies Newtonian notions of absolute time and space. Einsteinian relativity goes far beyond the Renaissance relativities of Galileo and Descartes, describing a world wherein simultaneity itself is relative. Perhaps most well-known of all his accomplishments, Einstein's celebrated $e=mc^2$ establishes the fundamental equivalence of energy and matter.[16]

This grand resynthesis of the basic constituents of physics surpasses the imaginations of Maxwell and Herschel alike. Joule would be puzzled as well. At St. Anne's, he called the idea that matter might be convertible into energy "too absurd an idea to be entertained for a moment."[17] Despite this, relativity is recognized today as among the most well-verified empirical theories in the history of physics.[18] As with prior redefinitions of 'physical' reality, these predictive gains come with losses in sheer 'physicality'. The material bodies of the 17th century can be directly touched; the forces of the 18th century can be physically felt; and the energies of the 19th century can be measured; but the curved geometry of spacetime can only be understood with great difficulty – not to mention wrinkles from related quantum developments! One wonders whether Joule, who experimented manually with mechanical paddleboard devices, would consider modern physics sufficiently tangible.

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[14] Harman, "The Context of Physical Theory," 12-44.
[15] Perkowitz, "Relativity | Definition, Equations, & Facts."
[16] Perkowitz, "Relativity | Definition, Equations, & Facts."
[17] Joule, "On Matter, Living Force, and Heat," 78-88.
[18] Joule, "On Matter, Living Force, and Heat," 78-88.

4 - MIND

In a 1935 letter to Erwin Schrödinger, Einstein wrote, "Physics is a kind of metaphysics."[19] Today, empirical threats to the 'physical' paradigm of the 20th century include results from quantum mechanics, cosmology, and even psychology. Astronomically distant interactions between fundamental particles defy Einstein;[20] and the increasingly epicyclic absurdity of 'dark matter' challenges our understanding of the very origins of spacetime.[21] Even more radically, refinements upon Thomas Young's infamous double-slit experiment – originally performed in 1801 – spark still-unresolved debates around the potentially causal role of observation itself.[22] The idea that *res extensa* could basically depend at all on *res cogitans* shakes physics to its Cartesian core. More radically still, there is a century's worth of statistical evidence that (at least some part of) the mind might survive 'physical' death.[23] Despite all this, once again, there is considerable philosophical resistance to 'metaphysical' considerations such as these.

Perhaps we need what 21st-century philosopher of science Matt Haber has called *scientific metaphysics*:

> If our current metaphysical tools have difficulty adequately accounting for [empirical observations] then the proper response is to develop new metaphysical tools, not constrain the science. The latter leads to irrelevance. Better to consider the former as a research problem for the scientifically informed metaphysician.[24]

Of course, just what counts as legitimate observation in physics is partially what's at stake now. Is it possible to scientifically observe mind/body interaction? I suspect we must devote more attention to the metaphysics of measurement. Our brief survey of the history of energy physics provides us with one more clue on this lingering theme.

In his 1847 lecture, Joule describes the numerical relationship between phase transition and heat in water.[25] The plateaus in temperature increase around freezing and boiling are evidence for the chemical conversion of heat into molecular energy. This argument would have been impossible

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[19] Giovanelli, "'Physics is a kind of metaphysics'," 783–829.
[20] Davour, The Nobel Prize in Physics 2022.
[21] Frank and Gleiser, "Is there a crisis in cosmology?," NYTimes.com.
[22] Francis, "What Does the New Double-Slit Experiment Actually Show?"
[23] Radin, "Getting Comfortable With Near Death Experiences," 24.
[24] Haber, "The Biological and the Mereological," 295–316.
[25] Joule, "On Matter, Living Force, and Heat," 78-88.

without related advances in thermometry. Post-Laplacian experimentalists, notably Henri Victor Regnault, learned gradually to craft consistent thermometers despite having no clear idea what heat itself was.[26] In short, temperature was invented before heat could be understood, because we had to measure it to understand it. Once more in the words of Einstein, "Physics describes reality [...] But we do not know what reality is unless we describe it."[27] Thermometry reminds us that we do not have to know what a novel phenomenon is yet in order to take the strange subject seriously.

CONCLUSION

In this brief historical survey and analysis, I have sketched the evolution of 'physical' theory and highlighted its philosophical implications. Orienting this discussion around Joule's address in Manchester revealed the fading importance of material substance alongside the gradual ascendance of all-pervasive energy and hyperdimensional geometry. I pointed out that predictive improvement has repeatedly involved metaphysical abstraction away from the tangible world of direct contact. Finally, I suggested that science should be willing to reconsider what counts as measurable evidence. As Chomsky observed at the end of his 2011 talk in Oslo, "Physical is just anything we more or less understand [...] Nonphysical is just anything we don't understand; if we ever get to understand them, they'll be physical."[28]

[26] Chang, "Spirit, Air, and Quicksilver," 57-102.
[27] Giovanelli, "'Physics is a kind of metaphysics'," 783–829.
[28] Chomsky, "The Machine, the Ghost, and the Limits of Understanding."

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Chaos: The Answer for Why There Is Something Rather Than Nothing

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Metaphysics, Philosophy of Reality

The origins of the following philosophical question come from the Age of Enlightenment when aristocratic nobles and priests began to challenge the established tradition of truth that was the foundation and justification for the churches and states of Europe. Prior to the advent of Galileo's heretical discoveries about the nature of the cosmic bodies, the a priori for existence was the divine. Specifically, nature was the way it was because God willed it so. During the Enlightenment, that interpretation of nature would see its end, and new empirical forms of truth-searching would ascend. Today, we call those forms; science. However, this transition from the divine to empiricism left a void in the question: why is there something rather than nothing, or why is there anything at all? This is because although the new enlightenment thinkers were divorced from the divine command assumption, they were still married to the idea of an ultimate truth that could be unveiled and definitively explained. Perhaps it is that assumption that has acted as a blindspot to the true definition of nothing, and to what that definition implies about ultimate reality. This paper aims to arrive at a definition of nothing that deviates from a perfect causal reason for reality, and in doing so, argues that the reason there is something rather than nothing is because the logical definition for nothing is chaos, or that nothing must by deduction exclude any law or causal origin which makes it necessarily chaotic in nature.

One of the primary problems in answering such a question lies in defining nothing. Nothing, as it turns out, is pretty hard to pin down. The general consensus about nothing both in the case of the Enlightenment and today, is that "nothing" is an impossible phenomenon. While many thinkers have tackled the logos of nothing, this paper will reference only two of them. One from the Enlightenment and one modern. In his Ethics, Baruch Spinoza argues that since nothing can be imagined, it is in its essence still something.[1] The most sensical interpretation we can come up with for nothing is a black void, and that is in fact something. To Spinoza, there is no alternative to existence; since a black void exists, it is not nothing.

Luckily for mankind, 21st-century thinkers came up with a better way to more deeply tackle the question. In Mystery of Existence: Why is there Anything at All? John Leslie and Robert Kuhn argues that there are nine levels of nothing.[2] It turns out that the better way to arrive at nothing is to

[1] Spinoza, Eliot, Deegan. Ethics. Salzburg: Universität 1981
[2] Kuhn, Thomas. The Structure of Scientific Revolutions. 1962.

lay out the total itemization of reality and deduct from it until you have nothing. In other words, explain what everything is, and work your way down. Leslie and Kuhn start off by removing matter in level one which is easy enough. Simply imagine a universe without matter. Levels two and three dispense with radiation and fields which for reason's sake is just like removing matter. Level four removes vacuums and level five removes space and time. While it's not intuitive what that actually means, for the purposes of this argument, it isn't important. It's just to say that if there was nothing, those things couldn't be real.

Level six is where our argument begins to take shape. Here Kuhn and Leslie argue that in order to have nothing you must remove the laws of nature. If that is true, then nothing by definition is chaos or at least chaotic, and being that the difference between chaos or chaotic is indiscernible, nothing simply is chaos. Levels seven and eight remove non-physical beings like God or gods, and abstract objects like math and numbers which is fine. It changes nothing to the argument. It is level nine that gives us a major problem. It removes possibilities. If there are no possibilities, then there is certainly no chaos. Nothing would be stagnant zilch. However, level six and nine cannot both be true about the nature of nothing. Either nothing is chaos or it is void of possibility. If nothing is void of all possibility then there would have to be an underlying reason for it to be that way; a law. So as it turns out, we have two definitions of nothing. One is the level six definition, chaos, and two is the level nine definition, zilch.

The question we are trying to answer is; why is there something rather than nothing? The answer, this paper argues, is that the valid definition of nothing is chaos. Zilch, after all, is indeed, as Spinoza would argue, something. We could of course ask, why is everything not simply zilch rather than the universe we have now? The chaos definition of nothing gives us an elegant answer to that question. The prime cause for everything was that there was no matter, radiation, fields, vacuums, time, space, gods, math, or laws. This unstable paradigm allowed for infinite potential which erupted in the emergence of everything. The origins of existence don't need a God because chaos is sufficient. The enlightenment quest to find a unified theory of everything, however, might be jeopardized since a formula for chaos isn't possible. A formula is a rule, and chaos necessitates no rules. While definitively proving such a claim is too grand a task for this paper, there is strong evidence supporting such a thesis. The idea that everything came from nothing is not a radical one, it's currently the

consensus. In an interview with NPR Theoretical Physicist Lawrence Krauss states that everything comes from nothing because nothing is "unstable."[3] That means that nothing couldn't have been zilch because zilch has one rule; no possibilities. So if everything came from nothing as is the current consensus amongst physicists, nothing is chaos, and that volatile starting point created everything, and zilch therefore could not have been an alternative.

But where is this chaos then? While it is true that there are limits to what mankind knows as a whole, it's not particularly noticeable that the origins of existence and its continuation is chaotic at all. The words that are typed on this page have an exact and precise meaning that can be understood intersubjectively with perfect accuracy. It is the experience of billions of people that the sun rises and sets periodically. Humans have repeating sleep cycles. The tools that we use work reliably etc etc. Where's the chaos there? If reality were truly chaotic, shouldn't floating pink elephants be popping into existence at some rate? Shouldn't the story of humanity read like Dr. Seuss's Wacky Wednesday? Why is it that we even stand a chance at making a coherent plan for success? It seems that chaos would make the desire to succeed completely absurd, and yet people all over the world are succeeding at innumerable things. The empirical world seems to be measurable, causal, sequential, and predictable. We have evidence dating back thirteen billion years to the connection of everything at one single point. That seems to strongly refute any notion of chaos.

However, chaos is not that simple. In his book Chaos: Making a New Science, James Gleick reports on the famous discovery of Edward Lorenz. Attempting to draw a predictable model of the weather, Lorenz plotted twelve formulas and twelve atmospheric variables such as pressure, temperature, humidity, etc. into a computer simulator that would calculate these formulas using the starting conditions of each one of the variables, and it would show the step-by-step evolution of the weather.[4] An unforeseen breakthrough came when Lorenz wanted to redo the simulation but started it using the starting conditions of the variables halfway through the previous one. Because the printer rounded to three decimal places and the computer calculated with six, the new simulation initially followed a similar trajectory as the initial simulation, but then diverged radically soon after. The model predicted a completely different type of weather than would have been expected based on the previous model (Gleick

[3] Lawrence. "Lawrence Krauss on a Universe from Nothing" Interview by Ira Flatow. 2012.
[4] Gleick, James. Chaos : Making a New Science. London: The Folio Society. 2015.

2015). There are two main conclusions to be learned from this experiment. One is that starting conditions greatly change the trajectory of anything, and two is that the further we look into the past and to the future, the less and less we can actually predict. Nevertheless, chaos does give us some semblance of truth. When graphing Lorenz's equations we find that there is something called an attractor (Gleick 2015). We graph many different initial starting conditions, and as they evolve they begin to create a pattern that resembles a butterfly. These conditions create an infinite pattern in a finite space. An analogous idea is that chaos reduces itself. When we start at a chaos starting point, and infinite volatile potentials emerge, those events begin to create a pattern that looks like our universe. We're able to see truth in the universe because chaos does not preclude order, and in fact, Lorenz's attractor shows that chaos can produce measurable patterns. Chaos, like nothing, allows for a beautiful and elegant universe.

In *The Case Against Reality: How Evolution Hid the Truth from Our Eyes*, Donald Hoffman argues that what we see with our eyes is not the objective world.[5] The redness of an apple, the aroma of coffee, and the warmth of a sunny day are nonexistent without the interface of sentient connection. To demonstrate this, Hoffman reports on the Australian Jewel Beetle that selects for certain characteristics in its sexual preferences. A special size and hue is so deeply preferred that in Australia the species almost went extinct. Male Jewel Beetles began mating with beer bottles that have the same shiny brown hue that female Jewel Beetles have, but because male Jewel beetles prefer the largest mate possible, the bottles beat out the females. This became so much of a problem that Australia had to change their beer bottling practices to save the beetles (Hoffman 2020). Hoffman argues that this is because what we see as reality is actually what our evolutionary hardware interprets subjectively for survival. The scientific revolution brought about a new path to truth, but like the theologians that resisted this revolution, the thinkers of the Enlightenment were still anchored on the premise that the ultimate truth could be known through the scientific method. Could this premise be wrong? Could it be that while the scientific method yields more accurate answers, there might be no such thing as ultimate reality? Perhaps that delusion lies in that the interaction of the animate intelligentsia of earth and the inanimate is nothing more than a dance for survival. Our consciousness interprets a world that is useful,

[5] Hoffman, Donald D. CASE against REALITY : How Evolution Hid the Truth from Our Eyes. 2020.

meaningful, adaptable, and survivable for us, but like the Australian Jewel beetle, our methods have flaws.

What about science? It's one thing that a beetle is too foolish to distinguish between an inanimate object and a mate, but science is objective and uses a method that has a historically proven track record of yielding accurate results. In his essay, The Structure of Scientific Revolutions, Thomas Khun divides science into two categories; "normal science" and "scientific revolutions."[6] To Khun, normal science progresses using an established body of knowledge, the equipment produced to support the experiments that advance those assumptions, and the professional body that creates consensus around those assumptions. According to him, normal science yields expected results and does not produce innovative or unexpected discoveries. As normal science produces more and more data about the natural world, what Khun describes as "anomalies," begin to creep up into the scientific "paradigm" (Kuhn 1962). Eventually, these anomalies lead to a crisis because the established paradigm of normal science can no longer ignore them. It is during these crises that revolutionary science occurs, and new methods of discovery are developed. The previous paradigm is turned on its head, a new paradigm is established, and normal science continues once more. Even though science finds truth there seems to always be more. Our best science today is beginning to saturate with anomalies. Perhaps we are now heading for a crisis, and soon thereafter yet another scientific revolution. Are these scientific revolutions like Sisyphus' boulder? Will they ever end? Won't we eventually know everything and put an end to the thirst for knowledge? If an ultimate reality is knowable, then chaos would be disproven.

The greatest ambition of today's theoretical scientific community, and science since its inception for that matter, is the reconciliation of all the sciences. This should mean that there would eventually be one final scientific revolution that finally answers everything, and there would no longer ever be any more anomalies. Mathematician Edward Frenkle, describes the connection of all the scientific fields by stating that biology is the child of chemistry, chemistry the child of physics, physics the child of mathematics, and mathematics the child of assumptions called axioms.[7] According to Frenkle, all of mathematics is a series of postulates that are given without proof. These

[6] Kuhn, Thomas. The Structure of Scientific Revolutions. 1962.
[7] John, Kuhn. 2013. The Mystery of Existence. John Wiley & Sons.

axioms are used to create what's called a formal system in mathematics, and mathematicians use these formal systems to derive new statements of truth, and build upon them until they cannot derive any more true statements. These systems require that the truths derived be consistent and useful. A formal system cannot prove a truth, and its opposite, for example, otherwise, it is useless and inconsistent. Like the scientific community, mathematicians thought that if they could create a formal system that had all of the correct axioms, they could finally derive every single possible truth ("Mathematician Explains Gödel's Incompleteness Theorem | Edward Frenkel and Lex Fridman" 2023). In his Incompleteness Theorems, mathematician Kurt Godel proves this is false. Godel's theorems prove that in any formal system that is consistent, even the most sophisticated one, there will always be a true statement that cannot be proven from an axiom ("Mathematician Explains Gödel's Incompleteness Theorem | Edward Frenkel and Lex Fridman" 2023). Everything cannot be proven so, chaos cannot be dispelled.

Zilch could very well work as a formal system even though intuitively we know it isn't real. Chaos on the other hand cannot work as a formal system because it contradicts itself. It simply proves every statement making it inconsistent and useless. This is why such an axiom could never even be considered. However, it is the animate that makes sense of chaos. Religion could be described as humankind's first attempt at truth. Then, our fitness for math and reason gave us the ability to submerge deeper into the depths of truth. Nevertheless, anomalies always seem to accumulate, and new scientific discoveries turn our previous understandings on their heads. Godel's theorems prove that we will never be able to know everything and that there will always be more and more statements that can't be proven. Evolution teaches us that what we do prove is deeply tied to our cognitive adaptive capabilities. The formal systems that we use preclude chaos because it is not a system that is useful. We seek what we can use, not necessarily what is real. As conscious creatures, like mathematicians, we use the assumptions that are intuitive to us and ignore what isn't useful or consistent with those intuitions.

This paper seeks to answer one of philosophy's greatest questions; why is there something rather than nothing? One formalized system of nothing is zilch. A nothing without possibilities, but as Spinoza notes, that nothing isn't really nothing. There's only one alternative to arriving at nothing. That is removing any rule at all, which means that from a

reality of nothing, everything is possible. The question, of why is there something rather than nothing, is a two-part question. First, we must consider what is nothing, and then we are left asking how that's related to everything. Chaos is the metaphysical bridge that satisfies both of those questions. If nothing is chaos, then we have the possibility for everything, including the universe that we bear witness to. Its alternative, a state of no possibilities is simply impossible, but chaos is not.

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The Problem of a Created World

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Philosophy of Religion, Metaphysics

This paper will present and respond to al-Ghazālī's argument that God eternally willed the world to be created at a specific moment in time; I will refer to this throughout the paper as "the eternal will hypothesis." Because Ghazālī's proof and my own responses to his arguments depend heavily on an understanding of God as eternal, I begin the paper by stipulating that God is axiomatically taken to be infinite in nature. In **§1**, I present Ghazālī's argument on behalf of philosophers who argue that the world exists eternally, which, in brief, proposes that a created world is impossible because in all instances it involves a change in God that violates His nature as an eternal being. In **§2** I explicate Ghazālī's eternal will hypothesis, which responds to **§1** by asserting that God's eternally willing a specific moment to be the time of creation does not require any change in God, and thereby serves as a viable explanation for a created world. In **§3**, I set the stage for two objections to Ghazālī's eternal will hypothesis by demonstrating how his example of two dates separates coincidental predisposition toward an entity from willful selection of an entity. From this understanding, I object in **§4** that willfully choosing a moment of creation, as in the date example, necessarily requires that God pre-exist His will of this moment, and thereby contradicts both Ghazālī's eternal will hypothesis and the nature of God as eternal. Lastly, in **§5**, I argue that although foregoing commitment to God's willful choosing of the moment of creation avoids the violation of eternity that occurs in **§4**, committing Him to a nature as eternally willing the moment of creation relegates God to the coincidental type of selection mentioned in **§3** and in so doing undermines the Ghazālīan conception of will established in **§3**.

Axiom

God is by nature eternal. "The eternal" and "God" are used interchangeably throughout Ghazālī's "First Proof" (CR[1] 146-163) in the *Incoherence of the Philosophers*, Discussion one.[2] "The eternal" is taken axiomatically to mean that which is without beginning or end; that which is of constant and infinite.

[1] "CR" in all instances stands for "Course Reader"; specifically, Philosophy 154 UC Berkeley Fall 2023 Course Reader," compiled by Timothy Clarke.

[2] Al-Ghazālī, "Selections from *The Incoherence of the Philosophers*, tr Marmura," "Philosophy 154 UC Berkeley Fall 2023 Course Reader" (Clarke). All passages cited "CR" refer to Ghazālī's *The Incoherence* as it appears in the *Course Reader*.

§1. Argument on Behalf of the Philosophers: the World is Pre-eternal

Because a world that is created requires a change in God that violates His nature as an eternal being, the world cannot be created by God, but must instead be *pre-eternal*, or without beginning or time before its existence. The creation of a temporal world requires that God Himself change from a state of "refraining to act" in the creation of the world to one of "commencing to act" in the creation of the world (CR 146). If God is taken axiomatically to be eternal, then a being which changes by terminating one state, non-action, and beginning a new state, action, cannot be God. In moving from non-action to action, one state of being—non-action—*ends* and a new state of being—action—*begins*; God expresses natures which are finite and thereby incompatible with the meaning of eternal. If what it means to be God is to be eternal, then there cannot be a time in which the world did not exist and then later does; rather, the world must be pre-eternal.

In considering capability, purpose, and intent as potential reasons for God's creation of the world, the moment at which He must transition from a state of non-action to action, Ghazālī, on behalf of the philosophers, argues that each of these similarly entails the violation of God's eternal nature, and accordingly refutes further the possibility of a created world.

First, if the creation of the world has to do with God's capability, in which His state of non-action prior to the moment of creation—which I'll henceforth call "moment C"—is one of impotence, in which He wants but is *unable* to create the world, and moment C is one of power in which he suddenly *is able* to create the world, certain properties must end and begin. Specifically, God's inability to create must cease and give way to the beginning of His newfound ability to create. In this instance, God changes and violates the definition of eternal; His nature as impotent ends and His nature as capable begins. God lacks the infinity (the beginningless-ness and endlessness) that necessarily belongs to eternity.

Second, if moment C can be attributed to God's developing or discovering a purpose for creating the world, the definition of eternal is again violated. In gaining purpose, God terminates a state of *being without* purpose (that of non-action, prior to moment C) and enters into one of *being with* purpose (that of action at and post-moment C). God's change of nature is marked by an end and a beginning which are incompatible with the eternal as being that which is without such beginnings or ends.

Third, if God's transition from non-action to action is a matter of intent, in which God is at first without the will to create the world, but later on, at or leading up to moment C, wills to create the world, He violates the definition of eternal. God is one way—*without will*—and then changes to become its negation—*with will*. His nature as unwilling ends, and his nature as willing the world begins; God's will has a beginning and with this a time in which it did not exist; thus it is temporally finite (and accordingly not eternal).

§2. Ghazali's Response to the Philosophers: Eternal Will Hypothesis

Ghazālī's response to the Philosophers' argument for the impossibility of a created world is straightforward: the problem of change that violates the definition of eternal and occurs in all of the above creationist explanations can be eliminated by asserting that *God eternally willed the creation of the world at moment C* (CR 148). Rather than marking moment C as the moment in which God transformed from non-action to action, moment C, under this hypothesis, unfolds as the inevitable effect of a plan that is eternally in place; the specific time C is and always was selected by God to be the world's inception. This means that the world's nonexistence prior to C is not due to an absence of will, power, or purpose in God, and its later existence at C to the sudden presence of one or several of these; rather both nonexistence and existence are equally direct effects of a *single and interminable* property in God—His having always chosen moment C as the point of the world's creation. As such, moment C, the manner in which it unfolds, and the differences between the before and after times are all parts of His eternal being; God doesn't need to change in any way in order for it to come about, because the metaphorical "script" for all events was written in its entirety from time immemorial. Just as a story appears to change as a person's reading of it progresses, but the book and words in which he is immersed themselves remain identical to how they were when his reading began, so does existence appear to change in time and nevertheless remain eternally identical in cause and substance—these being God's will.

§3. The Date Case

In both his objection on behalf of the Philosophers to his argument that God eternally willed the creation of the world at moment C, and in his own response to this objection, Ghazālī discusses an example of two identical dates. (CR 155-157). The philosophers, he says, will argue that

if the dates are indeed identical in every conceivable aspect, a person will be unable to choose between the two, and a decision would instead be made from *coincidence*; the person would not actually "choose," but rather be *predisposed toward* the one on his right because of his being right-handed, and because the date coincidentally happened to be closer to his right hand—not because he specifically willed that item. If it were possible to remove all coincidental factors such that one date was no more convenient than another (i.e. closer to his right hand), it would be impossible for the person to choose between them, (CR 156). The argument is meant to demonstrate that God, faced with identical moments in time, all equally empty in content and equally capable in their potential to be the moment of creation, could not have *willed* one over the other; rather it would have to have been selected out of some kind of coincidence, or else not selected at all.

Ghazālī, conversely, responds that a person's hunger—his will to eat—would inevitably drive him to choose a date; that a function of will is to "render one thing specifically distinct from its similar," (CR 157). Ghazālī wants to argue that God's will to create the world drove Him to differentiate one moment, C, from its identical others, and that this differentiating is an essential aspect of what it is to will something. If God truly *wills* moment C, as Ghazālī wants to argue here, then, it seems, He must *choose* it from amongst other identical moments. Importantly, this entails that His will of this moment cannot come embedded as part of His eternal being, as this would deny Him the ability to differentiate the moment amongst others, which, as just mentioned, Ghazālī claims is an essential function of will. If C came embedded as God's will, then it would exist already privileged amongst others—*not* by virtue of God's willing it so, but in virtue of it "just happening" to be the moment that comes eternally inscribed in God's will. Not only would there be no act of choosing by God to distinguish it from identicals, but there wouldn't even be identicals, because it already exists *the* moment embedded into God's will.

A helpful analogy in grasping the distinction presented here might be to consider a baby who, as he is born, is swaddled in a blanket that the nurses happen to have on hand at the hospital. He remains wrapped in this blanket as he is placed in his mother's arms, is re-wrapped in it after he is cleaned and taken home, and grows up with this blanket in his bed. This is and has always been his preferred blanket, amongst all others, *because* it is the one that he has found himself with for the entirety of his existence; that which renders it distinctive from other blankets is the fact that his being is and always has been (literally) entwined with this blanket, and this because it coincidentally happened to be the one nearby in the hospital the day of his birth.

Contrast this case with a child whose mom takes her to the store and allows her to choose one among identical red blankets. Although there is nothing about any of them that distinguishes one from the other, the girl, who now really wants a red blanket, digs through the pile and decides to pull one out. Now a blanket is distinctive—the one she has pulled from the pile is now special in virtue of her having rendered it, in her act of choosing, specifically distinct from others as *chosen*. It is a function of her having willed it to be specifically hers, amongst completely identical others, that it is now distinguished. Were she like the boy whose blanket is special because it "just happened" to be the one doctors wrapped around him at birth, and with which his existence "just happens" to have always intertwined, she would not, according to Ghazālī, haved will the blanket to be special. It is because she instead *chose* her blanket amongst identical others that Ghazālī would say she willed it—just as he argues that it is because God, out of a desire to create, selected moment C amongst identical others that He can be said to have willed moment C.

§4: First Problem with the Eternal Will Hypothesis

If to will He must freely choose moment C among all other moments in time to be the instant of creation, as Ghazālī asserts in the date analogy, then God must pre-exist His will of C as the moment of creation—yet such a pre-existence contradicts both Ghazālī's eternal will hypothesis and God's definition as an eternal being. If it is indeed God's desire for creation, just as it is a person's hunger for food, or the girl's desire for a blanket, that drives Him to select one among other identical moments, and render it, in virtue of this act, special and distinctive (and not its "just happening" to be the moment eternally inscribed as God's will that renders it distinctive) as C, then God must first be completely aware of identical moments before deciding amongst them on C (for if He was not first aware of them, He could not be said to be choosing between them in the first place). If there is a time of such awareness before God chose C, and a time after God chose C from this awareness, then in the time before the selection, God *did not yet will* moment C to be the moment of creation; in the time after the selection, God *did will* moment C to be the moment of creation. God's will of moment C thus has a beginning which God necessarily exists prior to. If God's will has a beginning, then it cannot have the eternity Ghazālī argues for in his response to the pre-eternalists (**§2**).

Similarly, the problem of God changing natures discussed in **§1** is reopened. God's state of being before He selects moment C is *not yet willing of C*; in the time after the decision, God's state of

being is *willing of moment C*. In His choosing of moment C, God's nature as *not yet willing* ends, and his nature as *willing of moment C* begins. In this change from one state of being to another, God's nature consists of finitudes, which contradict His definition as an eternal being, or that without beginning or end. Because God, by definition, *must* be eternal, it is impossible that He changes from one state of being to another. Because doing so entails this impossibility, it cannot be the case that God wills C by choosing among equally possible times to distinguish this moment.

§5. Second Problem with the Eternal Will Hypothesis

Although positing the will of moment C as inherent to God's nature seems to preserve His essence as an eternal being, the necessary preclusion of choice that follows from doing so critically violates Ghazālī's concept of will. Since God's having selected moment C among identical others and at the same time *eternally* willing moment C to be the moment of creation—as well as existing, Himself, eternally—has been shown in **§4** to be impossible, a defender of Ghazālī's eternal will hypothesis might abandon the idea that God selected among identical moments to will moment C as the time of creation. If God does not choose moment C, then He is not required to pre-exist His will of it; there is no need for His nature to change from *not-willing C* to *willing C*, or from *not having chosen* to *having chosen*, and God can accordingly retain His nature as the eternal being.

Yet if God does not choose moment C, the important question of how this moment comes to be attached to His will is raised. If God's will of C and God are each to be equally and actually eternal, then it is impossible that either one pre-exists the other; God cannot render C willed through choice (for reasons discussed in **§4**), nor can some special, "will-engendering" property of C compel God to will it (since this property would have to exist before God's will and thereby render the will non-eternal). Rather C exists as a part of God's eternity; it must be part of the nature of God to want this specific moment to be the instant of creation.

However, if it is God's nature to will moment C, such that *He could not have been any other way* while still being the eternal God, then it is difficult to conceive to what extent, if any, God actually *wills* moment C. If will is to be understood, as Ghazālī asserts, as that which, through desire, purposefully selects and distinguishes one thing from its similars, then a God whose will entails a "pre-seeded" moment C cannot be said to will it. In fact, there seems little to differentiate God from the individual who takes the date on the right side because it was in his nature, as a right-hand

person, to do so. As stated in **§3**, in such an instance, the man does not really *will* this specific date, but rather is predisposed toward it out of coincidence—because he just happens to be right handed, and because the date just happens to sit closer to his right hand; just as the boy in the blanket analogy did not really *will* the blanket to be his favorite, but finds it special because it just happens to be the one nurses had on-hand and presented to him at birth. If God has no role—because He *cannot* have a role, without rendering His will non-eternal—in determining moment C as the interminable object of His will, then the same coincidental factors seem to be responsible for His desiring moment C; God "wills" it because He is compelled to, because it is in His nature as an eternal willer of moment C to do so, and because he could not be otherwise without and still be eternal. Not only does this contradict Ghazālī's meaning of will (argued for in **§3**), but it imposes constraints on a God that is taken to be eternal, and with this, infinite in nature.

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Zesty