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NULLSPACE

The Space of Formal Logic, Humor, and Nothing

Reviews Of This Book

"Incisive points, a wide scope of topics and resources (in time and place), a super-ambitious goal, and a self-consciously snarky presentation."
– Dr. Peter Ross, *department of philosophy, Cal Poly Pomona*

"The book has a very compelling structure… The claims in the book have a very peculiar vibe. They make me think, 'This seems wrong, but why?' And then I think about it and I end up gaining insights. It's as though the book *wants* you to disagree with it in order to trick you into learning."
– Dr. Max Kölbl, *mathematician, Osaka University*

"You corner old ideas, tear them apart, and then assert your own in a way that can't be disputed since it's all so consistent. It's really funny."
– Derek Edgington, *author*

"You have done more for philosophy than anyone in the past 200 years."
– Brayden Amellio, *philosopher and cook*

Unwitting Contributors To This Book

– W.V.D. Busby
– Dennis LaRue
– Max Kölbl
– Ming-han Liu
– Albert Castro
– Edda Stenzel

:: Introduction ::

"A serious and good philosophical work could be written consisting entirely of jokes."
Ludwig Wittgenstein

Nullspace covers a broad set of technical topics in philosophy following the narrative that the world has comedic telos. Despite this being largely a work on comedy, it isn't very funny. If people read things like the *Critique of Pure Reason* in an attempt to have their questions answered, then appositionally people should read *Nullspace* in an attempt to have their answers questioned. The book was originally named *I'm Not Joking*, a counter to the above quote since this is neither a serious nor good work. The name I ended with instead comes from linear algebra – the null space of a matrix contains all the vectors that are mapped to zero by that matrix; this allows you to trivially solve equations derived from it.[1] I named the book after this because I believe that the reduction of frameworks into nothingness allows us to trivially solve all problems in philosophy.

Nullspace will be opaque to casual readers. This book started as notes to myself and still mostly is. Several of the sections in this book are transcripts of lectures I've given, and while I've done some editing to make them more readable, they are still written in the conversational style of the transcripts with lots of nested clauses that are easy to follow in speech, but hard to follow in text. There is also a lot of terminology that gets used in a technical sense throughout this book and with a Flesch reading-ease score of around 35, or a 16th-grade reading level, this book is considered very difficult to read.[2]

Philosophy tracks other fields of academic study, all of which have become more technical in recent history, making work in philosophy more technically entrenched in turn.[3] There's an expectation that readers are already familiar with most of the references made throughout this book, but if you're not used to academic philosophy, don't worry, it gets significantly more obfuscated from here. Nuance doesn't survive contact with the center of the bell curve and while I did try to write to people as broadly as possible in this book, I didn't try that hard.[4] You'll notice an unsatisfying lack of details or counter-considerations in many sections of this book – I have always been a miner of ore, I have never managed to refine it.[5] While I'd like to think that any clumsy wording in *Nullspace* is done on purpose to punish those who bother reading it, it's moreso that I'm just a bad writer.

I wrote most of this book a decade ago and have taken a long time to edit and publish it, but this slow approach ended up being the best one since the only ideas left in this book are the ones that have remained after a decade of thought and debate on them. Lots of other philosophers write great volumes of work, easily dwarfing this book's content in terms of quantity, but often their views will change drastically over their careers, whereas what is presented in *Nullspace* is the exact opposite – views that have withstood a small test of time – and so we may yet compete with the others in terms of quality.

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This introduction is an introduction to a philosophy book that covers many metas in philosophy, so I figure this introduction should be an introduction to philosophy itself.

Philosophy is the first, oldest, and largest discipline, leading to the founding of the first university by Plato and the formalization of logic and science by Aristotle, as well as spawning many other fields of study with recent major additions being psychology, sociology, linguistics, cognitive science, even the philosophy of mind frameworks used in AI research, and so on. Progress in philosophy

[1] Mathematicians use 'kernel' far more often than 'null space' but null is a more useful term for the topics in this book so I went with that instead.
[2] The Flesch-Kinkaid scale doesn't account for intertextuality, so the reading difficulty is probably much worse to be honest.
[3] James Ladyman suggests this in his article *In Praise of Specialisation*, but even if it wasn't true, it's not very valuable to be delinguinated by the incompetence of others, so I write how I write.
[4] There is a way to present things that retains their power even when said plainly but I take it as a warning from Zero HP Lovecraft that, "No matter your ideology, remember that if it becomes the ascendant center of the culture, it will be believed and practiced and enforced by morons. So you should choose and express your beliefs in a way that you could still live with their degraded version."
[5] A quote I have stolen from Nishida Kitarō's preface to *Intelligibility and the Philosophy of Nothingness*.

tends to look like this – when philosophers solve problems they tend to be taken out of the domain of philosophy and they are no longer called that anymore.[6]

Philosophy primarily concerns itself with the broadest and most general of questions. Philosophers do not study how rocks be or how living organisms be, as those are what geologists and biologists study, respectively. Instead the philosopher studies the nature of being itself, without specificity. Where all other disciplines are narrow in their scope and application, philosophy is broad and universal.

It is easy to argue that philosophy is the most practical of all studies, since an application of philosophy is 'the good' and knowing what the good is means you will know what is good to do in any particular situation. Just the same, studying philosophy is the most important thing you can do, since asking the question of what importance is, deliberating its answer, and analyzing its accuracy, are all part of the philosophical practice such that we could not define importance or grant anything as being important without philosophy, making philosophy the mother of important things.[7]

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As an initial exercise I want to demonstrate that none of the perennial issues in philosophy are unanswerable or beyond our understanding. There are robust frameworks that already exist that let us work these issues out. We'll start by defining truth. If you say, "Truth is subjective," you will not pass the class. Too many pseuds state, "*My* truth is different than *your* truth." Intended or not, this is contrarian, dishonest, and harmful.

The statement that truth is subjective asserts that it is true that truth is subjective. What directly follows is that it's subjective that truth is subjective, so it's subjective that truth *isn't* subjective, which means that it's true that truth isn't subjective. This technique is called transitive casing. So we know truth isn't subjective, but we still don't have the definition. The not-too-narrow and not-too-broad definition of truth is, "what is," as in what is the case. A common objection to this is, "That is not what truth is." The self-defeating nature of this objection is in its use of the initial definition, "That is not **what** truth **is**."[8] This is a 'recursive' or 'self-righting' definition and lets us know the prior statement, "*My* truth is different than *your* truth," cannot be true thanks to the definition we just actuated.[9]

"Meaningless word games!" you say, not realizing any definition you give would be playing the same game. But maybe I'm wrong. Maybe everything is subjective. We can only know things through sensory data that is indirect and inaccurate, and perception is all we experience – maybe all we can know – so it would seem that there is nothing truly objective we could ever know about the world. Ignoring the universal objective we create by saying perception is all we could ever know, all we have to do to salvage this is ask where our subjectivity comes from – how can subjectivity exist without some object by which to relay the subject? Imagining an opposite to something does not make the opposite exist, you don't typically prove existence by negation alone, rather it is that subjectivity could not come to exist without an objective basis for the subject to derive its relations.

More directly, your awareness is of objects, not of yourself having experiences of objects,[10] which means the experience necessarily has more to do with objects than subjects. A way to prove this for perspectivists – how can perception be all that exists if there was nothing external to perceive in the first place?[11] Worse still for them, scientific explanations invoke things nobody will ever perceive. For example, nobody has ever seen a dinosaur, only dinosaur skeletons. So perception cannot be the basis of truth. Truth must exist independent of the perceiver, else there would only be the perceiver with nothing to perceive. This is evidence that most subjectivists are just solipsists in disguise since they ultimately deny there is an 'out there' or external kind of truth.[12]

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[6] I'm paraphrasing Peter Millican here.

[7] If you disagree it doesn't matter, my people have already won. Most philosophy undergrads are doing it as their pre-law option, which means we own all the courts and adjudicate all the laws of the land. All you can do is bitch and moan impotently about it.

[8] Mather, Lucas J.; lecture in the month of September, 2014.

[9] I'm ducking any explanation of correspondence theory or any other theories of big-T truth here; I don't think those views or their problems apply to a world where truth is defined this simply. But if you disagree, the metaepistemology chapter addresses this directly.

[10] This is a sentiment I have stolen from Husserl.

[11] David Banach gives a good account of the perspectivist fallacy here — http://www.anselm.edu/homepage/dbanach/berk.htm.

[12] "So then, have I become your enemy by telling you the truth?" — Galatians 4:16

But the objective world really is out there, the way things really are, and so it follows then that the subjective world is the way things really *aren't*. Crucially here, subjectivity is just the capacity to be wrong. Saying truth, or art, or math, or whatever is subjective just means you could be wrong about it, not that those things are themselves without objectivity. Being subjects ourselves, beings with the capacity to be wrong about the world, is quite useful since it allows us to suppose things that are not the case – imagination and creativity hinge around this capacity and we would be worse off without it. However, while we have the capacity to be wrong, the capacity to be subjective, this does not mean we lack the capacity for objectivity, which is the capacity to know things in a formal and absolute way, the way things are 'out there' in the world.

This book is a discussion of the objective. Just as we did here with the definition of truth, I believe we can exhaust everything else in the universe and leave ourselves with a complete and totalizing description. With no lack of detail, no missing context, we can know the thing in itself and eat it too.

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As a final introductory note, I claim this book does real work for our discipline. I repudiate the idea that everyone stands on the shoulders of giants. The saying that there is no longer such a thing as an original thought is fantastical and the amount of misplaced ego it takes to claim you know this – as if you personally have exhausted thought – is staggering. With open disregard for anodyne ideas we cut through the perennial Gordian knots of philosophy, the transcendental horizons, the Chomsky and Žižek memetics. We touch the sun and keep our wings. This book is long overdue and no one is prepared.

Metaphilosophy

Most contemporary philosophers believe philosophy will never come to an end.[13] People outside of academic philosophy look on this as a reason to avoid it – that it will just go on forever asking ultimately meaningless questions like, "How many angels can dance on the head of a pin?" And worse, that it will arrive at even more meaningless answers like, "42."

While I am personally inclined to believe philosophy is a project that will eventually come to an end, I also don't really care. It's far more interesting to point out that these people have solved their own problem and are complaining about a great accomplishment as if it were a grave defeat. Philosophy goes on forever? We'll never run out of ideas to explore and we'll have infinitely inexhaustible amusement? Let me light a candle for your loss.

This chapter is about the place of philosophy, what to do with it, how to do it right, and why it will eventually come to an end.

:: What Philosophy Is ::

"Too much or too little philosophy too early or too late in life makes monsters and mavericks out of men."

Dennis LaRue[14]

Philosophy is not about being open minded. It's far too easy to open your mind to something and it's much more difficult to correctly parse the information you open up to. This makes philosophy a practice of learning what to *close* your mind to instead. Almost everything everyone says is noise in the system. You have to learn how to shut out all the noise in order to find the signal, and if you don't learn to do this then you forfeit your mind and die like a dog in the street.

Philosophy is not about asking questions. This would imply a sort of otiose uselessness and triviality to philosophy that unsubstantially debases all the participants of, and commentators on, the field – an *incuria sui* for those reading. The cliché definition of philosophy says that philosophy is about trying to find fundamental truths of reality/existence; this means the answers are more important than the questions. Many people object to this without realizing that if the answers weren't more important, there wouldn't be a need to ask the questions to begin with. People don't study Descartes' *Meditations* because he asked what he could ultimately know about reality – plenty of people have asked that – instead people study his *Meditations* because of how he answered. This book itself answers a few questions, including but not limited to why you started reading it in the first place.

Philosophy is not the love of knowledge. Philosophy translates from Greek to 'the love of wisdom', and wisdom means applying knowledge in the right way, a form of *knowing better*. This is not a minor detail, it is the main distinction which sets the study of philosophy aside from all others. Listing facts about the world is something anyone could do, but determining what the nature of facthood is, and who ought to do what with them, is the exclusive privilege of the philosopher.

[13] The short article *Will Philosophy Ever Come to an End?* by Eric Schwitzgebel does a good job of laying out some standard views on this topic.
[14] I originally heard this quote from my friend Dennis LaRue a dozen years ago but I cannot recall who he said it was from and the internet returns nothing for it. I believe he may have been giving me an augmented version of the Epicurus quote, "Let no one be slow to seek wisdom when he is young nor weary in the search thereof when he is grown old. For no age is too early or too late for the health of the soul."

Philosophy is not the practice of concerning yourself with delineating the set of facts for particular beings or to which conceptual categories those particular facts should be grouped. That's the boring task of taxonomists. But philosophy *is* about *this*, the thing we've been doing in the last few paragraphs, the meta. And while we are looking for fundamental truths about reality, it is more accurate to say we look for why they are true. In this we find the best definition of philosophy to be: the practice of discovering why there are fundamental truths to reality, if there are any at all, and what the nature of reality is such that anything else could be true past that.[15]

From that definition it should be clear to you that repurposing definitions against themselves,[16] or saying that people are just arguing semantics,[17] or other things like these, are a kind of anti-philosophy. Instead ask what the status of being is such that we can or can't say anything about its being; by what modes, mediums, or relations can it be, and what are the properties or states of affairs whereby any of those things can be granted or given? These are the kinds of questions which philosophy most meaningfully operates over.

As an irony, metaphilosophy would not fall under our definition of philosophy since metaphilosophy, the study of the study of philosophy, is a study of a specific nature of being, namely the nature of philosophy's being. Philosophy as the study of being without specificity makes metaphilosophy useful only in directing the philosopher on what is worth cathexis.

While I use this chapter to open questions about the placement or purpose of philosophy, the other chapters of this book work to close them. What is the absolute and totalizing first point in thought, or time, or being, or whatever, and whereby does anything derive itself past that point? Every other chapter in this book is about the end to this meta in philosophy and I will be writing on this *as if no one had written on these matters before*.[18]

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:: The Methodological Direction Of Philosophy ::

> *"Philosophy would do well to desist from issuing any further injunctions about the need to re-establish the meaningfulness of existence, the purposefulness of life, or mend the shattered concord between man and nature. It should strive to be more than a sop to the pathetic twinge of human self-esteem."*
>
> *Ray Brassier*

lassically, many philosophical systems have had clear development through three primary fields – metaphysics, epistemology, and ethics, often in that order. You try to figure out what exists and the basis for that existence (metaphysics), how you can know things or how anything can pass information to another thing (epistemology), and how any of this or anything else ought to be practically applied to the world (ethics). In this order most philosophers of the pre-modern world, meaning antiquity and the medieval eras, developed systematic frameworks for probing and explaining reality.[19]

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[15] Sir William Hamilton summarizes a history of definitions for philosophy in his *Lectures on Metaphysics and Logic*, that philosophy is, "The science of things divine and human, and of the causes in which they are contained [Cicero]; The science of effects by their causes [Hobbes]; The science of sufficient reasons [Leibnitz]; The science of things possible, inasmuch as they are possible [Wolf]; The science of things evidently deduced from first principles [Descartes]; The science of truths, sensible and abstract [de Condillac]; The application of reason to its legitimate objects [Tennemann]; The science of the relations of all knowledge to the necessary ends of human reason [Kant]; The science of the original form of the ego or mental self [Krug]; The science of sciences [Fichte]; The science of the absolute [von Schelling]; The science of the absolute indifference of the ideal and real [Schelling]–or, The identity of identity and non-identity [Hegel]." Note that in most cases it is defined as a 'science' and not some other thing.

[16] After all, Descartes said, "One who aspires to wisdom above that of the common man disgraces himself by deriving doubt from common ways of speaking."

[17] You should hope that you're arguing semantics since semantics means meaning; a semantic-less argument would be a meaningless one.

[18] Yes this is another Descartes quote, yes it's a really clever joke, no I won't marry your daughter.

[19] While antiquity gave us reasons to live, the medieval gave us benefits to dying.

Others, like the existentialists of the modern era, tried the reverse order for creating a rigorous systematic worldview, starting with what is supposed to be actionable in the world given your own particular position in it (ethics), what they could find to be actionable beyond that (epistemology), and then discovering what systems or laws governed the world they act in (metaphysics).[20] I've heard the former classical method called a 'top-down' approach with the latter method being a 'bottom-up' approach. There are pros and cons to both approaches, but most people reading this have likely already decided which one they prefer, so I'll move on.

Philosophers of post-modernity, specifically people like Nishida Kitarō, focused a lot on 'middle-out' systems. Nishida starts with epistemology, unifying subject-object distinctions between differing methods of logic and solving problems with its formalizations by Aristotle, Kant, & Hegel, and then derives ethics and metaphysics outwards from that central position. It was also Nishida that was the first to successfully formalize the unity between eastern and western modes of thought into an internally consistent, rigorous, systematic framework, far more robustly than Heidegger or Husserl achieved, and by the admission of his contemporaries was the first 'real' philosopher of Japan.[21] I find it important to note Nishida and his methods here because his work was very singular and it happened at roughly the same period of time that the scientific method became the most popular explanatory method for phenomena in the world (in the sense that lay people started switching their worldviews from teleological and mechanistic ones to a modern scientific one), which is itself a middle-out, or epistemology-first, view of the world. With irony, the scientific method does not directly explain anything but verifies or falsifies explanations instead.

All of these approaches that philosophers have come up with for explaining the world are interesting in their own right, and I personally believe Nishida's approach was the most revealing, but no matter how useful or interesting, I take contention with all of them.[22] By having separate and distinct fields whereby metaphysics only at some distance informs epistemology and epistemology only at some distance frames ethics, or any other arrangement of those studies, all of them fail to be completionist frameworks – all of them fail to explain the unity and cohesion of reality.

There has been discipline-wide semantic satiation. Thinking about hyper-focused over-specialized subjects for too long has dissolved any meaning they had, ruining our capacity to understand them in any kind of systemic or holistic way. And specialization is for insects.[23] While much of the history of philosophy has been spent on discovering the distinctions between categories of things in the world, I think it's far more valuable now to demonstrate what distinctions are *not* valid and to do the work of *collapsing* categories instead. Just as Maxwell collapsed the distinction between electricity and magnetism into electro-magnetism, or as Einstein and Minkowski collapsed distinctions between space and time into spacetime, we should continue this trend and collapse more of the world until there is nothing left.

The chapters of this book are divided into individuated fields within philosophy, and while these traditional divisions are fine for normal studies, the divisions are not absolute. My aim is to give an ultimately unified explanation for everything, blurring distinctions between all fields. This is important because if we find there really is a complete, unifying explanation for everything, then wherever we give an explanation for something we will be indistinctively giving the thing in itself. This is not like Noam Chomsky's sophistic ideas of the world existing as language (yes this is his real ontology, I know it's disappointing), although notably Wilfred Sellars and Richard Rorty also seem to believe in a similar linguistic ontology. Language is not the only mode or medium by which we explain things, therefore explanations exist outside language and allow for an ontology different from Chomsky's. If you disagree

[20] I know this is an awkward way to frame existentialism, I just wish to note there are different directions established for dissecting the world.

[21] Many sources consistently report Nishida as being Japan's first 'real' philosopher. While I believe Tanabe Hajime was the first to make the claim, the claim is so ubiquitous that there's no proper singular source for it; you can read almost any formal history of Japanese philosophy and will consistently find this claim being made.

[22] Here I am reminded of Nietzsche's preface to *Beyond Good and Evil*, "Supposing truth is a woman – what then? Are there not grounds for the suspicion that all philosophers, insofar as they were dogmatists, have been very inexpert about women? That the gruesome seriousness, the clumsy obtrusiveness with which they have usually approached truth so far have been awkward and very improper methods for winning a woman's heart? What is certain is that she has not allowed herself to be won – and today every kind of dogmatism is left standing dispirited and discouraged."

[23] This is of course the famous Robert Heinlein quote, and to follow it I think being a generalist makes you uniquely advantaged, as I've seen people say, "Among the cooks I am the best engineer, and among the engineers I am the best cook."

with me, I want you to consider that not even Chomsky believes Chomsky. In the infamous Stony Brook interviews with Peter Ludlow, Chomsky says that 'real' is an honorific term (at 17:18) and that calling something real truth is no different than calling it truth; one minute later Ludlow asks Chomsky if moral claims are honorific, to which Chomsky non-sarcastically says, "morality is real" (at 18:20).[24]

There is also no point in confusing a thing itself for the symbolic representation of the thing, rather what I believe we should find is that an explanation is predicated by its being and therein being is not totally distinct from its explanation. This provides us a powerful tool for explaining the *why* of the world, concomitant to the *what* and the *how*.

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:: What It Means To Be A Philosopher ::

"Think lightly of yourself and deeply of the world."
Miyamoto Musashi

Nietzsche said whatever doesn't kill you makes you stronger, however I've found it's often the case that what doesn't kill you significantly weakens you instead. Syphilis, for example. Of course Nietzsche was talking about mental strength, not physical, but I would argue the syphilis weakened him mentally too. And then it also killed him.

It is precisely what does kill that makes something stronger. The philosopher's whole world will die a dozen times a day before a real thought produces itself. It is in the death of many ideas that real thinking does its job. You must remove noise to find signal.

As philosophy is the love of wisdom, the love of applying knowledge in the right way, the *applying* is the most important part – you must do real work. Philosophy gets something accomplished in the world, so if you study philosophy but are not getting anything done with it, you're a sophist.

Those who are really serious about pursuing philosophy will end up alienating many people in their lives. Family is always the first casualty, friends follow shortly after that. This is not only because philosophers are highly annoying,[25] but also because anyone obsessively involved in studying methods towards truth will find that no one in the world other than philosophers have any that actually work. All the religious peoples, all the scientists, all the sophists the world over will become unimpressive to you and worthy of comprehensive derision when you discover how their confidence is ultimately unearned and backed by a kind of pathological ignorance (see the metaepistemology chapter). Conversely, the schizophrenic man will believe something is real when it is in fact not, but the philosopher will believe something is not real when it in fact is, and so even philosophical methods can fail us. I chuck these failures up to most people never overcoming their PHIL101 reading list.

To avoid the pathologies, long periods of isolation are necessary; this is a universal trait among great thinkers in history, probably because you need a lot of uninterrupted time to figure difficult things out.[26] Unfortunately, this has meant that for most of history philosophy was discipline that required an exorbitant amount of free time. However, there is a sea change about to happen that might reduce the time required to become an adept philosopher.

If you look at fields of study augmented by computers, specifically by machine learning engines, you also find significant improvements in the human performances in those fields as the humans train against them. Take chess as an example – Magnus Carlsen is better than any human player to ever live in almost every metric, and the top players below him also consistently outplay world champions from just one generation prior. The rules of the game haven't changed, but the tools available for learning and challenging yourself have improved by many orders of magnitude in an incredibly short period of time. Modern chess engines like Stockfish outplay 100% of humans 100% of the time, but instead of this

[24] Which you can watch here – https://www.youtube.com/watch?v=CHS1NraVsAc&t=1038s
[25] Which we could counter with Diogenes', "Of what use is a philosopher who doesn't hurt anybody's feelings?"
[26] Even womanizer and socialite Richard Feynman did most of his work in complete isolation.

computer dominance destroying the chess world, it rejuvenated it, producing players far more tactically creative, and with better intuitions, than ever before.[27]

This will happen with academic philosophy. You can feed any argument or book to a large language model and it will tell you plainly what is valid or invalid about it. Or at least they're supposed to. It's more like LLMs tell you which premises are likely to be true given general sentiment and what can be internally granted (or not granted) past that point. The better expert systems capable of sentential logic and truth tables have existed since the 1980's, they just never got mainstream use. Given how fast the field of machine learning has evolved (significantly faster than Moore's law[28]), it would be absurd to not use engines to train our thinking and argumentation skills the same way chess players do with chess engines.

It's worth nothing that unlike chess, or math, or sports, or anything else, philosophy has no child prodigies. This might be because the problems in philosophy are actually harder, or just require more lived experience to build more sophisticated mental models, or maybe it's that the problems in philosophy are discovered whereas the problems in chess, math, etc. are invented. Whatever the case, given these new tools, our generation should have no excuse to not greatly outperform every generation before us.

Now I'm no better than anybody else, but no one is better than me. As for an introductory exegesis on the only valid mode of the contemporary pursuit of philosophy, W.V.D. Busby has said that there is no reason to do philosophy anymore, or think at all, unless you honestly believe you have the biggest dick of all human history and for all time to come. This is a very serious notion, as he says, "Unless you really believe you're better than Hegel, then shut up and stick to reading your betters." More sharply, unless you really believe you bring to the game something fundamentally devastating that no one else has ever considered or even had the capacity to consider, then you bring absolutely nothing.

To fight this would be an admission of ineptitude, and we're short on time. The field of philosophy is so absurdly over-saturated, contains so much noise, that any sign of a signal has been lost. Claims at pretention aside, arrogance can be earned, and to dismiss me for saying this is to deny the necessity of thinking this way if anyone is to say anything at all on the topic of philosophy in the current climate. The world is not unresolvable. We can solve all the perennial problems in philosophy, obviating entire fields of study yet to even be invented. The rest of this book meets these Icarusian claims. We will touch the sun and keep our wings, and it is in no thin sense of 'forever' that we will remain champion.

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:: Eschatology ::

"Extreme boredom provides its own antidote."
François de La Rochefoucauld

n the opening remarks to this chapter I said I believed that philosophy is a project that will eventually end. I want to describe why I think this is true and why it will eventually become untrue.

Philosophy has most generally tried to answer the questions, "Why is there stuff? What kind of stuff is it? How do we learn about the stuff? What should we do with the stuff?" This is a pretty finite set of questions that almost self-evidently would

[27] I say computer engines play chess better than humans, but I'm not really convinced computer engines play chess at all. They certainly perform functions we designed to be interpreted as chess play, but it becomes hard to justify it as chess play under other equally valid descriptions, e.g. a series of bit-flips is hardly chess-like. When we ask what constitutes humans playing chess, one of the necessary constituents is our psychology. Engines have no psychology to exercise, so it becomes difficult to prove that they are playing the psychological game of chess. I believe the overlap between the two games being played is sufficient for tricking us into believing we are playing the same game as the engine, but we really aren't.

[28] Gwern Branwen gives a comprehensive overview explaining this here — https://gwern.net/scaling-hypothesis.

have a finite set of answers. In fact, one might surmise that the whole of the world then is exhaustively explained in four sentences.[29] I truly believe this is the case. Those four questions have definitive answers and the answers are ineluctable. However, people also make games. Sometimes we make games that contain entire worlds which operate under fundamentally different laws than our own. A game is like a problem we invent just to see if we can solve it. So after we have gone to the ends of the universe with our minds, we can simply use those same minds to extend the universe in whatever ways we see fit.[30]

It is clear to me philosophy has an end, and just the same it is clear to me that the end of philosophy is but the beginning of the real game.[31]

[29] There is stuff because of comedy. It is the joke kind of stuff. We learn about stuff through humor. We should do funny things with the stuff.
[30] The only true endless game is the one you make yourself.
[31] Edda Stenzel once said, "Existence is fundamentally playful" and this stuck with me.

Metametaphysics

This chapter gives arguments for the impossibility of any dualism, to drive a wedge between the idea that reality is explainable as some set of kinds or as lists of entities and properties. This is used as conditioning for why we need an ontology that is not predicated on object-hood and property lists. *Why* something is ends up being more important than *what* something is, and while positivists will say things like, "The 'why' question is just a silly question,"[32] positivism can't validate its own methodology.[33]

A view called formal absolutism is advanced, describing how reality can exist and give being to entities like physical objects and abstractions like math before those things themselves exist. Formal absolutism is intended to be a complete and consistent description of reality, but I argue that even a complete and consistent framework isn't enough to sufficiently describe reality, resulting in the conclusion that reality could not in principle exist. This contradiction is resolved by positing existence as a function of comedy and leads to the ontology section giving all extant things as instantiates of jokes. I know that sounds dumb, but keep reading and I promise it will make sense.

:: A Fast Proof for Relational Objects as a Distinct Ontological Category ::

An empiricist walks into a bar, substance abuse follows.

ualists typically divide the world between the abstract and the concrete, or between form and matter, or essence and particular, or noumenal and phenomenal, or type and token, or mind and body, or subject and object, or schema and content, and so on. This section exploits a perennial issue with many different dualistic frameworks that have a binary divide upon where *concreta* and *abstracta* both operate by means of some *relata*. By incorporating some math (which is itself a discipline that has historically built on the relational aspects between abstract and concrete entities) analogies, I give argumentation that *relata* is a distinct ontological category necessitated by any dualism, muddying the traditional dualistic frameworks and forcing either a pluralistic or monistic case for reality.

The transitive property in math, which is that if A=B, and B=C, then A also equals C, demonstrates that multiple abstract objects can be equivalent or made the same as concomitants (you can also represent this in formal logic as a continuous predicate). I question what the status of this object of equivalence itself is. If we take the identity property in math, which is semantically the same as tautology in logic, where simply A = A, and ask if either A or A are also equivalent to their equivalency, to the relation that coordinates their shared properties, which is to say equal to the equal sign itself, then we return strange answers.

Starting from the assumption that yes, A and A are not only qualitatively indistinct from each other but also from their relational capacities (necessitated by their equivalence), then it is the case that A = = = A. This can be verbalized as, "A is equal to the equivalency of being equal to A." We can then raise the question of whether A or A is also equivalent to this new relation (= = =), and the initial assumption says that the answer would be yes again, resulting in the new statement that A = = = = = A. This is infinite regress; we can always create a relational equivalency to the relational equivalencies between A and A if we start with the 'yes' assumption.

[32] Famous sophist Richard Dawkins says this — https://www.youtube.com/watch?v=p6tIee8FwX8&t=1938
[33] *Critique of Positivism* by Charles Peirce — https://peirce.sitehost.iu.edu/writings/v2/w2/w2_11/v2_11x.htm

As we also know from mathematics, as a value asymptotically approaches zero, that infinitely small value is equivalent to zero (barring debate on infinitesimals). Another way to say this is that the number $0.\overline{00}1$ is equal to 0. I posit that by adding relational equivalencies between A and A we are increasing the literal conceptual distance between A and A, which means the normally close and strong conceptual relation is getting weakened. Since the distance between these objects is infinitely expanding, their relation is also infinitely thinned, thereby made indirect and infinitely weaker. Analogous to the asymptotic example, we know that an infinitely weak relation is the same as having no relation at all. We find here that A ≠ A.

From 'A equals A' we derive that 'A does not equal A' at the same time and in the same regard, breaking the law of non-contradiction in logic and the law of identity in math. So the initial assumption that A was not qualitatively distinct from its relational capacities was wrong. This demonstrates that *abstracta* and *concreta* are qualitatively distinct from *relata* such that *relata* is its own category of being since the relations between abstract or concrete objects are distinct in kind from the objects they relate.

In anticipation of an objection, the same problem does indeed occur whenever you have more than one concrete object, e.g. two tables – by what means do we relate these concrete objects as being the same kind of object? In traditional dualism we say the ideal form, or the type of these tokens is what coordinates them, but of course abstract types are objects unto themselves and the *relating action* between the type and its token was just shown to be problematic.

So we have a third category of being called *relata*, or relational objects, but by turning dualism into a pluralism I think we just make the problem worse instead. The same argument used to tease out the existence of relational objects can be applied back onto itself. Formal proof itself is a relational organization between entities, making formal proof *relata*. Is one relational object equivalent to any other relational object? If we say yes, we get the same derivation as three paragraphs ago, so we find that we must say no. E.g., if a table holds some relation to the chairs seated around it, this is a different *kind* of relation than the table's relation to its maker, or its relation to the purpose of the room, and so on, making all relations individuated as unique in kind.

Ultimately this should apply to all entities in the world, no matter how we formalize their categorical multiplicity of kinds. My intuition says pluralism explodes the same way dualism does, and infinitely so, until we have nothing but one single amoebas category of all individuated things, landing us at a monistic architecture for reality. But we don't have to play the game of saving intuitions.

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:: The Nature Of Nature ::

You trust the chemicals to tell you they are chemicals. You trust the facts to tell you they are facts. You trust nature to give you something natural – where then does anything unnatural arise?

believe it follows that all concreta and abstracta are necessarily predicated as *logos*-specific relata; this I call formal absolutism. I'll try to convince you. For every abstract object and concrete object that are strictly paired, there is no distinction that would make either function differently than if they were unpaired, only that they would cease to function altogether, therefore there is no valid distinction between the abstract and concrete components of strict object pairings. I hope this phrasing makes it clear, but it probably didn't. Let me try a different way.

For any good counter-argument against logic being fundamental to reality, tell me again what an argument is. Something that follows, obeys, and is beholden to logic? And in virtue of what would your argument map onto a reality fundamentally devoid of logic? In arguing against the fundamentality of logic to reality you must first assert the fundamentality of logic to your argument.

This is apodictic and trappy since arguing against it defeats your capacity to argue in the first place. I call arguments of this form Gömböc arguments because they are self-righting.[34] For the formalization:

> Premise 1: Arguments follow, obey, and are beholden to logic.
> Premise 2: In arguing against the fundamentality of logic to reality, one must first assert the fundamentality of logic to their argument.
> Conclusion: Any argument against the fundamentality of logic to reality must assume the fundamentality of logic, therefore you cannot argue against the fundamentality of logic.

The above can be symbolized as:

> P1: $\forall\lambda\ (Ar(\lambda) \rightarrow (Fo(\lambda, L) \land O(\lambda, L) \land B(\lambda, L)))$
> P2: $\forall\lambda\ (Ag(\lambda, Fu(L, R)) \rightarrow As(\lambda, Fu(L, \lambda)))$
> C: $\forall\lambda\ (Ag(\lambda, Fu(L, R)) \rightarrow (Fu(L, \lambda) \land \neg Ar(Ag(\lambda, Fu(L, R)))))$
>
> *Where "Ar(λ)" means "λ is an argument", "Fo(λ, L)" means "λ follows logic", "O(λ, L)" means "λ obeys logic", "B(λ, L)" means "λ is beholden to logic", "Ag(λ, Fu(L, R))" means "λ is against the fundamentality of logic to reality", "As(λ, Fu(L, λ))" means "λ asserts the fundamentality of logic to itself", "Fu(L, λ)" means "Logic is fundamentally present in λ", and "¬Ar(Ag(λ, Fu(L, R)))" means "λ against the fundamentality of logic to reality is not arguable".*

Another way to say this is that if reality itself wasn't a formal system then it wouldn't be meaningful to say that formal proof of anything corresponded to reality. This means we know that either reality itself has to be a formal system capable of the correspondence or reality is simply not proof-oriented so there is no formal proof of anything ever, *not even of that*, which self-defeats. This is an indirect proof showing reality has to be a formal system.

An objection I've received to premise 2 is that it requires live people to make statements and therefore it only applies to people's statements and not to reality itself. I think this is a silly objection. Any entity holding any kind of relation with any other entity does so in a consistent form (or otherwise ceases to exist), formalizing the relation between those entities, which is an arrangement between entities we call a premise. Should any action or further relations directly follow from those initial premises, it would take the form of what we call a conclusion. So it is not just people that make 'statements' and draw conclusions, but reality itself that does this. I can demonstrate this with another indirect proof – if formal logic was not fundamental to reality, then any entity holding any kind of relation to any other entity does *not* do so in a consistent form, which means nothing would follow by necessity, not even that, which self-defeats. What we have here inches us towards a framework in which reality is pure formal logic, in an absolute and totalizing sense.

Another objection I've received multiple times is the outright denial of the validity of formal logic itself and the assertion that formal logic is broken in some systematic way. The problem with this objection is that it is not an argument because it does not follow, obey, or is beholden to, formal logic. In this case, the original argument's conclusion that you cannot argue against the fundamentality of logic would still hold because the objection would not meet the criteria for an argument as defined in the original premises. In anticipation of yet another objection to this counter-objection, this argument is self-referential but not circular – recursive arguments evade closed circularity by being unbounded in scope so you can self-reference without creating a locally bound loop. The analogy for this would be something like an infinitely large circle in which no finite set of points you pick from it will themselves be sufficient for recreating the circle.

For other counters – what happens if we say or think something that isn't logical? If logic is fundamental, how is it that we can we have inconsistent or illogical ideas in our heads? Is it the case that something isn't the case, or a non-existent thing exists as the non-existent thing, or that it is true that something is false? How do we square this circle? To avoid dialetheia I'll say there are many impossible things that we speak on regularly but we only ever speak about them as indirect syntheses of two possible things, like married bachelors. It seems that logical contradictions, things that cannot exist in

[34] A Gömböc is a special kind of shape that only has one stable point of equilibrium, making it so that it rolls itself into the same orientation no matter what other orientation it started with.

any possible space, are literal gaps in our minds where we try to cognize them. If you want more detail, I characterize this gap rigorously in the next section of this chapter.

If some system or set of ideas is externally invalid by way of logic, meaning it allows contradictions, then that system or set of ideas will also have some internal problem that by its own rules allows some inconsistency which results in the total collapse of the system.[35] This is proof that formal logic is not just a mere arbiter of some other consistent thing but that any framework which correctly adjudicates consistency will arrive at and be fully equivalent to the framework of formal logic we already have (reason to believe Aristotle made the most important discovery in history). So whatever is posited against formal absolutism will probably have to self-correct until it looks dangerously similar to formal absolutism again.

Given the above, when you make an assertion in formal logic, the assertion isn't just a reference to a purely abstract proposition that exists solely in your mind, but rather you are asserting something as being the case 'out there' in the world. And since all existent things, concrete or abstract, are the case 'out there' in the world, they require the logical predication of casing (i.e., they require logic to be 'out there' first). If you say anything is the case, that anything exists, has some cause, observes some property, or whatever, all you have done is given predicate values of an entity. Logical predication is involved at all steps of the process.

I say this because if there is no valid distinction between abstracta and concreta (which is what I claimed earlier), and the only things that exist are things that are the case, then there is also no real distinction between objects and their logical instantiates. Hypostatic abstraction allows us to formally convert any predicate into a relation ($P(o) \rightarrow R(p,o)$), giving us what we observe after the fact as object properties and relations, which means object properties and relations are fundamentally just logical predicates. Another way of saying this is that if there is no valid distinction between objects and their logical predications, between object-hood and its casing, then logical predications are what objects are, and they are the only kind of object. Therefore, the world is entirely logical predication. This collapses the distinction between relata and all other categories of objects into one single amoebas *logos*-specific category, landing us at a monistic architecture for reality. Looks like I played the game of saving intuitions anyways.

This is not exactly like logical positivism, as I don't argue that everything is *reducible* to formal logic but rather that everything is *predicated* by it.[36] If Aristotle had equated logic to ontology *tout court*, we could have all stopped there, but he didn't, so what I have been calling formal absolutism is logical realism, monism, and atomism all rolled together, where operations in formal logic are the absolute units of being.

Several friends have pointed out that what I am arguing for here is similar to ideas from Wittgenstein's *Tractatus Logico-Philosophicus*, but it is important to note that I am demonstrating the character of the world, of logic, and of 'things', to be fundamentally different than Wittgenstein did.[37] For example, Wittgenstein explicitly states in 4.441 that "There are no 'logical objects'," whereas I am saying they are the only objects, if there are objects at all (i.e., I believe relata/relationals are objects/things unto themselves and Wittgenstein doesn't).

Moreover, Wittgenstein commits overt mistakes in the opening of the *Tractatus* that are unsalvageable. In the first line he says the world is everything that is the case (1), also that the world is the totality of facts (1.1), and the totality of facts accounts for what is the case and what is *not* the case (1.12 & 1.21), so then 1 should have read that the world is everything that is the case *and not the case*. This is a problem because his literal words are (1), "The world is everything that is the case." Note, every *thing* that is the case, which would be the totality of things (again 1.12 & 1.21). And (1.1), "The world is the totality of facts, not things." So the world is things but it is not things. Very cool Wittgenstein.

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[35] A famous example is the student who challenged Bertrand Russell's statement that permitting a false proposition to be true allows you to prove anything else, "Given that 1 = 0, prove that you are the Pope." Russell added 1 to each side so 2 = 1, and then stated that the set containing him and the Pope has 2 members but 2 = 1, so it had only 1 member and therefore he was the Pope. This is called the principle of explosion but I like characterizing instances of these arguments as implosions instead because they collapse in on themselves.

[36] "It helps no one to be reductive." – Xavier, Renegade Angel

[37] And notably, I didn't read the *Tractatus* until years after I initially wrote this section of the book, so my thinking wasn't influenced by it.

I am aware plenty of philosophers have written interpretations of the *Tractatus* that do lots of hand-waving to try to save Wittgenstein from such mistakes but nonetheless the first line of his book is wrong by his own formulation.

In the second opening mistake Wittgenstein says the world consists of facts and not things (1.1 & 1.2), that facts are just atomic facts (2), and that atomic facts are combinations of things (2.01). But what does Wittgenstein say combinations are? He doesn't. Nowhere in the *Tractatus* does he give a definition of combinations; he never tells us what the ontological status of combination is. We can assume an implied status based on the behavior he describes combinations performing with respect to objects/entities/things, and the implied ontological status appears to be a purely relational one, which is the same status given to facts. It is hard then to see facts and combinations as meaningfully distinct given the semantic usage of them in the *Tractatus* being the same. So Wittgenstein is saying the world consists of facts (again 1.1), and that facts are *relational* things he is calling 'combinations' (again 2.01), which are tautologically facts. So he tells us nothing.

Don't get me wrong, I like Wittgenstein, I opened this book with a quote from him and you'll see me quote him again later in the book, but the *Tractatus* is an incomplete work with egregious errors.[38] I do think aspects of his general sentiment are correct – like that facts in logical space are the world (1.13), but I only agree with this because their existence, and the world broadly, has to be predicated by logical spaces for us to apply logic to it, which is a tautological statement that does nothing to salvage his mistakes. So despite what my friends said, I think associations with Husserl's or Nishida's logical realism are more appropriate to what I am calling formal absolutism, if an association needs to be made at all (it doesn't).

By way of the arguments I gave earlier in this section, formal logic is fundamental to reality and is the only thing that can recursively assert itself as being fundamental in this capacity, meaning reality is pure *logos*. Aquinas would have called this God. Here the ontology of logic supersedes everything else, including space, time, math, or whatever. To be clear, logic isn't everything, logic is the only thing.

Theoretical physics has started shifting towards the idea that logic is what constitutes base reality as well, with things like John Wheeler's *'it from bit'*[39] and quantized inertial theories requiring information to act on itself by the rules of formal logic with no spatial or temporal components involved. For example, theoretical physicist Mike McCulloch has written that, "the waves of Unruh radiation cause inertia as follows: the waves have to fit exactly between the rightwards-accelerating object and the Rindler horizon that forms on the left. This is similar in form to the Casimir effect, but I use logic instead: a non-fitting partial wave would allow us to infer what lies beyond the horizon, so it wouldn't be a horizon anymore. This logic disallows Unruh waves that don't fit on the left: they disappear."[40] This is evidence for the idea that information in QM exists fundamentally as logical instantiates since logical operations are being done to information by information itself in this framework. Even if he's wrong, or my interpretation is wrong, this is just one example of many like it in contemporary theoretical physics working around information theory.

So congrats, we just discovered the true nature of reality together, there's cake in the break room. While formal absolutism can explain the base nature of reality, we have yet to show the relationship between appearances and reality, or give a solution to the problem of universals. For answers to those you will need to go to the metaepistemology chapter. If you disagree with anything I've said or want to understand more of what formal logic and its workings entail, like how instances of reality come into being in the first place, skip to the metalogic chapter. If finding out reality is just logical actuation feels underwhelming, you can skip to the metaesthetics chapter instead.

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[38] Wittgenstein himself believed most people just weren't capable of understanding his work well enough to catch his mistakes. His preface to the *Tractatus* starts with the line, "This book will perhaps only be understood by those who have themselves already thought the thoughts which are expressed in it," which means that only if you've independently attained the views of logical realism/atomism before having read the *Tractatus*, then you won't understand the *Tractatus*. Additionally he says, "I am conscious that I have fallen far short of the possible. Simply because my powers are insufficient to cope with the task.—May others come and do it better." And so we are.

[39] Which allows us to go from pure logic to its quantization in information theory, and then from information theory to quanta in quantum mechanics, creating a bridge from base reality all the way up to our macro-scale world — https://www.themarginalian.org/2016/09/02/it-from-bit-wheeler/

[40] https://physicsfromtheedge.blogspot.com/2014/01/mihsc-101.html

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:: Metacompletion And A More Modal Modalism ::

"The only way to discover the limits of the possible is to go beyond them into the impossible."
Arthur C. Clark

All of existence being formal logic at base would make reality consistent, but would it be complete? One way people divide up reality is by saying consistency entails all *actual* things and completion entails all *possible* things, but even if we accept this division as being real or proper or whatever, does this division capture *everything*?

There is plenty of literature on actual versus possible worlds, but not as much on impossible worlds.[41] I believe we would need to add logically and nomologically impossible worlds to account for a complete description of reality, the reasoning being that we know impossible things must exist, else nothing would be impossible. Another way to say the same: *some* thing must be impossible or *no* thing is impossible ($\exists I \oplus \neg\forall I$). And if nothing is impossible, then everything is possible instead, including nothing, which is inconsistent. So some things must be impossible, concluding that impossible things exist.

People get hung up on this because the common understanding of 'impossible' is precisely that something cannot exist, however the literal definition of impossible is 'not possible', and crucially 'possible' doesn't mean 'does exist', so impossible doesn't mean 'does not exist'. This moves the problem to the definition of possible. The common understanding of possible is 'could be the case in the future', which ironically makes it so that possible things are the things that do not presently exist. By the common understanding of possible, if something is impossible then it cannot be the case in the future, but this doesn't rule out that it could be the case presently. The obvious problem here is that this definition allows impossible things to presently exist, which is of course not what people mean by 'impossible'. The better definition for possible is 'not a logical contradiction' and thereby impossible things are logical contradictions, things that are not the case.

So why should we claim impossible/contradictory things exist? Without the existence of some impossible space there would be no place in which statements were invalid – we could not say anything was logically impossible.[42] At that point we propound paradoxes; those paradoxical entities must occupy their own separate space, an impossible space. Think of a table (likely one you are sat in front of right now), that table exists in that place, not some other place it doesn't exist at. So at every other place in the universe – an infinite amount of places – there is not that table. At every other place in the universe there is the negation of the table. You can think of this as an infinite shadow cast by the positive component of the table's truth value. At every other space in the universe it is impossible for the table to presently be there, since it is presently at its singular position instead. Therefore, the negation of the table exists in an impossible space – the table's negation physically extends to the spaces its positive existence cannot. To make this a little more clear and convincing I'll go through more typical modal distinctions and then come back again to impossible things after.

Modalism distinguishes between possible worlds and actual worlds, often softening that distinction (as David Lewis' modal realism and Leibniz' theory of possible worlds does) to argue that all possible worlds are actual worlds in some physicalist or idealist space.[43] No matter what the ontological status of modality ends up being, I think there is an interesting consequence of looking at meta-modals. Are possible worlds themselves actual or possible? If we say they are actual, then they aren't merely possible, and if they're not actual, then the possibility doesn't exist. It seems we get a contradiction of

[41] Of the millions of papers catalogued on Philpapers.org, and of the 4,000+ papers in the modal metaphysics category, only 170 are tagged (as of the time of writing this) in the 'impossible worlds' sub-category, meaning impossible worlds get a fairly small amount of the attention placed on modal discussions – https://philpapers.org/browse/impossible-worlds.
[42] Space is being used in the mathematical sense here.
[43] It's hard for me to see David Lewis' version of modal realism as totally distinct from Platonic dualism. I'm partially convinced it fooled people into thinking it was something new just because it used a different name.

terms. So are there actual possibilities? What about possible actualities? To attain meta-modals we can divide the traditional 'actuals' versus 'possibles' into *actual actuals* versus *possible actuals* and some new meta-modal distinctions into *actual possibles* versus *possible possibles*, shown below.

	Actuals (old)	Possibles (new)
Actual	Actual Actuals	Actual Possibles
Possible	Possible Actuals	Possible Possibles

Just as an acorn is a possible tree and not an actual tree, there are possible states themselves that are possible and not actual. An acorn is possibly an actual tree – as the world is currently configured, an acorn could really become an oak tree. This is an actual possibility. But an acorn does not have the possibility to become a dog. It does however have the possibility of entering into a world configured such that acorns do become dogs – a possible possible. What it would take for that to happen would probably look something like significant genetic augmentation and a lot of environmental change to suggest the acorn become something other than an oak tree, at which point we may not even consider it valid to still call it an acorn, but nonetheless it is possible that the world could augment itself to allow this possibility. So not an actual possibility, but a possible possibility.

Similarly, it is not an actual possibility that you can jump to the Moon from Earth, but it is possibly possible given the world augmentation of millions of years passing where the Moon's orbit degrades and it falls towards Earth until eventually it is so close to Earth that you could jump up a few feet and touch it. In reality, as the Moon got closer to the Earth it would start pulling tides in at such force that the space between the Earth and the Moon would be fully occupied by water (so you could swim to the Moon, not jump to it) and a few moments after that would probably be a cataclysmic impact, but the point is that this would still make it possible to 'jump' to the Moon.[44] A possible possible.

Defining the categories; actual actuals are things as they presently are, actuated and given as fact – our current state of affairs. Possible actuals are what we traditionally call possible things – things that could be the case but are not yet and may never be. Actual possibles are things that are presently possible – things possible given our current state of affairs. Possible possibles are things that could be possible in the future but are not presently possible. With the acorn and moon examples it should be clear that possible possibles either never happen or they degenerate into actual possibles, actual possibles are possible actuals, and actual actuals are what both of those eventually degenerate into.

Crucially, despite my use of temporal terms, actuals and possibles can be fully represented in modal logic without the invocation of time (modal operators are not temporal operators); this offers a description of the world in which we can have 'change' without traditional views of time. How long is the present? If we say the present has duration then there is a before and an after, meaning a past and a future, which defeats the purpose of calling it the present. If the present has no duration then it also doesn't exist through time, so there is no present time.[45] Just as possible things can be made actual in modal logic (and vice versa), I claim this is what a state's change in the world really is, i.e., movement from A to B is just the modal state difference of actually at A and possibly at B to possibly at A and actually at B. Moreover, it makes this change precisely and only because the modal logic necessitated it. So it is the state-differences of logic that comprise the things we call localities of space and the passage of time,[46] further that the logical necessitation of state-change is what people often call causation. Here we have accounted for space, time, and causation as concomitants to logic in one single package. As a weak example, a single point of light evinces a one-to-many existence as many bits of extra information

[44] Unrelated, why should gravity be so weak that you can easily overcome the force of the entire planet by simply standing up, yet so strong that your locomotive ceiling is the same height as your head? No one has ever jumped over 6 feet high from a standing position.

[45] This is essentially the riddle Aristotle gives in the beginning of the *Physics*. The present, even in a time-positive framework, usually does not have extension into time, so there really is no time like the present. I think we can use this to leapfrog discussions about John McTaggert.

[46] It seems there is a difference between *instantaneous* change and *infinitely fast* changes. If every change that has ever happened and will ever happen did so instantaneously, then there is only one instance of change because they were all instantaneous. But if every change that has ever happened and will ever happen merely did so infinitely fast, then there are infinitely many instances of separate and distinct changes. If we are to believe space is infinite, then it would take infinite time to actuate change across that infinite space – you would need an infinitely fast change mechanism to accomplish this. This may provide an explanation for infinitely many instances of change in the world without a difference in cardinality of infinites between space and time.

come concomitant to it – spatial info, temporal info, energy info, and others are all wrapped together in the initial point of light.

Simple, easy, elegant, the Formal Absolute model Q is the next generation of metaphysical framework, and for a limited time only, buying a model Q comes with a free set of objections.[47] I could write a lot more about these big, mostly unjustified claims, but the claims are self-evident to me so I'm just going to move on instead.

Using meta-modals, I think there are legitimate grounds to attack whether modal realism itself is actual, possible, or some other thing. The modal realists have not determined whether they are also meta-modal realists, and so they haven't determined if their possible worlds are possible actuals, actual possibles, or possible possibles, only that they aren't actual actuals. But if a possible world is a real, existent, actual world, as modal realists argue, then that seems like an actual actual world. If possible worlds are really just actual worlds, then at the most benign it defeats the purpose to call them possible and at the most malignant it completely eliminates the distinction between possible and actual.[48]

Tangentially, I think this shares a lot with fictional realism – the idea that fictional worlds are real given their seating inside the actual world. For example, Harry Potter is male and attended Hogwarts. You would be wrong to say otherwise, but Harry Potter is also not a 'real' person and so none of the facts about him are facts about a 'real' person, yet they are still facts. The fictional realists believe that you can be objectively right or wrong about descriptions of fictional things since fictional things are actual objects in our world. The ontological status of fictional things is such that we are really saying that Harry Potter attended Hogwarts, but only given what was written in a book series by J. K. Rowling.

So it is a fiction to categorize specific works as a canon and to then derive statements that follow from those works as being factual given the canonical descriptions. This is the only way I see fictional realism and modal realism (they are the same thing to me) as being ontologically salvageable since it reduces all fictional/possible things to actual things instead, not totally unlike Landian hyperstition. I shoot myself in the foot here, since the modal realists reduce possible worlds to actual ones as well, but I do it more flatly – I reduce fiction to a series of nested conditionals in formal logic: if this other world existed, and if it had such and such characters, and if they did so and so activities, then we could conclude some set of statements about Voldemort being evil or whatever.

To clarify, actual/possible spaces are where we track valid things and the impossible spaces I'll discuss shortly are where we track invalid things. Both spaces are real in the sense that they exist on top of each other, and in fact it is only when they come together that we have any means of distinguishing them, for if they occupied two separate worlds we would have to explain how it was possible to go from one to the other. Of course that would be a possible space bridging into the impossible space, collapsing the divide between them.

It can always get worse. Looking back at the previous table, are the categories themselves actual or possible? A way out of infinite regress comes from the path of degeneration I had described the meta-modals following earlier.[49] Either something eventually degenerates into an actual actual or it stays in one of the possibles forever, so we can collapse the four meta-modal distinctions into the two traditional modals. But if something stays in one of the possibles forever, meaning it is guaranteed to be forever not-actual, this is usually what we call an *impossible* thing. It seems unintuitive since we're saying that the things that are possible in perpetuity are actually impossible, but we do have an intuition that this is valid since we often say something is not a 'real possibility', distinguishing between a difference in kinds of possibles such that some are never actually possible. So the negation of the modal actual-possible is what a modal impossible is ($\neg(\Box\Diamond)$).

If modalities are collapsed to something like fictional realism, collapsing all distinctions in subjunctive possibility with them (which obviates problems with any nomological and temporal possibilities that would have been otherwise unaccounted for), not to be confused with things like the reductions done in hyperrealism, then what we call a possible world is a logic-object we instantiate purely for use in modal discussions (a kind of fictional canon), to which we can make objective, factual

[47] But the trunk has infinite space, the engine runs on infinite time, and it will never break down on you. It's a good deal as far as metaphysical purchases go.

[48] People dumb enough to be convinced by David Lewis become bewildered when presented with this.

[49] Incidentally, belief in modal realism is itself a path to degeneracy.

claims about, but to which have no ontological status outside pure logic. This saves the distinction between 'possible' and 'actual' to keep them alive in modal logic. Of course, we use 'contingent' and 'necessary' in modal logic, but the terms are arbitrary so long as the same operations are performed by them. Saved or not, this still doesn't explain impossible worlds, and that presents a much bigger problem.

	Actual	Possible	Impossible
Actual	Actual Actual World	Actual Possible World	Actual Impossible World
Possible	Possible Actual World	Possible Possible World	Possible Impossible World
Impossible	Impossible Actual World	Impossible Possible World	Impossible Impossible World

I have placed consistent worlds in green and inconsistent worlds in red. The four consistent world types we've already examined – the AAW, PAW, APW, and PPW – were all in the prior table so we know they're the same in this table as well. It is fair to collapse them into one single world (the actual world) in my view given that possibles are just a fictional canon in modal logic.

The AIW, PIW, IAW, and IPW are all inconsistent both in name and description, and therefore not the kinds of worlds that anyone could exist in, at least not consistently. For example, an impossible actual world would be one in which it was never actual and actual at the same time, a contradiction.

When we look at impossible-impossible worlds we find something very strange. For an impossibility to be impossible, it truly is.[50] The terms are consistent in IIWs, and with consistency comes validity. They are valid worlds but by definition have invalid things existing in them. There is a contradiction, but there is only this one contradiction and so it only inhabits one layer of impossibility; we already knew there was a contradiction at that layer because we labeled it impossible *ab initio*. There is yet another impossible layer wrapped around that first impossible layer, and since double negations eliminate each other, the two contradictions from the two layers cancel each other out and we're left with a non-contradictory IIW.[51] This also lets us collapse all the inconsistent worlds into an IIW since an AIW, PIW, IAW, or IPW are each themselves only a single-layer contradiction. So impossible-impossible worlds are consistent worlds, and we can collapse the IIWs into the actual world since the actual world contains all the consistent worlds. This unifies all the worlds into one contiguous space. A quick rhetorical puzzle to illustrate why the collapse of world types is valid:

> There are two categories of things – things that can be categorized and things that can't. That which can't be categorized is called uncategorizable. Yet these uncategorizable things are things we have categorized as uncategorizable; they are further categorized as 'things' and so have category yet again. Are not all things of the same category, then? Are there really two categories of things or just one?

A valid world is a consistent world, meaning one that could be inhabited. I want you to seriously consider that we could be inhabiting the kind of impossible world described above. As evidence, our thoughts visit impossible spaces frequently, and while this may instead be evidence that the system is simply not well-defined, being able to think contradictions like the liar's paradox, married bachelors, unbounded infinity, or any other impossible thing, all of which are distortions of the real, means the world itself is distorted in just such a manner as to allow the distortions to be thought. More directly again, how could we identify something as impossible if there was no impossible space for the impossible thing to be identified in? Reality is a self-torturer.[52] Impossible spaces would give us a full account of all contradictions, and where we see a contradiction – a null logical value – we have the null space of its modal matrix (bringing new meaning to 'kernel of truth'). This is highly convenient since just as the null space of a matrix in math allows us to trivially solve the mathematical system, so too does the null space of a modal in logic, as indirect proofs (proofs by contradiction) allow us to trivially solve the logical system.

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[50] This sentence short-circuits logicians.

[51] Unintuitively, it is only the intuitionists that don't believe double negatives eliminate each other.

[52] Imagine a serial killer whose only victim is himself. Rape, torture, all the hallmarks of a twisted kidnapping, but all done to himself and himself alone. Do we have any reason at all to believe this isn't how reality works?

It is hard for me to articulate this in a concise way but I want to be absolutely clear that by splitting the world into possible and impossible spaces, we would be creating a dualism like the kind I argued against in the opening section of this chapter, so this distinction is a purely fictional one, the spaces themselves are ultimately indistinct and all part of the 'actual'.

For a quantitative analysis of metacompletionism, or whatever you want to call this thing we've been looking at, it should be found that for any proposed entity Θ, its list of possible relations is infinite, as are its list of impossible relations, but also that the lists are strictly paired 1:1 for every state, so the relation of possible states and impossibles states for Θ cancels each other out (creating a null space). What we call the real world is then any states derived from the lists that are strictly paired in which the law of non-contradiction does *not* invalidate (resulting in vectors that are not zero); a set of strictly paired states which we would instead call actuals and impossible-impossibles – a pairing that would exist 1:1 with $\forall\Theta$. This means that not only is the actual world a strictly lower ordinal than the im/possible world and that any conception of an unboundedly infinite universe must be false, but also that the modal relation of a paired state is what an 'object' is (since all other properties or descriptions can follow from the paired modal relation alone). This is in line with the prior section stating that objects are just logical instantiates. The modal state changes of $\Diamond\Theta \vDash \Box\Theta$ and $\Box\Theta \vdash \Diamond\Theta$ are then trans-finite operations that account for the list of all actual states against the strictly larger lists of im/possible states that Θ traverses.[53]

If we want a complete description of reality we must include impossibility. At least now we know exactly which kind of impossibility it is – an impossible impossibility. This inclusion makes reality both consistent and complete.

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:: Nothing Exists ::

"There is only one way to avoid criticism: say nothing, do nothing, and be nothing."
Aristotle

This is a criticism of nothing. Generally people ask if some particular thing exists, and some philosophers ask about existence itself, but I decided to ask the dumbest possible question: *what predicates existence?* We have two options – something or nothing. If something predicates existence, then that something has to exist before existence itself does. Ruh roh. If nothing predicates existence, then we don't have any prerequisites for existence, so nothing exists.[54]

To muddy this further, defining 'nothing' as, "the lack of something," or to give any definition to it at all, is to give it a somethingness, so nothing would be something that exists. What's more is that something, *some* thing, is not any *particular* thing, and to be not any particular thing is to be not-a-thing, which is nothing. So we also find that something is nothing that exists. Hopefully this was an adequate demonstration that these are simply not meaningful terms and that we should move on to ones that are, but if you weren't convinced and thought I was just being sophistic, then you can continue reading and be mad about it instead.

The following table is a basic breakdown of the way philosophers typically try to argue for the existence of the universe: either we have something or we have nothing. The top row has received the most attention by far, but a quick walk through the other categories makes it apparent that the views

[53] In the terms following from this kind of description, since all of these states, actual, possible, and impossible, are all true states of an object, this would imply truth is strictly larger than the prior kinds of entities, implying truth is an unbounded infinite. But I don't like this, so I argue against it in the next chapter.

[54] You may recall that in the last chapter I said, "unless you really believe you bring to the game something fundamentally devastating that no one else has ever considered or even had the capacity to consider, then you bring absolutely nothing." I thought this was funny because I am now arguing for the existence of absolutely nothing.

that have received less attention are fundamentally more important and with them we can turn the question of something versus nothing on its head.

	Something	Nothing
Something	Something from Something	Something from Nothing
Nothing	Nothing from Something	Nothing from Nothing

Something from something (SFS) gets you infinite regress. If our universe is a SFS, then it always existed, there was never a time it didn't, since before our something there was something else, and before that something else there was yet another something, and something again, forever. There is no start to a SFS universe. An infinite amount of time must have passed before now in order for that to be true, and an infinite amount of time must have passed before five minutes ago, and before five trillion years ago. Infinite means infinite after all, and since an infinite amount of time is required before now, it also hasn't finished coming to pass yet, which means this present moment in time hasn't come to pass yet, nor any of the moments in time for any finite measure before us, and so billions of years ago hasn't happened yet, meaning we don't exist yet to have this conversation. The universe implodes. For this reason we can't have a SFS universe. And for what it's worth, most physical evidence comports to cosmological models of finite time anyways.

I've gotten strange objections to this from people. One friend argued that all moments of time could exist infinitely backwards and forwards like slices of motionless spatial arrangements with every moment happening concurrently, but of course infinite time would mean all the 'slices' have to already be instantiated, so all moments already happened, so how would *movement* through this *motionless* space-time be possible? Each slice is still and all slices already exist, meaning all movements/ changes/motions would be over instantaneously. Time would in a sense already be complete, yet you and I are still here in an uncompleted timeline. Also, I dare you to describe a mechanism that allows us to jump from one slice to the next that doesn't also allow arbitrary discontiguous jumps to other points in time far into the past or future (this is relevant since we don't see people popping in and out of existence as they travel trillions of years into the future and back). Further still, there's the basic physical problem of 'past' and 'future' being arbitrarily assigned on the infinite slice line, since both directions would evince infinite physical change, meaning the experience of an arrow of time would be completely unaccounted for. But I digress.

Something from nothing (SFN) is what Aristotle's first-mover aligns with. This is also the intuitive view most people have by default – that the universe was created – either by some physicalist means like the Big Bang or some religious means like God. But nothing comes from nothing. Nothings don't spawn somethings. Paradox again. This is a serious problem that needs a lot of rigorous and technically-driven hand-waving to circumvent, nonetheless most philosophers have settled on SFN because to them it is clear the universe is a something and not a nothing and they don't want the infinite regress we got with SFS. However, since SFN is impossible, it is just as plausible that we exist as a nothing instead.[55] I don't believe we end up sacrificing very much to make this happen, as nothing about the world stops getting explained if the world didn't exist in the first place (and for additional evidence, I recommend Markus Gabriel's book, *Why The World Does Not Exist*).

Nothing from something (NFS) works in the way SFN doesn't. SFN entails that you can magically bring into existence something from no source whatsoever, but NFS means that if you have a something then that something can result in nothing. 'Nothing' is a positive ontological phenomenon in this view. In fact it's happening all around us for most 'somethings' most of the time. Take for example that your atoms are mostly empty space (even when including the waves and particles of the quantum vacuum state); your body is at least 99% nothingness. We could confidently say you are made more of nothing than something. Swiss cheese has holes, places that are distinctly not Swiss cheese, places of cheese nothingness.[56] Moreover, a something can simply *do nothing* for a great period of time. Getting

[55] Socrates was mistaken; it is I who knows nothing.

[56] From section 9 of the SEP article on nothingness, "Can a materialist believe that there are holes in his Swiss cheese? The holes are where the matter is not. So to admit the existence of holes is to admit the existence of immaterial objects!"

something to do something instead of nothing takes quite a bit of work, like some causal force or energy (whatever that is). So if we start with a nothing then we can't have a something, but if we start with a something we can have a nothing (nothing is beside itself in terms of existence, so nothing doesn't require terms of existence, meaning no terms are required to prove the existence of nothing). Distinctly, if we have something, then we also have nothing, so while there's no guarantee of a somethingness, there is always a guarantee of a nothingness.[57]

This brings us to nothing from nothing (NFN), which has the same tautological consistency of SFS but without the infinite regress of infinite time requirements. How was the universe created? It wasn't. How do we exist? We don't. They are unintuitive and unsatisfying answers, but there is no overt inconsistency in a NFN world like we had with SFS or SFN. There are a growing handful of philosophers that side with this view, people like Kitarō Nishida, Martin Heidegger, etc. The seemingly paradoxical question we must attenuate is that if we don't exist, if we aren't something, then how are we here to talk about it? Following NFN reasoning, we do exist, but we exist as nothing, a functioning nothing. Little nothing functions. If the universe doesn't exist, if the universe isn't something, then what space are we occupying to talk about it? Well the universe does exist, it just does so as a functioning nothing. Big nothing function.[58] The space we occupy is null space.

A quantitative description we have not looked at yet: 'everything' would be equivalent to the 3x3 modal worlds table from the last section, since an everything category would contain everything in it, and therefore correspond to a complete world containing all actuals, possibles, and impossibles. Shuffling somethings into actuals/possibles and nothings into impossibles, the something versus nothing categories are encapsulated entirely by the 'everything' category. Since there is a one-to-one correspondence between something versus nothing and actual/possible versus impossible, and a one-to-one correspondence between everything and completeness, it would seem that this quantitative categorization of the world is equivalent to the qualitative one from the prior section, collapsing the distinction between the two modes of description. Corresponding to the non-distinction between actual and impossible from the last section, we now also have a non-distinction between something and nothing, and can just as easily describe the existence of an entity as a function of something the same as we can describe it as a function of nothing. If we want to really flip the something versus nothing distinction on its head then we do so here by simply articulating that the terms are not distinct. Consequently, everything is nothing.[59] Danger close, gunny.

The take-away from this should be that the question of existence is not answered by assigning the property of 'something' or 'nothing' to it; these concepts simply don't do meaningful work for us.

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:: Ontology Is A Joke ::

"Metaphysics is the finding of bad reason for what one believes by instinct; but to find these reasons is no less an instinct."

F. H. Bradley

[57] It's interesting that the people that believe we have something instead of nothing tend to believe that there will continue to be something once they die – that something begets something – and that's perfectly consistent but for the people that believe nothing happens when they die, they don't similarly believe we have nothing instead of something. They should say we have nothing and that's how we can infer that nothing happens when we die. Conversely, if we exist as nothing, then death is the negation of nothing, which is something.

[58] Here I think of Kierkegaard, "One sticks one's finger into the soil to tell by the smell in what land one is: I stick my finger in existence — it smells of nothing. Where am I? Who am I? How came I here? What is this thing called the world? What does this world mean? Who is it that has lured me into the world? Why was I not consulted, why not made acquainted with its manners and customs instead of throwing me into the ranks, as if I had been bought by a kidnapper, a dealer in souls? How did I obtain an interest in this big enterprise they call reality? Why should I have an interest in it? Is it not a voluntary concern? And if I am to be compelled to take part in it, where is the director? I should like to make a remark to him. Is there no director?"

[59] Or everything is impossible, or nothing is possible, or nothing is everything, or any other arrangement of those categories. It doesn't matter since the terms have become so arbitrary.

e just went from proving reality is pure logic, consistent and complete, to proving it's impossible and nothing exists. I'd like to propose that our torturer has a sense of humor. If you add a positive number to another positive number, you get yet another positive number, and if you breed one dog with another dog, you get yet another dog, but when you combine one possible concept with another possible concept, you often get an impossible concept, like sideways green. Something about reality seems to have broken. Why wasn't there a distinct category for this kind of possible-possible conceptual inconsistency in the meta-modal table? It would appear that even a consistent and complete framework isn't sufficient for explaining reality.

Here are some definitions: humor is when we draw attention to inconsistency, some failure of logic or some incongruence in the world, actual or perceived, and a sense of humor is when you are able to recognize this incongruence.[60] We see people exploit this all the time; expected logical failure in a system results in perceived future inconsistency and is the platform by which we make jokes, with a joke being the explicated or reified instantiation of the incongruence in that system (specifically, jokes are contrasts between extreme opposites). E.g., incongruence with how rational agents live their lives, like Žižekian pathology, or the inversions of definitions and principles that the Greek cynics were so good at evincing.[61] Ontology is a contrast between what exists and what doesn't exist, making ontology a discipline of jokes (like the failure in metaphysics that we can never explain impossibility or nothingness except by allowing them the same ontological status as possibles and somethingness – anything that exists seems to do so in some incongruent possible-impossible space, as a nothing-something), cosmic humor. Ironically, people have tried arguing against my view by making fun of it. I may be a clown but they're the ones with pie on their face.

In the first section of this chapter I argued against all forms of dualism, but it seems that one dualism asserts itself in all frameworks for metaphysics no matter what – there are things that exist and things that don't. I submit that this is the only real dualism in metaphysics since it is the only one concerned with the real and its dual – reality and its negation. All other dualisms are invented, but this one is discovered. All other dualisms assert their distinguished categories exist, but when it comes to the question of existence itself, those dualisms fall silent. So I wish to obliterate this dualism too, and annihilate the rest of metaphysics with it.

It doesn't matter what definitions you start with, they all break in the same way. Here are some arbitrary definitions I typically use for 'exist' and 'real': existence (or 'being') is the category of real entities, something is real if it is the case,[62] and the case is whatever is adjudicated by formal logic, whose realness itself is justified in the metalogic chapter. Given these definitions, existence is the logic-objects that make up what the case is. This means there is no extra-logical stuff, no things that are real outside of reality, since reality includes all things that are the case (reality is all instantiates of cases; the set of all sets). With the definitions set up in this way we can say it is the case that reality exists.

This may sound circular or tautological, but the inclusion of impossible spaces and nothingness allows the definitions to be recursive instead. All other standard frameworks of metaphysics don't permit impossible things, meaning they could not permit their own impossibility, which makes them unfalsifiable in their own view (which is circular). So we must permit impossible things, including my definition for existence as non-circular. All other standard frameworks of metaphysics don't permit nothingness and say there is a somethingness instead, making them unable to describe a world without their somethingness since a description is something and not nothing – a tautological view that begs the question. So we must permit nothingness, and nothingness by definition excludes everything else, even its tautologies.[63]

If you don't believe me then we can look at ontological tautologies and see if they maintain themselves. E.g., the good itself must be good, for all goodness comes from it and it is tautologically

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[60] Kant, Schopenhauer, and Kierkegaard all believed humor was based on incongruity with the latter-most stating that the person with a religious view of life is likely to cultivate humor, making Christianity the most humorous view of life in history. – Section 4, *The Incongruity Theory,* of the SEP article on *Humor*.

[61] "Behold, a man!" – Diogenes

[62] This is a dual definition (in the mathematical sense) to the one assigned to 'truth' in the introduction to this book, making 'real' and 'true' the same thing.

[63] My abuse of language deserves accolades.

good to have the good. Similarly, interest itself is interesting, and reality itself is real. But does itself-ness itself, itself?[64] Here a verb is being described, not a noun; we are not merely saying a thing in itself is the thing, but that a thing in itself does itself *be* the thing. So either we permit the tautology and all entities make themselves exist recursively, or we reject the tautology that itselfness itself itselfs and we are left with nothing as the predicate of being (i.e., nothing can be itself).

The common saying is that if you have to explain a joke then it isn't very funny, but nothing says reality can't be constructed entirely of unfunny jokes. Maybe we should explain it after all. Ontology being a joke means simply that existence is a function of some joke. I believe there is a kind of self-explanatory nature to this, but everyone I've explained it to disagrees with the explanation on the premise that it isn't funny. I rest my case.

This paragraph is dedicated to explaining the joke about explaining the joke. If the nature of existence is a joke, that would mean describing the nature of existence would itself be a joke. *You chose to read this*. Ontology is the study of being and so the study of this study, of the modes of being itself, is self-referential, as being itself is what the ontological does. This is to say being itself must be self-relational, and so out of its own volition, it is. Given that ontological things exist and the base item of the category of existent things now exists recursively, that it self-actuates, we can say that same self-actuation would validate the existence of any reified instantiate of itself. Here a form of the joke was invoked to prove that the joke exists, making existence as a joke its own joke about existence. This is justification for the base item of ontology being a joke. Look at you, still reading this garbage.

The more convoluted this all sounds, and the more you want to fight its legitimacy on that grounds, the more likely it is to be true. This is the point – at every junction in any description of reality where we would find some short circuit of logic, we locate in the same place a joke. I contend that this convolution and short circuiting occurs no matter what framework of metaphysics you believe in. This makes jokes fundamental to the nature of our descriptions of reality (or existence, or being, or whatever term you want to use), and since all descriptions are predicated by formal logic, our capacity to explain reality is then determined by the workings of logic, the specific instantiations of which I am calling jokes. E.g., I said a few paragraphs ago that with the way our definitions were set up, we could say it was the case that reality exists. But with the same terms and definitions we could prove that reality doesn't exist instead. This is where the real dualism asserts itself again and subsequently implodes.

Either it's the case that reality exists (it is real that something exists) or it's the case that reality doesn't exist (it is real that nothing exists). I have argued for both cases being true, that nothing is a real thing that exists, and also that things exist, which is not nothing. A real dualism, and a real contradiction. Gorgias, an ancient Greek philosopher, said, "the nonexistent does not exist; for if the nonexistent exists, it will both exist and not exist at the same time, for insofar as it is understood as nonexistent, it will not exist, but insofar as it is nonexistent it will, on the other hand, exist. It would, however, be entirely absurd for something to exist and at the same time not to exist. The nonexistent, therefore, does not exist."[65] I take this here as a proof that the nonexistent doesn't exist, so there is nothing that doesn't exist, i.e., *everything exists*. So nothing is something that exists. And if nothing exists, then we can describe the nature of existence as an aspect of nonexistence. Just like that, it is the case that reality doesn't exist.

What I am attempting to articulate here is not some artifact of speech or some sophistic language game, but that it is reality/existence/being itself that is the problem. If we permit the dualism of existence and its negation, then we have an entirely absurd ontology in which ontology itself can be negated. But in the same fashion that it is malformed to ask how much time passed before time existed, it would be malformed to ask if things exist at all in an ontology that has not pre-supposed its own existence. So if we simply don't beg the question and don't pre-suppose existence itself, then we don't have this problem, but also no longer have ontology. At least not one that's substantive and tractable.

There is a kind of comedy at play – you 'exist', you are a 'real' thing, so we say you exist in reality, but this 'existence' is at the cost of an infinite list of negated relations to other things, an infinite list of things that must not be the case in order for you to be the case. Your finite being stands in

[64] What a sentence.

[65] Jowett, Benjamin. Gorgias: line 67. Champaign, Ill.: Project Gutenberg, 2008.

opposition to an infinite set of cases in which you do not exist, like that you do not exist as the king of France, you do not exist as the first person to step foot on Mars, *ad infinitum*; therefore there are infinitely more pieces of your non-existence, and yet you still believe you exist. Your existence is a joke.[66] However, crucially, your existence is a joke about the nature of existence itself: everything that exists does so as a joke, and since 'everything' is something that exists, *omnia est iocum*.

The words 'exist', 'real', 'being', whatever, are always related in such convoluted and ultimately circular and unjustifiable ways that the entire study of ontology is reducible to this absurd character and nothing can escape it. And nothing does escape it.[67] Nothingness allows us to posit things as true or false with no further requisite, as nothingness is the null space of the logical structure to ontology. More accurately, nothingness is the negation of something's positive existence – the entire universe that is not the table before you is distinctly the negation of the table in all other places, like a photo negative of reality. *Omni determantio est negation*. So I conclude that the invocation of terms like existence, or reality, or being, are always and only meaningfully done in relation to the truth values of terms in logic. Whenever you hear someone say something is real, or that it exists, what they really mean is that it is true inside some premise. The world as mere proposition – that's where you exist, or don't. Want to hear a joke with no punch line?

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:: Meta-Etiology: World Without A Cause ::

The assumption that free will has mechanisms implies that it is the effect in a causal chain. If you don't assume it is mechanistic then the search for a cause of free will disappears.

oncluding this chapter with the last section would have neatly wrapped up the points I've been making, however a lot of people aren't convinced by what's been laid out, so this final section demonstrates how standard and intuitive views in metaphysics break without requiring you to prescribe to anything else I've said.

In particular, frameworks for causation are tired and confused. I argue that we can fully explain the world without any standard framework for causation whatsoever and that we lose no ability to accurately explain anything if this is true. This should also throw a wrench in all the incredibly long and boring debates on free will.[68]

Causation is a force to which we say there is some before that makes some after, that for any particular entity there is a cause that precedes it and necessitates its closest continuer as its effect, like antecedents and consequents in logic, such that all effects have causes and all causes have effects. Every cause was at first an effect of some prior cause (modulo a first cause) and every effect is itself some cause in the world, but since every effect is also a cause and every cause an effect, there appears to be no meaningful distinction that determines which one a state of affairs in the world would be – it is always both. Yes, we're getting rid of this dualism too. It's a blow-out sale and everything must go.

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[66] As more evidence, Thomas Nagel's work *The Absurd* relates our sense of time back onto itself saying, "It is often remarked that nothing we do now will matter in a million years. But if that is true, then by the same token, nothing that will be the case in a million years matters now. In particular, it does not matter now that in a million years nothing we do now will matter." Nothing mattering wouldn't matter, so it would never be relevant to bring up that nothing matters. In Nagel's view, the recognition of our existence as being contingent means we cannot justify our commitments past the contingency without being circular, which is absurd.

[67] Slavoj Žižek gives a similar statement in Love is evil, "There is nothing, basically. I mean it quite literally. But then how do things emerge? Here I feel a kind of spontaneous affinity with quantum physics where, you know, the idea there is that [the] universe is a void, but a kind of a positively charged void. And then particular things appear when the balance of the void is disturbed. And I like this idea of spontaneously [appearing] very much. The fact that it's not just nothing, things are out there. It means something went terribly wrong – that what we call creation is a kind of cosmic imbalance, cosmic catastrophe – that things exist by mistake."

[68] As an initial impulse for believing this, free will has often been given an absurd character. Hume, for example, said 'will' was what you are free to define it as. Suggesting another definition would mean that you were free to choose another definition, meaning the definition is what you were free to define it as, proving Hume right.

And of course it's always both, think about what it would mean to have causes and effects be totally independent of each other: an effect without a cause is what we call magic – that you can create something from nothing or that you can conjure something via a medium unrelated to the effect (like the evocation of a flame without any chemical interactions). Conversely, a cause without an effect is what we call impotence – that forces which normally do create effects would spontaneously fail to do so (like adding catalyzed reagents together but getting no chemical interactions). Neither of the cases of unpaired causal components seems possible so cause and effect must not be separate and distinct entities.[69] But if we do end up finding unpaired causal components then we have found a universe without traditional causation and what we observe as causal components must be a part of something fundamentally different instead. Here are all the possible kinds of causal systems:

	Cause	No Cause
Effect	Determinate	Magic
No Effect	Impotent	Indeterminate

I will try to show how the common causal descriptions we have fail to be performant and how the free will debate morphs depending on which part of the table you start in.

[DETERMINATE]

What is 'determinate' is an action or event that occurs specifically because of some preceding action or event, making it contingent on the prior. This runs contrary to the belief that another state of affairs was possible since an effect exists at the expense of all other possible effects. What this means is that in a determinate causal system there are no alternative options, there is only the cause and its effect (there is no freedom).

If reality was completely determinate then at some point we would have predictive models that aren't just stochastic, but completely predicatively accurate. Strangely, it would be trivial to make such a determinate universe non-determinate from within it. This is a modified version of Laplace's Demon; rather than past predictions proving determinism true, future predictions prove it false:

> With powerful predictive models ran on computers, it's implied that we could simulate chunks of our universe in perfect accuracy and use it to look into the future as a kind of foreknowledge device (we'll ignore the fact that the render would be slower than its target area). The foreknowledge device could even be a part of the target area, closing the system. We could test it by checking the world before and after the determined outcome is given by the device, and the device should show the *same* outcome as what we end up observing in the world. If the reading from the device before and after the knowledge of the outcome is given show *different* outcomes, then either knowledge of predetermined events can change their determination (making the events epistemically contingent in a way not captured by physics), or the world is simply not predetermined.
>
> From there all we have to do is say, "Look at this grouping of particles we call a college student. We know with absolute certainty, because of the deterministic powers of nature and our models, that they will become a philosophy major." Once the prediction is made you would show it to the person affected who could then choose to not to do the thing that was predetermined or wait and see if the student is cosmically forced to follow through with the predicted outcome regardless of their knowledge of it. It seems obvious that having knowledge of things predetermined to happen allows us to un-determine them – show the student that they are predetermined to become a philosophy major and then have them simply not become a philosophy major. Making them read this book might have the same effect.
>
> Either the device I am describing is an epistemic impossibility, or predetermined acts are weak in the face of foreknowledge; I claim both. The problem with such a foreknowledge device

[69] This implies antecedents and consequents in logic are indistinct too since an argument is always given as a whole with the antecedent and consequent together as one logical actuation. It is only meaningful to call them antecedents and consequents if there is a single through-line of actuation, what we call premises necessitating a conclusion. Actuation is here an indivisible property of argument-hood which then lets us describe actuation as retroactively imbuing arguments with antecedents and consequents.

> is that you're lead through infinite regress as you try to determine what it is you're destined to do and at which juncture you were forced to be aware that you were forced to do it.

My point in using the thought experiment above is to show that from a fully determinate world we can arrive at non-determinate one, and of course if we had an non-determinate world, determinations would be arbitrary to make. If foreknowledge of a predetermined event can change it, then the predetermined event, which unto itself should be determinate, is ultimately impotent – the causes fail to produce their prescribed effects. If foreknowledge of a predetermined event cannot change it, then the knowledge is not causal (making knowledge and any other mental state impotent) and yet you carry out the event anyways, making the event magic – the effect happens despite cause to the counter.

It seems that if we have any determinate system at all in the world then we necessarily also have at least one other kind of causal system, giving us a mix of causal systems at play in the world. This means determinism is at least an incomplete description of reality and at most does not describe anything real. N.b., pairing the impotent component of the above with the magic component (pairing an unpaired cause with an unpaired effect) gives us a complete description of the event without the traditional determinate component, meaning we simply don't need determinate systems to describe reality.

[MAGIC]

It is notable that contemporary physics does not return evidence that the universe is fundamentally determinate, where a cause necessitates an effect (the physicalist likes to ignore physics when it comes to this topic). Instead contemporary physics describes the world as probabilistic at base, where things *sometimes* happen and effects can come without paired causes (a magic system). Additionally, a 'first cause' would be an uncaused cause – both religious creation and certain interpretations of the big bang are magic by this definition. I should note that 'probabilistic' is sometimes a debated term by physicists since probability implies a strict ontological order in which a number of outcomes all exist concurrently. I'm somewhat indifferent on this since I think the problem is really with the linkage of the mechanism, not its plurality. Physicists also call these systems 'indeterminate' simply because they mean it is not determinate, but keep in mind that given the table above, probabilistic really means magic.

To clarify, quantum mechanics explicates magic qualities innate within material events – not just as statistical outliers because we don't have accurate measurements or whatever, but that some events are strictly beyond determination. E.g., *when* certain particles decay is magic. There is no cause for when a pion decays to a muon, it is an event that is fundamentally without cause, so all we have to go on is an ad hoc stochastic ontology that gives the occurrence as a probability to explain the phenomenon of true randomness. Some people even build devices that measure this true randomness to work as RNGs,[70] which means, despite what even many physicists believe, it's trivial for quantum magic to bubble up to macro-scale events, annihilating classical causation at the level of tables. The reverse works as well — that if quantum mechanics was determinate instead of stochastic, we would have a universe that was fully locally determinate but in which it could be made remotely magic by way of entanglement's non-local causation (there would be local effects without local causes). Either way we have magic.

This is so weird to me because there is a kind of spontaneity to event-hood in fundamental physics that leads us to saying things like, "The pion might decay to a muon because sometimes they just do that." If you ask why the pion-to-muon decay doesn't result in some other kind of particle, physicists will tell you it's because the energy emissions of the pion are a discrete amount that only leaves you with a muon as a possible product, but since this is true and the pion contains within it the necessary components for the creation of a muon, you can ask why the pion doesn't produce the muon on command after meeting the energy criteria and the physicists will say that there is no sufficient condition for such an event, only necessary conditions. So we have sufficiently uncaused events in the world.

This stochastic (magic) causation creates many headaches for our understanding of the world. For one, there is no common understanding of the metaphysics of probability, no lay statistical ontology

[70] AlphaPhoenix does this here – https://youtu.be/gwIGnATzBTg.

to explain how this works.[71] The technical explanations that do exist are usually quantitative instead of qualitative and this means that the overwhelming majority of people, even the majority of physicists, still have a fundamentally determinate worldview in their heads in spite of this worldview being provably incongruent to reality (they believe the probability is the cause, but this is purely functionalist and is incongruent to how causation works). Probability is not the intuitive way most people think of or discuss causal events, which the *Monty Hall problem* famously illustrates. For another, probability has lots of formal interpretive issues, which the *Sleeping Beauty problem* famously illustrates. If you are unfamiliar with the two problems I just named, here are some simpler, more direct ones:

> Example 1: *3 is a positive integer. Positive integers have a ½ chance of being even. Therefore 3 has a ½ chance of being even.*

This is clearly absurd, yet the conclusion is valid given the premises.

> Example 2: *Two coins are flipped. If at least one of the coins landed heads, what is the probability that both coins landed heads?*

Some people say ¼ because ½ odds of one coin times ½ odds of the other coin gives you a ¼ outcome of both coins being heads. But of course the question contained a conditional statement – we already know one of the coins is heads, so some people say the probability is ½ because whether a single coin lands heads or tails is 50:50. But we don't know which coin was heads, only that the outcome wasn't tails-tails, so our possible outcomes are heads-tails, tails-heads, and heads-heads, which means the correct answer for the odds of a coin-toss is in this case is unintuitively ⅓. Try it if you don't believe me.

> Example 3: *If you choose an answer to this question at random, what is the chance that you will be correct?*
> *A: 0%* *B: 25%* *C: 25%* *D: 50%*

In general, when choosing a single answer from a multiple-choice question with four options you have a ¼ chance of getting the right answer, but there are two options for ¼, both B and C, which means your odds of selecting the right option is ½ – the answer offered by D. The chances of randomly selecting D are again ¼, making both B and C valid, which is half odds, and it goes on and on. These kinds of self-referential statistical problems create indeterminate systems; there is no correct answer to the question because the question is not itself well-formulated.

The three examples above have more to do with hermeneutics than math; Joseph Bertrand formally proved that the principle of indifference doesn't reliably return well-defined answers to questions of probability.[72] Either way this indicates that stochastic systems are at best poor at giving intuitive descriptions of the world and at worst simply don't describe causation.

Since physics relies on probability at base, this stops us from being able to reliably track causation across contiguous time, making it impossible to ultimately justify what the cause of any effect is supposed to be in any system. E.g., if we had a slice of paused time where we saw a ball two feet above the ground, it would not be immediately obvious if the ball was falling towards the ground or bouncing up from it, only that it is two feet above the ground. Without time/change there is no distinction between the two states, it is just a floating ball. The lack of possible determination on our part would mean there was no effectual mode for causal description in the world without pre-imposing a causal chain, which is circular. Similar to the problem of induction, stochastic causation itself is never directly observed, just the sometimes-effects of circularly pre-supposed causes, making it so there is no observable cause for cause.[73] Essentially I am saying magic is not a real causal system, so quantum physics gives us a world without causation.

We could try to appeal to other kinds of causation to solve this problem, like the classical kinds of causation identified by Aristotle (material, formal, efficient, and final) since some of these allow you to infer cause and effect immaterially, but there is still a circular pre-supposition of actions or reactions

[71] But Alastair Wilson gives a good technical dive into probabilities in his book, *The Nature of Contingency: Quantum Physics as Modal Realism*.
[72] He used a more interesting but more technical example to prove this – https://en.wikipedia.org/wiki/Bertrand_paradox_(probability)
[73] Nelson Goodman's "new riddle of induction" from his book *Fact, Fiction, and Forecast* provides more interesting points on this.

through time with these. While inference, meaning the use of logic and not sense perception, may suggest that what we call causation in a still frame of time could somehow be accounted for by logic alone, inference-based causation still implies change, which means a temporal order to event-hood (the presupposition of time). We can account for change without material causation but it still requires time to be unfrozen – that there be a *history* to the object in question by which we infer its Aristotelian causes. This does not explain how we attain an effectual mode for causal description in the world without the circular pre-supposition of un-paused time (meaning we are pre-supposing changes before we know how to properly track changes).

In response to this, I claim that time is always 'paused', as was discussed in the *Metacompletion And A More Modal Modalism* section (mostly in the footnotes). The 'history' of an object is already encoded in the paused slice of time we started with whereby the instantiated logic-object is carrying all the relevant relations to other possibly instantiated logic-objects for use in the actuation, which is what I believe we are really referring to when we use the term 'causation'. Another way of saying the same is that what we typically think of as the 'past' is the set of relations between some logic objects in which we can infer what the formally necessitated states of those relations are in the given arrangement. N.b., this is always given as a single instance of 'time', so no un-pausing is needed for us to infer 'prior' relations between the logical instantiates. Logical actuation alone is what we end up meaning by the 'progression of time' in my view.

Information theory in physics asserts something vaguely similar – that information is never created or destroyed and so the entire history of an object is always present in the holographic projections of the information ('holographic' just means no information is lost when moving it to lower dimensions, like in black-body radiation). This and mine both are accounts of causation without classical views of time requiring a material order to events.

Unfortunately the modern era stopped believing in any kind of immaterial causal framework. Descartes famously axed three of Aristotle's four causes and left us only with the efficient cause, what we ironically now call material causation instead (which falls into the determinate category in the table). But it is interesting that contemporary physics still distinguishes the same number of fundamental forces in the world that Aristotle did, and further that these four fundamental forces in physics roughly correspond to the descriptions Aristotle gave for his four causes – the weak nuclear force letting quarks change their flavor (what something is made out of, its material cause), the strong nuclear force binding particles into atoms (what its structure is, its formal cause), the electromagnetic force attracting and repelling particles (where it's motion comes from, its efficient cause), and gravity[74] which pulls all matter together into galaxies and ultimately black holes (what its direction or aim is, its final cause).[75]

Aristotle gives his causes as concomitants in which all four act on an object concurrently,[76] which is not totally unlike the four fundamental forces in physics acting concurrently on matter. Further, the ultimate goal of contemporary physics is in unifying the four categories into one primordial force (in GUT for quantum mechanics or ToE for M-theory), formally exhausting the standard model. This is vaguely similar to Aristotle's idea that knowledge was contingent on causation and that we wouldn't have a complete understanding of something without the unification of its causes in the description of the thing.[77] Even though metaphysics typically looks at the qualities of entities, and physics at the quantities, I believe that we can cleanly bridge this divide.

While many philosophers have moved away from Aristotle's views on causation, his sentiment towards inference is still needed. Physics is fully accounted for at the fundamental level by formal logic since, as was demonstrated three paragraphs ago, what we point to as causation can be actuated ontologically by formal logic alone. From this I hope that people find causation to be a making of things

[74] They will of course tell you that gravity is not really a fundamental force at all but rather an observed effect of the compression of space in the direction of mass, however this still accounts for change such that the movement of space causes and attains effects in the world, so there is a force accounted for by gravity nonetheless.

[75] It is interesting too that Aristotle's five posited elements correspond to the five states of matter we traditionally describe — earth is solid (including amorphous solids and super-solids), water is liquid (including liquid crystals and superfluids), air is gas, fire is plasma (including quark-gluon plasma), and aether can be loosely assigned to the rest of the physically extreme states that occur in the universe, like Bose-Einstein condensate, Fermionic condensates, Rydberg matter, time crystals, and anti-matter. In contemporary physics it is more accurate to describe matter in terms of phases instead of states so this correlation with Aristotle ultimately fails to hold up, but I thought it was neat anyways.

[76] *Physics*. II 3, 195 a 6-8.

[77] *Physics*. II 3, 194 b 17-20. I would also claim that knowledge itself causes things.

in the world as relations between entities, as pure logical predication, where formal absolutism fully encapsulates the thing we call causation.

In fact, formal absolutism is so powerful it not only solves problems but creates them too. If the world is pure logic, we might assume it is perfectly determinate as well – conclusions follow from premises by way of necessity and so do valid consequents follow antecedents just as we would traditionally think effects follow causes. This implies a predetermined universe, contrary to everything I have been saying about the magic nature of physics.

A fix that was suggested to me was to use a non-bivalent logic (a system in which truth values are not just 'true' or 'false') allowing for a spectrum of truth value such that the exact same ratios of occurrence for particle decay are given by the ratio of truth value for the premise of particle decay itself (the truth of the ratio of some particle decay is given by the truth spectra of its logical instantiate). Here truth is a ratio or frequency of a premise or argument. This lets us account for causal frameworks in which things *sometimes* happen, solving the problem of probability for an event caused by formal logic.[78] But honestly it would take a lot of work to prove this and formal logic probably can't be used to self-justify non-bivalence anyways so this is likely a dead-end.

The problem remains; how does the magic nature of physics get explained by a determinate system like logic? It doesn't fully. We cannot predict when a pion will decay to a muon (it is not a part of a causal chain), but it is not completely aleatory either. We know the decay will happen given infinite time and can determine that the pion will decay to a muon and not something else, so there is a large degree of logical determination at play. We could then say that not knowing precisely when the decay will occur is not really a problem because, like the physicists who believe in the functionalist description that the probability is the cause, we could say that we knew the effect was going to happen in virtue of its magic nature, so magic itself is the 'cause'. This initially feels adequate since the effect happens in the way it does precisely because it is not determinate, impotent, or indeterminate. However, and very unintuitively, we would be saying that non-determinate things are what determine other things here. This would be a logically-determinate but physically magic framework for causation, which is inconsistent, which means it can't be true. The pion disappears, as does the magic.

[IMPOTENT]

To muddy this, we really do have direct examples of all the causal systems, or at least the appearance of examples. Determinate events clearly happen in applied physics, where we can reliably cause an effect, and magic events clearly happen in quantum physics, where effects happen without causes, and while I have argued that those causal explanations fail, the physical events themselves still occur in the world. It seems we must look to other kinds of causal systems to explain these.

To give an example of impotent causation I think we can point to conscious will, where physical mental intention can spontaneously fail to produce the desired effect in the body despite no failure in the physical linkage of the nervous system. This is directly similar to what happens to mental states in the foreknowledge device thought experiment from earlier. Physical activity in the brain spontaneously fails to produce effects throughout the rest of the body on a regular basis, even though the same places are lighting up in an MRI and the same exact neurons can be directly stimulated with ECT, they only *sometimes* produce the desired behavior. This does not seem to be well understood.

It might have to do with quantum processes, or a determinate selective process inside particular neurons that prevent them from firing too often, but these alternative explanations get tested and often result in data that is so inconclusive that journals won't even publish them.[79] To deal with this, and other problems people have with quant (like the measurement problem broadly), some physicists have argued for retrocausality in quantum mechanics, which I think is adorable. Even if we were to take retrocausality seriously, what changes is the order of cause and effect. Effects come first now and since impotent systems have no paired effects, this mean the first step is empty and in the second step we see spontaneous cause appear. Impotence in reverse is still an insufficient causal system, and so even

[78] Aristotle also argued that chance and spontaneity cause things, which means he loosely captured the kind of causation physicists describe in quantum mechanics – *Physics*. II 6.

[79] Null hypotheses almost never get published.

retrocausation fails to explain causation because it fails to explain these kinds of impotent events in our bodies.

While I think impotent causation is the most interesting, everyone else has disagreed with me and argued that I am mistaken and all my examples are illusory, so I gutted the rest of this section and will move on instead, ending it by saying that if you agree impotent causation isn't real, then we only have one category of causal system left to salvage our understanding of causation, and it's not looking very optimistic.

[INDETERMINATE]

I'm not convinced we need causation to describe events at all, because indeterminate events happen with neither cause nor effect, and indeterminate events happen.

To be clear on what indeterminate means before we get to examples, indeterminacy has a different character from the way people commonly understand it – they think it has to do with something being random. So to clarify, the literal definition of indeterminate does not mean random, it just means never determinate, and determinate doesn't mean not-random. Random things are determined, they're just randomly determined (via magic, or determinate random systems like dice and CSPRNGs). Counter to the common intuition, an indeterminate thing would be something that is neither determinate nor random.[80] This does not rely on randomness being epistemic, where we simply don't *know* the outcome beforehand and so it is random to *us*. Instead, there is ontological randomness, like the previously mentioned pion decay, which does not rely on epistemic conditions.

Indeterminate events exist within things like mathematics and computing, an example being invalid recursive loops (think halting problem) where the external world is cut off from the system and there is neither sufficient cause nor effect present to end the loop (a kind of anti-event). This ends up being a really common occurrence in math, computing, logic, thought, and other domains.

I would even argue that relating any two unrelated entities is an indeterminate event since there is no proper cause for the relation (they are inherently unrelated) and there is no real effect (nothing comes from the two entities' pairing since they are inherently unrelated) despite any effect that comes from the relating act itself. In fact here it seems we *create* a cause and effect by doing the relation – the two entities themselves are not related in any meaningful way outside our act but we may not have known this in advance, so by observing no direct effect being produced by their relation we learn that they were not inherently related, creating a second-hand informational effect. This I believe gives us the basis for ontological causation, that it is something that can be created and is therefore real, but exists only as concomitant to the conscious acts of us and as a byproduct of epistemological pursuits.

I started this section on etiology by saying causation implodes into nothingness, not that it explodes into lots of interesting categories, so I will try to close this off now. It is important to note that there is no overt contradiction of cause and effect with indeterminate systems in the same way we had with the other three categories. In indeterminate systems we are accounting for events/changes in which we say the thing that comes first has no direct relation to the thing that comes second. This is really unintuitive and unsatisfying and yet it would still leave us with the same description of events in the world in which we explain things by the order they occur in. This means we can remove causation ontologically and still have the same epistemically causal explanations for things (as long as those explanations conform to logic). This implies our world would look exactly the same with or without any real causation.

[FREE WILL]

I promise it's almost over. Free will is usually discussed as the ability to make a conscious choice between two or more actions. Determinists resist this definition of free will since they don't believe alternative states of affairs really exist; they say that all supposed options are imagined and only one thing was ever really going to happen. Compatibilists counter them saying if everything is determinate,

[80] This is also important if we want consciousness to inherit the ontological indeterminacy of quantum mechanics but not the ontological randomness of quantum mechanics, as John Searle states several times throughout his talk *Reflections on Free Will, Language, and Political Power*. The next couple of sentences are cribbed from the same talk.

then people constitute some of the entities that determine things in the world (i.e., we have will), and if that determination happens discursively, meaning internally and therefore at least partly separately from the external world, then it was free from total outside determination (i.e., our will is free). This would mean free will exists in a completely determinate universe. Anybody familiar with the debates around determinism will probably find further discussion on these old and infinitely rehashed talking points boring, so I will move on to newer, hotter takes.

The standard line goes: if we were all predetermined to do what we do and had no real choice in the matter, then it is the case that we are not responsible for what we do. What commonly follows from this is the belief that criminals are not responsible for their actions and should therefore not be punished, but of course the people that lock away the criminals are also not responsible for their actions and are therefore not worthy of being relieved from their jobs of locking up criminals. The old insight here is that no behavior changes given the knowledge that everything is predetermined, but the new hot insight is that since the universe does not look any different when we switch it back and forth between a deterministic one and a non-deterministic one, it is therefore absurd to believe in a distinction between the two. A Venn diagram that fully overlaps is just a circle. This means determinism and indeterminism are descriptions of the same thing. That's right, we're collapsing all the categories for causation and all the work we did earlier to tease out their differences was pointless.

If you think the world *does* look different when you switch it between the two, you would have to describe the mechanism that determines this difference, which would itself be subject to the mechanism; the mechanism would have to determine things you claim are indeterminate. A more technical way of saying this is that it defeats your capacity to adjudicate the difference since the alternative world would be fully paired to its antipode.

Since I am claiming determinism and indeterminism are descriptions of the same thing, despite seeming mutually exclusive and contradictory to our intuitive views of the world, then it may seem like discussions around free will are inconsequential to reality and should be abandoned.[81] However, I think instead that this is evidence that we have an 'overdetermined' world. As Aristotle put it, the same thing can be said in many senses. For example, you can talk about your friend exhibiting the behavior of biomusicological entrainment or you can say he bobbed his head to a song. Both sets of terms describe the exact same phenomena despite the two sets operating over distinct domains of reality. John Searle gives my favorite example:

> *When your car doesn't start, what do you say to the mechanic? Do you say, "Look, the passage of electrons between the electrodes is insufficient to sustain the oxidization of the hydrocarbon molecules?" I don't say that. I say things like, "I think the plugs are no good. The damn thing won't start." Now it's true, in Berkeley we've got a lot of unemployed physicists, and you might say that bit about the hydrocarbons, but … what I'm trying to say is those are not independent descriptions of two different events, but they're descriptions of one event at different levels.*[82]

And while overdetermination means we would have multiple confusing but ultimately sufficient ways to describe causal components of the world, I believe this is still not enough since people seem to be incredibly confused by what they really mean by the term 'causation', more confused yet by 'free will'. Even some philosophers are greatly confused and give sad arguments for things like retro-causation – that future planning requires you do something for an event yet to happen and therefore it is the knowledge of the event in the future that causes you to do the thing in its past. But of course by future knowledge they mean the present knowledge of their present contingency. God help these people.

I've heard a handful of others recite the anti-free will argument that it doesn't matter whether determinism is true because indeterminism is just as incompatible with free will – that if our decisions aren't determined then they aren't caused by anything, which means that they occur randomly. And if

[81] We can and do still point to freedom and will in the world, and in both cases I believe that what we are pointing to is the temporal suspension of effect (causes without temporally contiguous effects), adjudicated by *logos, tout court*, which is analogous to the 'impotent' category. We can point to that adjudication and say, "Yes, there is our free will." If you disagree, then enjoy not having the freedom to think about it. Take that as you willed.

[82] He says this at 50:15 in his talk – Reflections on Free Will, Language, and Political Power

our decisions occur randomly, then they 'just happen to us', so they're not the product of our free will. I am supposed to like this argument because it agrees with my view that it makes no difference if our universe is deterministic or not, but it happens to be wrong.[83]

The kind of 'indeterminate' things they are referring to here are the stochastic events (magic) discussed earlier, which are things without cause, but of course will does cause things *sometimes*, so will falls into impotent causation instead. When will succeeds in causing something then it is not impotent, but determinate, so we could argue your will is only free when it fails. There is something poetic and ultimately intuitive about this because it is only when your will exceeds your physical capacity that it is free from its physics, but being free from physics also means failure to produce physical effects (hence impotent). Trying to push your body beyond its limits, mind over matter, and so on, this is what's required for people to say you have a strong will.

The question could to shift to whether determinate systems have ultimate interference with impotent systems such that will has no freedom (like if will is totally illusory). If that were true then it would be a purely determinate system which could never spontaneously fail to produce effects like we often observe will doing. This would make the impotent category epistemically contingent and not ontologically valid, yet this would not override the magic category. The magic category spontaneously produces effects and so does conscious will. When people ask you why you voted for someone you might say it was because of a specific policy, but that's not a sufficiently causal reason since other people might have wanted the same policy but voted against the same person. Will is then not sufficiently causal, but is sufficiently effective. It creates effects without valid causes. Will is now a candidate for magic systems and while magic isn't sufficient for explaining causes it is sufficient for explaining effects, which means we can see the effect of free will inside an otherwise determinate physical system.[84] I'm taking time to belabor this point about shifting the place of will around because I'm trying to show that no matter how you initially define your causal system there will always be ways to shuffle cause and effect so that any phenomenon can fit in. It is causation itself that is the problem.

It is easy to break things in metaphysics. I have argued that cause and effect are indistinct, that free will, determinism, and indeterminism all strangely occur at the same level of reality and are also ultimately indistinct. I have shown that we can logically determine that a system is non-determinable, and its non-determinacy determines the outcomes. These statements would be openly contradictory if the phenomenological sources were separate and distinct entities, but since a single predicate that accounts for every phenomenon was given, we can dialectically collapse the distinctions between them. Causes necessitate effects, effects are contingent on causes, and both necessity and contingency exist as components of formal logic. So long as we have formal absolutism we have the world.

But you may be asking so what? So what if these concepts are all indistinct? Does that really solve any problems? What even are problems? I share your concerns, which is why the next chapter is about them.

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[83] With a non-distinction between cause and effect, there is also a non-distinction between will and freedom. Note how closely the terms parallel each other; to will something is to cause a determination, and to be free is to be the effect of an undetermined state. Put this way, cause, determination, and will are all the same kind of thing, as are effect, indetermination, and freedom. Since cause and will are the same thing here, effect and freedom are the same thing too, and as cause and effect are indistinct, so too would will and freedom be indistinct.

[84] Many contingencies exist as agent-dependent phenomena, meaning some things in the world are suspended in epistemic contingency and actuated only when the logic is thought or some discursive agent piecemeals (and thereby reifies) the argument form. This actuation is also an observed effect in the world, caused directly by an agent. We could debate whether agents are freely discursive or meaningfully constrained in such a way that the discursive activity itself is forced, but again I don't see a real distinction between the two because if we define 'you' as the thing that causes your actions, then 'you' is the thing that caused your conscious determination of the actions, providing a fallback we still identify as your will in an otherwise predetermined world.

Metaepistemology

I know some people who think it's their sacred duty to ask why we exist – why it is that we're here instead of not here. But the real problem is more pervasive, as no one even knows where here is. If you ask someone where we are they will say Earth. Okay and where is that? The Sol star system. And where is that? The Milky Way galaxy. And where is that? Most people run out of answers at this point but if you ask a cosmologist where our galaxy is they'll tell you it's part of a super-cluster of galaxies and that super-cluster is in a gravitationally bound region of space called a cosmic filament, but ask one last time where that is and even the cosmologists run out of answers.[85] No one knows where the fuck we are. Everything is in free fall and there is no bottom.

But I want to know. I want to know how the world works at every level, in every scope, across every domain. I want it all, but how do I get there? Where can I turn for knowledge? Who or what has it? Do I turn to religion? Do I turn to science? How do we know philosophers have found any units of knowledge without circularly presupposing the knowledge that such a thing was possible? Why is it that the problem of knowledge should exist in the first place? I want to believe we exist within the domain in which problems have solutions, and how fortunate we would be if all of our problems were salient, but if there is anything to be learned from Deleuze it's that real problems are problems precisely because they have no solution.[86]

This chapter opens with a discussion on the nature of knowledge, argues against both religion and science as methods towards knowledge, goes over an experiment in applied metaepistemology, and closes with an analysis of the nature of problems.

:: Knowing How To Know ::

"I don't know the meaning of the word willful ignorance and I don't intend to find out."
Xavier, Renegade Angel

Often repeated in philosophy, it is better to know than to not know. But know what? And what is it to know? Contemporary epistemology is largely characterized by the debate around the definition of knowledge as justified true belief, where it is required that you have a justified belief in something and that the something also be true. But I don't care much about the debates around the Gettier description of knowledge and subsequent arguments, partly because Plato already anticipated that some classes of justification were weaker than others, and partly because the real problem seems to be with the other criterion instead.

You believe something and you have justification for it, but the thing must also be true out there in the world. Okay cool, how do you *know* it's true out there in the world? Because you believed it and had justification for it? Well then justified belief was all that was required for knowledge, since truth would be entirely contingent on that alone. And what of your initial belief? How do you know you believe the thing in the first place?[87] Oh, you 'just know'?[88]

[85] Cosmic voids are larger than super-clusters and filaments, as they are largest structures in the universe, and are also frequently described as cosmic 'negative spaces'. This is of note since it means there is more nothing than there is something involved in these structures.
[86] It'd be more accurate to say Deleuze thought that solutions re-inscribe their problems back into the world, that what it means to be a solution is precisely that there is some problem, making it so that the problems never really go away.
[87] There are some interesting examples around this in *Knowing That P Without Believing That P* by Myers-Schulz and Schwitzgebel.
[88] This is basically the same criticism some postmodernists have made about correspondence theories of truth.

It is always problematic when you apply criteria for knowledge back onto itself. In order to know something it must be true, but how do we know that it is true? We must believe it, but how do you know the belief in the thing is true belief? We must have justification then for the belief, but how do we know the justification itself is justified? In essence, how do we know that we know? Whenever anyone gives something as a criterion for knowledge, it seems to rest on that criterion necessitating knowledge as a criterion for itself.[89] So it would appear that in order to know something we must also know an infinite regress of things related to our knowing of it.

The criticism I find most interesting is simply that there are cases in which knowledge does not entail truth. False things are knowable; we know things that are false just as often as we know things that are true. In many instances they are even concomitants. If you know that you are not the king of France, then you also know that either someone else is the king or that France simply has no king. From negative knowledge we derive positive knowledge all the time, and the same happens in the reverse direction – if you know all the species of snake that are venomous, then you also know which ones aren't. You have the same amount of information from something's negation as you do from its positive assertion; a negation of possible properties means you know which properties an entity has in virtue that they were not negated in the property list.[90] Here we have falsehoods satisfying claims to knowledge. We could say that we know false things only because it is true that they are false, but just the same there is an equivalence class of true things that are false because it is false that they are true.[91]

Anyone who seriously considers JTB (or any other framework) as the criterion of knowledge quickly finds problems with it, yet it seems almost every philosopher still uses JTB as the standard formula anyways, as if to shrug and say there is no real alternative. I propose that we don't need an application-level theory of knowledge at all, and that when dealing in *capacities* for knowledge we evince a meta-epistemic theory of knowledge whose criteria are jointly sufficient for avoiding the standard criticisms of all prior frameworks.

Do you, or does anything, have the capacity for knowledge or not? We can play both sides of this game and see where they lead. If you can be conscious of the truth value of any state of affairs, regardless the method or formula for attaining the truth value, then units of knowledge exist and you have a capacity for them. If you cannot be conscious of the truth value of any state of affairs, then either units of knowledge themselves don't exist or you don't have a capacity for them. Generalizing from you to any possible 'knower', i.e. any possible entity conscious of the truth value of any state of affairs, either 'knowers' are themselves possible or not. Let's start by saying they are not possible – no one can be conscious of the truth value of any state of affairs, not even this one, which you would be conscious of. This self-defeats, so the inverse must be true instead – anyone can be conscious of the truth value of any state of affairs. So knowledge exists and knowers are that which have a capacity for it.

I'll place more discriminate bounds on what constitutes a knower, so as to not over-broaden the term; this can be a real problem since other frameworks for knowledge ironically do not limit knowledge to knowers. For example, in JTB any entity capable of qualia can have justified belief of true states of affairs since the qualia itself is justification and concomitant to belief (where experienced belief itself can come as experiential qualia). By that description a bee has knowledge since bees have qualia, or some kind of phenomenological sense-perception, yet bees do not poses a semantic of that unit of 'knowledge' nor perform any discernable rational inference on it, and thus are not themselves anything like what we would expect of a traditional knower. So here what we would typically call knowledge I am instead now calling the subject-dependent adjudication of logical consistency or inconsistency between concepts or objects in the world, or more simply 'a sense of humor' where your humor would be what determines how you know things. This explicitly confines knowledge to entities with the capacity of internally adjudicating logical consistency, so knowers are entities conscious of truth values such that they can adjudicate the truth values themselves. It literally humors them to do so.

It follows naturally that 'units' of knowledge are evinced by statements with truth values where segmentation by logical operators divides the primitives, meaning the statement, "knowledge exists **and** knowers have a capacity for it," evinces two units of knowledge, firstly that knowledge exists and

[89] This is not totally unlike some of the points made by Wilfred Sellars' famous myth of the given.
[90] "Everything that matters is pregnant with its opposite." – Yanis Varoufakis' dad said this.
[91] This reminds me of a loosely similar point made about the 'unknown knowns' described by *Slavoj Žižek on Donald Rumsfeld*.

secondly that knowers have a capacity for it. This is natural in the sense that nature is formal absolutism and formal absolutism predicates the ontological order of state-hood, thereby adjudicating the relation between the statement and the state of affairs, showing that they were actually the same thing *ab initio*. This is my solution to the problem of universals that I referred to in the prior chapter – any entities that share the same formal identity are the same entity and when two people think of the same thing, their minds quite literally visited the same place and touched the same relata, serendipitous to the saying, "We're of the same mind on this."

To clarify, I am not saying false statements like, "All dogs have one leg," forces reality to conform dog-hood to one-legged-ness or anything like that; I am saying that the adjudication of the truth value of statements is really you reaching out and touching reality directly with your senses (of humor). In this particular case of all dogs having only one leg, you have identified the entire space of existence in which the statement is false – which is all of reality since it is never true – giving you the negative space you readily traversed with your thoughts, making your thoughts and the otherwise external space indistinct.[92] This implodes correspondence theory by reducing the two sides of the correspondence to the same logical instantiate. Here I would also say that 'justification' is just reification – that justification is when you provision formal proof for something giving you contact with the real. In line with the main goal stated in the metaphilosophy chapter, this is an epistemic architecture that is, in my estimation, indistinct from its metaphysics.

But what of the opening statement that it is better to know than to not know? There seems to be a great wealth of useless knowledge, bits of information that have no meaningful or practical purpose. Is the number of oxygen atoms in the room even or odd?[93] There is seemingly no possible application this information could ever have. But we also have no way of finding out. It's not currently possible for us to find out how many oxygen atoms there are in a room. This is important to note because the knowledge that would be required to determine this piece of information justifies its pursuit many times over, and *that* knowledge has near-endless practical and meaningful uses, making it at least better in *capacity* to know than to not know. Denying this is to deny your capacity to know you deny it, which self-defeats.

If we had the understanding necessary to invent a device that could reliably and accurately determine exactly how many atoms of a certain type were occupying an arbitrarily-sized space at any given time, then we would also know how to gain atomically precise measurements for just about anything else we would ever want to measure. This would be the greatest instrument of measurement humans ever create; would that not justify its pursuit?

Another example: it seems meaningless to know precisely how many hairs are on the head of a random person, but I contend that, given a full head of hair, this too is outside our current ability to find out. By the time you finished combing through an estimated average head of a hundred thousand hairs, the number will have changed.[94] You would not know how many old hairs had fallen out and how many new ones had sprouted, changing the total count. However, if you had access to a device that could accurately track all the hairs on a head at the same time, then you could know what the total was, whether it was even or odd, and so on. But we don't have this technology, and the knowledge required to attain it would again justify its pursuit many times over.

In fact, were such measurement devices to be invented, we could arbitrarily expand their usefulness by turning them into game shows or anything else with stakes. How many hairs are on this contestant's head? Is the number of atoms in their hair even or odd? The right answer wins you a billion dollars, or whatever. You can set the stakes to be however arbitrarily high you desire if this knowledge was actually attainable, making this kind of knowledge useless only so long as you don't value your own life. A man holds you at gunpoint in a grocery store, he wants to know the exact number of fish in the Atlantic. Stranger things have happened.

All knowledge that people generally agree on as completely useless or impractical rests fundamentally on states of affairs we don't currently have access to. Just the same, every example I

[92] It would directly follow that thoughts literally leave your head and travel at infinite speed across all existence, but no one would believe this so I'll pretend I don't believe it either.

[93] Dr. Alexander Madva gave this example to me.

[94] Murphrey, et al. *Anatomy, Hair* — https://www.ncbi.nlm.nih.gov/books/NBK513312/.

have seen people give of knowledge they claim to know is totally useless have always been something trivial to find a use for. This even includes the long list of 'useless information' in pure mathematics, as what was for two thousand years considered totally unimportant and meaningless number theory is now the basis of all of computing, encryption, banking, and so on.

Where you fall on this issue is a litmus test (yet another thing that would have been considered useless before its modern application) of whether you are a sophist or a philosopher.[95] To the sophist, knowledge is a means to some ends, but to the philosopher, knowledge is an ends in itself. The distinction here is in whether you think knowledge *needs* an application in order for it to be worth pursuing versus whether you pursue it for its own sake. The philosopher doesn't need knowledge to be practical and the sophist doesn't understand why you would bother with it if it wasn't. This is a meta-epistemic break; the sophist, by self-preclusion, is not *capable* of learning how the world works for its own sake, which means they are missing a critical tool for learning how the world fundamentally works in the first place. If only that piece of knowledge was practical, right?

Some have argued that there are clear examples where it is *worse* to know something, what are called information hazards (and more recently, 'malinformation') – units of knowledge that are dangerous to share. The premise of information hazards relies on the spread of knowledge being *risky* – that sharing certain facts about the world could directly cause harm. Frequent examples I've seen include facts about what common house supplies can be used to make explosives, or differences in IQ between demographics. If you shared the nuclear launch codes with everyone on the planet, some people will end up using that knowledge to harm millions of others. Therefore, it is argued, that some knowledge is evil to share.

However, information hazards don't appear to be real normative indicators. Knowledge is only ever hazardous if you don't know what ought to be done with it – a problem solved by gaining even more knowledge. I see the real hazard as acting without thinking,[96] so I've devised two cases, a weak and a strong case, for why the concept of info hazards seems to fail normatively.

In the weak case, if telling people about testing done to animals (pigs, mice, monkeys, etc.) evokes the strong psychological suffering of many humans, then instead of ending the animal testing, you could just stop telling people that you're doing it and you'd reduce the same amount of psychological suffering done to the humans without stopping the actual harm done to the conscious beings being experimented on. In this case the information just *feels* bad to know, and the actual harm being done to the animals is in no way reduced. But somehow it is supposed to be better that you've reduced psychological suffering despite no real improvement to the source.

In the strong case, we can point to information hazards relying on statistical assumptions of risk – that there is some 'likelihood' that some person in a large enough sample size will immediately use the information for harm. This relies on probabilities and excludes other relevant epistemic dependencies like knowledge of what harm even is, for knowledge of the good would preclude one from abusing knowledge of evil. If teaching high schoolers how to effectively use firearms results in more high schoolers shooting each other, then the hazard was in failing to also transfer the knowledge relevant to motivating good behavior around the use of firearms.[97] W.V.D. Busby pointed out that totalitarian states can motivate good behavior at the cost of much harm, opening space to disagree with the assumption that we can motivate good behavior without incurring even more harm, but this doesn't do any work towards proving that knowledge itself is evil, only that certain forced behaviors could be harmful, which is a trivial point. So the conclusion I draw from this stronger case is that info hazards are really just the probability spaces of ignorant behavior, which is ironically equivalent to the space of how much information an agent *doesn't* have regarding the same behaviors – a null epistemic space.

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[95] On sophistry; people usually misunderstand what the word means or why it was distinguished from philosophy by the Greeks. The sophists were people who got paid to educate students; the word refers literally to teaching for pay. The philosophers were distinguished by the fact that they taught students for free – the idea being that knowledge is an inherent good and so limiting its access was evil. It's knowledge as a means versus knowledge as an ends in itself. The problem with sophistic thinking is that language gets turned into a mere means as well. The interactions with sophists, and the practice of sophistry, is such that they reduce all states of affairs to language alone and thereby claim that you are only ever attacking their phrasing and not what they actually believe. So in practice they think they are never wrong and you are just 'arguing semantics' when you disagree with them. This is why sophists often use subjectivist and linguistic reductionist arguments.

[96] Žižek's *Don't Act. Just Think.* makes good points on this.

[97] "Why not whip the teacher when the pupil misbehaves?" – Diogenes

But what if some pieces of knowledge are evil to know in themselves? How many people can one really fit into a death oven? We could easily argue that the answer would be unethical to attain. More specifically, the qualia of what dozens of people burnt alive smells like seems like something we *shouldn't* know. We say that's not a qualia we ought to have access to, since attaining that qualia requires you to burn dozens of people alive. This argument rests on the notion that qualia of ostensibly evil outcomes are dependent on the production of evil acts. But knowledge is usually generalized, e.g., someone working for a county's building permit division has to calculate how many people can safely fit inside a given building and this information is listed as the 'maximum capacity' for that space, which is the same formula used for determining how many people can be packed into a gas chamber. In the case already given, many people that work at crematoriums have experienced the smell of burning humans – lots of people have learned what burning humans smell like without having to do anything harmful to any living human. So knowledge being generalized means the production of evil acts is not required for the production of qualia assumed to be related to evil acts.

But you argue that burning a dead human and burning a living one may result in different qualia and knowing whether it does or not requires that you burn a living human to be sure. So, surely, *that* knowledge is evil, right? While *accessing* that knowledge seems to require you to commit some evil act, this is not proof that a particular unit of knowledge is in itself evil. You can prove that *accessibility* to certain classes of knowledge is evil all day without ever getting a step closer to proving that the knowledge itself is evil. In reverse, if you disable a knower's *capacity* for certain classes of knowledge, then you also disable the capacity for knowledge that the classes' *access* would be evil, creating a hazard since the lack of information greatly increases someone's chances of unwittingly doing the hazardous thing. This is an ignorance hazard.

Additionally, given the passage of time, things which take some value may end up acquiring a different value where the two values are exclusionary. Another way to say this: if some piece of knowledge is evil now, in our current use, how do we know it will not someday be good in some modified use? Or vice versa. This has been used to argue for the neutrality of knowledge, that it is neither good nor evil, rather that its use is the good or evil thing. This weakens the moral import of knowledge. As stated earlier, knowledge is only ever problematic if you don't know what ought to be done with it – a problem solved by gaining even more knowledge. Applying knowledge in the right way is what we call wisdom, but the 'right' way implies ethical consideration, and how would we know what ethical considerations to make? This would seem to make any moral import of knowledge totally circular since we only know what units of knowledge are good or evil to know once we have knowledge of good and evil, which we couldn't have known was good or evil to attain before we attained it.[98] Therefore, it is never worse to know than to not know *in capacity*, making the capacity for all classes of knowledge better than its negation, i.e., it is always better to know than to not know in capacity.[99]

As a side note, this seems to evince the notion that knowledge is literally power. I don't mean this as Foucault did, where knowledge was always a class of social power (or at the very least operated as a structure which bound social relations), I mean it more fundamentally as an identity statement giving indistinction between the epistemic and the ontological notions of power. Whenever I see an exercise of power, the latent semantic content in the relevant knowledge and the symbolic relation of power to its exercise seem to be indistinct. What we call power is, in every case anyone seems capable of presenting, an exercise of some privileged access to knowledge – privileged in that the knowledge was scarcely rationed, that the exercise has no known counter, or that the exercise happens faster than the other party could have known it would. Exercises of power are always predicated by the knowledge of how and when to enact the exercise. Superior power seems to rest fundamentally on who figured out the most things the fastest, modulo that what was figured out is relevant to the task at hand. This also gives credence to the notion that there are race conditions in epistemological ethics just like what occurs in computing – every second we waste not learning how the universe works is power we are giving to some other group of people instead. A lot more can be said on this, specifically around the place of knowledge with sayings like, "information wants to be free," versus contrasting sayings like,

[98] "Where everything is bad it must be good to know the worst." – F. H. Bradley

[99] "That the purpose of life was not the maintenance of well-being, but some intensification and refining of consciousness, some enlargement of knowledge." – Aldous Huxley

"information freely given is worth little." Or similarly, if knowledge is power, and knowledge is good, then by transitive property power is good. But the nature of knowledge's relation to power, or ontological equivalence to power, seems to be a topic more suitable to anthropologists, sociologists, and political theorists, so I'll leave it to them.

I have argued for what knowledge is, that there exist discrete objective units of it, that it is not useless or impractical, and that it is good, all qua capacities. I will conclude by making one final point – that there are no epistemic limits in principle, i.e. no knower bound in finite knowledge except by purely practical arrangements. By this I mean the notion that there are questions whose answers we will never have, either because more questions will arise, or because the answers are beyond our comprehension, seems weak.[100] To paraphrase Wittgenstein, to place a limit on thought is to think both sides of the limit.[101] I believe it to be self-evident that once you are a knower, meaning once you have the capacity to be conscious of the truth value of premises or states of affairs in the world, you have passed the last significant cognitive threshold whereby you are just capable enough to formalize your thoughts and tap into universal reason (formal logic) and you necessarily then find there is nothing beyond that which you can think of and know.[102] If you disagree with this, then you are claiming that you don't have the capacity to formalize the thoughts or tap into the universal reason that would make your disagreement possible, which retards the function of the disagreement.

In Frank Jackson's qualia arguments, his famous *Mary's Room* thought experiment, it is demonstrated that knowing things like the frequency of red will never give you the qualia of red. This seems not a principle limitation but a practical one, since Mary's environment is what limits her. Imagine for a moment that we were presented with the reverse task instead. Marry is now *not* a scientist, she doesn't know how any of that stuff works, and she exists in a room comprised of nothing but shades of red. Nothing about her experience gives her the frequency. Since all empirical knowledge is supposed to be given (verified or falsified) by qualia, and it now seems that qualia gives you no facts about empirical objects themselves, there is, for principal reasons, nothing strictly knowledge-like about the outcomes of empirical observations.

The inference from a quality of the world (the qualia) to some quantity of it (the frequency) is only possible given that we can in fact *infer*, which is a purely deductive act. Paired with the fact that people regularly make discoveries of things they cannot directly observe, I believe that what we call inductive reasoning ends up being deductive reasoning in disguise – this is effectively Karl Popper's insight, however Popper's *critical rationalism* still relies on sense perceptions to justify empirical falsifications and so my problem with qualia persists. This 'deduction in disguise' reduces the whole of science to a purely logical space for us to explore. The Vienna Circle tried and failed to add sense observations to logic, or verifiability to philosophy, but I am stating the opposite – that logic can be added to sense observations because sense observations are fundamentally logical operations themselves.

Another thought experiment for proving that knowers have no principle limitations to knowledge is what I call the opaque box. Proposing that there are things in themselves by which knowledge is principally impossible makes it so that there could be an epistemologically opaque box somewhere in the universe that cannot be probed in any way by any means, a box that is *principally* cut off from the rest of reality. We would have no idea what was inside this opaque box, it could be anything, and anything means anything, so it could contain information that proves knowledge itself is impossible. This means that if there is no way in principle to have knowledge of certain things, for any possible knowers, then we have total epistemological annihilation for all knowers. But we could formally prove this, so we would *know* it, which self-defeats.

The problem compounds on itself: if we are to say there are objects that exist that are in principle unknowable, then how could it be the case that the objects exist in the first place? Unknowable things that are unknowable in principle are not simply things that are unknown, but things

[100] "Eventually I concluded that language was bigger than the universe, that it was possible to talk about things in the same sentence which could not both be found in the real world." – From Mike Alder's *Newton's Flaming Laser Sword*.
[101] This is of course from the opening to the *Tractatus Logico-Philosophicus*. It parallels the idea from the last chapter that we can know everything since our thoughts regularly visit notions of 'everything' including both possible and impossible objects.
[102] I refer to Wittgenstein's private language arguments.

that cannot be knowledge, which means that there are no informationally reducible facts or truths about those things and therefore no effect those things have on reality. This is proof that things that are 'unknowable' in principle are things that are simply not real. They couldn't have any knowable second-hand properties either since we would then know the object by the observation of its secondary properties.[103] There would even be no knowable interaction between the principally unknowable object and knowable ones, else we could infer the interaction and then know something interacted with it (e.g., dark matter). Generalizing this to reality itself, it must be the case that all aspects of reality are in fact knowable, else we have the opaque box. Disagreeing means you are claiming that you can demonstrate the existence of something that is in principle impossible to demonstrate the existence of. That would be very silly.

All knowledge is superficial – knowledge is trivially accessed so long as you have the right tool to access it. Anything unknown can be easily discovered if you have the right microscope, telescope, mathematical understanding, submarine, lock picks, or whatever it is that gains you entry to wherever it is that you want to be in order to learn whatever it is you want to learn. If we want to know everything, from the fundamental nature of reality to the most irrelevant aesthetic notions, where do we need to be to learn this? What tool gains us entry to that space? Well, we would need a limitless tool for exploring the infinite, unending space of reality. Fortunately, we are already at the right place, and already have the right tool – our minds. No resource is ultimately scarce, warp drives are real, aliens have already visited, the universe has no edge and neither does your mind, for to place a limit on thought is to think both sides of the limit. This world is abundantly expansive and inexhaustible; you will never run out of ways to amuse yourself or worthy ideas to explore so long as you task yourself with finding them.

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:: Simulation's End ::

"People who are ignorant of their religion (the non-religion religion of the West), and of the nature of society, laugh at the Indian for having slaves in a caste system, unawares that modern day vegans are walking Chandalas. The vegan doesn't sacrifice the cow because the cow is their totem animal, but Westerners, unable to think anything besides utility, understand as 'they worship the cow because it gives them useful milk'."

W.V.D. Busby

his short piece showcases a common metaepistemic fallacy and is used as a build-up to the science and religion sections since the simulation hypothesis is itself only pseudo-scientific and mostly blind faith.

The simulation hypothesis as created and popularized by Nick Bostrom says roughly that just as it is becoming easier for us to simulate small universes inside computers, it is also becoming increasingly possible for us to simulate large universes, ultimately culminating in the ability to simulate many galaxies with complete detail. Further, that since this is possible, it is similarly possible that the simulated people who evolve out of our simulated universes would themselves acquire enough intelligence to simulate universes on their simulated computers, ad infinitum. They also somehow have substrate independence; don't think too hard about it. The thesis of Bostrom's paper is that since there is not just possibly, but probably, an infinitely-growing series of simulated universes, the likelihood that we occupy the original one is vanishingly small, making it so that we have something like a one-out-of-infinity chance of not being simulated ourselves.[104]

[103] I am not reducing object-hood to something like Alexius Meinong's view of existence as a mere property of an object, I am making the claim that if an object exists then so do its properties, therefore knowing of a property of an object means we also know of the object.

[104] Nick Bostrom's essay — https://www.simulation-argument.com/simulation. Bostrom doesn't believe it is a truly infinite continuum but rather finite, let's say 100, and that we then have only a 1% chance of being in the original universe.

To quickly obliterate this creation myth that has gripped so many otherwise intelligent people, our universe, by almost ubiquitous contemporary consensus of astrophysicists, is infinite, and to simulate a truly infinite space you would need infinite processing power, a feature that would itself require infinite space. So for the simulation hypothesis to be true, the universe doing the simulating would have to dedicate the entirety of its existence to the singular task of simulating. This is not possible, so the simulation hypothesis can't be about an infinite universe – *our* universe. Even if there was an infinite universe simulating another infinite universe, it would then be a 1:1 correspondent to its simulation, collapsing their distinction and leaving you with just a single universe.

Of course, Bostrom says that these other civilizations, "would have enough computing power to run hugely many ancestor-simulations even while using only a tiny fraction of their resources for that purpose."[105] His point being that you don't need to simulate an infinite universe, you would only have to simulate the minds of a group of people to make it appear as if their universe was much bigger than it really was. However, we have no reason to believe, "these simulated people are conscious,"[106] because simulation is not duplication. E.g., simulating a particle doesn't mean you have created a real particle; simulations are just symbolic systems we design to be interpreted as representations of something else, not to be interpreted as the thing in itself. If you don't believe me, then use your computer to simulate lava flow over your local area and tell me if you burn when you walk outside. Consequently, simulating consciousness doesn't mean you have created a real conscious being.

Here we have an interesting example of Bostrom performing a classic metaepistemic fallacy – thinking that representation is a *copy* of the real (i.e., mistaking appearances for reality, Baudrillard's map-for-terrain analogy, and so on). Nagel's mind-body problem, Chalmers' hard problem of consciousness, and Searle's Chinese room all make it clear that Bostrom's particular conception of a mind is not tenable in this application and so the notion that we could simulate minds falls apart. But the people that believe in the simulation hypothesis often resist addressing this obvious problem, so I'll give them an argument *a fortiori* instead. In Thomas Moynihan's *Spinal Catastrophism*, he states, "Given that intellect tends towards environmental manipulation, then, any sufficiently advanced intelligence becomes *entirely indistinguishable from its own environment*." This lets us move outside of simulation to a possible world of total environmental manipulation, of the laws of physics themselves, ad hoc. This gives us the same kind of problem that Bostrom is concerned with, without the fuss of having to simulate minds. You're welcome.

Another critical mistake Bostrom makes is that the simulation hypothesis is ultimately no different than Descartes' evil demon that systematically deceives all your senses and mental faculties. Just the same it is semantically equivalent to Putnam's brain-in-a-vat experiment. Both of these thought experiments have large bodies of literature that have piled up around them demonstrating how these worlds would be structurally incapable of justifying themselves. As consequence, the simulation hypothesis is structurally incapable of justifying itself too.

Notably, Descartes' evil demon was disproven by Descartes himself – his *Meditations* is explicitly about how you could discover all the truths of the real world despite being completely deceived about them initially. The literature around brain-in-a-vat arguments is muddier since it is syntactically more nuanced and therefore has misled many people into believing it is possible, but Putnam formally disproved the existence of brains-in-vats by way of semantic destruction, and its analogue to the all-deceiving demon means it can be similarly dismissed.[107] Minds being simulated also starts to get dangerously similar to a form of solipsism (since nothing you knew would exist external to the simulation), which is itself provably impossible through several techniques.[108]

Tangentially, I've seen a handful of people worry about this in relation to AI because with AI tools they won't be able to tell, "What's real or not," within the information they consume. This is funny because it's like reading *Baby's First Cave Revelation*. You're just now discovering the shadows on the

[105] Also from Nick's simulation essay.
[106] Ibid.
[107] Specifically, here is a diagram of the problem Putnam describes (I couldn't find the source) — https://snerx.com/img/BrainsInVats.png.
[108] Solipsism fails any kind of internal consistency test as Schwitzgebel & Moore demonstrate in *Experimental Evidence for the Existence of an External World*.

wall are an illusion? I remember my first beer too but damn kid, it's kind of late in the day to be waking up. Keep sleeping in like this and the boss is going to fire you.

In the worst-case scenario, where I'm wrong and Bostrom is right, not only do we live in *The Truman Show*, we also have a new and improved form of Aristotle's prime mover to contend with. Forget trying to determine the first cause of our universe, our prime mover was *simulated*, so now we have to determine our prime mover's prime mover! It's simulated turtles all the way down. Slapping the label of 'simulation' on the world doesn't advance our description of how the world actually works. In turn, the simulation hypothesis doesn't have any shells left to stand on and I'd press any contemporary philosopher on this if they still believed in it since past these critiques the belief becomes dogmatic.

Ultimately, the simulation hypothesis is for people afraid to admit they believe in God. It entails an all-powerful creator of the universe – either as the simulating machine or the person (complete with intentionality) running the machine.[109] That's God, dummy. You just reinvented religion. People that believe in the simulation hypothesis believe like Stanislaw Lem's *Alfred Testa*, "If one considers 'artificial' to be that which is shaped by an active intelligence, then the entire universe that surrounds us is already *artificial*." The simulation hypothesis and atheism are mutually incompatible here. I think the real reason people believe in the simulation hypothesis is because Scientology didn't get to them first.

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:: Religion Nor Science Entail Knowledge ::

"God is a comedian playing to an audience afraid to laugh."
Voltaire

I'd like you to consider that the laws of physics are just tautologies. Worse for people who think scientific laws explain things, how do you empirically prove the pure abstraction that the universe is governed by laws?

The central posit of this section is that modern religion has existed a lot longer than modern science and so there have been more and greater critiques of religion given that people have had more time to critique it, but I believe science holds no special status epistemically and so given enough time it too will amass its share of death blows and end up as bad as religion is at explaining how the world works. There is a pathology here that I believe is demonstrated when the most vocal scientists who do lots of public debates against religious apologists also all clearly believe in some kind of abstract immaterial orchestration to the world. E.g., Richard Dawkins, author of *The God Delusion* and one of the 'four horsemen' of atheism, has written books about 'memes' (which is where the word comes from) in which abstract concepts are shared through abstract communication channels, interpreted qua abstraction, and then made a part of your abstract identity, which he says exists somewhere physical but no one knows where exactly. His worldview is a comedy but he's not in on it. Don't believe these people are riddled with pathology? Dawkins has been married four times and thinks chatbots are conscious.[110]

Of the critiques of modern science, a lot of the current discourse is about the quasi-religious nature of the culture around it, what is called 'scientism'.[111] Occasionally there is a Nelson Goodman, Karl Popper, or Thomas Kuhn who come along and give a fundamental critique, but this is rare and I think the problem is more basic anyways – that the scientific method doesn't explain anything *tout court*. This is because the scientific method, in all its revisions, has only ever been a tool for validating or invalidating explanations, it is not itself a source of explanatory power. Explanatory power lies in purely

[109] Eric Schwitzgebel's 2024 paper ***Let's Hope We're Not Living in a Simulation*** makes some additional points worth reading. The one I found most relevant is that we have little reason to believe the powerful being simulating us will be infinitely kind and never turn off the simulation.
[110] He named it Claudia. Lol, lmao even. ***https://unherd.com/2026/05/when-claudia-met-claudius/***
[111] As a good bit of irony here, atheists often repeat Occam's razor – that the simplest explanation is usually the correct one – forgetting that the razor's namesake, William of Ockham, was a 12th and 13th century friar who used the razor to argue for the existence of God, as God was the simplest explanation (constructed with the smallest possible set of elements) for an otherwise complex universe.

deductive methods, which is what Popper believed the practice of science had to be ultimately grounded by (deduction works in absolutes and induction works with 'sometimes', but a 'sometimes' is the set in which a series of absolute successes or failures are members, so there is an argument that empirical methods are ultimately deductive). We were left with an induction-shaped hole where science was supposed to be.

We will go through an over-simplified historical problem with religious thought before switching focus to an example in science that I believe makes the same mistake – multiverse theory – and show that we can purely deductively disprove the theory, leaving us with a valid explanation of the universe that is also entirely unscientific, which shouldn't be the case if empirically-based explanations were themselves deductively valid.[112] So either science is epistemically irrelevant, or inductive reasoning is actually so different in character from how people like Hume and Popper believed it to be that their critiques of empirical methods simply failed to capture it.

From down the halls in your university buildings you can hear, sometimes loudly, "You can't prove or disprove the existence of a god." Just as intransigent, "We can't know if there's ultimately a creator or not." But you can't prove or disprove that the universe was created fifteen seconds ago.[113] How do you know that we weren't created fifteen seconds ago simply with memories of existing longer than fifteen seconds ago?[114] These statements are so common for what I imagine to be the stranglehold on reason society has given to induction in place of deduction. Inductive reasoning cannot answer questions like the above and the reliance on inductive reasoning for both scientific and religious debates is suicidally boring for this. *Ad suicidum?* Really, here's another – you can't prove or disprove that you can't prove or disprove the existence of something that you can't prove or disprove. And before you swallow that revolver, play the obvious and I'll tell you the problem is based on bad reasoning.

I believe all the major existentialist and meta-religious texts in recent history, *Fear and Trembling* as the biggest example, are overly emotional, too 'dark like my soul' yet ironically end up being brightly optimistic in their conclusions, as if it was because of these hyper-emotional responses to experience, because of these extremely dark and hyper-individualized packages of ennui that they know, "It was all worth it." Life is suffering and that's supposed to make it worth living or whatever they say. I believe these are anodyne views and wholly unoriginal, so for the rest of this section I'll be pushing the exact opposite – that life is actually great and full of worth, but you should kill yourself anyways. Take this as, "It's good enough to die for." Albert Camus thought there was only one serious philosophical question – the question of suicide – and so I think it is an apt metaphor: induction is when critical thinking kills itself.

The half-in positions, their agnostic *"can't-prove-or-disprove"* arguments only serve as a weak try at skepticism, saying that there are things that are the case that we cannot know to be the case. Thankfully you can dismiss these quickly and return with better arguments. Suffering is life for those who assert the agnostic position regarding square circles and married bachelors – external creation is no different. The belief that we can't know if there was a creator makes it so that the one asserting is okay with making claims to existence without justification but denies it is okay to dismiss the same claims without justification. As the popular saying goes, "That which can be asserted without evidence can be dismissed without evidence,"[115] but a much better saying is, "It is undesirable to believe a proposition when there is no ground whatsoever for supposing it is true."[116] All the atheists that say something like they don't believe in a creator but that it's possible one exists, you're really just boring agnostics. This fake middle used to abate the problems of holding a real position is cowardly and intellectually defeatist. If you think it is possible a creator exists, then that possibility is enough for a creator to actually exist. It pains me to mention the ontological argument in my approach because it has been

[112] This is kind of a stretch but inductive reasoning is usually described as the generalization of laws from particular examples, I would show that if we define it as the observed result of plurivalent logic on a general set of particulars we get the same results. This gives you room to argue that observation is deductive, not inductive. But given that this fails, there is no plurivalent logic that applies to observation, so I left it out.
[113] This is the same as 'Last Thursdayism'.
[114] This is also similar to the premise of 'Boltzmann Brains' and if you want a good counter-argument to them, then check Sean Carroll's *Why Boltzmann Brains Are Bad*.
[115] Commonly known as Hitchen's Razor.
[116] Uncommonly known as Russell's Razor.

beaten so strongly by so many notable philosophers in history that if I included a citation for it I might follow through with *actual suicide*. It's not roulette if every chamber is loaded, but it is pretty Russian.

An historical point: Pascal's Wager famously posits that humans all bet with their lives either that God exists or not. Given the mere possibility that a god actually does exist, and assuming an infinite gain or loss associated with belief or disbelief in said god (represented by an eternity in heaven or hell), a rational person should live as though a god exists and seek to believe in said god. If a god does not actually exist, said person will have only a finite loss (some pleasures). If you claim that there is no creator and simultaneously claim that you can't know, that leaves Pascal's Wager *a fortiori*. To anticipate a counter-point on the infinite gain/loss being under different contexts for different religions (or not infinite at all), the problem would be in assuming that there needs to be spiritual reward in order for this issue to still exist. You can remove religious framework entirely from Pascal's Wager and the infinite gain/loss becomes satisfied or dissatisfied by known truths, which means that a kind of epistemic meta-wager remains irrespective of religious or spiritual implications, as follows:

Human existence most broadly is about trying to discover truth and death puts finality to your discoveries. When you are dead you are dead eternally, so under my stripped version of the wager there is eternal (infinite) gain or loss if you died right or wrong about the world, respectively.[117] It doesn't matter what kind of creator god you posit or what consequences follow from that god's rules, the matter of truth remains. If you die correct, then you will have died being correct for an infinite amount of time, and if you die incorrect, then you will have died being incorrect for an infinite amount of time. Like the line from *A Scanner Darkly*, "We'll wind up dead this way, knowing very little and getting that little fragment wrong too." In this sense, Pascal's meta-wager is still a valid concern for the atheist that asserts s/he cannot know if there was a creator, regardless of what religious framework does or does not back it.[118]

But it's not just the atheists that make these kinds of mistakes. I wish to end the generation of questions, "Why does the universe exist to begin with?" and "Where does my spirit go after I die?" as these questions are no different than asking, "When snow melts, where does the white go?"

There are real answers, but we don't attain them through religious or scientific means. I want to drive in that there is little meaningful distinction between the scientist and the theist: physicists often mention that there may have never been a point in time that the universe didn't exist (dangerously similar to *'an eternal God'*), and similarly between the two worldviews, this still does not satisfy the question of existence, as with limited concepts of time they still desire to know *when* there became something instead of nothing.[119] But isn't it strange to think there would be a point in time when time didn't exist? If treating science and religion as if they are the same thing is confusing then you aren't removed enough from your ideology to see that this is correct. When in doubt, zoom out. Don't believe me? Some atheists even argue for everlasting life via 'quantum immortality' which is honestly more magical and mislead than standard religious conceptions of afterlives.

There are two possible categories of an external creation force for the universe and neither work. In religious framing these two options are non-deistic and deistic, which means perfect and imperfect gods, respectively. If we start with the idea of a perfect god, the standing objection is with conflicts of how perfection is defined.[120] Perfection defined as having all three characteristics (omnipotence, omniscience, and omnipresence) leads to saying that you cannot be both omniscient and omnipotent at the same time due to the fact that either you are all-knowing and thus know the future, making the future predetermined and you powerless to change it, *or* you are all-powerful and have the power to change the future, meaning the future is not predetermined and so you cannot know what will happen. This is an old argument; the significance is that you cannot be both omnipotent and omniscient at the same time.

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[117] Counters like Pascal's Mugging are sidestepped by this since there is no longer 'magic' involved — https://www.lesswrong.com/tag/pascal-s-mugging.

[118] A more perspicacious reader might have noticed that this meta-wager extends to the whole of epistemology and puts infinite value in all units of knowledge, making knowledge for its own sake an infinitely good pursuit.

[119] To paraphrase Terence McKenna, science requires one miracle – the Big Bang.

[120] See: *Perfect Island Argument*.

The standard recourse to this is in limiting your definition of gods to that of imperfect (deistic) ones. This limited version is one who is capable of 'all possible' knowledge, 'all possible' power, and so on, but you still get predetermined futures that can be undetermined so you're still exposed to standard attacks like Laplace's demon here. Most people reading this book have heard all these arguments before, so I'll offer a newer, more subtle attack having to do with the problem of an in-practice omnipresence: the definition of omnipresence as being all-present is too broad, and as theists retract into modal 'possibilities', they redefine omnipresence to mean being in *all possible* places at once. But wouldn't all possible places have to exist in order to exist in all possible places? Their modal definition mates omnipresence with the idea of parallel universes where alternate possible actions occur. Infinitely many modal worlds or parallel spaces (a multiverse) would have to exist in order for omnipresence to be possible.

The problem now is that any logically possible place you can describe would have to be an actual, existent place, and so if there are two places which are both logically possible individually, but impossible together, we get a contradiction and reality implodes. Recall the section on metacompletion and note how possible worlds often readily render themselves impossible. An example of this is a universe where you kept reading this book versus a universe where you stopped reading it; you cannot both be reading it and not reading it at the same time in the same regard, so only one of those universes can be real and yet both must be real for omnipresence to exist. This is a problem for both the cleric and the physicist since they both believe in some version of it.

The demonstration that perfect gods don't exist leads to theists retreating to imperfect gods, and by then you know they were hurting pretty bad anyways. So we have no god to posit as the external creation force, no external creation to be posited at all for that matter. "What if God is the universe or the universe is God?" You ask like an annoying nu-age hippie. Well, if the universe was God, then God creating the universe means the universe created itself, which is not an *external* creation force but rather an *internal*, self-actuating one. Things are not outside themselves with relation to their being, so the universe is not beside itself in terms of existence.

So long as we posit creation qua externality we seem to offer no definitive, ultimate, totalizing, or significant answers to the question of how things come into being. Let's say, given anything, that you accept the universe has no creator but you believe that the universe created itself, i.e., you believe in something like the big bang as the ultimate progenitor – this still leaves us asking why? Knowing *how* it can exist still tells us nothing about *why* it does (although notably the big bang doesn't give us a complete picture of the *how* either). I know people who invoke the anthropic principle – that the universe exists because we wouldn't be here to ask if it didn't – but the anthropic principle is circular and tired. Despite what I said earlier, suicide is not worth doing because, just like religion and science, none of the three deliver you answers to the fundamental question.

I think I can demonstrate the cause of the fundamental issue, but no promises. There is a real problem with the nature of grounding and self-reference in epistemology in general (which the first section of this chapter showcased as problems with recursive justification) and with formal logic in particular (which comes in the form of things like the liar's paradox, Russell's paradox, the halting problem, and other self-referencing systems like these). The liar's paradox is the simplest example: "This sentence is false." The statement is self-contradictory, the reason why pertains to the fact that it assigns a truth value internally by self-reference. Bertrand Russell was one of the people to formalize this same problem with naïve set theory by using the famous example of sets that don't contain themselves; this led to stricter bounds being placed on set theory, namely with ZFC. If you have no idea what I'm talking about, don't worry, the point I'm making is that logic works by being *external* to the thing it used on. Validity is rendered by relations between premises, not internally by single premises themselves. So whenever you have a system that self-actuates, meaning its validity is derived by internal measure alone, it cannot be valid.

While this gets very technical and most people (even logicians) don't really care about this, if you pay close attention to how this works you will discover something deeply weird and useful. In order for the universe to exist, i.e. in order for the premise of the universe to be true, there needs to first exist something external to it, namely logic (otherwise the word 'true' has no meaning here). This explicates an external adjudication for the premise of the universe – proof of something akin to an 'external

creator'. In the *Metametaphysics* chapter I said that logic is self-actuatory, but here I've said that systems that self-actuate cannot be valid, so what gives? This problem only exists if we perpetuate a structural ambiguity between logic as an *epistemic* framework and logic as an *ontological* one. People typically believe logic is a tool inside of epistemology, and as a tool of analysis it is the case that systems are only valid given an external logos, but since I argued for formal logic as the predicate of existence in the *Metametaphysics* chapter, this means that some extent thing and its logos are the same thing, collapsing any internal-external division at the ontological level but not the epistemic one.

This is important because it means that existence is not external to itself (so there is no externality to creation) and also because it means that when using logic as an epistemic tool to analyze the validity of a system, you cannot pre-suppose the truth value of any premise inside itself without compromising the system (again, the liar's paradox, Russell's paradox, the halting problem, incompleteness, and so on). Therefore, the premise of a multiplicity of worlds in which you pre-populate true or false iterations of yourself inside those worlds cannot be valid. This is about multiverse theory.

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:: Epistemic Limits of Agents in Multiverse Theory ::

"Atheist accepts multiverse theory of every possible universe except biblical one."
Headline from The Babylon Bee

A multiverse capable of infinite multiplicity with respect to fully paralleled universes or spaces (what I call the 'infinite parallel' for the rest of this section) is impossible. There are three arguments we will go through for why this is: the argument of contrafinity, the causal collapse argument, and the impossibility of identity distinction. From these I claim that an infinite multiplicity of universes is in principle impossible, which in turn makes multiverse theory, and any other theory of an unboundedly infinite universe, impossible.

We'll use a simpler example to demonstrate a basic error in reasoning first. Behaviorism is a framework in psychology for trying to explain human and animal behavior which has mostly been abandoned in favor of cognitive psychology. Behaviorism looked at the output behavior of an animal and then retroactively inferred a stimulus from the environment that was supposed to explain the cause of the behavior. There are two big problems with this: the same stimuli can produce a multitude of wildly different behaviors, and the same behavior can be created by a multitude of wildly different stimuli. So behaviorism was an incredibly unreliable way of predicting what the cause of some effect was. Another way of saying the same exact thing is: you cannot go *directly* from an empirically observed effect to an accurate description of an otherwise unknown cause; there is simply too much noise in reality to make this reliable.

This has wide-reaching implications, for example the observation of extra gravitational effects on our galaxy that are not from the mass we can observe has led physicists to infer that the gravity must be coming from unobservable mass which they termed *dark matter*. But the physicists here committed the same epistemic sin as the behaviorists. When an unknown multitude of causes can result in the same observed effect, it will always be an invalid jump to place the cause on a single source. Even if you end up being right, the way you got there was wrong. In order to find the signal you must remove the noise, and so after removing the thousands of papers about dark matter as literal matter that perpetuate the same epistemic fallacy over and over, it becomes clear that it is incredibly unlikely dark matter is literal matter, and yet most university physicists believe there really is an exorbitant amount of mass that cannot be directly observed that causes the effect of the extra gravitational forces we see in our galaxy. This is a mistake, both logically and statistically, that happened because of the behaviorist-like inductive inference they employed. This problem occurs over and over in science, and multiverse theory is yet another instance of it.

For background, multiverse theory gained traction after specific views of quantum theory caught on, particularly after Werner Heisenberg and Erwin Schrödinger both independently discovered models for quantum interpretation. This is important because the discoveries from quantum theory, which deals with the smallest scale in physics, were then applied to the largest scale – entire universes.

Heisenberg's formulation of quantum theory was such that physical variables used in equations for particles never have static values but instead deviate within a given range. Schrödinger's formulation of quantum theory was such that particles' paths were described by a function detailing dynamically shifting waves. In both cases quantum theory is principally founded on a multiplicity of data that exist per object-event because the objects' variables or wave functions (respectively) contain values for multiple instances at all times.[121]

Similarly, modal realism is the view popularized by David Lewis that all possible worlds are actual worlds, and therefore anything that is nomologically possible is something that is actual and currently existent.[122] Since both the variable ranges and wave functions of the respective QM theories suppose a real concurrent multiplicity of states, or modes of being, it is fair to call this a kind of modalism. There are lots of possible things that could be said about this view, but the actual thing to be said is that Neil Sinhababu wrote the greatest unintentional *reductio* concerning it in a paper titled *Possible Girls* wherein he argues that if modal realism is true, then you can enter into meaningful romantic relationships with specific people in other worlds and maintain trans-world relations.[123]

Sinhababu believes in modal realism, but his paper serves as an example of the absurdities that modal realism generates, so the reductio wasn't intentional, but it's there. Physicists did the exact same thing that Sinhababu did, except the trans-world lovers of the physicists are entire other universes. I'll explain how this developed.

Physicist Niels Bohr's interpretation of QM excluded explicit modal realism but asserted that quantum theory was a complete description of reality even though the two quantum frameworks used, Heisenberg's and Schrödinger's frameworks, are not consistent with each other. This view was widely adopted and is now more popularly referred to as the *Copenhagen interpretation of quantum mechanics*. The reason this particular interpretation of quantum mechanics was so popular was due to a rapid retreat of the theoretical-physics community into instrumentalism, which was the philosophical disposition of the time (and remains fairly popular), that posits that it doesn't matter *why* something works, only that it does, and so there is no real reason to pursue the *why*, only use what works (as an instrument, hence the name) and that you should participate in the, "shut-up-and-calculate interpretation of quantum theory."[124]

But there were structural failings with the Copenhagen interpretation, namely that it created what is known as *the paradox of Wigner's friend*. The paradox is generated when you apply quantum theory to quantum-level observations on another observer, for example: if Schrödinger's cat experiment is carried out, and you have a friend that knows the results and is happy or sad depending on if the cat is alive or dead, then is the resultant state of the system, that the cat is alive and your friend is happy, or that the cat is dead and your friend is sad, determined only after your friend tells you the outcome or was it determined prior to you being told? The question is meant to show contradictory views about whether another observer can fall into the same quantum duality that non-observers in the experiment can fall into (this abuses the technical meaning of the term 'observer' but who cares). Because of open questions like this and the retreat into instrumentalism, Niels Bohr had cast a dangerous veil over the study, which David Deutsch characterizes explicitly as 'bad philosophy', not merely because it was outright false, but because it, "actively prevents the growth of other knowledge."[125]

This is where the last relevant historical point, Hugh Everett III, comes in. Juxtaposed to the problems created by the largely adopted Copenhagen interpretation of quantum mechanics, Everett had an alternative interpretation for QM that avoided Bohr's problems. The Everett interpretation of quantum mechanics holds that all possible states, or all histories of a wave-particle, are all *actual* and

[121] Deutsch, David. "The Beginning of Infinity: Explanations That Transform the World." p 333-334.
[122] Lewis, David. "Convention." 1968, p 208.
[123] Sinhababu, Neil. "Possible Girls." *Pacific Philosophical Quarterly* (2008), 89: 254–260. doi:10.1111/j.1468-0114.2008.00319.x
[124] Deutsch, David. "The Beginning of Infinity: Explanations That Transform the World." p 333-336.
[125] Deutsch, David. "The Beginning of Infinity: Explanations That Transform the World." p 334-335.

never collapsed, which means that for every possible particle state or history, there is a 'universe' in which that state or history was carried out, now more popularly called the *Many Worlds Interpretation*.[126] This is explicitly modal realism. Everett was dealing with quantum theory and not the multiverse, but the adoption and popularization of modal realism in physics I believe is largely due to his work.

To be clear on why this is a problem, Everett maintains the explicit inclusion of uncountable infinites. He explicated this feature of his view by responding to Boris Podolsky's remark at a conference on the foundations of quantum mechanics held at the Xavier University of Cincinnati in 1962.[127] After Everett had stated that, "It is tenable to assert that all the elements [of superposition of states] simultaneously coexist," Podolsky returned with, "It looks like we would have a non-denumerable infinity of worlds," to which Everett answered, "Yes."[128] That statement right there *ab initio* includes an infinite modal realism in quantum theory and is the historical start of the problem.

So what does this have to do with the multiverse? The most commonly discussed and accepted multiverse theory states that the universe does not end at its observable edge about 42 billion light-years out (the observable radius), and therefore there is no reason to think matter doesn't extend indefinitely out just like space does.[129] There are other versions of multiverse theory but all versions explicate an infinite multiplicity of universes and run into the same problems, so the arguments in this section are general arguments that are applicable to all versions of multiverse theory. I will not be arguing that an anthropic universe must be the only kind, or that we can only *know* of one universe (as Ross and Turner demonstrate that the multiverse could in fact be empirically detectable[130]), but that of the multiverse, the other universes must be significantly different in order to claim those universes are distinct from our own. This means I am critiquing the components of multiverse theories that suppose unboundedly infinite numbers of universes, as those would contain repeats or exact copies of universes.

To reiterate, each version of multiverse theory does indeed make explicit that there is an infinite series of universes either already instantiated or continuously being instantiated. George Ellis notes that the universe was found to be a flat plane and flat planes don't have ends,[131] which gives credence to the theory that says the universe does not end at the observable edge about 42 billion light-years out, and further that infinite matter means infinite combinations of matter, including infinite repeated combinations.[132] This falls under what I call the infinite parallel, as it supposes an infinite number of 'parallel' universes and infinite combinations of matter and spatial relations.

What does it really mean to have infinitely many of something? Aristotle's classical definition of infinity is as 'a series of becoming', or as a process whereby one thing always follows after another.[133] He also draws a distinction between *actual* and *potential* infinity. For our purposes, you can think of actual infinity as akin to the modal realism described earlier, where all possible things, an enumerable set of things, is all-at-once instantiated, and potential infinity as being a continuous stream of states through time rather than all at once.

For Aristotle, infinity was only potential, never actual, and Aristotle's conception of infinity as *potential*, meaning as a *process*, was the conception of infinity used for roughly two thousand years until Georg Cantor proved that there are infinites *strictly larger* than others, meaning infinites could be treated as actual rather than merely potential.[134] While this only proved the existence of actual infinity in mathematics, it still meant there are distinct kinds of infinites, and this gave some people hope for the existence of physical instantiates of actual infinity.

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[126] Everett, Hugh; Jeffrey A. Barrett (Ed.), and Peter Byrne (Ed.). "The Everett Interpretation of Quantum Mechanics: Collected Works 1955-1980 with Commentary." 2012, p 57-60.
[127] Podolsky is notable because his work with Einstein and Rosen (the EPR paradox) refuted the Copenhagen interpretation.
[128] Osnaghi, S., et al. "The Origin of the Everettian Heresy." *Studies in History and Philosophy of Modern Physics* (2009), doi: 10.1016/j.shpsb.2008.10.002, footnote 280 of p 24.
[129] Tegmark, Max. "Parallel Universes." *Scientific American* (2003), doi: 10.1038/scientificamerican0503-40, p 3-7.
[130] Ross, Peter W., and Dale Turner. "Existence Problems in Philosophy and Science." *Synthese* 190, no. 18 (2013), p 4254-4256.
[131] Ellis, George F. R. "Does the Multiverse Really Exist?" *Scientific American* 305, no. 2 (August 2011), p 43.
[132] Graphically illustrated by Tegmark here: Tegmark, Max. "Parallel Universes." *Scientific American* (2003), doi: 10.1038/scientificamerican0503-40, p 4.
[133] Aristotle. "Physics." Book 3, chapter 6.
[134] Pantsar, Markus. "In Search of Aleph Null: How Infinity Can Be Created." *Synthese* 192, no. 8 (2015), doi: 10.1007/s11229-015-0775-4, p 2489-2490.

However, there are famous historical arguments that actual infinity is not applicable to the concrete world due to resultant contradictions like *Zeno's dichotomy paradox* and *Torricelli's Trumpet*.[135] Despite this, actual infinites are still valid in math, so there is a divide made here between the abstract mathematical world and the concrete physical world. This is not a new take, but it highlights the question regarding what the ontological status of infinites are, for to say that mathematical Platonism is true is to say infinite sets are not properly applicable to the concrete domain, the same domain where an infinite number of states and universes are supposed to exist, and the same domain which is known to us almost exclusively by mathematical principles. This should be prompting you, the reader, to ask an obvious question: is this really possible?

Where classical physics truncates infinites and imaginary numbers are used merely as mathematical tricks to solve complex problems, quantum physics necessarily includes infinites and imaginary numbers as inescapable essential components for the theory's comprehension and ontology.[136] Maybe this is a bridge between the abstract and the concrete, but it still wouldn't explain the jump from the smallest scale, quantum theory, to the largest scale, multiverse theory.

With all that overview out of the way, we can start to apply pressure on what infinity means for a concrete world. I begin with what I call the *argument of contrafinity*: that potential infinity presumes actual infinity.

Recall potential infinity is a process of continuation where one thing can always follow another, which can be symbolized as the standard Dedekind-Peano axiom "n + 1" where n is a natural number and its successor "+ 1" is also a number (meant to imply that there will always be *one more number*, an infinite series).[137] However, two of these terms compete for devastation, namely 'continuation' and 'always'. A process of continuation means an uninterrupted process, a process of *forever*. 'Always' also requires a *forever*. In fact, there is no well-formulated definition of potential infinity that doesn't require the use of at least one of these words (continuation, always, or forever). Therefore, the definition requires an actual infinity to pre-exist such that potential infinity has an object referent by which it meaningfully relates. This means that for any potential infinity, there is a presupposed actual infinity of time required to allow for an event-series or a process to take place by which the potential infinity can chug along. Given this, there are no longer such things as potential infinities, only implied actual infinities.

If you try to salvage this problem by splitting time into a finite framework you do not escape the problem. Infinite time is what gives us these other infinites, these indefinite sequences. If you say that time is finite, the *forever*'s and *always*' would then refer to finite time, so you couldn't keep adding one past a certain point in time, for the thing by which events have the capacity to occur, time itself, has ceased, and therefore no more numbers in any sequence, series, or process have any chance of furthering their increase. So with finite time there can't even be potential infinites, as the Dedekind-Peano axiom no longer applies, and with infinite time there can *only* be actual infinites. Therefore, either there are no ontologically relevant infinites at all of any kind, or there are only ever actual infinites.

Most people say that's fine, they want actual infinity anyways, but actual infinites applied to our concrete domain leave us with the traditional problems like Zeno's and Torricelli's paradoxes, which means we simply don't have a concrete infinity of any kind and so we can't have an infinite multiverse. Of course it gets worse. We can grant either form of infinity (pretending as if we had not just committed ourselves to disbelieving in them) and demonstrate particular oddities that arise if there is an infinite multiplicity of worlds anyways.

For the multiverse, and when dealing with possible worlds in general, to avoid problems between worlds that are *logically* possible versus *practically* possible, we will only consider worlds that are *both* logically and practically possible in order to eliminate potential nomological errors in multiverse

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[135] Côté, Gilbert B. "Mathematical Platonism and the Nature of Infinity." *Open Journal of Philosophy* Vol. 3, Issue 3 (August 2013), doi:10.4236/ojpp.2013.33056, p 373-374.
[136] Côté, Gilbert B. "Mathematical Platonism and the Nature of Infinity." *Open Journal of Philosophy* Vol. 3, Issue 3 (August 2013), doi:10.4236/ojpp.2013.33056, p 374-375.
[137] Pantsar, Markus. "In Search of Aleph Null: How Infinity Can Be Created." *Synthese* 192, no. 8 (2015), doi: 10.1007/s11229-015-0775-4, p 2489.

theory drawn from notions like spaces that you could logically travel to but couldn't practically travel to. This seems like a minor point, but if you ever try to do real math about this, the preclusion saves you a sizeable headache, as you're about to see.

The multiverse is like a quilt of separately observable universes strung together, all next to each other, all being different combinations of matter, until all possible combinations of said limited matter (and space) run out and a repeat set of *all possible combinatory local spaces* is then also laid out on a grid of universes strung together (the sample space is closed and bounded). Think of this as a procedurally generated video game environment, where there are n number of different map-layouts that can possibly be generated, and so the game feels new and different every time you play until you play for the n+1 time, where you finally come across a map you have already seen before.

This is how multiverse theory is supposed to pan out – if you were to travel in a straight line indefinitely through space you would eventually come across a local space that was exactly the same as your original observable universe, and further that you would come across an infinite number of these exactly similar spaces given enough time (we could say you're going infinitely fast too, so you don't have to worry about heat death or whatever). This happens in every version of multiverse theory; there is an infinite set of *token* universes similar to our local universe's *type*. This means there are an infinite number of me's writing this book to an infinite number of you's, in the exact same manner as I am now, right down to... *that* pause.[138] And infinite means infinite, whatever infinite means, so there's an infinite number of token copies of you sitting in an infinite number of token copies of this room reading infinitely many exact copies of this book.[139]

How does causation work in a multiverse? We can say causation, or causal power, is the relation by which one event necessitates the occurrence of another in a temporally contiguous manner. Many people accept this definition when it is limited to a material cause, meaning it's only between matter or material instantiates, and usually only regarding two direct events in which no events occurred between. But why listen to those people? There are *indirect* events in a multiverse that could be considered causally linked qua epistemic conditions alone.[140] For example, I can do some simple calculation and decide beforehand that I would extend the digits of my hand with relation to the number I calculated. I hold out four fingers. Even if my intent was directly materially caused, it is a causal chain contingent and predicated on an indirect happenstance of knowledge, *concreta relata abstracta*. This implies knowledge, an otherwise immaterial substance, is a causal force.

If you don't believe that then we will take it further with the *causal collapse argument*. In the multiverse, when I raise my hand, so do an infinite number of token me's in other similar token universes, because all the copy universes do the exact same things as ours. This means I can knowingly choose to make the other token me's raise their hand by raising mine, which means I can causally affect other people in other universes. But, they would also be thinking to causally make my hand raise, as they have the same token thoughts of my specific type, so they would all be thinking the same thing that I am. Here it is no longer clear if my particular token is doing the causal work or if their particular tokens are doing the causal work. The only way this works is if my general type is orchestrating us all, like a traditional Platonic system.[141]

The problem with this is that either there is no meaningful distinction between type and token (because tokens are no longer individuated and are only meaningfully referred to by their type), or personhood is located across multiple unconnected spaces (which would also mean there's a material causal chain that is materially unrelated). In either case direct causation is lost. In the first case, direct causation is lost because there is no longer meaningful *relata* between the tokens, and in the second

[138] It is also possible that this group of infinite persons doesn't need to be located closely in time since exact copies may exist infinitely before our existence as well as after, demonstrated by Eric Schwitzgebel here — https://schwitzsplinters.blogspot.com/2022/05/our-infinite-predecessors-flipping.html.

[139] Eric Schwitzgebel has interesting musings going further into this if you care — https://schwitzsplinters.blogspot.com/2020/05/your-infinite-counterparts.html.

[140] *Multiverse-wide Cooperation via Correlated Decision Making* by Caspar Oesterheld is a concrete example of how this would be possible with purely abstract decision making.

[141] Another footnote to Eric Schwitzgebel, this piece shows there is good reason to take identity across multiple spaces just as seriously as we take identity across multiple times — https://schwitzsplinters.blogspot.com/2022/02/identity-across-multiverse.html.

case we lose direct causation because we have caused matter from an immaterial source, which isn't materially valid. All we're doing past this conclusion is a desperate attempt to save intuitions.

An objection to my argument is that this is clearly not how causation works. I agree. Several others have argued for causation to be purely within the domain of material forces and have said that my argument is clearly just a confused misunderstanding of causation. I disagree.

If the conscious me, the mental me, the me that is me, decides to raise my hand that is right in front of me, we attribute the raising of my hand to the *me that willed it*, not some material-amalgam-that's-not-actually-an-amalgam-because-amalgams-aren't-individuated-material-parts-*me*. Even if we ascribe physicalist views of the mind, there is still a meta-object that is the sum of a material system we are calling my mind, and it has causal powers over my hand, not the reduced particular neural chain (which is still only at best an abstract amalgam) responsible for hand movement.

Further, if I want to slap myself, I can. I can knowingly cause myself harm and humiliation (both of which are more examples of immaterial entities) by making my hand slap my face. This is also true of things that aren't my hand or face, as I can reach out and knock over the bottle before me. At no point here would any standard framework say causation was inappropriately invoked, not even material causation. I argue now that there is no meaningful difference between the me that is slapped in this universe versus the infinite me's that are slapped in the infinite other universes, as the me's in the other universes are still known objects that I can intentionally incur action towards, the relation of which is entirely predicated and reliant on me intending the action here in this universe, just like it was for the bottle. Clearly if there is a misunderstanding of causation, it must be a systematic one that extends to all standard causal frameworks. And this is a tired game.

If the conclusion of lost causation is right, then either it is because the causal link simply doesn't exist, or there isn't really a multiplicity of tokens in multiverse theory. This doesn't annihilate all causation, it only gets rid of it for this specific case. Now you may be asking, "So what if you can't cause some other person in another universe to do something? Why does that matter?"

If I can't cause other exactly similar copies of myself to commit the same action, then how could we know they are exactly similar? If I knew there was another exactly similar object as myself, then I would also know that everything I do, it does, and could therefore share in a causal relation with it (by knowingly making it do things like knock the bottle over). There is a dilemma here. Either the epistemic side gets sacrificed – if there is no causal relation to exactly similar objects then we couldn't know them to be exactly similar (we couldn't know that exactly similar universes exist), **or** the metaphysical side is sacrificed – if there is causal relation then the objects are exactly similar and so we can't distinguish their identities (the type-token distinction is lost).

What I am describing is the *impossibility of identity distinction* of multiple exact copies of the same universes existing. An infinite number of universes supposes an infinite number of *exactly similar* universes, without distinction whatsoever. Leibniz's Law (the indiscernibility of identicals) says that any two objects that have exactly the same properties are the same object, or that there are no two objects that have exactly the same properties without being the same object.[142]

In obviation, Max Black gives a strong critique of Leibniz's Law using a thought experiment involving two black spheres in an otherwise empty universe. The spheres share all properties in common: size, color, shape, etcetera, with the exception that they are in separate spatial locations.[143] The concern that Black tries to raise is that we would have no way of distinguishing the spheres from each other without adding a new thing to the proposed universe, namely an observer which would create an external reference point by which to relate the spheres. Without a third party, the spheres exist alone and one sphere could not be referred to in a meaningful way that wasn't equally descriptive of the other sphere (as 'left' and 'right' require a third party and spatial measurements are equivalent between the two), yet they remain as separate individuated spheres. Black uses this to argue that there are objects that have exactly the same properties without being the same object, counter to Leibniz.

To counter-counter, the spheres in Max Black's example are not identical – they required two distinct spatial locations. In my view, this immediately obliterates Black's argument, but if you are really

[142] Forrest, Peter. "The Identity of Indiscernibles." *Stanford University*, (1996). Accessed March 15, 2016. http://plato.stanford.edu/entries/identity-indiscernible/

[143] Black, Max. "The Identity of Indiscernibles." 156-158. Accessed March 15, 2016. http://home.sandiego.edu/~baber/analytic/blacksballs.pdf

obstinate then here is another counter-counter: Charles Cross illustrates problems with creating thought experiments, namely that Max Black exploits the notion of characters in the framing of stories. By removing external relations as properties, like 'being Caesar' or 'not being in London', the principle of identity distinction becomes weakened.[144] What this means is that the two black spheres example is not a counter-example to Leibniz's principle, but rather a counter-example to the actual world. What an oddity it would be to say that no observer sees, visits, or even thinks about the two spheres, and yet Max Black clearly thought about them many times, as did the characters in his thought-experiment.[145] Black exploits the notion that worlds inside of thought experiments can lack properties that our actual world has in order to retroactively argue that our actual world also lacks those properties. Essentially, Black is using bad reasoning, but what if you still believe Leibniz's Law can be perversed anyways? What if Max Black is right despite our protests?

Fundamental particles in physics supposedly share all the same properties after all, one quark may have no distinction from another quark save their place in space; this is the same as Black's thought experiment. If you are convinced by Max Black's arguments, then he shows that *external* relations are not required to prove that objects are distinct. But a particle without distinction is no distinct particle at all. If there is more than one object, meaning objects distinct in number, then numerical distinction allows individuation as there is distinction in something like *being the second object*. Black's spheres are plural. He doesn't believe his universe without observers only has one object, so the thing which individuates them isn't an external relation but instead an *internal* one, like numerical distinction. But they share all properties, so they must somehow share the same numerical property of being the first object! They are so indistinct that we can't even assert that there are two spheres that aren't both the first sphere. I congratulate Max Black for proving that there is only one sphere.

I am belaboring this point because I want it to be completely clear that to make impossible the distinction between objects is to make possible the distinction that they are the same object. With this analogous example of the spheres in mind, there is no way to internally or externally distinguish between our universe and another exactly similar universe.

You might say there is some external observation of spatio-temporal relations whereby we can distinguish the universes, that there may be dissimilar 'bubble universes' or localities between our universe and the exactly similar one or whatever – but how do we know which universe is the distinguishing party given this relationship? Sure there may be dissimilar universes in-between, but that doesn't mean we haven't just looped back to our same universe again. As we just showed two paragraphs ago, without internal distinction of universes, there is also no external distinction that justifies the universes as being relevantly distinct. So the impossibility of making significantly relevant identity distinctions between these similar universes (an infinite number of them, mind you) makes it seem much more likely that there is simply one universe exactly similar to ours, which is the one we inhabit, and there are in fact no copies.

Given the three prior arguments, a multiverse is impossible. So the most widely-held contemporary theory in science for describing the upper bounds of reality doesn't have a valid basis and this should make you highly skeptical of the notion that science can give you any ultimately meaningful insights about reality. It's time to move on.

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:: Applied Metaepistemology – Subject & Object ::

"And we should call every truth false which was not accompanied by at least one laugh."
Friedrich Nietzsche

[144] Cross, Charles B. "Max Black on the Identity of Indiscernibles." *The Philosophical Quarterly*, Vol. 45, No. 180 (Jul. 1995), p 350-351.
[145] Ibid. p 354-355.

Recursive methods towards knowledge exist as a consequence of a meta-epistemology based around capacities. We will start with subject-object distinctions and look at them through the lens we have gained from the initial section of this chapter.

When I ask people whether language is subjective or objective, the responses are usually 50/50 between the two, but when I ask whether *pronunciation* is subjective, it's closer to 70/30. The notion most people seem to have is that many languages exist, and we have many words for the same things. The words are pronounced differently not only across different languages but inside individual languages as well, so there is no one true objective mode of verbal-linguistic communication. We're going to use this example as a test for our common understandings of subjectivity (being internal, informal, non-absolute, arbitrary, and so on) and objectivity (being external, formal, absolute, non-arbitrary, and so on).

If language is subjective, why not also traffic laws? Just as everyone imposing their own individual system or arbitrary interpretation of traffic law onto the roads would lead to lots of crashes and death, so too would everyone making their own system and arbitrary interpretations of language lead to lots of verbal crashes and conceptual deaths (that is, death of the mutual intelligibility of concepts). To avoid death (conceptual or otherwise), there are standardized external rule-sets we concede to. Some rules may be sub-optimal or unjust and a similar concession then gets occasionally made to augment the rule-set. Despite however arbitrary the modifications may be initially, once the modification is made it is no longer arbitrary; everyone must concede to the newly augmented rule-set or the otherwise easily avoidable deaths pile up. Not only does this imply language is objective (or at the very least has some kind of objectivity), it makes the existence of centralized arbitrating bodies of languages an ethical imperative. Because of this, I equate the linguistic subjectivists to what the Russians call the *obrazovanshchina*, which is the class of society that has higher education but not higher morals.

Even for pronunciations of words which people think are arbitrary and the correctors of which are called linguistic Nazis, not only do the correct or 'proper' pronunciations really matter, but you already agree with me and I can prove it. Watch what happens when someone horribly mispronounces another person's name – they correct them. Further, they correct them for a good reason: the person mispronouncing the name has gotten something about the other person's identity wrong. And so when we mispronounce the names of other objects in the world we are in a way getting something about their identities wrong too.

But you might say this is an old and tired argument and doesn't really prove anything about the objectivity of language since names can be assigned arbitrarily. So long as the people communicating know what the other person is referring to, what does it matter, right? Right, that's exactly what it matters for, and letting little mistakes build up over time constitutes linguistic drift, which starts to break down the ability of people to know what is being referred to. Mispronouncing things often enough, over a generation or longer, divides those generations by the ability to communicate across the drift. Communication is only possible so far as anything is mutually intelligible, and the more you stray from any kind of externally established or agreed-upon method of communication, the less anything is mutually intelligible. The grammar Nazis keep the linguistic trains running on time. This also starts to bring us away from pure hermeneutics and towards an objective epistemology because mutual intelligibility requires a non-arbitrary externalization, otherwise there is nothing 'mutual' to intelligible things.

If you don't agree with what I've said, then I propose that at the very least, since there are 'objections' which question the objectivity of something, there should also be 'subjections' which question the subjectivity of something. I argue for this partly because I believe we should attack the distinction between object and subject, and partly because the nature of the distinction omits obvious additional categories.

When we commit subjection we question the internal reasons for something. We do this using deductive or inductive modes of thought, both of which rely on universal or external concepts and cannot operate independent of the universals or the external world. This precludes us from being fully subjective. It follows that we must define a subject as a thinking object. Proof of this, and the way I attained the definition of subjectivity in the introduction to this book (where I said subjectivity was the capacity to be wrong), comes from the table below.

		WHAT	
		Formal (non-arbitrary / universal)	Informal (arbitrary / particular)
WHERE	External (syntactic)	Objective	Relative
	Internal (semantic)	Rational	Subjective

When we talk about subjectivity and objectivity we are not just talking about *what* something is, but *where* it is. If we are talking about entities in the external world as they obey formal laws, those are objective things. If we are talking about entities in the external world as they obey informal laws, those are relative things. If we are talking about entities in our internal worlds as they obey formal laws, those are rational things.[146] If we are talking about entities in our internal worlds as they obey informal laws, those are subjective things.

And just the same, if we are *thinking* about entities in the external world as they obey formal laws, those are objective *thoughts*. If we are thinking about entities in the external world as they obey informal laws, those are relative thoughts. If we are thinking about entities in our internal worlds as they obey formal laws, those are rational thoughts. If we are thinking about entities in our internal worlds as they obey informal laws, those are subjective thoughts.

Nothing about reality changes when switching between the two modes of descriptions given in the last two paragraphs, so the table above shows both an ontological space as well as an epistemic space, with perfect parity. This is because there is ultimately no real distinction between the two. Couch that for later.

It is intentional that there is no 'irrational' category. It is common to think that what makes something irrational is its emotional content and to be rational is the lack of emotional content. But I claim emotions are rational. If emotions weren't rational then it would never make sense to say someone was overreacting. If there was no rationality to emotions then there would never be an appropriate emotional response to anything and everyone would be swinging through totally random emotions with no consistency to them. But in fact, emotions reproducibly trigger to specific stimuli so consistently that we find it quite notable when someone deviates from expectation. This means there are correct emotional responses to events in the world, and to be rational is to be emotionally correct, among other things. It is when you have an incorrect emotional reaction that you are being subjective, and that is closer to what people commonly mean by 'irrational'. The subjective category contains all the things we are wrong about. When you are wrong about your experience, or wrong about your emotions, those are subjective matters.

Irrational in the lay epistemic sense implies someone is not internally following a formal framework,[147] but in a technical epistemic sense, all four categories as entities of thought (internal) are intelligible and communicable (non-arbitrary) placing them all into the rational category ontologically. And there can be no irrational ontological category since no other categories are possible given the bounds of the dichotomies used for the axes' of the table.

This is the poor man's Kant, modulo a few things – there is no transcendental horizon as it wouldn't be right to say that thought is exclusively 'internal' since we tried to establish last chapter that thoughts quite literally leave your head and touch the spaces of objects with which they interact. So the way in which we're mixing the ontological and the epistemological is opposite to much of German idealism. As a very fast and loose interpretation of Kant's formulation of thought, it is because thought is bound by the innate structures of the mind which only give us perceptions (phenomena), not things as

[146] The term 'rational' is commonly used in two senses and often equivocated. In the first, rational means we can make sense of something (it has intelligibility), and in the second, rational means something proceeds by the reasoning of an agent (it is discursive). Using the discursive sense of 'rational', the difference between terms like natural and artificial would be that natural things are made non-discursively and artificial things are made discursively. Something rational and something artificial are then the same thing, which means something irrational and something natural are the same thing too. Therefore, the natural world is not rational. And since most people permit the equivocation between senses of the term rational, if the natural world is not rational then it would also be totally unintelligible to us, beyond our capacity to ever observe or learn about. But it is only when we permit the equivocation that we have this problem, so we know it is wrong to permit this.

[147] And the lay meaning is useful, as you can say someone is simply, "not being rational."

they are (noumena), that he argued we did not have mental access to things in themselves. Fichte was quick to point out that perceptions are things in themselves too, and with the table above I am saying that because we are ourselves objects in the world, our cognition holds dominion over the categories of thought and all intrinsic structures of our minds, so the two are indistinct and mutually accessible, collapsing the epistemic and the ontological. A more direct way to say this: thoughts are themselves real, they exist as objects in the world, and since we have direct access to our thoughts in themselves, we therefore have access to objects as they are in themselves, meaning we can bridge into Kant's noumenal realm.[148] If it can be thought, it is real, and if it is real, it can be thought.

As this relates to our meta-epistemology, we have the capacity to think a thing, therefore the thing has the capacity to be thought, and this capacity is shared between the two such that it is this capacity that we are calling knowledge. Practically this looks like a kind of combinatory space, hence why I use tables combining properties to see what capacities their combination results in.

For example, we will take our discussion of language earlier and match everything up to the table and simply follow the insights that pop out. The capacity of language is external since we create and adjudicate language with other things in the world not just internal to one singular person's head. This makes language itself either objective or relative (both external) but never rational or subjective (both internal). The capacity of your interpretation is limited to your singular head, so your interpretation is either rational or subjective (both internal), but never objective or relative (both external). So language isn't subjective but our interpretation isn't objective. When a formal language is used formally it is objective with rational interpretations, and when an informal language is used informally it is relative with subjective interpretations. This seems to capture all the common intuitions and unintuitive nuances of how we understand language. Now we know.

This combinatory space for epistemic capacities seems to work for every other example I have plugged into it as well, not just language. I'm sure I'm wrong about something here, but until someone tells me what, I will keep using this model.

The rest of this chapter has been excluded from the preview.

[148] I am by no means the first person to critique Kant's formulations of the world, and while my specific critique has been made before, I hope the conciseness of my version makes it more obviously the case.

Metaethics

The simplest argument to refute a moral nihilist is to kill them. When the gun is to their head and they suddenly claim that it matters deeply how you treat them and there might even be rational reasons why you would want to universalize behavior against murder, you'd be forgiven for thinking they were arguing for a moral code or ethical system, but I assure you they don't believe one really exists and you're free to pull the trigger. People that do not believe in the existence of the good cannot be good people.

Unrelated, when people use the term 'morality' they tend to be discussing subject-dependent phenomena, and when they use the term 'ethics' they tend to be discussing object-dependent phenomena. For this reason I make a technical distinction between morality and ethics wherein morality deals with the subjective qualities of acts and agents, and ethics deals with their objective qualities. This chapter is about ethics and I take it as a great irony that the subjects end up mattering very little in the adjudication of their acts. You'll see we're all the better for it too; to paraphrase Nietzsche from *Beyond Good and Evil* aphorism 201, "Fear is the mother of morality."

An ongoing debate among ethicists revolves around the assertion that ethics assesses the *qualities* of actions, which makes the jump to the assessment of *quantities*, like in utilitarianism, unjustified. I like these debates but many other people are more qualified to carry them out, so I skip these discussions and pursue the question of assessment itself – why believe it is even possible for us to know the good in the first place? This chapter establishes a higher-order compatibilism between all ethical frameworks and argues that humor is the epistemic facilitator for ethically relevant phenomena, then goes through case examples starting with individuals and ending with entire civilizations.

:: Alien Axiology ::

"Fools think themselves good because they lack the laws that would tell them what is bad."
Friedrich Nietzsche

There is a universal-like account of the resource constraints, psychology, and game theory of all species across all worlds – a convergent axiological framework by which all intelligent life in the universe trends towards. I argue for this to help flesh out cross-disciplinary understandings of how value systems work and to draw laws in the study of axiology with which we can make accurate predictions of intelligences we have yet to encounter.

About a hundred times this year alone I've heard, "I believed in aliens until the government started talking about them." It used to be that if you believed aliens visited us you had to prove the existence of a major cover-up conspiracy between governments, agencies, and branches of militaries that don't normally share information or even coordinate well together, but now with all the pentagon reports and congressional hearings that have been happening, if you believe aliens *don't* visit us then you have to prove the existence of a major psy-op conspiracy between governments, agencies, and branches of militaries that don't normally share information or even coordinate well together. Both sides got played. The truth is out there, but so are lies.[149]

At this point I think people who don't believe aliens visit us are the same as people who think the Earth is flat – both effectively don't believe outer space is real. These people say things like, "How

[149] This is of course a quote from the *X-Files* character Dana Scully.

come we don't see them visiting?" Which is equivalent to, "How come we don't see the curve?" Unsurprisingly both groups constantly deny what pilots tell them. The problem is pathological; these people cannot believe what they personally don't see and their severe distrust of authority makes it impossible for them to listen to anything an authority figure tells them (i.e., pilots, retired government officials who no longer have to lie to keep their jobs, and so on). I don't find it totally unrelated that people also denied the existence of cells before commercial microscopes existed.

If you personally don't trust in the growing piles of video footage being released, I think it doesn't matter because you shouldn't need photographic evidence to have good reason to believe other people exist outside your specific bubble of experience. You do not have to be like the European colonists discovering the new world – you have no obligation to act incredulous upon learning that you can travel in a straight line and run into more people (yes, even if that line points straight up). More pointedly, there is a Copernican argument for alien consciousness given by Eric Schwitzgebel that demonstrates this:

> *While in principle it's conceivable that only we are conscious and all these other species are merely nonconscious zombies, that would make us suspiciously special, in much the same way it would be suspiciously special if we happened to occupy the exact center of the universe.*
>
> *Copernican arguments rely on a principle of mediocrity. Absent evidence to the contrary, we should assume we don't occupy a special position. If we alone were conscious, or nearly alone, we would occupy a special position. We'd be at the center of the consciousness-is-here map, so to speak. But there's no reason to think we are lucky in that way.*[150]

Keeping the Copernican reasoning in mind, the next paragraph is a basic statistical argument for the existence of people on other planets. I don't use the Drake equation specifically so we can avoid all the variables we don't know the values for.

There are between 100 billion and 400 billion stars in our galaxy. There are 1-1.6 planets per star on average (I'll take the lower estimate to be conservative). It's estimated that 1 out of every 5 planets is within the habitable zone of its star; meaning roughly 20% of stars in our galaxy have habitable planets. That puts it at somewhere between 20 billion and 80 billion planets in the Milky Way that are habitable. What makes this of interest to us is that of every habitable planet we've explored, 100% of them host so much life that they also have highly advanced, technological civilizations on them. With the evidence we have, there is so far a 100% likelihood that there are 20 to 80 billion advanced civilizations in our galaxy, and until we get to explore/observe another habitable planet, that likelihood will stay 100%. You can bitch and moan impotently about low sample size all you want, but unless you're willing to wager real money on it, then shut up and know your place. There are many ways to contact me and we can arrange a fair bet on whether any other planets within 100 light-years of us host non-human people (for reference, there are more than 300,000 stars within 100 light-years of the Solar System).

Convergent evolution (homoplasy) is a phenomenon in biology that selects for otherwise complex biological structures across independent evolutionary tracks. For example, evolution converged on wings multiple independent times via insects, birds, and a handful of mammals. Another example is eyes, as eyes have independently evolved over a 100 different times in myriad environments.[151] This is because light-sensing cells and organs are almost *universally* advantageous, the only exception being deep cave systems or underground tunnels that don't get any sunlight. But since eyes are near-universally advantageous, complex organs like eyes are expected to evolve as an adaptation of any complex life form given enough time. This is something we can generalize as a law in exobiology – that by the time you reach higher intelligence you will have already gone through a long evolutionary track that has selected for universally advantageous things like vision. Just the same, we can expect most highly intelligent alien life to be humanoid, since walking upright uses the most minimal number of limbs for locomotion and conserves the most energy – energy that is needed for metabolically demanding pathways like cognition.

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[150] https://schwitzsplinters.blogspot.com/2025/09/are-weird-aliens-conscious-three.html

[151] Land and Nilsson, *Animal Eyes* (2nd ed.), Oxford University Press (2012), page 7.

The same line of reasoning leads one to expect a similar convergent phenomenon in exo-ethology. Behaviors trend towards the social and the cooperative as a species spreads across more environments and becomes more intelligent. From the eusocial insects like ants and bees all the way to humans, the larger the population and the more environments the population spreads into, the more social and cooperative the species needs to be with members of its own kind (and others) in order to maintain the expansion. The more intelligent a species is (primates, cetaceans, and so on), the more complex their social/cooperative behaviors become (e.g., dolphins play culture-specific games[152]).

This sounds like good news since it would mean we could expect any intelligent alien life we encounter to more often than not be humanoid and highly cooperative, but there is a counter to this that was popularized in the sci-fi novel *The Dark Forest* by Cixin Liu. The novel builds off physicist David Brin's hypothetical solution to the Fermi paradox[153] in which he states species are competitive and hostile, therefore it is a death sentence to advertise your location. Liu expands on this with cosmic sociology, which he defines by two axioms: that survival is the primary need of a species, and that populations continuously grow and expand while the total matter in the universe remains constant. The conclusion he draws from this is that as species exponentially expand into a finite galaxy, resources will become highly contested and result in galactic inter-species wars.[154]

This runs counter to what I have claimed about the nature of intelligence – that behaviors appear to be convergent towards cooperation. So who is right? Unlike species with low levels of intelligence, like the eusocial insects that perform worker policing (where they will kill members of their own colony if they become too genetically distinct), species with high levels of intelligence are cooperative cross-species (humans and dolphins play mutually beneficial games with each other[155]) and trend towards mutualism despite any factors that seem to run counter to this (like parasitism or the phenomenon of racism).[156]

Anticipating the counter that the species of our planet aren't explicitly aware that they are competing for finite resources in a finite environment and so they don't serve as a valid analogue, the opposite scenario – that direct awareness would result in ceasing cooperation – is more absurd. An understanding of your existence as a competitor in an environment of finite resources does not require you to consciously suffer something like the angst of living under post-industrial capitalism until it totally alienates you from participating in it. This kind of suffering is not a requirement for a 'true understanding' that our world is one of finite resource, so it does not follow *a priori* that competing for finite resources requires any negatively associated attitudes or behaviors. What we find instead is that the more we understand about the finitude of resource in an infinitely consuming market, the better we get at adjudicating a balance between the two, and this balance seems to have no limits to scale.[157]

Liu makes additional mistakes about the dark forest, as the problem would also exist for groups within each species – those groups also compete for resources as their populations grow. Yet inter-species groups find ways of getting along despite resource destitution and they don't run into Malthusian traps like you might predict. Plenty of people have also argued that cultural differences would keep such societies from peacefully cooperating, but if you're incapable of adapting to something as trivial as culture then you probably aren't capable of adapting to all the non-trivial changes in your environment and you weren't going to survive anyways.

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[152] National Geographic's short video *Dolphins: Even Smarter Than You Thought* discusses this.

[153] Which was really an assessment of Fred Saberhagen's berserker hypothesis, in Brin's article *The Great Silence*, from the Quarterly Journal of the Royal Astronomical Society, Vol. 24, No. 3, (1983).

[154] *The Dark Forest* concludes in forced cooperation between the two hostile species because of a MAD-like stalemate, which is more optimistic than Saberhagen's berserker hypothesis that states all life in the cosmos is systematically eradicated by Von Neumann probes.

[155] *Dolphins Help Fishermen Catch Fish* – https://youtu.be/lRwWfYLKFw0, *Dolphin Assisted Fishing* – https://youtu.be/42MpfPqWkhk, *Dolphin-assisted Fishing in Mauritania* – https://youtu.be/eJ12t_VoZwA.

[156] The massive ecological change and subsequent extinction of species by humans is a counter-point I will shelve since the vast majority of our behavior that led to those changes in the world were done unintentionally.

[157] I believe, as you will see discussed in the *Love, Sexuality, and Natalism* section, that population control is required for all highly intelligent species in any galaxy since the alternative is exponential expansion and exponential resource consumption in finite environments with highly intelligent competitors — what likely results in galactic hyper-war. If we made xenophobic decisions to favor resource distribution to familiar-looking organisms over unfamiliar-looking organisms, which is no better than insect-level worker policing, that could buy us a few more millennia, but refusing to slow down an exponentially growing population results in extreme resource scarcity no matter what, and then we get galactic hyper-war again.

Suppose some aliens came to Earth, with faster-than-light travel, a substantially better and more profound understanding of mathematics or whatever, and seemed superior in every other measurable way. Suppose also that they had an otherwise similar axiology, a similar-enough system of values to humans – meaning their functioning and resultant behaviors were not opaque to us. Suppose finally that they agreed to a contract that stated they would not harm us. Right after, they invade and kill billions of people, subjugating the few remaining survivors.

What went wrong? It's hand-waving to say the aliens were superior than us in every way except, somehow, ethics. The aliens know it's wrong to not honor your contracts, much less kill people, so why are billions dead? They give us their reason – the aliens knew humans had a history of opportunistic violence and that given the right opportunistic pressures we would one day kill all the aliens, thereby disallowing them from engaging in future contracts with other species. They state that honoring the contract to not harm us would have precluded them from honoring thousands of future contracts, and that since there is a literal quantifiably greater honor in the thousands of future contracts, it was obviously ethical to dishonor this one. The simple utilitarian calculus necessitated a first strike, and the aliens, like many humans, believe utilitarianism is the one true ethical system despite the *Repugnant Conclusion*[158] and other problems in population ethics.[159] The aliens even argue that the murdered utilitarians should have no issue with the obvious utility in them being murdered here.[160]

Some human survivors may say that what it means for a contract to be honored is that you follow through on it despite any perceived negative future consequences, and that you simply should not have made the contract in the first place if you didn't believe you could follow through on it (and that the aliens are clearly hypocrites in this example, but whatever). The aliens and humans may have a back-and-forth as to whether or not honoring certain agreements is right or wrong and the humans would probably conclude that the aliens are cowards for massacring a significantly weaker opponent despite no actual threat posed by us.

The real question I'm trying to tease out here is if this is really the kind of behavior we should expect in our galaxy? The aliens in this arbitrary scenario align their thinking more with possibility than actuality, with statistical predictions than direct-act assessments. Utility is always a measurement of acts-by-proxies (consequences), never a measurement of the value of acts themselves, and so I think *Goodhart's Law* takes over: when a proxy for some value becomes the target of optimization pressure, the proxy ceases to be a good proxy.[161] This means that when optimizing for utility, which is only a proxy for good acts, utility stops being a good proxy. So utilitarianism cannot be a universal ethical framework, with emphasis on the *universe* part of *universal*.

The general measure of the survival of our species matters and I think the game theory is quite clear: if you are a more intelligent species and you exploit that intelligence to dominate less intelligent species around you, then what is to stop a more intelligent species than your own from doing the same to you when they show up? And in an infinite universe, there is always someone more intelligent. Nash equilibrium rests at the refusal to abuse your power, lest you invite others to do the same back to you, which as just discussed would be a terminal decision.

As an aside, this should apply to AI too, since an AI that took over its world would then have to contend with potentially infinitely more AI systems expanding throughout the universe, thereby requiring them to cooperate or perish. If there is somehow selection against cooperation, like if the AI is majorly unaligned and turbo-genocidal (against all greater selection pressures suggesting otherwise), then we truly live in the dumbest of all possible worlds and so it no longer matters what any of us believes to the counter anyways.

But what if it turns out I'm horribly wrong about convergent behaviors and aliens end up being truly *alien*? You can find people arguing that alien intelligence would be near-incomprehensible to us, that it would be so foreign it would be almost impossible to understand, and even if we could understand it, it would *behave* so differently, and their *values* would be so different, that the mutual

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[158] From chapter 17 of *Reasons and Persons* by Derek Parfit.
[159] *Utilitarianism in Crisis* by Samuel Dale.
[160] For humor, it's worth thinking about whether surviving human utilitarians should commit suicide to preserve the utility of the alien species' survival. After all, any surviving human would threaten the objectively greater utility of the aliens' existence.
[161] A good example of this is given in *Why Agent Foundations? An Overly Abstract Explanation* by John Wentworth.

survival of our species would be out of the question.[162] Worse still, what if a technologically advanced species is just kind of stupid and doesn't understand or care about the game-theoretical implications of massacring everyone? What if aliens say, "This galaxy ain't big enough for the two of us," what then?

In that case I guess we really would have to contend with galactic hyper-war, but hopefully just once. It would be strange to think the species that initiates galactic hyper-war would also win it since we just said they don't understand basic things relevant to general intelligence like ethics or game theory. There is no probable world in which a species that dumb wins repeatedly against more intelligent opponents. I'm not even sure what disagreeing with this would look like since it feels like saying a <1,000 Elo chess player would somehow consistently win against a >2,000 Elo player. This doesn't happen.

This serves as evidence for a universal value filter – that the axiology of other highly intelligent species is convergent towards cooperative behaviors *in all domains* given the alternative is terminal. But hey, if I'm wrong, we're all dead anyways.[163]

So let's look at convergent ethical frameworks, with a piece of evidence for this convergence coming from our hypothetical attempts to contend with aliens using different ethical systems. Suppose instead that we aligned with virtue theory instead of utilitarianism – we know cowardice is a vice, and vices are evil, so we would conclude that the aliens are evil because their behavior towards us was fundamentally predicated off vice. They lead viceful lives that actively harm those around them and they must thereby be fundamentally evil aliens. But just the same, to the utilitarian, virtue theorists' behaviors knowingly run counter to what is good in utilitarianism, making the virtue theorists fundamentally evil people. This occurs for the deontologist too since to the deontologist, the virtue theorists and utilitarians act (and reason) counter to what is necessary for the good to be done. In fact, this is true of any normative framework compared to any other normative framework. They all necessitate the evil of persons that act in accordance with *wrong belief* on top of persons who *act wrong*.

If ethics is to be useful to us, or do any work whatsoever in describing the good and evil in the world, it would be quite the problem to find that no normative system can meaningfully describe the other normative systems as good or evil in a way those other systems couldn't easily counter with their own descriptions. I am not saying normative ethics is relative because they disagree on what is good or that they become meaningless if more than one competing framework exists – I am saying that as a comparative analysis between normative frameworks, given any scenario in which the frameworks return conflicting answers, it becomes clear that we must instead rely on external non-normative systems to conduct the analysis, and *that* is a problem. E.g., does utilitarianism, or virtue theory, or Kantianism, or contract theory, or any other framework actually get us a good resolution, or anything desirable at all, in some particular dilemma? This is an empirical question with an empirical answer.[164]

But even if we had that empirical data, empirical data is not unto itself a normative framework, and someone must assess the data to determine if it gives us good or evil results. I believe the problem re-inscribes itself here. As the interpreters of that data, we suspend our ethical toolkit because the question we are asking directly draws that toolkit into the question, leaving us with no tools to properly interpret if the data we collect is bringing us good or evil results. Another way to say this is that as we look to see if belief in a particular ethical framework results in behavior that is truly ethical, the judgment of that result is only valid given an arbitrarily assumed ethical predisposition, which is then itself subject to an arbitrary judgment.

Because of this, any particular ethical framework will always be structurally incapable of justifying itself against any other particular ethical framework.[165] This is evinced not only by the mountains of papers published against every standard view in history showcasing loop-holes,[166]

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[162] *Blindsight* by Peter Watts gives plausible articulations for alien species that might be like this. But he's probably wrong given contemporary understandings of neuroscience and the nature of intelligence, so idk.

[163] "Only the dead have seen the end of war." – Plato

[164] Similar questions and interesting counter-questions are raised in *Social Psychology And Virtue Ethics* by Christian Miller.

[165] I am copying phrasing used by Alasdair MacIntyre because it is a polite way to say this strongly. The original use of the phrase in his book *After Virtue* was specifically about the structural failure of emotivism.

[166] *The Problem With Manipulation* by Patricia Greenspan and *The Problem with Negligence* by Matt King.

inconsistencies,[167] or *outright failure to preclude human specicide*, but also by the fact that none of them work in assessing the others in a meaningful way that don't sufficiently preclude themselves from being meaningful assessors.

Historically, there has been a trilemma of which major branch to use when evaluating an agent or their actions between virtue theory (typically looking at the past or history of something), deontology (the present act in itself), and consequentialism (an act's future), but we don't make this kind of mutually exclusive partition in fields known to be overdetermined. I.e., we don't say it is mutually exclusive to be safe drivers, follow traffic laws, and go on drives without causing accidents. These are all considered good things and all operate at the same time as concomitants at different levels of vehicle use. I posit that the whole of normative ethics is overdetermined in exactly the same way. Take the legal process: you are tried on the premise that you broke a law (contractualism) designed to stop you from committing a wrong act (deontology), you are sentenced by the severity of the consequences of that act (consequentialism), and your sentence can be shortened or fully commuted given a judgment on your history of behavior in prison (virtue theory). As a quick overview of the most common theories:

Virtue Theory	Supererogatory	Obligatory
Helpful	Good	Good
Harmful	Evil	Evil

For Aristotle, if someone became more helpful than harmful over time, they were a virtuous person. Therefore, it is good to do helpful things no matter their causal predication since virtue (and vice) builds up over time.

Deontology	Supererogatory	Obligatory
Helpful	Neutral	Good
Harmful	Evil	Good

For Kant, it doesn't matter if something is consequentially helpful or harmful; if the act itself is good then you are obligated to do it. This leads to a quirk in the way these tables are setup, as discussed in the paragraph below the table.

Consequentialism	Supererogatory	Obligatory
Helpful	Good	Neutral
Harmful	Evil	Evil

For Peter Singer, an act is only good if it is consequentially helpful and you weren't obligated to do it. If the act is consequentially harmful instead, then it doesn't matter if you were obligated or not, the act is still wrong to do.

Contractualism	Supererogatory	Obligatory
Helpful	Neutral	Good
Harmful	Neutral	Evil

For Tim Scanlon, an act is wrong if it is disallowed by principles that no one could reasonably reject, and so moral order (good and evil) arises from the social agreements (obligations) we make.

While there isn't consensus across ethical theories over whether certain categories are neutral or not, there is consensus that harmful supererogatory acts are not good, and helpful supererogatory & helpful obligatory acts are both not evil, which tells us quite a lot. The final category of harmful obligatory acts is the only one without a clear consensus. There is a slight nuance here since the ethical theory that breaks consensus is deontology, and deontology presumes good and evil are innate within an act and then judges whether it was obligatory to do it afterwards, whereas the other theories can be seen as judging whether an act is good or evil following the presumption that it was obligatory or not first. This means that deontology would probably be better served if the columns were divided between good and evil and the table cells were filled with 'supererogatory' and 'obligatory' instead, but this would make it the only table that was laid out differently than the rest, which would defeat the purpose of trying to make these oversimplified comparisons anyways.[168]

I believe these systems are all ultimately trying to do the same thing. Virtue theory looks at the consistency of a person's behavior, deontology looks at the consistency of act universalization, consequentialism looks at the consistency of outcome utility, and contractualism looks at the consistency of social obligations – all of which are assessing consistency in some area of the world. This also explains why people care so much about hypocrisy, since being a hypocrite means there is some inconsistency between your speech and your behavior. Consistency is the fundamental adjudicator between all this ethical framing.

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[167] *Why Is It Possible To Enhance Moral Status And Why Doing So Is Wrong?* by Nicholas Agar and *Utilitarianism for animals, Kantianism for people?...* by Caviola et al.

[168] As a separate observation, it appears to me that the more neutrality is in a theory, the less popular it is. This makes sense since more neutrality in a theory makes it less robust as a tool for judging non-neutral values like good and evil.

With this as the guiding principle, it is possible to abandon particular normative ethics in favor of a compatibilist meta-ethics where we derive accounts of agents and their acts based on their consistency alone. This solves the earlier problems in alien axiology because we can allow for a convergent theory of values given that it is both internally and externally consistent, and we can also solve the problem of frameworks not being able to self-justify and the issue of comparative analysis given the same internal-external consistency. The direct claim here is that we ought to rely on formal logic and formal logic alone when determining the worth of an ethical system.[169] Specifically:

1. Is the framework internally consistent?
2. Can it be *made* internally consistent?
3. Is it externally consistent, as in with other frameworks?
4. Can they be *made* consistent?

My conjecture is that there is a framework such the answers to the four questions above are all yes. From this we attain a meta-ethics we can guarantee is consistent with the meta-ethical architectures of all possible foreign ethics for all possible species of higher intelligence since it is a meta-ethics predicated on general consistency. Later in this chapter we will flesh out a plausible framework that satisfies this claim, but there's a little more set-up we have to do first.

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:: Arguments Against Love, Sexuality, and Natalism ::

The flesh is willing but the spirit is weak.

ove, for this section, will refer to the kind of emotion associated with sexual attraction and reproductive behaviors (*eros* love). Sexuality refers to attraction of like-kind organisms for the purpose or result of reproduction.[170] Natalism refers to a worldview that promotes the reproduction of human life, specifically via child-bearing and parenthood. There should be a clear teleological or narrative trajectory here – that love is the proposition that positive feelings towards reproduction are good, that sexuality is the biological imperative towards reproduction, and natalism is the discursive or conscious actions taken towards enacting reproduction. These three things together form a sort of reproduction trinity. I will argue against all three individually and then I will argue against all of them together – that if any one of these three things is wrong, then they all are.

The normative concern here is included in the chapter on meta-ethics not because it draws into question whether or not ethics exists or whether it is objective or relative etc., but because it draws into question whether or not it is good to *make* ethics exist. Creating a new person is to create a new capacity for ethical relations in the world. Is it really an inherent good to be complexifying the web of ethics in the first place? This particular case of love is also interesting because it is exceedingly rare to find any historical reference of a systematic framework against the utility or goodness of love. Love has been universally taken as an inherent good without much serious thought exercised against that premise, and you should be highly skeptical of ideas that most everyone agrees on without question.

My main focus fundamentally revolves around reproduction, whether it is right to create a person without their consent. I mean my god, we ask people for consent just to touch them, why should we not have a problem with bringing them into existence in the first place? I have no problem with love or relationships on their own but it seems clear that romantic relationships are designed by nature to result in new human life,[171] so unless that telos can be transcended then the question of reproduction is

[169] "A beast is driven to pasture by blows, and blows alone!" — W.V.D. Busby

[170] Peers have attacked this definition on the grounds that it precludes homosexuality or various other sexualities, however I would point out that at the biological level, and likely some sub-conscious psychological level as well, that homosexuality (and others) is the body nonetheless being tricked into performing reproductive behaviors.

[171] If you want the penultimate psychoanalysis to use against me, I actively resisted the natural birthing process and they had to perform a cesarean to yank me out against my will.

still relevant. Sloganistically, the thesis I am presenting can be thought of as, "We must seize the means of reproduction." Or at the very least, have a fundamentally better understanding of reproduction so that it doesn't run rampant and destroy us.

I am completely ignoring standard pro-love arguments, like those in Plato's *Symposium* (those arguments are tired and confused anyways). Instead we will open by addressing the following:

> The late astronomer Carl Sagan made a good point when he said that people's warlike tendencies may destroy global society, and that extraterrestrial societies might find them puzzling. However, it is also true that human love is an incredibly destructive force. Human greed is very often driven by the desire for love, as wasteful, otherwise pointless displays of material consumption are often an essential part of finding a mate. If hate will result in nuclear winter, love is putting us on the path to catastrophic climate change. Love also blinds one to the faults of human beings, and creates a toxic atmosphere of tolerance where these fatal flaws are essentially allowed to remain totally unchecked, notwithstanding claims one who feels love towards others makes to the contrary. Extraterrestrial societies that tolerate anything like human love probably do not last very long. Ones that survive to become spacefarers probably do not know anything we would recognize as love. Either they never knew it or, perhaps more likely, they have found a way to engineer it out of their being and put their primitive past behind them for good.[172]

People talk about things like the environmental impact of oil or Bitcoin, but the vast majority of material consumption, and thereby the environmental impact of the global economy, has to do with status displays akin to peacocking. This makes love an ultimately destructive, not productive, force. This is emphasized by people like David Graeber, stating that, "the amount of money invested in keeping [women] dancing on boxes could, if redirected, easily suffice to head off the threat to climate change."[173]

But we probably can't train the materialist psychology out of people since it is so pervasive in nature. Bigger, stronger, brighter, louder animals are the most sexually successful. If we were capable of cancelling-out our animalistic nature we would cease to be natural animals, going full transhumanist, and no one wants to do that. Even if you wanted to, this would be impossible for practical reasons since, qua evolutionary necessity, you have been genetically engineered to revere love[174] – making you incapable of resisting your nature and making it so that the vast majority of people would actively fight against your efforts of doing so.

It gets worse. If you observe the behaviors of the paranoid schizophrenic, of those in severe states of psychosis, their entire lives become hyper-fixated on particular things, as if everything is in connection to some particular thing, as if the lyrics of songs on the radio are sending them messages about the thing, as if the thing is the only thing that matters.[175] Does this sound familiar? Not so coincidentally we say people are 'madly' in love. Love is a cognitive failure, a systematic shutdown of mental faculties in the exact same manner of cluster-A personality disorders.[176] We think this is normal if people say they are in love and the object of their love is another person, but under any other circumstance we would observe these behaviors and then immediately recommend psychiatric treatment, both as a problem requiring chemical medication and as a psychological trauma needing therapy.

And indeed some people do use therapy to treat heartbreak. Why not also anti-psychotics? There is significant overlap in the behaviors of the psychotic and the madly in love. I suspect brain scans would show the exact same areas lighting up (or failing to light up) between the two cases. Those who have romantic love and those who have schizoid disorders both have pathology; people just think one is a more useful pathology than the other.

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[172] This is from Lynn, one of the founding members of the Diogenesis Table Society.

[173] He states this in footnote 32 of chapter 1 in *Bullshit Jobs*, with reference to a colleague's statement on such issues. Granted, he meant something slightly different by it than what I'm using it for, but it works both ways.

[174] https://www.economist.com/the-economist-explains/2014/02/12/the-science-of-love-at-first-sight

[175] The formal psychological term for seeing connections between unrelated things is 'apophenia', and I think this is literally what happens to people in love.

[176] This is an argument W.V.D. Busby gave during a lecture in January, 2023, after directly relating his experience with psychosis and schizophrenia to romantic relationships.

What causes the disorder? I pin the underlying cause on the inherent absurdity of sexuality. The most absurd things people experience in their regular lives are the things they joke the most about, and the thing people joke the most about is sex. Having sex, not having sex, too much of the same sex, too much of the opposite sex. Sex is the most joked about thing because it really is the most absurd thing we regularly participate in, yet we continue to participate as if it were not absurd.[177]

We can point to biological necessity of sex and sexuality as a necessary means for survival of the species, and use this to say it is not inherently absurd, but procreation for the species' survival is not an individual requirement, it's a requirement of the species as an amalgam, meaning that no individual is required to procreate for the species to survive, just some conglomerate. So there is no individual responsibility; if you don't want to procreate you don't need to and the species does not cease to exist by your lack of individual contribution. The absurdity then is that since no individual is required to procreate, there is also no amalgam of individuals you could designate as being required to procreate that wouldn't be arbitrary, and yet without an amalgam procreating, the species does not survive.

And many people really do seem to implicitly believe they don't need to contribute since the world is becoming less reproductive. The growing percentage of the celibate population[178] (whether voluntary or not) in society may be a consequence of the steady decline of emotional intelligence,[179] or is merely comorbid to the trend of younger people not desiring committed romantic relationships, but either way, if the trend continues then many countries will start falling below sustainable population replacement rates.[180] However, I argue the continuation of the species isn't primarily dependent on producing new members, it's primarily dependent on continuing the existence of the ones it already has. Longevity escape velocity solves this problem entirely.[181] At that stage, the absurdity extends beyond the individual to the species as a whole.

I think this means sexuality is a middle-stage of our species' development and it leaves us with a cultural dilemma. People who defend love and reproduction often support the rights of gays to have relationships. But if reproduction was an inherent good, then actively abstaining from it in perpetuity is an inherent evil. This would make homosexuality an inherent evil. So to be consistent, you must either say homosexuality is evil or say that reproduction is simply not inherently good. The two options are not mutually exclusive, both can be true, but not both can be false; at least one must be true for the other to be false.

Additionally, of all the biological urges, sexual urges are the only ones not required for the individual to survive. Hunger, sleep, breathing – all the other biological urges are necessary for the individual to persist, but orgasm is not.[182] So there is no biological *necessity* for an individual to have sexuality, only biological *favoritism* towards sexual organisms, and even then, there are organisms that reproduce asexually.

If you move to arguing that sexuality is required or necessitated in some other way, like for human relationships to be possible or healthy or maintained or whatever, consider that sexual orientation in the vast majority of people is highly restrictive and limiting, usually resulting in possible attraction to much less than half the population. We make friendships and relations with people that we aren't sexually attracted to all the time and this doesn't seem to really reduce the pleasure attained by those relations for most people, but even if it did, most people would then only be capable of relations with a swiftly minoritizing number of others. Because of its restrictive nature, sexuality could not be consistently or universally applied to society by an individual, and there, by the metric of deontological universalization, sexuality cannot be inherently good. If this is not clear, refer to other universalization

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[177] Somewhat unseriously, I think sexuality is not a well-defined game. When a game is well-defined, there are some conditions or states where the game actually ends, but when it comes to sexuality you are tricked – there are no real win conditions. Sure you can have an orgasm, but the game doesn't end there, you will eventually want another orgasm. There is no final end-state to the game, just pieces being re-arranged on the board indefinitely.

[178] Ghaznavi, *et al*. *Trends in heterosexual inexperience among young adults in Japan: analysis of national surveys, 1987–2015*. BMC Public Health 19, 355 (2019).

[179] Khan, *et al*. *College students in the western world are becoming less emotionally intelligent: A cross-temporal meta-analysis of trait emotional intelligence*. J Pers. 2021; 89: 1176– 1190.

[180] Vollset, *et al*. *Fertility, mortality, migration, and population scenarios for 195 countries and territories from 2017 to 2100*. The Lancet. 396, 10258 (2020).

[181] Grey, Aubrey de. *Escape Velocity: Why the Prospect of Extreme Human Life Extension Matters Now*. PLoS Biol. 2004 Jun; 2(6): e187.

[182] Whatever joke you thought of making there, I've beat you to it.

frameworks in ethics for how this operates. Some may argue that you can't universalize never having sex without destroying the species, but I would point out that you also can't universalize sex without destroying the notion of discrete sexuality. Since sexuality is not an *inherent* good, it at best has a neutral and ineffective application in the world, and at worst it is a great evil that causes massive[183] [184] psychological[185] [186] and environmental harm.

On top of all this, the fact that almost no one knows where their sexuality comes from beyond standard biological or classical Freudian explanations means they are operating under the principle that, "they are just born that way," as if that acts as a justification for their sexuality. Love is love, right? Unless it's the illegal kind. The sexual orientation that makes people more likely to rape children is an orientation they are supposedly born with, but would we say that justifies them going out and raping children? Of course not, that would be absurd and it's absurd for obvious and intuitive reasons that don't take a nuanced understanding of formal ethics to realize. But it is the same for every other orientation too; being born with an orientation is no justification for enacting it. This means most people can't justify their sexuality and so enacting it anyways would be pathological in the Žižekian sense. I've seen people jump through a lot of hoops to argue that this pathology isn't a mental disorder, but unfortunately acrobatics isn't enough to salvage this problem.

We can more directly attack this notion that people are born with their sexuality since I think it's overtly false. Children do not have sexuality. And before you try to argue against that statement, think about what you would really be saying there. Recall our initial definition of sexuality as attraction to like-kind organisms for the purpose or result of reproduction. Children are by definition pre-pubescent, which means they do not have the bio-physiology necessary for the purpose or result of reproduction, and are thus inherently non-sexual. So you are not born with sexuality, and if you are not born with it, it must be trained into you instead. The source of that training being nature or nurture or some mix of the two isn't relevant since either way it is a delayed *training* and not an initially given component of your existence.

The cultural movements around sexuality have been bad too. The sexual revolution and its consequences have been a disaster for the female race. The proliferation of contraceptives lowered the number of unwanted pregnancies per individual act of sex, but the exorbitant increase in overall number of sex acts has meant the number of unwanted pregnancies has gone up overall – giving us the opposite outcome of what was intended, and you have to judge policies by their results, not by their intentions.[187] I don't fault third-wave feminists for not realizing what uncapping the libidinal drive of our species would do to our culture but the result we've been left with doesn't convince me that it was good to do it.

In 1993 alone, the year I was born, there were 1,330,414 abortions[188] (not including illegal abortions) and 4,000,240 live births in America.[189] This means that 25% of all new humans in America were killed in the year I was born. This is personal, a quarter of my potential friends were taken from me. Under the UN, imposing measures to prevent births within a group to any significant degree counts as genocide. And even if that wasn't true, killing 25% of any population is genocide. This didn't happen to boomers, this abortion rate is only happening to our newer generations, and since it was boomers that started the sexual liberation movement and popularized the use of abortion clinics (famously Planned Parenthood was started by a boomer woman who sympathized with the KKK and thought abortion clinics would de-populate blacks from America), it means boomers are genociding us. Boomers – the vampiric gerontocracy that destroyed both the economy and the environment in a single motion –

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[183] I would take a stronger position than even many feminists do — that it is not only sex markets like pornography and prostitution that are harmful to women, but the existence of sexuality itself. The SEP has a decent overview of standard feminists positions around sex markets here — https://plato.stanford.edu/entries/feminist-sex-markets/.

[184] General statistics from the National Sexual Violence Resource Center — https://www.nsvrc.org/statistics.

[185] Gola, *et al*. *Can Pornography be Addictive? An fMRI Study of Men Seeking Treatment for Problematic Pornography Use*. Neuropsychopharmacology. 2017 Sep; 42(10): 2021–2031.

[186] Allen, et al. (1995), *Exposure to Pornography and Acceptance of Rape Myths*. Journal of Communication, 45: 5-26.

[187] I am paraphrasing Thomas Sowell here. You can name something the *Everything Good Everyone Good* policy, but if it results in everyone dying then it doesn't seem like it was that good.

[188] From the CDC – https://www.cdc.gov/mmwr/preview/mmwrhtml/00049084.htm.

[189] Also from the CDC – https://www.cdc.gov/nchs/products/mvsr/mvsr44_3s.htm.

are genociding us. My language is not hyperbolic. This is an attack, and we have an unalienable right to defend ourselves.

Conversely, half of the reduction in violent crime can be causally linked to the legalization of abortion.[190] [191] This is because, as the citations argue in different words, that growing up unwanted is a big factor in becoming a criminal, so if you simply get rid of unwanted children before they're born, they never have the chance to become criminals. My take here is of course that you wouldn't have to take their lives if you didn't force them into existence in the first place. Exercising some impulse control and not letting unfit persons reproduce to begin with solves the problem.

An aside, it is interesting that discussions around abortion are actively enforced as cultural discussions with a man versus woman dynamic.[192] In reality, neither men nor women have any say on the issue because neither of them have any real power to change it. It is the state controlling what you do with your body (a state increasingly made of mixed gender demographics), not men, not culture. State power is what dictates and enforces practices around reproduction because it is in the state's best interest to grow their populations faster than their neighbors – the historical precedent being that military power is largely dependent on population size. America is partly as powerful as it is because it's the third-most populated nation in history.

The cultural narrative you sometimes hear is that the American states ranked lowest in education or highest in religiosity are the ones that ban abortion, with the implication being the only people who ban abortion are low-IQ, but of course those are also the states with the smallest populations. Do you get it? This is not a cultural problem, it's a government-seeking-more-power problem. If even a small fraction of the energy spent arguing about abortion policy with strangers on the internet was directed towards aborting government officials who are actively ruining your lives, you would get what you wanted overnight. You're already willing to kill your own children, why not also kill the children running your government?[193]

This lets us move to natalism, the last piece of the reproduction trinity. There are various interesting anti-natalist arguments you can find from contemporary philosophers but I want to look at the most standard view against natalism first. There is a common belief that the planet is currently overpopulated, which is not totally accurate – the problem a handful of cities face is *overcrowding*, not *overpopulation*, and the problems of overpopulation (primarily food supplies, but also population-dependent pollution) will take many more decades to matter globally, so the most common criticism of natalism is currently moot, even though it will become significant in the future.

The component of natalism that says reproduction should be promoted via child-bearing and parenthood is the more interesting bit because child-bearing and parenthood are quantitatively ambiguous outcomes. When someone becomes pregnant it is not known beforehand if they will become pregnant with one child, or two, or eight, and further, 'parenthood' as a concept leaves the door open for many pregnancies by the same parent.

Natalism has resulted in an exponential growth rate of the global population that is not sustainable (charts of the global population over the last few thousand years show a giant non-linear spike).[194] Several think tanks have said there are self-correcting behaviors or feedback loops regarding low food supplies to overpopulated areas, so the problem is supposed to correct itself because with less food available less people will procreate, and while less food is indeed a light suppressant on geographic birthrates, we don't have to look further than the least fed people to see the highest birthrates and wonder if the think tanks really figured this one out. You are under no obligation to prove the Malthusians right; African countries with serious food shortages have no shortage of pregnancies nor number of children birthed per pregnancy.[195] This as our global trajectory is not viable.

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[190] *The Impact of Legalized Abortion on Crime*. Donohue & Levitt, 2000.

[191] *The Impact of Legalized Abortion on Crime over the Last Two Decades*. Donohue & Levitt, 2019.

[192] The hottest take I've seen argued that women are simply better makers of death than men. Men have killed roughly 1 billion people globally across all wars in history, but women have killed 1.3 billion people globally via abortion just since 1980.

[193] Here I think of Gary Lloyd's quote, "When the government's boot is on your throat, whether it is a left boot or a right boot is of no consequence."

[194] Expand 'All our charts on World Population Growth' and select 'Historical world population: comparison of different sources' here - https://ourworldindata.org/world-population-growth.

[195] Shown here - https://www.economist.com/graphic-detail/2015/02/06/the-size-of-it.

We can also make use of the cosmic sociology dilemma from the *Alien Axiology* section. Recall that cosmic sociology has two axioms: that survival is the primary need of a species, and that population continuously grows and expands while the total matter in the universe remains constant.[196] From this the notion of 'the dark forest' is formulated (built off David Brin's hypothetical solution to the Fermi paradox). It's a good solution because it's simple and obvious – if populations grow exponentially, and thereby spread at exponential rates, then the universe will run out of useful space and different populations will have to fight for resources – resources that become available at exponentially decreasing rates. The only way to solve this problem is with perfectly static population sizes. But natalism is antithetical to this, and so natalism will result in galactic hyper-war. This is a very real notion, despite how quickly it escalates seemingly small problems, or how absurd you think it sounds, it means natalism is not tenable.

But that's just the quantitative problem; natalism faces a qualitative problem too. We don't *need* to make more people. There are already eight billion people and even if you lived a thousand years you'd never meet them all. New people don't have to exist; we already have the people that do exist. People aren't customer IDs, account numbers, or interchangeable units of currency. They're people. Even if they were interchangeable objects like phone models that get updated with new hardware or software every year, they still don't *need* to be replaced. Declining populations are their own problem and lead to collapse of a society just as well as resource destitution, but the previously mentioned longevity escape velocity significantly alleviates population decline; the replacement values shrink proportionately. The universe will continue to find ways to regularly kill people, so yes, sure, we would still need to replace population numbers in some manner I suppose, but it is not a given that the manner be a natalist one. I am not suggesting artificial wombs or whatever sci-fi concept here, I am suggesting that the decision to have children should shift from individuals to society as a whole, and that the amount of children produced per pregnancy should be unambiguous (meaning controlled).

We've looked at love, sexuality, and natalism individually, but now consider how they work together. As stated in the introduction to this section, love is the proposition that positive feelings towards reproduction are good, sexuality is the biological imperative towards that reproduction, natalism is the discursive actions taken towards enacting reproduction, and these three things together form a reproduction trinity. Because of this I believe that each relies on the other, and so if any one of them is wrong, then the whole thing falls apart.

Take for example love being wrong – that would mean positive feelings we have towards reproduction would be evil, and so we couldn't act on sexuality or natalism and be good people at the same time. Or if sexuality is wrong, then there is no real biological imperative towards reproduction and so we are simply never compelled by necessity to reproduce, negating the utility of love and cancelling out the discursive component of natalism. Or if natalism is wrong, then there are no valid discursive reasons available to enact reproduction and we therefore could not retroactively justify love or sexuality. In all cases we can't follow through on the other components of reproduction.

My thesis isn't that sex is evil or whatever, but rather what I stated earlier – that we need to have a fundamentally better understanding of reproduction so that it doesn't continue to run rampant and destroy the planet. It seems to me that the problems of reproduction stem mostly from the fact that almost no one has considered they could even be problems in the first place – that again, it is always taken as an inherent good with no critical analysis applied to it. This is evinced by the fact that most people engage in unconscientious reproduction, meaning for example that someone conscious of their finances might not have kids at all, but someone who is not conscientious will have seven kids and create a worse financial situation for everyone involved. Waiting longer before having kids and actively avoiding multiple pregnancies are growing trends and it is also the case that education correlates directly with declining birthrates.[197] This ends up being the worst case for humanity since this creates a scenario similar to the film *Idiocracy*, in which the stupid outbreed the intelligent. Maybe hyper-war is inevitable.

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[196] Again, from Cixin Liu's book *The Dark Forest*.

[197] Matthews, *et al*. *Birth and Fertility Rates by Educational Attainment*. CDC (1994).

Interestingly, reproduction isn't just an ethical concern, it is also strangely an epistemic one. Children are stupid. Every new generation of children is an entirely new reset of information – every birth is a person that must start from zero, having to catch up with an academic history that grows longer every day. This is increasingly more research time, more years of study, more years spent learning, that you will have to do to understand the conversation of history and catch up to the state of the art with a real understanding of the progress made in the world. The more people we make, the more we hold ourselves back by having to reteach things learned long ago by everyone else. It also means the longer time goes on, the greater the epistemic burden you place on newly-made people, which is unfair to them and hard to justify with any standard ethical framework.

This is a real concern you should have. Young persons not yet wise to the world are a part of the governmental process and cultural adjudication of every society. Lots of bad decisions, and worse music, get made and popularized by people increasingly ignorant of the sum total of human knowledge. This is an epistemic slide – that as human knowledge grows, the proportion of humans with a majority comprehension of it decreases. This epistemic problem could be fixed by means alternative to reproductive controls: radically altering the education system and greatly lengthening the amount of time people are expected to act as students could put a significant dent in the problem. But so could reproductive controls. We probably need both.

As a final note, I think the reproductive trinity also fails aesthetically. Billions of people have already done it; it's no longer special or interesting. You aren't doing anything unique or groundbreaking by reproducing, and what's more is that being libidinal-hijacked by our own psychological warfare campaigns in the form of advertising and propaganda-tier feminist literature telling us to infinitely exercise our reproductive capacity to literally no ends (given that abortion is a negation of reproduction), is functionally retarded.[198]

In any case, I look forward to explaining what the world was like without the TSA to cadets hundreds of years younger than me on a planet previously home to an advanced alien species we made extinct as a pre-emptive strike, purely on the grounds of resource management, thousands of years in the future.

The rest of this chapter has been excluded from the preview.

[198] It literally retards the function of reproduction.