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# COGITO

*The Reading School Philosophy  
Magazine*



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# Foreword

When I founded Cogito at the start of this academic year I had no idea how successful and prosperous this project would grow to become. Cogito was founded on three key principles - to allow writers to eliminate their cognitive biases and develop independent thinking skills, to deliver a relatively niche and misunderstood subject to the wider school community, and to exemplify the value of philosophy.

Cogito's editorial and writer team has grown to currently 21 members, spanning a variety of years, from all sorts of philosophical backgrounds. We have published 3 editions this year, with content ranging from existentialism to the philosophy of economics.

Cogito has exceeded all my expectations and I am excited for the developments and progress we will make next year.

This project would not have been possible without the extended hard work of the Cogito team. I would like to thank all the editors for being the glue of the team. I would like to thank the writers for constantly exceeding expectations in the quality of their articles. I would like to give a special thanks to Mudit for his continual hard work put into designing the magazine for every edition.

I hope you enjoy this edition of Cogito!

Ryan Lin



# Lacan's Theory of Desire

## Why Coke sells better than Pepsi



Often philosophy is rooted in large, existential questions: are we conscious? Can we trust our senses? What does it mean to be moral? This magazine has focused on a lot of interesting answers to these, but we should also recognise it is the job of any philosopher not to become too out of touch with the real world. Cicero said Socrates was "the first who called philosophy down from heaven, and into our homes", compelling an practical tradition which would endeavour to answer both the big questions about the universe, and the narrower questions, concerned with our individual lives and decisions. These including some less earth-shattering questions which are just as close to our hearts. Questions like, why is Coke more popular than Pepsi?

Obviously we don't all prefer Coke, but still the reality is that, when you sit down at a restaurant and get asked "Is Pepsi Okay?", it's implied that Coke, if not better, is at least the default option. Pepsi is the go-to example of a "challenger brand", with the world consuming over twice as much Coke each year - a surprisingly strong preference for two very similar products. This is also a preference that puts some of the easy answers as to why we prefer anything into question. Many a classical economist will tell you that we choose to consume products for the tangible benefit we perceive them as providing us (their utility), but the Cola Wars have been raging since the 70s and blind taste tests have pretty consistently shown that people prefer Pepsi, or at least that there's not a lot of difference. And not only does Coke apparently taste worse than Pepsi, but it also doesn't really function as a drink in itself; because of its high sugar and caffeine content in Coke, drinking it actually makes you more thirsty. Clearly, the real success of Coke is not at all in its utility, but its unmatched cultural significance. So how has it achieved this?

Again, the economist might argue that Coke achieved prominence through exclusive supply contracts and massive advertising budgets, but in his book "The Fragile Absolute", the Slovenian philosopher Slavoj Žižek presents a different explanation.

Žižek is potentially the foremost cultural critic of the this century, who Vice has called "the most dangerous philosopher in the West" for his use of a wide combination of philosophical frameworks in analysing ideology in modern capitalist society. Like Socrates, Žižek often demonstrates that philosophical concepts are far more familiar than we realise, and therefore especially focuses on how they reach us via a variety of everyday mechanisms, such as film, pop-culture, and, in this case, soft drink advertisement.

The deep philosophical content of Coke advertising, Žižek argues, is demonstrated by looking at the history of its slogans. In 1904, 18 years after Coke was first produced, the Coca-Cola company marketed on the quite straightforward pitch that Coke is "Delicious and Refreshing". These remained the major buzzwords for at least the next thirty years, with similar phrases continuing to emphasise the specific advantages of the drink. In 1942 though, they advertised slightly more nebulously that "The Only Thing Like Coca-Cola is Coca-Cola Itself", beginning a trend whereby their slogans would grow more and more opaque. By 1969, they more confusingly touted that Coke was "The Real Thing". In 1982, they put it as bluntly as they could: "Coke is It!"

But what is "It"? Žižek asks. If the emphasis is no longer on the refreshment, nor the taste, which Coke seemed to move further away from year on year, then what was the Coca-Cola Company advertising? It seems to Žižek that Coke is advertising some invisible, indescribable quality totally separate from any of the positive attributes we can consciously ascribe it.

It was Marx, he says, who first articulated that a commodity is never merely an object to be exchanged or used – there are always metaphysical implications present in how we view them. This manifests in Marx's theory of "Commodity Fetishism", which grants that general social relations and identities can be expressed in terms of material objects. But in the case of Coke, as Žižek argues, it is exactly by abstracting away the material that it gains deeper meaning – it is by transcending any particular, material functions, that our desire for Coke becomes even more insatiable.

To explain this, we have to take a look at the philosophy of Jacques Lacan, a 20th Century French psychoanalyst who developed many concepts pioneered by Freud. Lacan's work is typically complex enough that it makes one doubt if it's really meant to be understood at all, but central to his psychoanalysis are some basic ideas about what, and how, we desire. Fundamentally, Lacan asserts that desire is a continuous and self-perpetuating force. While desire is of course a specific relation between the desiring "subject" and the "object of desire", it is never merely the case that we just desire some object, because, he claims, the satisfaction of desire always tends towards creating desire itself.

This is a fairly intuitive idea, emphasised by Freud: the idea, for example, that the more money you make, the more you want; the more you follow morality, the guiltier you can become; the more Coke you drink, the thirstier you get. While this dynamic is sometimes present in the specific qualities of certain objects (clearly Coke, for example, is also physically addictive), Lacan argues that there is a capacity for an addictive relationship in all things, because it is in us. There is a compulsive tendency in human nature towards an insatiable, undifferentiated force of desire, within which the actual object of that desire is secondary.

The Lacanian paradox of desire was elucidated perfectly by Oscar Wilde, when he wrote that "there are only two tragedies in life. One is not getting what one wants, and the other is getting it." In the Lacanian framework, whenever you get what you want, you're never satisfied, because, as soon as the thing you desire becomes accessible, your desires necessarily change their form, and target something else. We can't ever help but retroactively discover some missing element in whatever thing we originally wanted which shifts our sights onto something "better". Lacan calls this feeling "castration" – the internal absence which guarantees that one's desire inevitably moves on as soon as the object of desire becomes accessible, and it ceases to fulfil its structural purpose as a desirable object.

It is because of this perpetual mechanism that we come to see that desire is not a positive attitude towards any specific object – there is no end goal of our wants. Rather, all of desire is the process of reacting to a negative attitude – a permanent and fundamental lack on the part of the subject – which we attempt to fulfil.

In trying to fulfil the insatiable absence, we work through an indefinite progression of specific, attainable objects of desires ("objet a"), ultimately pursuing the unattainable object of desire as a whole ("objet petit a"). This objet petit a is the elusive "It" of the Coke advert – the purely excessive symbol which expresses the sum total of the whole process of desire, reached by stripping it of all positive content.

Lacan also calls the objet petit a the "object cause" of desire, conveying the dual-conception of the objet petit a as both, from the point of view of the desiring subject, the positive object of our entire process of desire, as well as, more fundamentally, the negative lack of the subject which causes desire in the first place.

The point here is that we usually think of desire as a relationship to a particular thing we lack (objet a), while in reality, desire is lack as such. It is by thinking of this lack on the part of the subject (object cause) as being instead a positive property of some objet a that we create the concept of an also external, totally satisfactory unattainable object of desire, which is reached when that insufficiency is filled.

As a result of these ideas, Lacan's theory of desire comes in contradiction to Freud's early theory of the "Pleasure Principle" – the idea that our behaviours are always formed by our need to maximise pleasure and minimise pain. This is pretty close to the "utility theory of value" proposed by economists, but Freud himself recognised that utility is not enough to explain everything we want. He later observed his patients exhibiting what he believed were behaviours contradicting the Pleasure Principle and developed the theory of a contrasting "death drive", which motivates the repetition of self-destructive behaviours.

But for Lacan, this going beyond the Pleasure Principle was already present in the Pleasure Principle itself. In pursuing the objet a we are always motivated by pleasure, but by continuing this pursuit indefinitely, there is a point where pleasure finally ceases to arise from successively fulfilling our desires. The process results in a painful surplus pleasure, or "surplus enjoyment", which Lacan calls "jouissance".

This may seem an obscure concept at first, but some consider jouissance to be the zeitgeist of the 21st century first world. For most, our base desires are typically readily fulfilled, so, while life is still constructed by the pursuit of objet a, there is no effort or value in this pursuit, and, while it is easy to satisfy a particular desire, it is as easy to become dissatisfied with the process in general. Through the repeated satisfaction of desires, we gain a more intimate awareness of our own castration, and might learn to take a nihilistic attitude, predicting the insufficiency of the objet a even before it becomes



accessible. This is one way in which a painful jouissance arises from the pleasurable pursuit of desire.

To finally get back to Coke then, Žižek's point about Coke is that it exactly symbolises this 21st Century excess; by directly embodying the surplus of jouissance, it appeals squarely to our desire for the unattainable objet petit a, avoiding the perception of insufficiency associated with a regular objet a. Clearly, Coke cannot fully satisfy our desires – it offers no less vacuous a gratification than any other product. However, Žižek explains it is exactly because Coke is such an empty concept that we cannot conceive of it becoming insufficient.

The paradox of desire illustrates that “the ultimate horror of a desire is for it to be filled in” – at which point we realise that it doesn't satisfy the need it was supposed to. If this is correct, then perhaps the ultimate, most effective object of desire – the objet petit a – is one which doesn't attempt to satisfy any kind of need in the first place, and does not present itself as such. This is particularly the case for Coke Zero, or even Coke Zero Caffeine Free, in which case, Žižek states, you almost literally “drink nothing”, in the guise of something – “the purse semblance of a property that is in effect merely an envelope of a void”.

This is what is developed in jouissance. As we move from desire to desire, we successively reject every specific function as insufficient and come to reach a purely excessive, symbolic, non-substantial concept of the objet petit a, which is really derived from the “void” of the internal lack of the subject, but which simultaneously exists as the symbolic totality of all preceding desires.

In lacking any immediate “use value” then – i.e. not quenching thirst, not having a particularly distinct taste, etc –, and thus having no determinate function or utility, Coke is allowed to be pure excess. One struggles to conceive of any sense in which Coke's role can be considered “insufficient” – it cannot be inadequate in fulfilling any end, as it has no function in satisfying specific ends in the first place. Therefore, even as it is consumed, Coke cannot be conceived of as lacking.

Compare Coke Zero then, with Pepsi Max; the difference is already clear from the names. Pepsi plays into a positive role, advertising definite properties and, often, lifestyles, such as its 1993 “Be Young, Have Fun” campaign, and thus gives way to the insufficiency of the objet a. Themes of energy and youth are common in Pepsi adverts, with another similar advert claiming that “Frequent Pepsi drinkers are 3x more likely to belt out a song at karaoke”, or “2x more likely to skip work on the first day of spring.”

Clearly Pepsi does this in the knowledge it has to compete against Coke, and to do this it has to associate itself with positive ideas and concrete advantages as a challenging object of desire. The 1952 slogan “What you want is a Coke” perfectly conveys Coke's opposite character as the objet petit a, embodying the structural role of Coke as not just a specific

object of desire but the end of the process of desire itself. This type of Coke made effective by rejecting the principle of the competition, not just arguing that one should desire it over Pepsi as a specific object, but presenting itself already as the sum of desire in total.

The fundamental difference in marketing then, is that Pepsi appeals directedly towards our reasoned want for a better product, where Coke becomes successful by appealing to desires that are essentially irrational. What Coke demonstrates more generally is that the economists are wrong to assume that our wants are determined by a perfectly rational desire for utility. Coke shows that what we really want is never any appealing quality, nor pleasure, nor function; any definite role is insufficient. What we want instead is an irrational, mysterious “it”. What we want is always the total excess of the unattainable object of desire. As much from a drink as from life in general, what we want is a Coke.

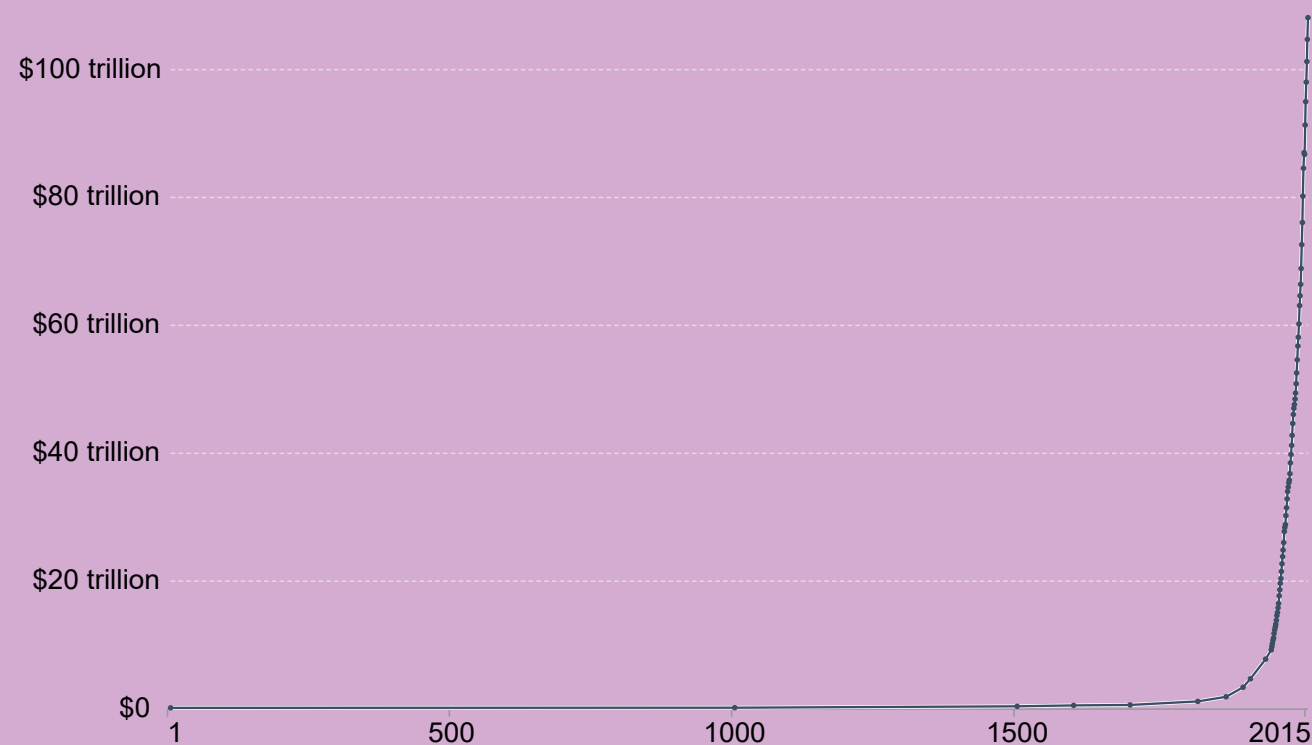
ELIJAH GIBBONS

# How Effective Altruism can change the world

Effective Altruism is the key to addressing many of the world's greatest and most challenging problems that have troubled humanity for the last decade. It's an ideology as well as a framework for organisations of all sizes to create greater change within society. Effective Altruism suggests that, through evidence and careful reasoning, it is possible to focus on problems which "do the most good" for society. It claims that we are able to pick and choose which causes to address, in order to maximise total welfare. This view stems from Longtermism – the idea that positively influencing the future is a great moral priority. It is crucial for us to consider the importance of building towards the future of humanity, as it is a fundamental nature of any species to seek to preserve its own existence. Unlike most species, humans have the ability to foresee existential threats many years, or even decades into the future. Thus, it follows that we should be able to significantly and reliably affect the long-term future to create the best possible chances of survival, seeking to improve our quality of life along the way. The following graph shows how global output has drastically increased as a result of the industrial and technological revolutions over the last few centuries:

## World GDP over the last two millennia

Total output of the world economy; adjusted for inflation and expressed in international-\$ in 2011 prices.



Source: World GDP - Our World In Data based on World Bank & Maddison (2017)

At present, we live in a very crucial time for enacting change and solving key problems. We have more resources at our disposal than ever before, and this poses the question of how to make best use of these resources to impact the lives of humans now and in the future. Effective Altruism provides a way to bring Longtermism into practice to give a structural methodology of identifying which problems have the largest impact on society, and thus require more resources allocated to solving them. This framework consists of three criteria for identifying impactful problems:

- Importance
- Tractability
- Neglectedness

Importance is a function of **Scale** x **Severity**. Ideally, it is logical to focus on solving problems that impact society at the national or international level, as well as problems that pose the greatest threat to human wellbeing or existence. By definition, this ensures that the greatest number of people would be affected by the solution and therefore the impact of initial resource input would be magnified.

Additionally, tractability plays a large role in identifying key problems, as it ensures that we only focus on problems that are able to be solved. To take an example, when comparing the impact of conducting Criminal Justice Reform with Foreign Aid Reform, the latter is much more important, due to the scale at which it operates. In the fiscal year 2020, more than 200 regions depended on US Foreign Aid. Despite this, Foreign Aid formed less than 1% of the US federal budget, and half of that was spent on military aid. Reforming this would ensure that millions of citizens in developing countries see an increase in quality of life. However, the allocation of Foreign Aid is decided by United States Agency for International Development, and it is difficult for ordinary citizens to influence change or effectively protest misallocation. Therefore, in this case, Criminal Justice Reform is a much more tractable problem, as it is much easier for the general population to dedicate time and money to raising awareness and advise on solutions to improve policing. Evidently, we have seen numerous large-scale protests and calls for the US justice system to drastically change in the last few years.

Thirdly on an individual level, it is much easier to create an impact by addressing problems that are neglected, as there is a much greater scope to lay the foundations and enact useful change with little input. In problems that are more mainstream, there will already be a great deal of progress in finding a solution, so one will need specialised skills and much more time to make a large impact.

To then pinpoint the exact order of significance for a shortlist of problems following the application of the 3-part framework, Effective Altruism suggests a quantitative approach known as Cost-effective analysis. Each problem should be analysed according to the number of people it impacts in the future, and the most common unit of measurement for the effectiveness of solving a problem is "Number of lives saved/dollar". Effective Altruists seek to determine the precise impact of each problem on human life, as well



the estimated cost of solving that problem. Naturally, this has some element of uncertainty, especially when considering effects of solving a problem far into the future. Therefore, the importance of Effective Altruism depends on the extent to which we are able to increase the accuracy of our predictions, which can be done through increased use of concrete statistics from reputable sources.

Furthermore, from a moral perspective it may seem insensitive to place a value on human life and as such make choices that may place some individuals at a disadvantage, by using evidence such as population data, welfare statistics and trend graphs, we will be much more effective in developing an equal society for the future. This is because those most in need of a certain problem being solved will receive aid first, and this prioritisation will distribute resources to maximise welfare. Hence, the use of cost effectiveness analysis not only ensures that we make the best use of our scarce resources, but morally, it is also the most logical method of ensuring equality in the quality of life within society.

The ideology of Effective Altruism is often regarded as just a form of applied utilitarianism. It is true that the two philosophies often tread a similar path. While Effective Altruism agrees with the utilitarian idea of directly improving welfare for the maximum number of people, Effective Altruism also focuses on other aspects of the world, such as the protection of animal rights, democracy, and freedom. Also, Effective Altruism does not advocate for finding any means to do the "most good", in the sense that one should not violate any laws, or human rights in order to solve a particular problem which may increase welfare for a different group. Rather, Effective Altruism is a philosophy of carefully selecting issues through logical judgement and within the realms of real possibility; the solution to a problem must be realistically achievable, without wishful thinking or breaking any laws. This means that while it is inherently an ideology, Effective Altruism ties into the principles of Economics and Scientific Thinking. Practice of Effective Altruism relies on the economic ideas of maximisation and efficiency of an objective given some element of scarcity, and the scientific ideas of using evidence and data to conduct reasoned judgement.

Through Effective Altruism, it is possible for humanity to increase awareness and address the problems that matter most in this extraordinary period of our existence, full of change and possibility. The framework can be used to make better decisions that maximise the impact of solving problems on our society.

ARYAN KINGE

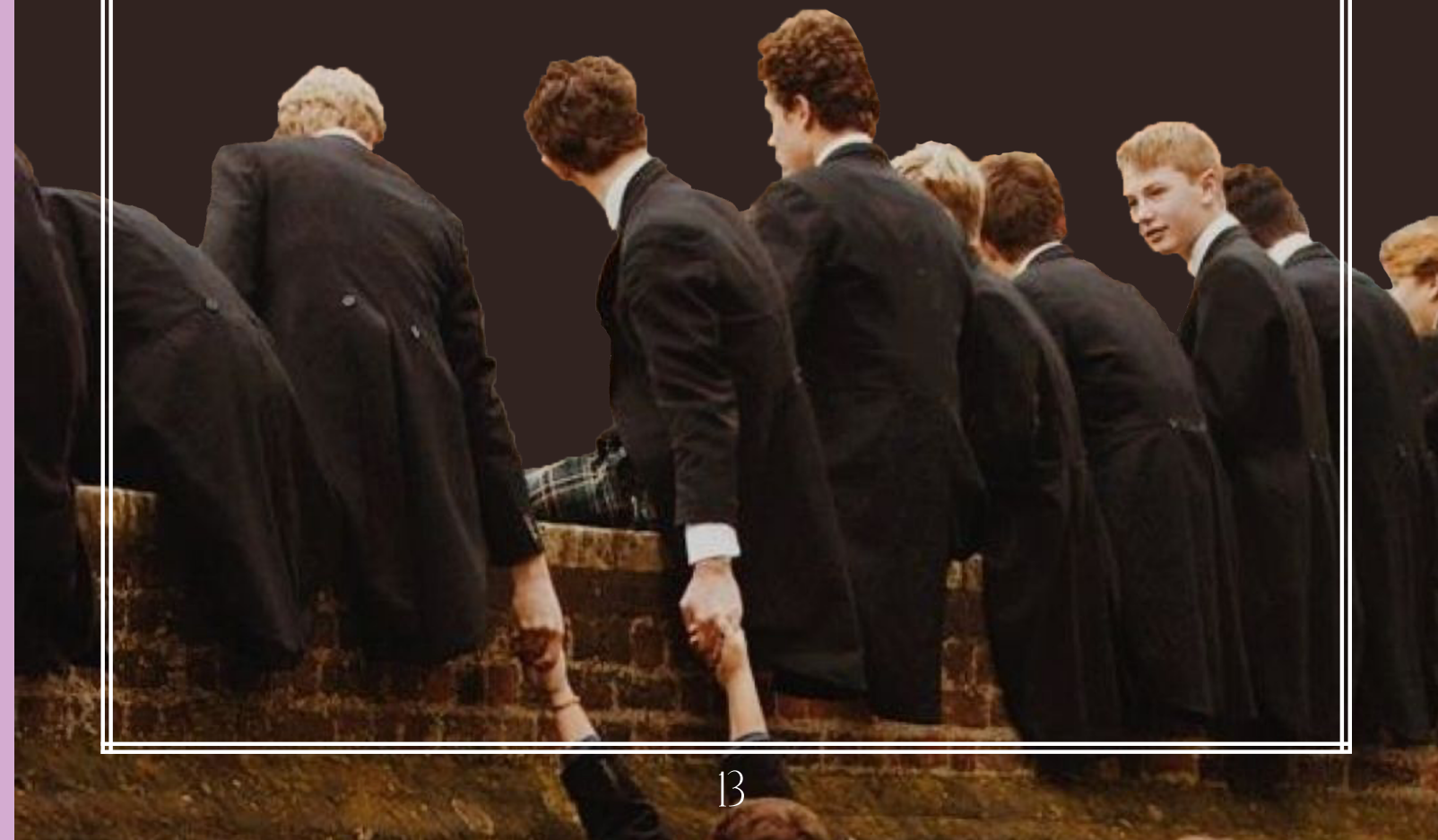
# Dark Academia

An often overlooked branch of Philosophy is called the philosophy of aesthetics. The word 'aesthetics' is derived from the Greek word 'aisthetikos', meaning 'of sense perception'. Philosophers who specialise in aesthetics, called Aestheticians, often ask questions regarding beauty and the nature of art. However, this definition is quite abstract so a more concrete example might be useful.

I was scrolling through YouTube and came across a video about an internet subculture called Dark Academia. Internet subcultures are essentially different activities and lifestyles that many people on the internet take part in. Some of these subcultures include Cottagecore, which romanticises the idea of living in the countryside and making one's own blackberry jam, and the Goth subculture, which is associated with dark clothing, heavy metal music and skulls. One such internet subculture is Dark Academia.

I found it fascinating and problematic at the same time. To put it briefly, this subculture romanticises the idea of learning for pleasure and deriving enjoyment from it. It takes designs, colour schemes, and literary inspiration from old-world prestige.

Just what exactly is old-world prestige? Old-world prestige is the idea of studying and learning in old, dark, and antiquated establishments – such as the Universities of Oxford and Cambridge as well as those of the Ivy League. This subculture creates an idealised version of studying in an elite setting within which average individuals wouldn't gain the opportunity to study in. Activities include reading classic books from Shakespeare to



Plato, watching old films, and wearing outfits such as tweed blazers, brown chinos and knitted sweaters. However, the source material of the subculture was something that drew my attention the most.

If you haven't noticed by now, it's worth acknowledging that the source material for this subculture is very privileged. Typically, you find pictures of rich men studying in elite institutions that many historically may not have been able to afford or have access to. Within this subculture, the tailcoats of Eton as well as the campuses of the Ivy League and Oxbridge prominently feature. Historically, women and people of colour were denied an education at these institutions. Yet the popularity of studying in such institutions remains high. Why is this the case? One phrase - vintage looks, not vintage values.

Whilst aspiring for the elite appearance of studying in famously elite institutions, the people immersed in this subculture tend to be more inclusive than their real-life counterparts. Many Dark Academia gurus on social media offer alternatives to expensive clothing and present institutions with activities and ideas that are more accessible to middle and lower class individuals. Even though some may not be able to pursue a philosophy degree at Harvard, many still can read the works of famous philosophers and engage in critical thinking. Whilst some institutions may have historically been exclusive to people of colour and women, Dark Academia eliminates these issues and allows people of all backgrounds to engage with what it aspires for - the beauty of learning.

Now that we have outlined the basics of Dark Academia we should consider what questions Aestheticians would ask of Dark Academia. Some questions include: What is the nature of beauty according to Dark Academia? What is aesthetics according to Dark Academia?

The beauty that Dark Academia aspires for is the beauty of learning - learning about different topics and ideas from a time long gone. In a way, it's trying to retrieve an ideal that may have been lost for many due to the experience of the current education system.

Think about school or your time at school. Why did you go? What motivated you to wake up every morning and spend 7 hours of your day at school?

In the short term, it was probably your mum or dad forcing you to wake up. But why did you keep going? For many in Reading School, including myself, it is to gain the life skills and qualifications needed for university. Why do you want to go to university? To get an excellent job that pays well and is fulfilling and enjoyable. That is the predominant desire for learning. Learning is considered, as Kant would put it, 'the means to an end'. Do well in your GCSEs; do well in your A-Levels; go to Cambridge; study Medicine and become a doctor. But Dark Academia doesn't obey this utilitarian view.

Dark Academia presents learning as an 'end in itself'. People within this subculture wish to learn for the sake of learning. They want to know more because that is what is

beautiful and enjoyable. Learning is something that is life-giving and something that everyone should be excited about and enjoy. This is what Dark Academia aspires for.

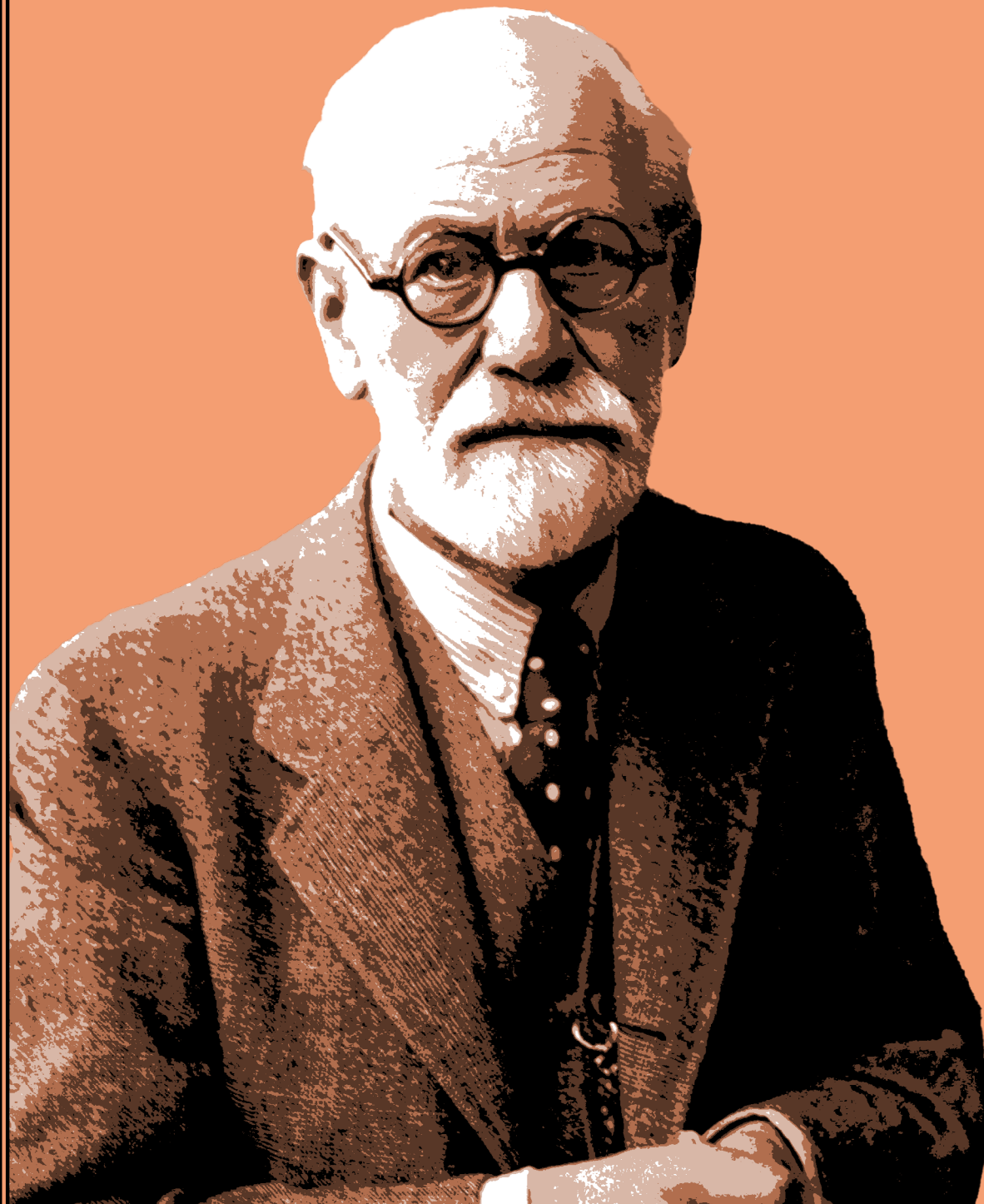
Unfortunately, the current school system tends to weaken this fondness and curiosity for learning with media such as standardised testing, memorisation of facts, and the value that school mistakenly places on testing like termly tests or end of year tests (which, in the grand scheme of things, do not matter). Any creativity or curiosity that many students may have for a subject suddenly becomes subdued as students are forced into a capitalist education system which rewards competition and outperforming others.

Dark Academia attempts to distance itself from the status quo, of learning that many experience in school, for a more idealised version of learning that many may be more attracted to. Learning becomes an 'end in itself' rather than a 'means to an end' as people learn for themselves for the sake of learning. Whilst what this subculture is rooted in may be problematic, the generation of today can decide what to include and what to discard to create an environment of endless growth and limitless possibilities. Possibilities which are but a book away.

SIDDHANT MATHUR



# Happiness and the Freudian Model of the mind



One of the many psychologists who have had a profound impact on philosophy was Sigmund Freud. Among his various theories was the perspective that our unconscious mind served as the primary governing force for our actions. Freud then attempted to use such a model to better understand mental health and guide humans towards happiness. This perspective was primarily spurred on by his unique allocation of sections within the brain. The original version of his theory of the mind split it into a bipartite structure between the unconscious and conscious mind. However, this model had several issues and shortcomings primarily due to its reductionist foundation. Eventually, Freud settled on a tripartite model which separated the mind into three distinct parts. The Id, Ego, and Superego of which combine to form the general unconsciousness.

The first aspect of this aspect of unconsciousness is the Id which according to Freud characterised as the most primal element of the subconscious is the Id named after the Latin word for "it". The Id stands for immediate and selfish gratification. It is the element of mind we are all born with that motivates us to take self-serving actions and prioritise short-term satisfaction. This forms the basis for what Freud calls the "pleasure principle" which is the driving force for the Id. Freud also notes that while the Id never really disappears it can become restrained and dampened over time. We make sure the Id fits in with our present understanding of the world and its other inhabitants. However, this dampened version of the Id will sometimes manifest as dreams or neurosis according to Freud.

The second main aspect of Freud's tripartite view of the mind is the Ego which served a similar role as the conscious mind in Freud's original model. It, according to Freud, evolves out of the Id. It serves primarily to implement the "reality principle" which according to Freud governed the individual's ability to interact cohesively with the real world. It stands in stark contrast to the pleasure Principle mentioned previously. This "reality principle" is created because as a person grows the Ego more heavily monitors the impulses of the Id and decides which pleasures are satisfied and which are not. Freud often uses an analogy to compare the relationship between the Id and Ego to a rider and their horse. Occasionally, of course, a horse will slip from its rider's control, just as the instinctual demands of the id occasionally elude the restraints of ego, but, mostly, the horse is guided and controlled by its rider.

The third and final part of Freud's theory of the mind is the Superego. A much later edition than any of the other elements of Freud's theory of the mind. It was derived from Freud's thinking regarding narcissism. During a period of child development they become "centered" focusing all energy onto themselves and thus creates a narcissic view of themselves. A baby who believes they are the centre of the universe would be an example of this. Freud then suggests as the child developments to properly interact with the world around them and meet the requirements of parents careers and other adults a third element of consciousness emerges. A superego, its purpose is to monitor the ego in the same way the ego monitors the Id. It is the element of consciousness that provides the individual with a sense of right and wrong and allows us to meet the demands posed



to us by society at large, as such Freud described it as the "internalised voice of society". Freud, in addition to laying out his theory, also presents some uses for his model. Primarily it allows us to more easily understand negative and upsetting emotions such as guilt and shame. Freud posits that such emotions emerge as part of disharmony between the three elements of the consciousness. For example, real world difficulties can cause the ego to become stressed. Falling short of the moral standard of the super ego can cause shame and doubt in oneself and finally, the primal urges of the Id may cause neurotic anxiety that may not be immediately understood by the individual. Freud suggests that by using his model we can set up treatments and therapies that help individuals struggling with any of the above issues.

In conclusion, Sigmund Freud will remain influential in the history of Philosophy and Psychology because of his controversial ideas that sparked a lot of conversation and critical analysis but in relation to his theory of the mind alone, his ideas have underlined several other theories. For example, Steve Peter's *The Chimp Paradox* utilises Freud's ideas of the Id and Ego into a cohesive philosophy for success and his book is exceptionally popular. Freud's ideas are controversial undoubtedly, but they provide us with a useful contrary position with which to explore new ideas of the mind and of happiness.

CIARAN MCELLIGOTT

# How likely is the multiverse? Would it change anything if we came to know the theory was true?

## I – Introduction

This essay will argue that such questions which concern the term 'multiverse' are incoherent as the concept of the 'multiverse' lacks any content about reality as argued for by logical positivist accounts of empiricism. Therefore, this essay will contend that the questions posed are flawed and meaningless.

We first need to define the concepts involved in this debate. The universe is commonly defined as 'the collection all of space, time, matter, and energy'. The multiverse is commonly defined as 'a theoretical concept denoting a collection of universes that are causally disconnected'. However, given this definition of the universe, the concept of a multiverse would be incoherent as if the universe is defined as everything in existence, there cannot be a multiverse, as such a collection would just be the universe by definition. Tegmark overcomes this problem by introducing new definitions. Tegmark characterises 4 levels of multiverses and corresponding types of universes. For level 1 multiverses, Tegmark defines the universe as all space within our cosmic horizon, whilst the multiverse is defined as the set of all space within and beyond our cosmic horizon. For level 2 multiverses, Tegmark defines a universe as being a set of space within which there are unique physical constants (speed of light, mass of an electron, etc), whilst a multiverse is the collection of spaces which have different physical constants, however with identical physical equations. For level 4 multiverses, Tegmark defines a universe as a set of space within which there are unique laws of nature and physical equations, whilst a multiverse is the set of all universes with different laws of nature and physical equations.

Tegmark's level 2 and 4 multiverses allow the possibility of other universes existing as ontologically distinct areas of space-time. All of Tegmark's levels involve the idea of causal disconnection between universes – that is, no information can be transferred from one universe to another. This key property of the concept of the multiverse is central to logical positivist attacks.

## II – Can we determine the likelihood of the existence of the multiverse?

One method to assess this likelihood is to use a teleological method. One could argue that if the causal principle is true and an infinite series is impossible, our universe must have some cause. Therefore, we may conclude that there is some likelihood that the same cause created other universes of type 2 and type 4 nature. Krauss argued that our universe has zero total energy since gravitational fields introduce negative energy to a



system, and thus negates the positive energy within our universe (positive potential or kinetic energy). One could use Krauss' analysis to support the teleological method – if our universe had some cause, which required zero total energy, it seems that same cause could, without violating the law of conservation of energy, create another zero total energy universe of type 2 or type 4. Therefore, given our universe exists, a multiverse's existence is likely.

However, such an attempt fails to assign a likelihood as it merely shows that the existence of a multiverse is logically possible, which does not entail metaphysical possibility nor non-zero probability. Metaphysical possibility concerns what can be in any possible world whilst logical possibility concerns the logical coherence of propositions. This is because the assumptions required for the argument to succeed are logically possible to be true, however, we have no justification to justify the metaphysical possibility of the assumptions. For instance, Hume argues that the causal principle, as the principle that everything which begins to exist must have a cause, cannot be empirically verified as we never perceive causation, merely correlation between two events. Probabilistic analyses can only consist of metaphysically possible elements within its sample space and therefore we cannot justifiably assign a probability to the existence of the multiverse.

Another method to assess the likelihood of the existence of the multiverse is through further inductive methods. The mathematics of quantum mechanics yields the possibility of the many-worlds interpretation which postulates that quantum measurements are merely entanglements of our consciousness with a certain superposed state, and thus a single quantum measurement results in a branching of universes, where two different consciousnesses get entangled with their respective orthogonal states. Tegmark characterises such a multiverse as being type 3. Therefore, one could argue that it is metaphysically possible that the many-worlds interpretation is true as its compatible with physics which determines what is possible in any possible world. Therefore, there is some non-zero likelihood of the multiverse existing.

However, an issue still arises with regards to taking metaphysical possibility to imply a non-zero probability. Localism about objective probability postulates that objective probability of A at time t is the subjective probability that a perfectly rational agents would assign to A, if they had perfect information about the way the world is before or at t and no information after t. Metaphysical possibility does not alter the probability a perfectly rational agent would assign to A, and therefore, it is a fallacy to argue that the metaphysical possibility of the many-worlds interpretation entails its non-zero likelihood. Even if we do not wish to accept localism, an issue arises when attempting to assigning probabilities solely based on metaphysical possibility. This is because metaphysical possibility involves infinite sets since arguably an infinite number of possible worlds could exist. For example, we have no evidence that it is metaphysically impossible for the physical constants to vary continuously. Therefore, it is incoherent to assign a probability to one metaphysically possible state of affairs as we will be dividing by infinity (the cardinality of the infinite sample space).

More crucially, however, it seems all empirical methods cannot possibly assign a likelihood to the existence of the multiverse given the property of causal disconnection between universes, preventing verification, and thus it doesn't seem possible to answer the question of whether the multiverse is likely given our epistemic position.

### III – Logical Positivism, Verificationism, and Falsificationism

Logical positivism was a philosophical movement which concerned the cognitive meaningfulness of language.

This essay has already shown that it seems problematic to assign likelihood to speculative hypotheses such as the multiverse, however, this leaves open the debate about such linguistic concepts. For example, one could still ask 'but does the multiverse really exist?' Logical positivism addresses this issue by rejecting such debate as a coherent debate about reality.

Logical positivism was motivated by the success of science in the 20th century. The success of science was rooted in being strict with regards to conforming to empirical data. Logical positivists attempted to reform philosophy to follow such principles.

Popper noted that one such strict principle of science was of falsificationism. Popper argued that what distinguished scientific theory from metaphysics/pseudo-science was the ability to be falsifiable – to be 'incompatible with certain possible results of observation'. Popper gives the example of Einstein's general relativity which made predictions about empirical reality, which meant it could be checked to be false, if such predictions (such as gravitational lensing) did not occur. Popper considered Einstein's theory to be a valid scientific theory.

Logical positivists have applied scientific principles such as verification and falsification to philosophical language. Ayer argued for the verification principle – a statement is cognitively meaningful if and only if it is analytic or, in principle, empirically verifiable. Other logical positivists provide similar accounts of cognitive meaning; Hempel argued that a statement is cognitively meaningful if and only if we can provide the conditions of verification for that statement in publicly shared experience. Hempel argued that a cognitively meaningful statement are abbreviations of ways in which we can check whether that statement is true or false as that is what links that statement to empirical reality. Hempel argued that language exclusively obtains its meaning from empirical verification.

Applying such analyses to the statement 'the multiverse exists', we find that such a statement is meaningless since it is not analytic, not empirically verifiable in publicly shared experience (causal disconnection suggests it is impossible to verify the existence of the multiverse by definition), nor involves conditions of verification. For instance, we do not know any methodologies to verify the existence of the multiverse.



One response against such an analysis is to deny the validity of verificationist logical positivism. One could argue that cognitively meaningful language introduces hypothetical entities such as beliefs, genes, atoms, etc which do not derive their meaning from empirical data. Claims about such entities cannot be completely characterised in terms of their conditions of verification. One could argue the multiverse is hypothetical entity which does not gain its cognitive meaning from verification as it is a purely theoretical construct. It seems that hypothetical entities are cognitively meaningful because science has utilized them successfully in light of lack of empirical data. For example, the concept of an atom as an indivisible unit of matter was formulated before we had the means to check its validity, and thus was unverifiable. However, before we could verify the concept, the hypothetical entity of an atom still seemed meaningful as it addressed an aspect of reality.

We can get around this issue by adopting a falsificationist account of logical positivism. Philosophical falsificationism applies the principle of falsification to philosophy – a statement is meaningful if and only if it is falsifiable, that is, it is logically incompatible with a possible state of affairs. Flew justifies this principle by arguing that all cognitively meaningful statements are about reality (the way the world is). Flew argues all statements about the way the world is involves an entailed claim about the way the world is not which that statement is logically incompatible with. Therefore, if a statement is unfalsifiable, it is not committed to a way the world is not and therefore is not about the way the world is, and thus is meaningless. Philosophical falsificationism allows the meaningful use of hypothetical entities such as the concept of an atom, provided the existence of that hypothetical entity is falsifiable – some evidence, if were to come true, would disprove the hypothetical entity. The concept of hypothetical entities such as the atom were falsifiable and thus were meaningful (e.g the theory of the atom would be disproven if we found that matter could be infinitely divided). On the other hand, the hypothetical entity of the multiverse is unfalsifiable as no logically possible evidence could come about which would disprove the multiverse's existence – firstly, by definition, the multiverse involves causal independency, which means we cannot interact with other universes and therefore we would gain no evidence of other universes showing whether they exist or not. Secondly, for the multiverse to be falsifiable, we would require empirical evidence to show that we are the only universe. However, if only one universe exists, we could never know it, as our universe would be the only one which we could gain empirical evidence about. Therefore, the statement 'the multiverse exists' is cognitively meaningless.

One could respond to falsificationist logical positivism by arguing that it is conceivable that there is some situation in which we would know a single universe exists. For example, it is logically possible that the investigation of the laws of nature reveal that they are necessarily true and so type 2 and type 4 multiverses would be impossible, thus type 2 and type 4 multiverses are falsifiable, and thus meaningful.

However, such a response does not succeed as falsification involves metaphysical

possibility – the incompatible state of affairs must be shown to be metaphysically possible (one in which can actually occur in empirical reality) in order for the statement to be falsifiable. This is because possible empirical observations involve metaphysically possible states of affairs. However, conceivability concerns logical possibility, not metaphysical possibility, and therefore, the response does not show the multiverse is falsifiable.

Therefore, we have good reason to believe the concept of the multiverse is cognitively meaningless as philosophical falsificationism succeeds.

#### IV – Would it change anything if we came to know the theory that the multiverse exists was true?

This essay has shown that the theory of the multiverse is meaningless and contains no content about empirical reality. This second question, therefore, is incoherent, as the subject in the question does not assert anything about reality, whilst the question assumes that the subject is about reality and could exist – which is an attribute of a concept about reality. However, this is a mistake because the term 'multiverse' is a term with no factual content. Therefore, this question is fundamentally mistaken and cannot be answered.

#### V – Conclusion

This essay has argued that logical positivism succeeds in showing that the concept of the multiverse is meaningless as it, as a metaphysical theory, is unfalsifiable. Logical positivism moves beyond saying we cannot assign a likelihood to the theory's truth, to claiming the very concept does not contain anything meaningful, and therefore both aspects of the question commit a fundamental mistake in assuming the concept of the multiverse contains meaningful content which we can discuss.

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