PHILOSOPHY OF LOGIC AND LANGUAGE

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Declaration: I confirm this essay is my own work

‘Pegasus does not exist. So something does not exist.’ Is this a good argument for non-existent objects?

I will argue that this is *not* a good argument for non-existent objects, because the premise ‘Pegasus does not exist’ is false. I will argue that Pegasus *does* exist, but as a non-spatiotemporal abstract object.

Why is ‘Pegasus does not exist’ problematic?

The proposition ‘Pegasus does not exist’ is usually read as having a subject-predicate structure. That is, the proposition asserts that Pegasus (the subject) does not have the property of existence (the predicate). Some things have existence (such as Joe Biden) and some things – according to this proposition – do not have existence (such as Pegasus).

Sentences with a subject-predicate form usually implicitly require the subject to exist. For example, the sentence:

> ‘Joe Biden lives in the White House’

implicitly requires Joe Biden to exist: it would not make sense otherwise. Now consider (knowing that the French monarchy has been abolished) the sentence:

> ‘The present King of France is bald’

This sentence seems to be incoherent, or meaningless. One cannot (it is generally assumed) ascribe properties to an object that doesn’t exist. Returning to the sentence:

> ‘Pegasus does not exist’

there are two options: either Pegasus *does* exist, in which case the sentence is incorrect, or Pegasus *does not* exist, in which case Pegasus is non-existent and we are committing ourselves to saying that there are non-existent objects.

The solution I propose is to admit that Pegasus does exist (thus avoiding any kind of ontological commitment to non-existent objects), and to fully explicate the manner in which Pegasus exists, and how it is different from the manner in which, e.g., Joe Biden exists.

What is existence?

Quine (1948) argued in his essay ‘On What There Is’ that to exist (or rather *to be*, which he treated as synonymous with *to exist*) can be defined as:

> To be is to be the value of a bound variable

Which is to say, to be within the domain of quantification, such as ‘something’, ‘everything’, or ‘nothing’. For example, for ‘the tallest man’ to exist, we must be able to say, ‘something is the tallest man’, which we can. In his essay, Quine goes on to argue that this definition of existence can be extended to Pegasus, by substituting ‘Pegasus’ with an appropriate description. The example he gives is ‘the winged horse that was captured by Bellerephon’. He argues that ‘Pegasus does not exist’ can then be rephrased as ‘nothing is the winged horse that was captured by Bellerephon’, which evaluates to true and removes any problematic references to proper names.

The equating of a proper name with a description is known as the Descriptive Theory of Names, and was first introduced by Russell in his 1905 paper ‘On Denoting’. In this paper, he describes how to formally analyse definite descriptions – descriptions of the form ‘*the* so-and-so’ – to form his Theory of Descriptions, and then extends this theory to explain how to analyse proper names.

Theory of Descriptions

Russell proposed an analysis of definite descriptions in which propositions of the form 'the F is G' are analysed as having the logical form:

1. There is at least one F
2. There is at most one F
3. Whatever is F, is G

These three claims are the existential claim, the uniqueness claim, and the maximality claim respectively (Ludlow, 2022).

This theory was used to solve the puzzle of how to analyse non-denoting definite descriptions, such as 'the present King of France.' For example, how do we evaluate 'the present King of France is bald': is it true or false? We know that he is neither bald nor not bald: he doesn't exist. Russell's Theory of Descriptions solves this puzzle, by analysing this proposition as: 'there is at least one present King of France, and there is at most one King of France, and whatever is the King of France is bald.' Since the first of the three conjuncts is false, the entire proposition evaluates as false. However, the question still remains of how to analyse non-denoting proper names, such as Pegasus. Russell's account has been extended to form the Descriptive Theory of Names to account for such proper name puzzles.

Descriptive Theory of Names

Let us take the proper name: 'Santa Claus.' 'Santa Claus' is a non-denoting name (i.e. it does not refer to a specific, real-life person). How do we evaluate 'Santa Claus is bald'? There is no '*the* so-and-so' term to convert into a tripartite claim, as we did above. And what about alternative names, such as the French 'Papa Noël'? Do the terms 'Santa Claus' and 'Papa Noël' refer to the same object – to the same *seemingly-non-existent* man? The Descriptive Theory of Names says to convert the names into a definite description in order to analyse them. For example, we might use the definite description 'the man who delivers presents at Christmas,' and analyse it as above. It could be argued that this is not unique (perhaps postal workers count as delivering presents), so we could further refine this to 'the man who lives at the North Pole who delivers presents at Christmas', and so on until we had a universally-agreed-upon definite definition for the name. The French term would also be translated into the appropriate French description, and both of these descriptions would be equivalent, so would have the same *connotation* (meaning), but both lack a *denotation* (referent).

Russell stated (1919): 'it is only of descriptions – definite or indefinite – that existence can be significantly asserted.' I will now argue that he is wrong, and that we *can* assert existence (though admittedly, with more difficulty) of proper names, by using Kripke's theory of rigid designators alongside Platonism about abstract objects.

Problems with the Descriptive Theory of Names

We have seen above that Russell advocated for treating proper names as definite descriptions – or more precisely as *disguised* definite descriptions, since we do not usually convert proper names to descriptions when talking. Frege also advocated this view (1892), arguing that the sense (or meaning) of a proper name is given by some description.

Both of these views conflict with the account given by Mill (1843), often termed *Millianism*. This account states that proper names do not have any semantic meaning (i.e. they cannot be converted into a description), and the only function that proper names serve is to *directly reference* a referent. Under this account, the name 'Joe Biden' simply references the man Joe Biden: the name adds no extra meaning or description above and beyond this reference.

Millianism was recently defended by Kripke (1980) in his lecture series 'Naming and Necessity', where he also provided several powerful arguments against the Descriptive Theory of Names. One of these arguments was the *modal argument*, which can be applied to our example as follows:

> Let us consider the proper name 'Joe Biden,' and a possible description for it: 'the current President of the United States of America.' This description is a *contingent* description: in a counterfactual situation, this could have turned out false. We could imagine a situation where Biden lost the 2020 election, and so wouldn't fit the description 'the current President of the United States of America'. In fact, any description we can think of is contingent: 'the man who ran against Trump in the 2020 election' (we could imagine a situation where Biden never entered into politics at all); 'the father of Hunter Biden' (we could imagine a situation where he fathered no children). When we consider the sentence 'Joe Biden could have died as a baby,' it becomes extremely difficult to find any suitable description to replace 'Joe Biden' with (since a description such as 'the father of Hunter Biden could have died as a baby' seems contradictory, since babies cannot be fathers). Thus – concludes Kripke – since descriptions are *contingent*, they cannot provide the *necessary* conditions for identity across possible worlds.

Another argument he gave was the *argument from error*. This argument states that many people can be wrong about the characteristics of a person, or simply not know anything a person except their name. For example, many people have heard of the Rorschach test (a psychological test using inkblots), and might assume that it was invented by someone called Rorschach (and they would be correct). However, many people may know absolutely nothing about Rorschach, and so would not know of any meaningful description for him (not even that he necessarily invented the test, since sometimes people take credit for others' work). Even if a vague description were known, people would be happy to have their views corrected, while still intending to refer to the same person. For example, if someone said 'Rorschach was a German surgeon from the 20th century,' and was then told that he was actually 'a Swiss psychiatrist from the 19th century,' they would be wrong about every aspect of the description, yet we would generally still accept that they are referring to the same person: Rorschach, despite not knowing anything about him.

Having challenged the idea that names are shorthand for descriptions, Kripke went on to endorse Millianism in his paper, and further propose that names act as *rigid designators*.

Rigid designators

Rigid designators are terms that refer to the same object in all possible worlds where that object exists. Kripke proposed that names are rigid designators, meaning that the term 'Joe Biden' refers to Joe Biden in all possible worlds where he exists, so the sentence 'Joe Biden could have died as a baby' now functions as we intuitively expect: in worlds where Joe Biden died as a baby, the name 'Joe Biden' would continue to refer to him, even though he would never grow up to do many of the acts attributed to him (such as fathering Hunter Biden), but this no longer creates contradictory sentences as the Descriptive Theory of Names did.

Descriptions are not generally considered to be rigid designators. For example, the description 'the current President of the United States' could instead refer to Donald Trump, in a possible world where he won the 2020 election instead. Thus if we want to pick out the man Joe Biden in all possible worlds where he exists, we must use a rigid designator (i.e. his name) rather than a description, since descriptions only *contingently* pick out an object, while rigid designators *necessarily* pick out an object.

Causal-Historical Theory of Names

The next account that Kripke introduced in 'Naming and Necessity' was how the reference of a name is introduced and transmitted to people who have not been directly acquainted with the referent (since all we have so far is an account of what a name *is*, not how it is introduced or transmitted).

The referent of a name is fixed through an initial baptism. This baptism is either an ostensive baptism – where someone ostends (gestures towards) an object – or a descriptive baptism – where someone picks out a specific object through a description. An example of an ostensive baptism is Joe Biden's mother pointing to her baby and saying, 'this is Joe'. An example of a descriptive baptism is an astronomer looking at their gravitational calculations of Uranus and concluding that there must be some unobservable planet affecting its gravity, and thus asserting that 'there is a planet in our solar system that is responsible for disturbances in Uranus' orbit, and I hereby name it Neptune'.

In both of these instances, the person introducing the name to the linguistic community is intending (directing their mental attitudes towards) a *specific* object that they have in mind. Note that, even when a name is introduced with a descriptive baptism, the description is only used for the initial picking-out of the object: all subsequent uses of the name ignore the description and refer solely and directly to the object itself.

The referent of a name is transmitted through linguistic communities through successive uses of the name, each intending to refer to the initial object. Each use forms a link, and these links form a causal-historical chain, connecting the name causally with the initial intended object. Thus, even when speakers do not directly know the initial object – such as the man named Rorschach – the fact that they use the name correctly and intend to transmit the original meaning ensures the initial referent is preserved, without anyone needing to know any description of the object.

Applying rigid designation and causal-historical chains to Pegasus

We now have that proper names are rigid designators, with no associated description, and that they are introduced through an initial baptism and transmitted through a causal-historical chain. What does this mean for Pegasus?

It is not entirely clear how to apply Kripke's theory to fictional and mythological beings (since what does the initial baptism involve? What is the object being baptised? *Where* is the object that is being baptised?). Kripke attempts to answer this question in another lecture series: 'Reference and Existence: The John Locke Lectures' (2013). He concludes that the analysis of a proper name depends on whether it is an empty name (i.e. has no referent) or not. However, this creates circularity when considering a sentence such as 'Pegasus does not exist': in order to analyse the sentence, we first need to know whether 'Pegasus' is a non-empty name, i.e. we need to know whether Pegasus does or does not exist, in order to analyse 'Pegasus does not exist'.

This is because the analysis of a sentence involving an empty name involves a *metalinguistic* analysis – i.e. asking whether the name is empty – while the analysis of a sentence involving a non-empty name involves a *linguistic* analysis – i.e. asking a question about the referent of the name.

As Kripke himself admits, this position is untenable. In the rest of this essay, I will use Kripke's work on rigid designators and causal-historical chains, but diverge on his treatment of fictional characters, in order to arrive at a tenable position about fictional characters.

Abstract objects

In what follows, I will use 'concrete' to denote objects that are spatiotemporally located somewhere in the universe, and I will use 'abstract' to denote objects that are not spatiotemporally located anywhere in the universe. Most of us are familiar with concrete objects: they make up the vast majority of entities we interact with on a day-to-day basis. Neptune, olives, electrons, Shakespeare: these are all concrete objects – objects that are or were physically located somewhere in the universe at some point in time.

What are some examples of abstract objects? A triangle, the number 3, the property of being red, the multiplication function: all of these are abstract objects – they are located in neither space nor time. We could not, no matter how hard we tried, point to where 3 is in the universe – it isn't anywhere. There are other ways of characterising the abstract-concrete distinction, such as causal efficacy, but for now let us use the spatiotemporal criterion. Under this definition, we have that Pegasus is an abstract object, since Pegasus is not located anywhere in space or time.

It is highly contested whether numbers (and abstract objects more generally) actually exist. The major sides of the debate around mathematical objects are Platonism and nominalism. Mathematical Platonism asserts three claims (Linnebo, 2023):

1. Mathematical objects exist
2. Mathematical objects are abstract
3. Mathematical objects are mind-independent

Mathematical nominalism rejects claim 1, and asserts that mathematical objects do not exist. (There are a few other views not focused on the *existence* of mathematical objects per se, such as psychologism – which claims that mathematical objects are not mind-independent – and immanent realism – which claims that mathematical objects are not abstract – but these are less relevant to the question at hand).

Mathematical Platonism and mathematical nominalism (hereon: Platonism and nominalism) both agree that *if* mathematical objects existed, they would be abstract (Balaguer, 2016) – they differ on *whether* mathematical objects exist. One of the most powerful arguments in favour of Platonism comes from the work of Quine and Putnam.

Quine-Putnam Indispensability Argument

As described by Colyvan (2023):

> Premise 1: we should be ontologically committed to the objects that are indispensable to our best scientific theories
>
> Premise 2: mathematical objects are indispensable to our best scientific theories
>
> Conclusion: we should be ontologically committed to mathematical objects

Mathematical objects (such as numbers) have great predictive and explanatory power: from quantum mechanics to statistical models to weather predictions, mathematics is pervasive and (it seems) indispensable.

There is a lot of literature on Platonism: one of the main counterarguments to it is the fact that if abstract objects do exist, and exist outside of spacetime, it is hard to see how we can come to know of them (especially when considering the alternative definitions of abstract objects, such as causal efficacy: if abstract objects are precisely those which are causally inefficacious, and if we gain knowledge about an object through causally interacting with it, it is unclear how we can know of any abstract objects). Some have argued that abstract objects are a useful fiction, allowing us to talk about maths in a meaningful way, but that they don't *actually* exist (this view is called fictionalism).

I will assume that the indispensability argument is sufficient grounds to accept Platonism. (Technically I have only argued for mathematical Platonism – not Platonism about fictional characters, or Platonism about abstract objects in general, but I am implicitly assuming that the conclusion that there are mathematical abstract objects can be extended to include fictional abstract objects without too much loss of generality).

The eternity of Pegasus

We have now argued that abstract objects exist, and that Pegasus is an abstract object. However, we have not yet said anything about the *nature* of abstract objects: how is Pegasus different to a concrete, actual horse? Can we make truthful statements about Pegasus, such as ‘Pegasus is a winged horse’ without ontologically committing ourselves to the existence of concrete horses with wings?

If abstract objects are not spatiotemporally located (as per the definition above), then they exist outside of time: more specifically, they cannot come in or out of existence at any point in time. So, if Pegasus is an abstract object, it cannot have come into existence at a point in time (in particular, it cannot have come into existence at the point in time when the first myth about Pegasus was told). This logic can be extended to all fictional characters: Sherlock Holmes cannot have come into existence when Doyle wrote the Holmes books. Moreover, Sherlock Holmes must have existed for all of time (or more specifically, Sherlock Holmes must exist timelessly and outside of time).

On its surface, this appears to be extremely unintuitive: how could Sherlock Holmes have existed before Doyle was born? How could Pegasus have existed before humans existed and started telling stories and myths? Why should we accept that Pegasus will outlast humans and exist for all of eternity?

I will now provide two thought experiments to provide an intuition behind why this is correct:

> First, consider the Infinite Monkey Theorem. This states that a monkey typing random keys on a typewriter for an infinite amount of time will, with almost certain probability, type the entirety of Shakespeare’s works. Thus, a purely random process can (eventually) produce a complex literary work. Let us imagine that we have in front of us the infinite string of characters that the monkey has typed, and that this string was created at the beginning of time. We could then imagine that the writing process instead involves searching this string for a narrative of our choice. The string has always existed, but the work of the author lies in finding an interesting substring, and bringing this to the attention of the populace.

Thus, the fictional characters embedded in the timeless string always existed: they were simply discovered and named by an author at a specific point in time.

> Second, consider the Library of Babel. This is a theoretical library described by Borges (1941). This library, so the story goes, contains every possible 410-page book. Every permutation of characters (including both letters and punctuation) can be found somewhere in this extensive library. The vast majority of books contain indecipherable gibberish, but a small proportion are valid English, and an even smaller proportion represent all books that have ever been authored. Moreover, this library contains every book that *will ever* be written. We could then consider the work of an author to be *finding* their book, rather than writing it. This would be an equally (if not more) difficult process, since the library also contains every variation of their book, from typos to plot holes to inconsistencies, so the work of the author lies in carefully selecting their book.

Every book ever written and every story ever told is a permutation of the dictionary – using the same words but in a new and interesting order. The work of an author is deciding on that order. Thus, I argue that the idea of Pegasus being timeless, though unconventional, is perfectly valid.

What does 'Pegasus' refer to?

How does the rigid designation process work with abstract objects? We can imagine (for simplicity) that there was one particular myth-teller in Ancient Greece. One day the idea came to them about a winged horse. They imagined a world where this winged horse was born from the blood of Medusa, and later tamed by a hero named 'Bellerephon.' They relayed these tales to their friends, and decided on the name 'Pegasus' for this being.

We can then describe the naming process as follows: first, the myth-teller provided a descriptive baptism of the object ('a winged horse born from …'), and attached the rigid designator 'Pegasus' to this object. Then the friends told this story to their families and friends, forming the start of the causal-historical chain. This story continued to be told up until the modern day, with the term 'Pegasus' remaining causally connected to that initial intended object. Thus 'Pegasus' refers to and rigidly designates the abstract object Pegasus.

Concrete-entailing properties

I will use the term 'concrete-entailing property' as follows: if an object has a concrete-entailing property, this implies that the object is concrete. For example, the property of being a mammal implies concreteness – any object that is a mammal must be a concrete object (i.e., located somewhere in spacetime). The property of being savoury, the property of being small, the property of being a horse, the property of having wings: all of these properties imply concreteness; an object cannot be savoury without also being located in spacetime. Concrete-entailing properties can also entail other properties. For example, the property of being a Labrador entails the property of being a dog, which entails the property of being a mammal, and an animal, and a living being, and so on.

It therefore follows that all of the properties that we would *normally* wish to attribute to Pegasus, such as being a horse and having wings, are concrete-entailing properties, which in turn implies that Pegasus must be a concrete object, which we know it is not. It seems as though Pegasus cannot have *any* of the properties attributed to it in the myths. The same would follow for Sherlock Holmes: he cannot have the property of being a detective, or the property of having the brother Mycroft Holmes, or the property of living in 221B Baker Street.

This leaves us with two questions: first, what properties *does* Pegasus have, and second, what makes Sherlock Holmes and Pegasus different?

Some properties are not concrete-entailing. For example, the property of being prime is not concrete-entailing. The number 3 can have the property of primeness, without this implying that 3 is concrete. However, since the myths about Pegasus are intimately connected with the concrete world (since the myth-tellers were probably more familiar with everyday concrete objects than they were with abstract mathematical objects), there are no obvious candidates for non-concrete-entailing properties that Pegasus could possess.

The second question – what makes Sherlock Holmes and Pegasus different – is an important one due to Leibniz's Identity of Indiscernibles. This logical law (assuming it to be true) states that if two objects share every property, then they are identical. The consequence of this law is that if Sherlock Holmes and Pegasus do not have any properties, or have precisely the same properties (such as the property of being fictional), then they must be identical. This is not ideal: we do not treat fictional and mythological characters as all being the same. Even if Sherlock Holmes does not literally live in 221B Baker Street (because he isn't concrete), we would still wish to say that Pegasus is not identical to Sherlock Holmes.

Quasi properties

If this is correct, then Pegasus *must* have some discerning properties. I thus propose the following solution. We usually only consider one relation that can hold between a property and an object: the relation of having that property. For example, squares *have* the property of having four sides; horses *have* the property of having hooves, the sky *has* the property of being blue. I propose we introduce a second relation: the relation of *quasi-having* a property. This relation would only hold between abstract objects and concrete-entailing properties, and would denote the abstract object being *attributed* that property or being *represented as having* that property, with the crucial difference that an object quasi-having a concrete-entailing property would *not* then imply that the object must be concrete.

Under this account, we could then say (using 'quasi-is' as shorthand for 'quasi-has the property of'): Pegasus quasi-is a winged horse, and Pegasus quasi-was born from the blood of the gorgon Medusa, and Pegasus quasi-was tamed by Bellerephon. We could also say that Sherlock Holmes quasi-is a detective, and quasi-has the property of living at 221B Baker Street. If we extend Leibniz's law to include both having and quasi-having a property, then this avoids the unwanted conclusion that Pegasus is identical to Sherlock Holmes.

The benefit of this quasi account is that it solves another problem in the philosophy of fiction: how to deal with the comparison of fictional characters with concrete objects. For example, consider the sentence, 'Sherlock Holmes is better than any real detective.' This sentence is difficult to analyse since it involves comparing two kinds of object: fictional and non-fictional. My quasi account easily answers this: both concrete detectives and abstract detectives have a relation to the property of being a detective (namely *having* and *quasi-having* respectively), and we can compare them by evaluating how *strong* the relation (i.e. whether they bear a 'good' relation or a 'brilliant' relation to being a detective), while disregarding whether the relation type is having or quasi-having.

Conclusion

We have argued that 'Pegasus' is a rigid designator that directly and non-connotatively denotes Pegasus and necessarily picks out Pegasus in every possible world in which it appears, that the referent of 'Pegasus' is transmitted through a causal-historical chain, that Pegasus is an abstract object, that abstract objects exist (and thus that Pegasus exists), and that Pegasus quasi-has the properties normally attributed to it (in order to avoid unwanted identities across all mythological and fictional characters).

In answer to the original question, the argument 'Pegasus does not exist. So something does not exist.' is *not* a good argument for non-existent objects, because 'Pegasus does not exist' is false: Pegasus *does* exist, just as an abstract object with quasi properties.

Bibliography

Balaguer, M. (2016). *Platonism in Metaphysics (Stanford Encyclopedia of Philosophy)*. [online] Stanford.edu. Available at: https://plato.stanford.edu/entries/platonism/.

Colyvan, M. (2023). *Indispensability Arguments in the Philosophy of Mathematics (Stanford Encyclopedia of Philosophy)*. [online] Stanford.edu. Available at: https://plato.stanford.edu/entries/mathphil-indis/.

Frege, G. (1892). *Uber Sinn Und Bedeutung*. The Philosophical Review, pp.574-.

John Stuart Mill (1843). *A System of Logic, Ratiocinative and Inductive*. Cambridge University Press.

Jorge Luis Borges (1941). *The Library of Babel*. Pocket Paragon.

Kripke, S.A. (1980). *Naming and Necessity*. [online] Philpapers.org. Available at: https://philpapers.org/rec/KRINAN.

Kripke, S.A. (2013). Reference and existence: the John Locke Lectures. *Choice Reviews Online*, [online] 51(04). doi:https://doi.org/10.5860/choice.51-2007.

Linnebo, Ø. (2023). *Platonism in the Philosophy of Mathematics (Stanford Encyclopedia of Philosophy)*. [online] Stanford.edu. Available at: https://plato.stanford.edu/entries/platonism-mathematics/.

Ludlow, P. (2022). *Descriptions (Stanford Encyclopedia of Philosophy)*. [online] Stanford.edu. Available at: https://plato.stanford.edu/entries/descriptions/.

Quine, W.V.O. (1948). On What There Is. *Review of Metaphysics*, [online] 2(5), pp.21–38. Available at: https://philpapers.org/rec/QUIOWT-7.

Russell, B. (1905). On Denoting. *Mind*, [online] 14(56), pp.479–493. Available at: https://www.jstor.org/stable/2248381.

Russell, B. (1919). *Descriptions*. [online] PhilPapers. Available at: https://philpapers.org/rec/RUSD-5.