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Abstract:

Clapp (2023) develops an account for explaining the meaning of later utterances of mythical names called the *Conversely Conditional Co-reference proposal* (hereinafter *cococo-reference proposal* for short). According to Clapp, this proposal consists of three components: a complex intention, an intermediary disjunctive content, and a final content. In this essay, I examine the *cococo-reference proposal* to reveal a flaw in it. I argue that the *cococo-reference proposal* actually has a fourth component, namely a principle called “the consistency between intention and belief”. This principle is embedded implicitly in Clapp’s argument. Once the consistency principle is uncovered, I combine it with the complex intention and also the intermediary disjunctive content, to reveal that the *cococo-reference proposal* cannot coherently explain the meaning of a later utterance of sentences such as “Vulcan does not exist”. This is because the explanation offered by this proposal results in a conflict between belief and intention: we will be required to hold intentions that our beliefs prevent us from holding, and we will be ascribed beliefs that are in conflict with our intentions. Therefore, the explanation of later utterances of sentences such as “Vulcan does not exist” is the Achilles’ heel of Clapp’s *cococo-reference proposal*.

Keywords:

Reference, Co-reference, Intention, Belief, Mythical Name

When the name “Vulcan” was introduced into modern astronomy by Le Verrier, the 19th century astronomer believed this name referred to a planet orbiting between Mercury and the sun, and this planet explains the perturbation of Mercury’s orbit (Clapp 2023: 935). However, later scientists have discovered that there is no planet orbiting between Mercury and the sun. If so, what do we later speakers mean by the name “Vulcan”? This question is

known as the problem of the meaning of mythical names. Here the term “myth” is used a broad sense. It just means “false explanatory theory”¹. Mythical names are names of hypothetical entities that play key explanatory roles in false explanatory theories, for example, Le Verrier believes that “Vulcan” is a name for the planet which explains the perturbation of Mercury’s orbit. The meaning of mythical names has been discussed by many philosophers, including Braun (2005), Goodman (2014, 2017), Zvolenszky (2016), María de Ponte, Kepa Korta & John Perry (2023) and Chris Tillman & Joshua Spencer (2024). Recently Clapp (2023) makes a contribution to this discussion by developing a sophisticated account for the meaning of later utterances of mythical names, including but not limited to “Vulcan” and “Hammer”, called the Conversely Conditional Co-reference proposal (hereinafter “cococo-reference proposal” for short)². In this essay, I will critically examine the cococo-reference proposal. My aim is to show that there is a flaw in this proposal: it cannot coherently explain the meaning of later utterances of sentences such as “Vulcan does not exist”, because the explanation it offers leads to paradoxical consequences.

The structure of this essay is as follows:

First, I introduce the three components of the cococo-reference proposal that Clapp explicitly states in his paper, namely, the complex intention, the intermediary disjunctive content, and the final content. Then, I introduce the task that Clapp suggests his cococo-reference proposal can complete. The task is to coherently explain the meaning of later utterances of negative existential sentences involving mythical names, such as “Vulcan does not exist”. Third, I argue that besides the three explicitly listed components, the cococo-reference proposal has a fourth component. The fourth component is the principle of the consistency between intention and belief. This principle is not explicitly stated by Clapp, but it is implicitly embedded in Clapp’s argument. Finally, I argue that when all the four components of the cococo-reference proposal are combined, the proposal’s interpretation of the meaning of later utterances of “Vulcan does not exist” leads to paradoxical consequences. Therefore, contrary to Clapp’s suggestion, his proposal cannot complete the

¹ Please refer to Chris Tillman and Joshua Spencer (2024: 644–646) for a detailed discussion on “myth” as “false explanatory theory”.

² It is worth noting that Clapp’s cococo-reference proposal is based on Perry and Korta’s conditional co-reference proposal proposed in their *Critical Pragmatics* (Korta and Perry 2011). For an overview of the recent developments of the conditional co-reference proposal, please refer to de Ponte, Korta and John Perry (2023).

task of coherently explaining the meaning of later utterances of negative existential sentences involving mythical names.

1. Cococo-Reference Proposal

There are three explicitly listed components of Clapp's cococo-reference proposal. They are the complex intention, the intermediary disjunctive content, and the final content. Clapp's characterization of the complex intention is

A later utterance conversely conditionally co-refers, or cococo-refers, with an earlier one, if the second speaker's intention is to refer to the abstract artificial entity created by the first speaker's erroneous theorizing, if the first speaker failed to refer because of this erroneous theorizing, and to refer to same thing as the earlier utterance, if there is anything the earlier utterance referred to. (Clapp 2023: 941–942)

Via a complex intention characterized in this way, a later utterance of a mythical name conversely conditionally co-refers (cococo-refers) with the first speaker's utterance of that name, and an intermediary disjunctive content is ascribed to the later utterance via the complex intention. Clapp uses "Vulcan" as an example to illustrate what an intermediary disjunctive content is like:

My assertion of 'Vulcan is a mere mythical entity' has the truth conditions of the following network-bound intermediary content:

Given that u is my utterance of 'Vulcan is a mere mythical entity', and that I am speaking English, and u has the syntax that it does, and that N_{Vulcan} is Le Verrier's coco-referential 'Vulcan' network, u is true iff $\exists x$ such that if $\exists y$ y is the origin of N_{Vulcan} , then $x = y$, and otherwise x is the abstract artificial entity associated with N_{Vulcan} , and x is a mere mythical entity. (Clapp 2023: 943)

Here, by " $\exists y$ y is the origin of N_{Vulcan} ", Clapp suggests there is a planet orbiting between Mercury and the sun and Le Verrier's utterances of "Vulcan" succeeded in referring to that planet. So, in non-technical words, the intermediary disjunctive content of a later utterance of "Vulcan" is:

This utterance of "Vulcan" means an abstract artificial entity, if Le Verrier's utterance of "Vulcan" failed to refer to anything; or it means a planet orbiting between Mercury and the

sun, if there is a planet orbiting between Mercury and the sun and Le Verrier's utterances of "Vulcan" succeeded in referring to that planet.

This content is intermediary in the sense that it is a way towards the final content. The final content of a mythical name, according to Clapp, is externally determined by the external world (Clapp 2023: 942). In the example mentioned above, if in the external world there is indeed a planet orbiting between Mercury and the sun, the final content of "Vulcan" is that planet; but if there is no planet orbiting between Mercury and the sun in the external world, the final content of "Vulcan" is an abstract artificial entity generated by Le Verrier's erroneous theorizing.

2. Later Utterances of Negative Existential Sentences Containing Mythical Name(s)

Clapp then continues to argue that the application range of the cococo-reference proposal is wider than people might think (Clapp 2023: 944). This proposal not only applies to names in false scientific theories, such as "Vulcan" and "Phlogiston", but also applies generally to referential terms whose intended referents are disputed as to whether they exist:

The relation of cococo-reference allows a speaker to use a name in a way that is referentially dependent upon previous uses of the name, even if the speaker doubts that those previous uses referred to anything. Because cococo-reference enables referentially dependent uses of a referential expression across such divisions of ontological commitment, we should expect the relation to be instantiated in many conversations that involve disagreements concerning what there is, and what there isn't. Any speaker who doubts that a previous referential utterance actually succeeded in referring is in a position to cococo-refer with that previous utterance. (Clapp 2023: 944)

Here Clapp clearly associates "speaker doubts that those previous uses referred to anything" with "disagreements concerning what there is, and what there isn't". In other words, Clapp associates a debate on whether a referential term succeeds in referring to anything with another debate on whether the intended referent of that referential term exists. Then, he introduces an example to illustrate this association between semantics and ontology:

A currently topical example illustrates both of these reasons to resist the temptation to suppose that cococo-referential uses are less prevalent than they actually are: One of

the claims made by Republicans who reject the results of the 2020 US presidential election involves uses of the name ‘Hammer’ in failed attempts to refer to an election-rigging software system deployed by agents of “the deep state.” In debunking these claims, Chris Krebs, the head of the Cybersecurity and Infrastructure Security Agency, asserted, ‘This is not a real thing’. (Clapp 2023: 944)

In this example, the word “this” in Chris Krebs’ utterance “This is not a real thing” is anaphoric on Chris Krebs’ utterances of “Hammer”, and his utterances of “Hammer” cococo-refers with the election result deniers’ utterances of “Hammer”. It’s clear that by asserting “This is not a real thing”, Krebs expresses a disagreement between him and the election result deniers “concerning what there is, and what there isn’t”. That is to say, they disagree on whether an election-rigging software system called “Hammer” exists. Therefore, Krebs’ utterance “This is not a real thing” should be understood as expressing a denial of the existence of an election-rigging software system called “Hammer”. This denial can also be expressed through an utterance like “Hammer does not exist”.

Now, a tricky question emerges: if Chris Krebs says “Hammer does not exist”, can the cococo-reference proposal coherently explain the meaning of this utterance?

To avoid unnecessary distractions, let’s take my utterance “Vulcan does not exist” as an example to investigate the question of whether the cococo-reference proposal can coherently explain the meaning of later utterances of negative existential sentences involving mythical names such as “Vulcan does not exist” or “Hammer does not exist”.

According to the cococo-reference proposal, the intermediary disjunctive content of my utterance of “Vulcan” is:

(3*) an abstract artificial entity, generated by Le Verrier’s erroneous theorizing, if Le Verrier failed to refer to anything with his utterances of “Vulcan”; or (4*) a planet orbiting between Mercury and the sun, if there is a planet orbiting between Mercury and the sun and Le Verrier’s utterances of “Vulcan” succeeded in referring to that planet.

Therefore, the intermediary disjunctive content of my utterance of “Vulcan does not exist” is:

(3) An abstract artificial entity, generated by Le Verrier's erroneous theorizing, does not exist, if Le Verrier failed to refer to anything with his utterances of "Vulcan"; or (4) a planet orbiting between Mercury and the sun does not exist, if there is a planet orbiting between Mercury and the sun and Le Verrier's utterances of "Vulcan" succeeded in referring to that planet.

This intermediary disjunctive content, (3) or (4), when combined with the complex intention and also a principle called "the consistency between intention and belief" embedded implicitly in Clapp's argument, leads to paradoxical consequences.

3. Principle of Consistency between Intention and Belief.

To demonstrate this point, I must first uncover the fourth component of the cococo-reference proposal, namely the principle of the consistency between intention and belief.

Clapp writes:

Given our confidence that Le Verrier failed to refer to anything, it is not clear that we even could utter 'Vulcan' with the intention to coco-refer with Le Verrier's utterances of 'Vulcan'. Just as you cannot, e.g., intend to sell a car you know you do not own, so, it would seem, we Vulcan-skeptics cannot utter 'Vulcan' with the intention to co-refer, nor even coco-refer, with Le Verrier's utterance. (Though of course we could intend to act as if we had the intention to sell the car, or to refer to a planet.). (Clapp 2023: 940, footnote 23)

Here he suggests that if a person is a Vulcan-sceptics, namely, if a person is confident that Le Verrier failed to refer to anything with his utterances of "Vulcan", then this person cannot intend to co-refer with Le Verrier's utterance of "Vulcan" via her own utterance (though this person could intend to act *as if* she had the intention to co-refer). But what does "our confidence that Le Verrier failed to refer to anything" mean?

I believe the confidence Clapp talks about here is an epistemic confidence. By "epistemic confidence", I mean a confidence based on epistemic states. I'm confident that Le Verrier failed to refer to anything with his utterances of "Vulcan", because I *know* there is no planet orbiting between Mercury and the sun. In this sense, my intention about co-referring is constrained by my knowledge: given that I know there is no planet orbiting between

Mercury and the sun, I cannot intend to co-refer with Le Verrier's utterance of "Vulcan".

This means my intention about co-referring must be consistent with my knowledge.

Clapp uses the following example to illustrate how this consistency works: if I know I do not own a certain car, I cannot intend to sell that car (Clapp 2023: 940, footnote 23). The intention involved in this example is not an intention about co-referring. Rather, it's an intention about an action (selling a car). This example suggests that the consistency principle not only applies to intentions about co-referring, but also applies to intentions about actions in general, which presumably include intentions about referring. By applying the consistency principle to intention about referring, we get (5):

(5) If I know X doesn't exist, I cannot *intend* to refer to X.

Then, by exploring an analogy proposed by Clapp himself, I realize that the consistency principle works not only in the case of knowledge, but also in the case of belief. Let's take a look at this analogy:

By way of analogy, consider a theist's utterance of 'God is a perfect being'. An atheist who endorses a parsimonious ontology that does not include any perfect beings is thereby compelled to hold that the theist's use of 'God' fails to refer to a perfect being. But the atheist is not compelled to reject the eminently plausible analysis according to which in uttering 'God is a perfect being' the theist purports to use 'God' to refer to a perfect being. And such an analysis is eminently plausible precisely because the faithful, whose ontological commitments are more profligate, accept such utterances as true. Analogously, a serious philosopher who endorses a parsimonious ontology that does not include mere mythical entities is thereby compelled to hold that a speaker's use of 'Vulcan' in an utterance of 'Vulcan is a mere mythical entity' fails to refer to a mere mythical entity, but this serious philosopher is not thereby compelled to reject the eminently plausible claim that the speaker purports to use 'Vulcan' to refer to a mythical entity. (Clapp 2023: 940)

Here Clapp distinguishes "(successfully) referring to God" from "purporting to refer to God". The former requires the existence of God, but the latter doesn't require that. Atheists, who do not believe in the existence of God, do not believe theists' utterances of "God" succeed in referring to God; but they can still interpret theists' utterances of "God" as purporting to

refer to God. Analogously, a philosopher who denies the existence of abstract entities does not believe that my utterances of “Vulcan” succeed in referring to an abstract entity, but she can still interpret my utterances of “Vulcan” as purporting to refer to an abstract entity, because purporting to refer to an abstract entity does not require the existence of abstract entity.

However, I believe this analogy has another implication which has not been touched by Clapp’s analysis: this analogy is not only about the relation between semantics and ontology, but also about the relation between *intention* and *belief*.

A crucial difference between atheists and theists is that atheists don’t believe in the existence of God, but theists believe in the existence of God. This difference in their beliefs leads to the following consequence: only theists’ utterance of “God” can be interpreted as intending (or purporting) to refer to God, but atheists’ utterance of “God” cannot be interpreted in this way. Analogously, a crucial difference between a philosopher who denies the existence of abstract entities and me is that she doesn’t believe in the existence of abstract entities, but I believe in the existence of abstract entities. This difference in belief leads to the following consequence: utterances of “Vulcan” made by philosophers who deny the existence of abstract entities cannot be interpreted as intending (or purporting) to refer to an abstract entity, but my utterances of “Vulcan” can be interpreted in this way. Based on this analysis, we get (5*):

(5*) If I believe X doesn’t exist, I cannot *intend* to refer to X.

4. Paradoxical Consequences

Now, if we combine (5*) with the intermediary disjunctive content and the complex intention, we get paradoxical results. Note that “paradox” here doesn’t mean semantic paradox. Rather, it means the conflict between intention and belief.

First, let’s consider a case in which (3) is the final content of my utterance “Vulcan does not exist”. If (3) is the final content, my utterance means:

(3**) An abstract artificial entity, generated by Le Verrier’s erroneous theorizing, does not exist.

My intention associated with (3**), according to the cococo-reference proposal, is the first half of the complex intention, that is

(6) I intend to refer to the abstract artificial entity created by Le Verrier's erroneous theorizing.

Here comes a paradoxical situation: (3**) conflicts with (6).

According to (3**), my utterance means, Vulcan as an abstract entity does not exist. Then, based on the disquotational principle, it's safe to say that I believe Vulcan as an abstract entity doesn't exist. But if I have this belief, then according to (5*), I cannot intend to refer to Vulcan as an abstract entity. This contradicts (6).

A similar paradoxical situation occurs when (4) is the final content of my utterance. If (4) is the final content, my utterance means:

(4**) A planet orbiting between Mercury and the sun does not exist.

My intention associated with (4**), according to the cococo-reference proposal, is the second half of the complex intention, that is

(7) I intend to refer to same thing as Le Verrier's utterances of "Vulcan", namely, a planet orbiting between Mercury and the sun.

Here comes a paradoxical situation: (4**) conflicts with (7)³.

³ An anonymous reviewer suggests that the paradox described here can be resolved by a Russellian approach. For example, a later speaker does not intend to refer to any particular planet (or to any other entity) when she asserts its non-existence. She does not mean to say that there is an object such that it is the planet between Mercury and sun, and that that object does not exist. What she means to say is that there is no such object (there is no x, such that x is the planet ...). She does not need to intend to refer to a particular object to say this; She just needs to say that there is no object meeting certain descriptions/being the bearer of a certain proper name.

My reply to this suggestion is:

First, by "paradox" I don't mean semantic paradox. I don't mean that the meaning of an utterance of "Vulcan does not exist" is paradoxical. Surely there is nothing paradoxical concerning the meaning of the utterance of this sentence.

By "paradox", I mean the conflict between intention and belief. My point is that the cococo-reference proposal's interpretation of the meaning of a later utterance of "Vulcan does not exist" leads to paradoxical consequences, which are conflicts between intentions and beliefs. In other word, my point is that the cococo-reference proposal cannot coherently explain the meaning of a later utterance of the sentence "Vulcan does not exist".

Second, this Russellian approach suggested by the anonymous reviewer is indeed incompatible with Clapp's cococo-reference proposal. According to the reviewer, the Russellian approach starts with the following

According to (4*), my utterance means, Vulcan as a planet orbiting between Mercury and the sun does not exist. Then, based on the disquotational principle, it's safe to say that I believe Vulcan as a planet orbiting between Mercury and the sun doesn't exist. But if I have this belief, then according to (5*), I cannot intend to refer to Vulcan as a planet orbiting between Mercury and the sun. This contradicts (7).

In short, regardless of whether (3) or (4) is the final content of my utterance "Vulcan does not exist", the cococo-reference proposal would always require me to hold an intention that my belief prevents me from holding.

What's more, even if we temporarily ignore the final content, the complex intention *per se* is also problematic. Consider the following argument:

The first half of the complex intention requires me to intend to refer to Vulcan as an abstract entity. According to (5*), in order to hold an intention like this, I must not believe that Vulcan as an abstract entity does not exist.

The second half of the complex intention requires me to intend to refer to Vulcan as a planet orbiting between Mercury and the sun. According to (5*), in order to hold an intention like this, I must not believe that Vulcan as a planet does not exist.

Therefore, to entertain the entire complex intention, I must not believe that Vulcan as an abstract entity doesn't exist and I must not believe that Vulcan as a planet doesn't exist.

Let's call this "the complex belief ban".

However, according to the intermediary disjunctive content, my utterance "Vulcan does not exist" means either that Vulcan as an abstract entity does not exist, or that Vulcan as a

assumption "a later speaker does not intend to refer to any particular planet (or to any other entity) when she asserts its non-existence. (...) She does not need to intend to refer to a particular object to say this". This assumption is *incompatible* with the complex intention of Clapp's cococo-reference proposal. The complex intention is

A later utterance conversely conditionally co-refers, or cococo-refers, with an earlier one, if the second speaker's intention is to refer to the abstract artificial entity created by the first speaker's erroneous theorizing, if the first speaker failed to refer because of this erroneous theorizing, and to refer to same thing as the earlier utterance, if there is anything the earlier utterance referred to. (Clapp 2023: 941-942)

A crucial requirement imposed by this complex intention is that when making a meaningful utterance of a mythical name, for example "Vulcan", a later speaker must intend to refer to a certain object, either an abstract one or a physical one. Thus, it's obvious that the complex intention is in conflict with the assumption of Russellian approach. Since the complex intention is an essential component of the cococo-reference proposal, the Russellian approach has already been blocked by the cococo-reference proposal itself.

planet does not exist. Thus, based on the disquotational principle, I either believe Vulcan as an abstract entity does not exist, or believe Vulcan as a planet does not exist. No matter which belief is ascribed to me, it would always violate the complex belief ban.

Violating the complex belief ban indicates that there is an internal conflict between the complex intention and the intermediary disjunctive content. This conflict leads to the following paradoxical consequence: according to the cococo-reference proposal, the interpretation of my utterance of “Vulcan does not exist” will always assign me a belief that is in conflict with my intention.

5. Conclusion

The analysis I make in this essay concerning a later utterance of “Vulcan does not exist” can be generalized to later utterances of any negative existential sentence containing mythical name(s) in the following way:

For any mythical name “X”, the cococo-reference proposal cannot coherently explain the meaning of a later utterance of the sentence “X does not exist”. In other words, when uttering “X does not exist”, a later speaker cannot coherently cococo-refer with the first speaker’s utterance of “X”. This is because, a later utterance of “X does not exist” will always lead to the following paradoxical consequences if the later speaker wants to cococo-refer with the first speaker’s utterance of “X”: the later speaker will be required to hold an intention that her belief prevents her from holding, and she will be assigned a belief that is in conflict with her intention.

Therefore, the explanation of a later speaker’s utterances “X doesn’t exist” is the Achilles' heel of Clapp’s cococo-reference proposal.

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