

IS OMNISCIENCE A SOLUTION TO THE KNOWABILITY PARADOX?

É a omnisciência uma solução para o paradoxo da cognoscibilidade?

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Abstract: From fairly innocuous assumptions, the Knowability Paradox demonstrates that if it is possible for every truth to be known, then an unacceptable conclusion, that every truth is in fact known, could be deduced. In sight of the omniscient view, which proposes that every truth is known, we appear to have a solution to the Knowability Paradox. This paper intends to argue that the omniscient approach cannot be such a solution. On the one hand, the omniscient view is not an anti-realist theory. Although each anti-realist cannot afford to know every truth, the omniscient can know every truth beyond human-being's epistemic capacity. On the other hand, anti-realism demands the existence of a linguistic community in which the omniscient does not live. Anti-realists claim that truth, like linguistic meaning, is intimately related to the use of relevant expressions in human linguistic community. On the contrary, the omniscient is not accepted as a potential relevant knowing subject existing in such community. The paper further proposes a specific definition of **K**-operator in order to prove that the omniscient cannot meet the conditions of "the members of linguistic community". The solution that takes into account omniscience cannot succeed in avoiding Knowability Paradox.

Keywords: Omniscience; Fitch Paradox; Knowability; Linguistic Community.

Resumo: Partindo de pressuposições altamente inocentes, o Paradoxo da Cognoscibilidade demonstra que se é possível para toda verdade ser conhecida, então uma conclusão inaceitável, a de que toda verdade é de fato conhecida, poderia ser deduzida. Tendo em vista o ponto de vista da omnisciência, o qual propõe que toda verdade é conhecida, parecemos ter uma solução para o Paradoxo da Cognoscibilidade. Este artigo visa argumentar que o ponto de vista da omnisciência não pode ser uma tal solução. Por um lado, o ponto de vista da omnisciência não é uma teoria antirrealista. Embora antirrealistas não possam conhecer todas as verdades, o ser omnisciente pode saber todas verdades, além da capacidade epistêmica de humanos. Por outro lado, o antirrealismo demanda a existência de uma comunidade linguística em que o ser omnisciente não está presente. Antirrealistas afirmam que a verdade, assim como o significado linguístico, está intimamente relacionada com o uso de expressões relevantes em comunidades linguísticas humanas. O ser omnisciente não é aceito como um sujeito conhecedor potencial existindo em tais comunidades. O artigo propõe ainda uma definição específica do operador **K** para provar que o ser omnisciente não pode cumprir com as condições dos "membros da comunidade linguística". A solução que usa a omnisciência não pode ser bem sucedida ao tentar evitar o Paradoxo da Cognoscibilidade.

Palavras-chave: Omnisciência; Paradoxo de Fitch; Cognoscibilidade; Comunidade linguística.

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Introduction

The Knowability Paradox demonstrates that if it is possible for every truth to be known, then an unacceptable conclusion, that every truth is in fact known, could be deduced. The straightforward conclusion seems to be seriously problematic for anti-realism. Anti-realism requires an epistemic characterization of the notion of truth, according to which no truths exceed our cognitive capacities to grasp them. Many strategies have been suggested in order to avoid the paradoxical conclusion.¹ Several different starting points for an anti-realistic reaction are intelligible.

- i. Accept the conclusion. That is to say, anti-realists have to show that it is, according to their philosophical position, plausible to hold the claim that every truth actually is known.
- ii. Doubt the premises. Anti-realists doubt that the derivation of the conclusion from the premises is correct.
- iii. Check the suitability of the used instruments. In Fitch's argument, standard modal logic and the knowledge operator **K** are the used instruments.

The latter two starting points have been refuted at different levels in the relevant literature. For one thing, the premise on which Fitch's proof relies and which might be questioned is distributivity of knowledge over conjunction: $\mathbf{K}(p \wedge q) \rightarrow \mathbf{K}p \wedge \mathbf{K}q$. However, Williamson argues that there is no prospect of defending the claim that all truths are knowable by disputing this premise.² For another, the used instruments of standard modal logic and the knowledge operator **K** are frequently mentioned in the literature only to be dismissed right away,³ and Igor Douven (2007) argues that this is a wrong approach. Nevertheless, we learn from the first starting point to justify whether we can accept the conclusion that every truth is in fact known, so that we won't completely lose our courage to solve this paradox.

¹ For an introduction and a general overview of the various critical approaches to the paradox, see Brogaard and Salerno (2009) and Kvanvig (2006).

² See T. Williamson, "Does knowledge distribute over conjunction" forthcoming in J. Copeland (ed.), *The Arthur Prior Memorial Volume*.

³ See, for instance, Edgington (1985, p.558), Wright (1987, p. 311), and Williamson (1988, p. 423).

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1. The Knowability Paradox

The Knowability Paradox (we also call it *Fitch Paradox*) appeared in Fitch's famous paper 'A Logical Analysis of Some Value Concepts', and it results from the theorem 5 in this paper:

(Theorem 5) $\exists p(p \wedge \neg \mathbf{K}p) \vdash \exists p(p \wedge \neg \diamond \mathbf{K}p)$ ⁴.

Theorem 5 is equivalent to:

$\exists p(p \wedge \neg \mathbf{K}p) \vdash \exists p(p \wedge \Box \neg \mathbf{K}p)$

This equivalent form shows that the existence of truths which are in fact unknown entails the existence of truths which are necessarily unknown. Putting together the equivalent form of Theorem 5 with the claim that if something is true then it is possibly known, we can easily get:

(Knowability Paradox) $\forall p(p \rightarrow \diamond \mathbf{K}p) \vdash \forall p(p \rightarrow \mathbf{K}p)$.

This form erases the logical difference between the existence of contingent ignorance and the existence of necessary unknowability. It tells us that if every truth can be known, then every truth is in fact known. As such it collapses sophisticated anti-realism into naive idealism.⁵

However, Fitch states that the argument was discovered by an anonymous referee (*ibid.*). J. Salerno recently launched an investigation to uncover this anonymous referee by examining some correspondences between E. Nagel and A. Church.⁶ He suggests that Church was the referee:

⁴ See Fitch (1963).

⁵ Brogaard, B. and J. Salerno. (2009): "Fitch's paradox of knowability". In *The Stanford Encyclopedia of Philosophy*, ed. E. Zalta. <http://www.science.uva.nl/~seop/archives/win2010/entries/fitch-paradox/> (last accessed 1 June 2010).

⁶ Costa-Leite, A. (2006): "Fusions of Modal Logics and Fitch's Paradox", *Croatian Journal of Philosophy* 17, 281.

In 1945 Church refereed a paper written by Fitch; the author of the report was anonymous to Fitch; and Fitch's paper was (at least, at this stage) not being accepted for publication. If this was the paper in question and there were no other referees on the job, then it would seem that Church was the anonymous referee who conveyed the knowability result to Fitch in 1945. (Salerno, 2006)

Though A. Church was indeed the author of the paradox, Fitch's name is used to identify the problem which shows that if we accept that '*Every truth might possibly be known*' then we should also accept that '*Every truth in fact is known*'. Standing at the anti-realists' philosophical point of view, truth is epistemically constrained, anti-realists only accept the former one, and do not accept the later one.

An ordinary language formulation of the anti-realistic thesis **ART** can be given:

(**ART**) Every truth might possibly be known.

We can also express **ART** by a 'Knowability Principle'. Formally,

(**KP**) $p \rightarrow \Diamond Kp$

The Knowability Principle is the normal statement of Fitch's paradox, because from it, Fitch deduces the Collapse Principle '*Every truth in fact is known*'. Formally,

(**CP**) $p \rightarrow Kp$

The Collapse Principle is also called strong verificationism by T. Williamson, who argues that **CP** is a problematic statement, because if it is true, then it implies that:

- There are omniscient agents who are able to know all true propositions. The Collapse Principle is obviously equivalent to: $\neg(p \wedge \neg Kp)$.
- The concept of knowledge collapses with the concept of truth.⁷

⁷ See Williamson, T. (1992): "On Intuitionistic Modal Epistemic Logic", *Journal of Philosophical Logic* 21, 63-89.

The following will show how Fitch could deduce the unacceptable **CP** from the acceptable **KP**.

First, the following two assumptions are needed, so that Fitch's argument can be run in a classical modal logic:

(F) $\mathbf{K}p \rightarrow p$ (Factivity)

(D) $\mathbf{K}(p \wedge q) \rightarrow \mathbf{K}p \wedge \mathbf{K}q$ (Distributivity)

The first unproblematic assumption is about the concept of knowledge, which says that knowledge is factive. The second says that knowledge distributes over conjunction: knowing a conjunction implies that both conjuncts are known. In normal modal logics, the necessitation rule allows us to infer ' $\Box p$ ' from any theorem ' p '. Given the duality of ' \Box ' and ' \Diamond ', ($\Box\neg p \equiv \neg\Diamond p$), this gives us the rule:

(N) $\frac{\neg p}{\neg\Diamond p}$

Using these principles, here is a way of running the Knowability Paradox:

- | | |
|--|----------------------------|
| 1. $\mathbf{K}(p \wedge \neg\mathbf{K}p)$ | Assumption |
| 2. $\mathbf{K}p \wedge \mathbf{K}\neg\mathbf{K}p$ | 1, (D) |
| 3. $\mathbf{K}p \wedge \neg\mathbf{K}p$ | 2, (F) |
| 4. $\neg\mathbf{K}(p \wedge \neg\mathbf{K}p)$ | 1, 3, <i>Reductio</i> |
| 5. $\neg\Diamond\mathbf{K}(p \wedge \neg\mathbf{K}p)$ | 4, (N) |
| 6. $(p \wedge \neg\mathbf{K}p) \rightarrow \Diamond\mathbf{K}(p \wedge \neg\mathbf{K}p)$ | (KP) |
| 7. $\neg(p \wedge \neg\mathbf{K}p)$ | 5, 6, <i>Modus tollens</i> |
| 8. $p \rightarrow \mathbf{K}p$ | 7, Classical logic |

From lines 1–3, Fitch proves that $\mathbf{K}(p \wedge \neg\mathbf{K}p)$ is inconsistent, from which it follows that line 1 is impossible. After using a smart substitution $p \wedge \neg\mathbf{K}p$, **KP** allows to infer $\neg(p \wedge$

$\neg\mathbf{K}p$) (line 7), which is equivalent to $\mathbf{C}P$ (line 8) by Classical logic. From (1) to (8), a modal collapse happened: the possibility operator \diamond has disappeared,⁸ which is the most magical and problematic place of Fitch's proof. As the claim made by one person that every truth is known seems to be at least very problematic if not absurd, anti-realists will have much work to do with this dilemma and they must find a solution to jump out of the *aporias*.⁹

2. Omniscience

What is known as '*omniscience*' means the capacity of perceiving all things and obtaining complete or unlimited knowledge or comprehension. On the basis of this definition, we call the being that has such a capacity 'the omniscient'. In particular, Hinduism and Abrahamic religions (Judaism, Christianity, and Islam) believe that there is a divine being who is the omniscient, such as God.¹⁰ In this paper, the omniscient is taken to be a certain kind of agent, who can go beyond human being's epistemic capacity to know.

Berkeley has a stronger view than the anti-realist, who claims that even if not every truth is known by a human being, every truth is known by an ideal epistemic subject or an omniscient God¹¹. In favor of Berkeley's claim, the omniscient hypothesis can be an approach to solve the knowability paradox through admitting there is an ideal epistemic subject or the omniscient. Similarly, this claim also appears to be a reason for anti-realism to accept $\mathbf{C}P$. However, Dummett does not agree with Berkeley's claim, and he argues that the omniscient hypothesis just appeals to a 'God's eye view' to illustrate a fascinating aspect of Fitch's proof, and which merely makes Fitch's proof itself can be used to produce a new inductive argument for God's existence. Indeed, as an anti-realist, Dummett insists on non-omniscience, let alone accepting $\mathbf{C}P$.

⁸ See Jenkins, C. (2009). "The mystery of the disappearing diamond". In J. Salerno (Ed.), *New essays on the knowability paradox* (pp. 205-222). New York: Oxford University Press.

⁹ See Tennant, N. (2000): "Anti-realist aporias", *Mind* 109, 825-854.

¹⁰ See <http://en.wikipedia.org/wiki/Omniscience>.

¹¹ As a radical subjective idealist, Berkeley claims '*esse est percipi*', that is, objects cease to exist as soon as they are no longer perceived by human beings.

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3. Omniscience could not be a solution

In section 2 it was shown that Fitch deduces the Collapse Principle from the Knowability Principle. And the Collapse Principle says that ‘*Every truth in fact is known*’, $p \rightarrow \mathbf{K}p$, which implies that there are omniscient agents who are able to know all true propositions. Accordingly, if we can find an agent who knows everything, for instance, the omniscient, then **CP** will become un-problematic. However, for anti-realism, we could not succeed in finding such an agent. The following will show the failure of this approach.

3.1. The omniscient approach is not anti-realistic

It is held to be a central principle of anti-realism that truth cannot outstrip human being’s capacity to know it. However, the omniscient can outstrip ordinary one’s capacity to know every truth. That is to say, the non-omniscient approach is anti-realistic. After understanding what the realism and anti-realism are, we can get a more explicitly comprehension that the omniscient approach is not anti-realistic.

Peter Vardy in *The Puzzle of God* (Collins 1990) identifies what he considers to be a key debate within ‘realist/anti-realist’. He argues that the key difference between these two groups lies in their respective visions of ‘reality’ and the true-claims that underpin them:

Realist - For the realist, there is a reality which exists independently of the language, hopes and aspirations of human beings, respectively. In a religious context, this means that there is a god who is the transcendent¹² creator of the universe.

Anti-realist - For the anti-realist, all that we have is human language and the impulse to create a meaningful life for ourselves. If God is defined (as has tended to be the case) as a being other than ourselves, then for the anti-realist there is no such God in charge of the universe.¹³ As Tennant points out, it is a main idea of anti-realism that somebody is an actual human being cognitively idealized in a suitable way.¹⁴

¹² Transcendent – existing beyond and independent of the created word.

¹³ See B.Clack-curriculum. Leadinglearning.org.uk

¹⁴ Tennant, N. (1997): *The timing of the true*. Oxford: Clarendon press, 144-148.

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For anti-realism, if we can find an agent who knows every truth, Fitch's argument will not deduce the paradox. However, we cannot determine who is an anti-realist in light of the definitions of realism and anti-realism. Further Tennant argues that it is possible that an agent knows that p if and only if that agent, an ideal representative of our species, possibly knows that p . That means some actual human being is that agent who cannot pretend to be the omniscient to know every truth.

3.2. Anti-realist demands the existence of a linguistic community in which the omniscient does not live.

Anti-realism claims that 'Every truth might possibly be known'. Here are two hints about $\mathbf{K}p$. The first hint requires the standard expression to interpret $\mathbf{K}p$ as 'somebody knows at some time that p ' - it means anti-realism does not claim that truth can be known over all time points (in the past, present or future). So, instead of using operator \mathbf{K} , we introduce a knowledge operator \mathbf{K}_s , which says 'there is a time point $t \leq s$, and at t it is known that ...', where t and s are time points, and t lies in the past or present, rather than in the future. The second hint is that the concept of truth for anti-realism is not epistemically constrained by any agent, which is constrained by the linguistic community in which that agent lives.

For anti-realism, the concept of linguistic community is a very important one. The main representatives of anti-realism, such as Dummett and Wright, claim that truth, like linguistic meaning, is intimately related to the use of relevant expressions by the human linguistic community. That means that what is expressed by a certain sentence thus depends essentially on how it is used. In light of this position, what we expressed might not be in principle independent from the corresponding contexts of use that may arise in the linguistic community:

The meaning of a mathematical statement determines and is exhaustively determined by its use. The meaning of such a statement cannot be, or contain as an ingredient, anything which is not manifest in the use made of it, lying solely in the mind of the individual who apprehends that meaning: if two individuals agree completely about the use to be made of the statement, then they agree about its meaning. (Dummett 1978,216)...The argument involved only certain considerations within the theory of meaning of a high degree of generality, and could, therefore, just as well have been applied to any statements whatever, in whatever area of language. (Dummett 1978, 226)

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Then it is plausible to accept the claim that what is expressed by linguistic meaning, including truth, are necessarily in principle accessible to the human linguistic community. That is to say, anti-realism's concept of truth is constrained to epistemic accessibility relations.¹⁵ However, the omniscient is an agent, who does not live in such a community, and whose concept of truths is not constrained. The omniscient agent lives out of our community and he can surpass epistemic accessibility relations to know everything.

3.3. Detailed explanation

The anti-realistic argument relates in a human linguistic community and is aimed to show that every truth might possibly be known by a member of this community. This means that the **K**-operator contains an implicit double existential quantification, one about points of time (in the past, present or future) and the other about the members of the linguistic community. But the omniscient does not satisfy the second existential quantification, for he does not live in the linguistic community. In reference to Rückert's idea¹⁶, a specific formal explanation that the omniscient does not meet 'the members of the linguistic community' will be presented. Using *Ca* as an abbreviation for "a is a member of the linguistic community", we can get a doubled indexed knowledge operator **K**_{at}, where **K**_{at}*p* means "a knows at *t*, that *p*". According to this more detailed explanation of operator **K**, we define:

$\mathbf{K}p \Leftrightarrow_{\text{def}} \exists a \exists t (Ca \wedge \mathbf{K}_{at}p)$, where *a* is a member of the linguistic community and *t* is a time point

In light of this definition, we can draw an obvious conclusion --- the idea that the omniscient knows all truths --- is no promising defense of thesis **CP**. The main reason is that the omniscient is not accepted as a potentially relevant epistemic subject. That is to say, the omniscient doesn't satisfy the predicate **C**, because the predicate **C** means membership in a

¹⁵ See Rückert, H. (2004): A Solution to Fitch's Paradox of Knowability, in S. Rahman and J. Simons (eds.), *Logic, Epistemology and the Unity of Science*, Kluwer Academic Publishers, 351.

¹⁶ *Ibid.* pp 355.

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linguistic community, and the omniscient does not belong to such community.

Conclusion

For anti-realism, the Knowability Principle **KP** (that is $p \rightarrow \Diamond \mathbf{K}p$) is a core philosophical standpoint, which proposes that no truths can exceed our cognitive capacities to grasp them. Collapse Principle **CP** (that is $p \rightarrow \mathbf{K}p$) means that there is an omniscient agent who can know all truths. Anti-realists, although insisting on **KP**, do not accept **CP**. However, there is a proof in which Fitch demonstrates that if you accept **KP**, then you accept **CP**. We call this proof ‘Fitch Paradox’ or ‘Knowability Paradox’. Berkeley claims that even if not every truth is known by a human being, every truth is known by an ideal epistemic subject or an omniscient god. Namely, for anti-realism, the omniscient approach appears to be a solution to Knowability Paradox. But according to the definition of realism and anti-realism, the omniscient hypothesis is not an anti-realist hypothesis, since anti-realists stick to non-omniscience. Further, depending on the anti-realistic concept of truth --- truths have to be epistemically accessible to the members of linguistic community --- the omniscient is not accepted as a potentially relevant knowing subject in the linguistic community (he/she doesn’t satisfy the predicate **C**). These two main reasons show that the omniscient hypothesis fails to be a solution to Fitch Paradox.

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