

Gödel's ontological argument

Contextualisation and Reception

by

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Outline

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Introduction

What is an ontological argument or proof?

- ❖ Ontological (gr. *onto* = „being“, *-logia* = „logical discourse“) can be translated to „study of being“.
- ❖ Fundamental questions of ontology include:
 - What exists? What is an essence?
 - What are the meanings of being?
 - Is existence a property?

Proof versus Argument

- ❖ Argument: set of premises with the last being conclusion

$$\begin{array}{l} \textit{Modus} \\ \textit{Ponens}: \quad \frac{\textit{P}}{\textit{P} \Rightarrow \textit{Q}} \\ \textit{Q} \end{array}$$

- ❖ Proof: set of statements and axioms being stated or inferred with last statement being conclusion (*thesis*).
 - Every single step of the statements must be true (inferred by rules of application).

What can we possibly expect of
a proof of God's Existence?

John Turri: No ontological argument can possibly succeed.

1. We can not have non-empirical knowledge that other beings exist *now*.
2. God is defined as a being.
3. If an ontological argument is sound, we would know that God exists.
4. We would hence know non-empirically that another being (God) exists. (Contradiction to first premise!)

Historical development

- ❖ Three historical periods of interest in ontological proofs:
 1. 11th century St. Anselm of Canterbury
 2. Middle 17th to early 18th century: Descartes being improved by Leibniz
 3. 20th century onwards including Gödels' argument in 1973
- ❖ Islamic, Greek-Orthodox and Jewish tradition
 1. The utter otherness. The oneness of God. Tahwid
 2. Speaking of God in paradoxes.
 3. *Hesychasm* (Greek: „stillness“, „silence“)

Historical predecessors

Anselm of Canterbury: (1077 – Proslogion)

- (1) God is a being than which none greater can be imagined.
- (2) A being than which none greater can be conceived exists at least in the mind.
- (3) It is greater to exist in reality than to exist only in the mind.
- (4) Therefore, God – a being than which none greater can be conceived – exists not only in the mind but also in reality.

Leibniz: Anselm did not proof God's possible existence.

Leibniz improved Anselm's proof (1714 – Monadology):

- (1) By definition, a perfection is a simple quality that is positive and absolute.
- (2) A simple quality that is positive and absolute is irresolvable or indefinable. (*Premise*)
- (3) A and B are perfections whose incompatibility can be demonstrated.
- (4) In order to demonstrate the incompatibility of A and B, A and B must be resolved.
(Premise)
- (5) Neither A nor B can be resolved. (*From 2*)
- (6) (Hence) It cannot be demonstrated that A and B are incompatible. (*From 3, 4 and 5 by reduction*)

Gödel's “Ontologischer Beweis”

6.

Göd.

$\neg p \wedge q \wedge A \vdash \neg \neg p \wedge \neg \neg q \wedge \neg \neg A$
 more abbrev. if $A \sim \phi \sim \psi$,
 $\neg \neg \phi \wedge \neg \neg \psi \vdash \neg \neg (\phi \wedge \psi)$.

and $\neg \neg \phi \wedge \neg \neg \psi \vdash \neg \neg (\phi \wedge \psi)$ is not provable
 in Gödel's system - if it were provable, Gödel's proof
 of consistency would be invalid. If $\phi \sim \psi$
 then $\neg \neg \phi \wedge \neg \neg \psi \vdash \neg \neg (\phi \wedge \psi)$ is provable.
 This is because $\neg \neg \phi \wedge \neg \neg \psi \vdash \neg \neg (\phi \wedge \psi)$
 and $\neg \neg (\phi \wedge \psi) \vdash \neg \neg \phi \wedge \neg \neg \psi$.
 It follows that $\neg \neg \phi \wedge \neg \neg \psi \vdash \neg \neg (\phi \wedge \psi)$
 is provable. But this contradicts Gödel's proof of consistency.
 So Gödel's proof of consistency is invalid.

An example of Gödel's Gabelsberger shorthand (from *1939b)

A1 Either a property or its negation is positive, but not both:

$$\forall\varphi[P(\neg\varphi) \leftrightarrow \neg P(\varphi)]$$

A2 A property necessarily implied by a positive property is positive:

$$\forall\varphi\forall\psi[(P(\varphi) \wedge \Box\forall x[\varphi(x) \rightarrow \psi(x)]) \rightarrow P(\psi)]$$

T1 Positive properties are possibly exemplified:

$$\forall\varphi[P(\varphi) \rightarrow \Diamond\exists\varphi(x)]$$

D1 A *God-like* being possesses all positive properties:

$$G(x) \equiv \forall\varphi[P(\varphi) \rightarrow \varphi(x)]$$

A3 The property of being God-like is positive:

$$P(G)$$

C Possibly, a God-like being exists:

$$\Diamond\exists xG(x)$$

A4 Positive properties are necessarily positive:

$$\forall\varphi[P(\varphi) \rightarrow \Box P(\varphi)]$$

D2 An *essence* of an individual is a property possessed by it and necessarily implying an of its properties:

$$\varphi \text{ ess } x \equiv \varphi(x) \wedge \forall\psi(\psi(x) \rightarrow \Box\forall y(\varphi(y) \rightarrow \psi(y)))$$

T2 Being God-like is an essence of any God-like being:

$$\forall x[G(x) \rightarrow G \text{ ess } x]$$

D3 *Necessary existence* of an individual is the necessary exemplification of all its essences:

$$NE(x) \equiv \forall \varphi[\varphi \text{ ess } x \rightarrow \Box \exists y \varphi(y)]$$

A5 Necessary existence is a positive property:

$$P(NE)$$

L1 If a God-like being exists, then necessarily a God-like being exists:

$$\exists x G(x) \rightarrow \Box \exists y G(y)$$

L2 If possibly a God-like being exists, then necessarily a God-like being exists:

$$\Diamond \exists x G(x) \rightarrow \Box \exists y G(y)$$

T3 Necessarily, a God-like being exists:

$$\Box \exists x G(x)$$

Reception

Flaws and other objections

- ❖ Axiom 2 and 5 can give reason for objection.
- ❖ The proof invokes Modal Collapse: Everything that is the case, is so necessarily.
- ❖ Begging the question: Defining things into existence.
- ❖ Kant: Is being a perfection?
- ❖ Aquinas: God's reality is unlike any other reality to us. How to conceive the infinite with a finite mind?

Conclusion

- ❖ The proof is essentially a modal version of Leibniz' proof in 1714.
- ❖ Proof is not strong enough and not meant to bring others to theism.
- ❖ The axioms used are reasonable, although bearing problems with them.
- ❖ Once accepted the premises and definitions imply God's existence.
(defined as a being necessarily existing and having all positive properties)
- ❖ This was proven with the help of computers by the present Prof. Benzmüller in 2013.

References

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- ❖ (Proofs version taken from: Christoph Benzmüller, Bruno Woltzenlogel Paleo, *The Ontological Modal Collapse as a Collapse of the Square of Opposition*.)

Thank you