

Dialetheism is an empirical hypothesis

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Overview

Vagueness

Semantic paradoxes

Overview

Dialetheism

Dialetheism is the view that:

- there are some true contradictions, or
- some things are both true and false, or
- some truths have true negations.

It is best known as a view about the liar paradox:

This sentence is not true.

But also:

- semantic paradoxes
- set-theoretic paradoxes
- vagueness
- motion
- change
- boundaries
- fiction
- law
- etc

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Vagueness

A dialetheist take

- Three Meter Tammy is tall.
- If two people differ in height by only 1 mm, then either both are tall or both aren't tall.
- There is a series of people that starts with Three Meter Tammy and ends with One Meter William, such that any two adjacent people in the series differ in height by only 1 mm.
- So One Meter William is tall.

Each step works like this:

- Person A and Person A' are either both tall or both not tall.
- But Person A is tall, so it can't be that they're both not tall.
- So they must both be tall.
- So Person A' is tall.

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What if A is **both tall and not tall**?

Soritical reasoning gets things right until it strikes a true contradiction, and then goes wrong.

These true contradictions live in the borderline area.

Vagueness

The empirical upshot

Here's a phenomenon:

speakers agree to sentences like 'Person X is both tall and not tall', when person X is a borderline case of 'tall'.

The question is: why?

The short answer: dunno.

The long answer: there are a number of possible theories, and it's too soon to decide.

'Person X is both tall and not tall'

Consider:

'Tall' is just like 'here' or 'now';
it's an indexical, and it picks up tallness standards from the context.

If the first 'tall' is evaluated w/r/t a different context
from the second one,
nothing contradictory need be happening.

This view has a problem: ‘now’ and ‘here’ **require** two occurrences for this to happen:

- (1) Sam is hungry now, and Sam isn’t hungry now.
- (2) *Sam is and isn’t hungry now.
- (3) It’s cold here, and it’s not cold here.
- (4) *It both is and isn’t cold here.

Vague predicates are not like this:

- The circle is near the square and it isn't near the square.
- The circle both is and isn't near the square.

Both are fine in borderline cases.

This does not rule out context-based accounts.

But it does show that the way context affects 'tall' is different from how it affects 'here' and 'now'.

Among the hypotheses we should take seriously:
people are simply reporting a contradictory truth.

Not all puppies and roses:

Some participants accept 'both P and not P ' claims while **rejecting** both ' P ' and 'not P ' claims.

Semantic paradoxes

A dialetheist take

(L) The sentence (L) is not true.

- (L) is true iff (L) is not true.
- (L) is either true or not true.
- Either way, it's both true and not true.
- So it is indeed both true and not true.

Some truth—the claim that (L) is true—thus has a true negation.

Look out!

- (Since (L) is true),
Either (L) is true or Chomsky faked the moon landings.
- (Since (L) isn't true),
So Chomsky faked the moon landings.

This kind of funny business needs to be stopped.

The usual place to attack is the move from $A \vee B$ and $\neg A$ to B .

If A and $\neg A$ are both true, then these premises hold, no matter what's up with B .

This means: classical logic must go.
(Well, ...)

Semantic paradoxes

The empirical upshot

But it has to do more than just go: it must not be reintroducible.

Priest, *Doubt Truth*, p 88:

“If one takes it that a dialethic solution to the semantic paradoxes is correct, one must deny the coherence of Boolean negation.”

Here, ‘Boolean negation’ is understood to be ‘a negation that behaves exactly as the classical account of negation says it does’.

The thought is this: if Boolean negation \neg_B is coherent, then there is a sentence that says of itself that it is \neg_B true.

But this sentence can't be both true and \neg_B true, since then everything would be true.

So we need to treat this sentence differently from the usual liar, suggesting that the root of the phenomenon has been missed.

When we teach classical logic, sometimes we say things like:

- $\neg_B\phi$ is true in \mathcal{I} iff ϕ is **not** true in \mathcal{I} .

Do we thereby succeed in presenting Boolean negation?

As Priest points out, the crux is the highlighted negation.

Priest, *Doubt Truth*, p 98,
after noting that the 'not' had better not be Boolean:

“But now recall the dialectic. The point of the argument was precisely to establish the coherence of a notion satisfying the properties of classical negation. If the only way we can do this is by appealing to such a notion, and so presupposing its coherence, then the argument is clearly question-begging.”

I think it is not so clear as this.

We may legitimately presuppose the coherence of natural-language negation, **whatever** it is, **even if** it's Boolean.

(If negation isn't coherent, we've got bigger problems!)

What we cannot presuppose (in this dialectical situation) is **that** it is Boolean.

So: we can define \neg_B via its truth conditions, expressed using natural-language negation.

Whether \neg_B is Boolean or no—
and so whether dialetheism has a problem here—
depends on whether natural-language negation is Boolean.

But this is simply a question about which entailments hold among natural-language sentences: it is a matter of formal semantics.

If natural-language negation **is** Boolean,
there is no need to detour through \neg_B ;
the dialetheist is already in trouble.

If it's **not**, then \neg_B as defined above isn't Boolean either;
the dialetheist survives this round.

The status of natural-language negation matters.

Dialetheism—
the view that some truths have true negations—
both **provides** and **depends on**
substantive empirical hypotheses
about natural-language negation.