‘Consequentialism’?

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Where's the inference?

'Consequentialism'?

Consequence as prior

Conclusion

Where's the inference?

Inferentialism vs representationalism

People infer.

People represent.

According to inferentialism,
inference is explanatorily prior to representation.

According to representationalism,
representation is explanatorily prior to inference.

Where's the inference?

Inferring is doing

Inference is an action, a particular psychological process.

Two kinds of inferentialism:

- What's prior is how people do infer.
- What's prior is how people should infer.

Either way, there is familiar trouble;
neither notion is particularly well-behaved.

Descriptive: Wason selection task

Normative: options about how to proceed

Perhaps for these reasons, some people who call themselves ‘inferentialists’ don’t actually think that inference is prior to reference.

Some of us think that something else is prior to both.

‘Consequentialism’?

I know, it’s a bad name. Sorry.

One option is to think that consequence is the prior notion.

This requires understanding consequence some way that doesn’t require either inference or representation.

‘Consequentialism’?

Positions and bounds

Let a position be a set of assertions and denials.

Some positions are in bounds;
others are out of bounds.

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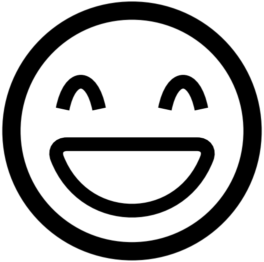
The bounds are a social kind:
which positions are in bounds depends on
which positions are taken to be in bounds.

Let $[\Gamma \mid \Delta]$ represent the position
that asserts everything in Γ
and denies everything in Δ.

$\Gamma \vdash \Delta$ means that $[\Gamma \mid \Delta]$ is out of bounds.

Consequence, on this picture, is the bounds.

This gives a notion of consequence that is nice in many ways.



Consequence as prior

to inference

How to see this notion of consequence as prior to inference?

Again, there is a choice:

- Inferences we do make, or
- inferences we should make?

I suspect neither is achievable,
for more or less the same reasons as before.

Instead, I will offer an account of nonampliative inference.

Consequence settles when conclusions do not go beyond
the premises that lead to them.

This is at most part of a story about how we do or should infer.

Consequence as prior

to nonampliativity

Equivalence:

A position $[\Gamma \mid \Delta]$ is equivalent to $[\Gamma' \mid \Delta']$ iff for all Σ, Θ:

$$\Sigma, \Gamma \vdash \Delta, \Theta \quad \text{iff} \quad \Sigma, \Gamma' \vdash \Delta', \Theta.$$

Equivalent positions leave the same options open
for in-bounds expansion.

Implicit assertion for sentences:

A position $[\Gamma \mid \Delta]$ implicitly asserts A iff it is equivalent to $[\Gamma, A \mid \Delta]$.

That is, iff for all Σ, Θ:

$$\Sigma, \Gamma, A \vdash \Delta, \Theta \quad \text{iff} \quad \Sigma, \Gamma \vdash \Delta, \Theta.$$

Nonampliative inference:

Inferring A from Π is nonampliative iff:

every position that asserts Π implicitly asserts A.

That is, iff for all $\Gamma, \Delta, \Sigma, \Theta$:

$$\Sigma, \Gamma, \Pi, A \vdash \Delta, \Theta \quad \text{iff} \quad \Sigma, \Gamma, \Pi \vdash \Delta, \Theta.$$

(That is, iff for all Γ, Δ:

$$\Gamma, \Pi, A \vdash \Delta \quad \text{iff} \quad \Gamma, \Pi \vdash \Delta.)$$

Once you've asserted the premises of a nonampliative inference, you may as well have asserted the conclusion as well.

Nonampliative inference obeys:

- Reflexivity, monotonicity, and finite transitivity by its nature, whatever $\vdash$ is like. (Implicit appeal to contraction and expansion for $\vdash$ here.)

- Complete transitivity when $\vdash$ is compact.

Example:

Suppose $\vdash$ obeys weakening on the left and $\wedge$L.

Then we have:

$$\frac{\Gamma, A, B, A \wedge B \vdash \Delta}{\Gamma, A \wedge B \vdash \Delta} \qquad \frac{\Gamma, A \wedge B \vdash \Delta}{\Gamma, A, B, A \wedge B \vdash \Delta}$$

That is, the inference from A, B to $A \wedge B$ is nonampliative, as are the inferences from $A \wedge B$ to A and to B.

Consequence as prior

Undeniability and inference

When we infer, we conclude things;
we do not merely rule out denying them.

What is the relation between consequence and nonampliative inference?

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Cut:

If $\vdash$ obeys weakening and cut,
then if $X \vdash A$, the inference from X to A is nonampliative.

Why?

By weakening, $\Gamma, X \vdash \Delta$ implies $\Gamma, X, A \vdash \Delta$.

$\Gamma, X, A \vdash \Delta$ together with $X \vdash A$ gives $\Gamma, X \vdash \Delta$ via cut.

Id:

If $\vdash$ obeys weakening and identity,
then if the inference from X to A is nonampliative, $X \vdash A$.

Why?

Since $X, A \vdash A$, it must be that $X \vdash A$.

So if $\vdash$ obeys weakening, cut, and id, then nonampliative inference is shaped a lot like consequence.

But whatever $\vdash$ is like, nonampliative inference is grounded in consequence.

Conclusion

- Inference is a thing people do.
- Only some ‘inferentialists’ really ground representation in it.
- Consequence can ground both representation and nonampliativity of inference.

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