

Re: reductio ad falsum versus reductio ad absurdum

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- *From:* Torkel Franzen <torkel@xxxxxxxxxx>
 - *Date:* 01 Sep 2005 12:02:28 +0200
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adamgolding@xxxxxxxxxx writes:

> the \Rightarrow means \vdash , here?

We don't need to take \Rightarrow to refer to provability in any formal calculus. Just read $G \Rightarrow A$ as "A follows from G". The rule

$$\frac{G, A \Rightarrow B}{G \Rightarrow A \rightarrow B}$$

then allows us to conclude, given that B follows from G together with A, that $A \rightarrow B$ follows from G.

> so, by this line of thinking, saying that CP is

>
> $(P \vdash Q) \vdash (P \rightarrow Q)$

>
> makes a lot of sense to me—although i gather from the responses that
> there is something wrong with this—although i don't quite gather
> what—is there something formally/technically wrong? is it false?

To make good sense of the above, you need to specify the language you use and how \vdash is to be understood.

>>
>> $\sim A \Rightarrow Q \sim A \Rightarrow \sim Q$
>> -----
>> $\Rightarrow A$

>
> Allen & Hand call the above rule "Impossible Antecedent", and they lump
> all the rest under RAA...

"Impossible Antecedent" is not standard terminology. But the important thing is that indirect proof is not constructively valid, but constructive reductio is.

> ok, so with RAA often being used as an umbrella term, 'constructive

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> reductio' makes it clear that one means the one with no premises.

Here I don't see what you have in mind.

- > there another specifying term in somewhat common parlance to specify
- > the other kind, i.e. not constructive reduction, not impossible
- > antecedent, but the one i called 'reductio ad falsum' ??

Not that I know of.

• *Follow-Ups:*

- ◆ *Re: reductio ad falsum versus reductio ad absurdum*

◇ *From:* futurist

• *References:*

- ◆ *Re: reductio ad falsum versus reductio ad absurdum*

◇ *From:* adamgolding

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