# Re: reductio ad falsum versus reductio ad absurdum

***Source:*** http://sci.tech−archive.net/Archive/sci.logic/2005−09/msg00214.html


- *From*: "futurist" <adamgolding@xxxxxxxxxxxxxxx>
- *Date*: 6 Sep 2005 10:57:22 −0700


Torkel Franzen wrote:
> "futurist" <adamgolding@xxxxxxxxxxxxxxx> writes:
>
> > these two modes of reasoning seem fundamentally different to me, and
> > thus seem to deserve separate names in ND, which is supposed to model
> > natural reasoning, after all.
>
> But we use exactly the same rules in proving results of the form
> G=>~A and in proving results of the form =>~A.
>
> > PS however, i'm a little confused as to what distinguishes a
> > constructive from a nonconstructuve reductio
>
> Just examine the form of the rules. They are not the same.
>
> Constructive reductio:
>
> G,A => Q G,A => ~Q
> −−−−−−−−−−−−−−−−−−−
> G => ~A
>
> Indirect proof:
>
> G,~A => Q G,~A => ~Q
> −−−−−−−−−−−−−−−−−−−−
> G => A
>
>
> Constructive reductio always leads to a conclusion G => ~A. Indirekt
> proof yields a conclusion G => A where A can have any form.

does A have to be atomic in the first case?

> For example, you need to use an indirect proof to prove => pv~p.

if A is not atomic, couldn't you have any number of '~' symbols

'inside' the A? (i.e. in the wff that A represents?)

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- ***Follow−Ups***:
  - ♦ ***Re: reductio ad falsum versus reductio ad absurdum***
    - ◊ *From:* Torkel Franzen

- ***References***:
  - ♦ ***Re: reductio ad falsum versus***