Re: Existence, Self−identity and Uniqueness.

Source: http://sci.tech−archive.net/Archive/sci.logic/2006−12/msg00493.html

- *From*: William Elliot <marsh@xxxxxxxxxxxxxxxxxx>
- *Date*: Thu, 28 Dec 2006 22:01:53 −0800

On Thu, 28 Dec 2006, Jan Burse wrote:

> William Elliot wrote:
>
> > On Thu, 28 Dec 2006, Jan Burse wrote:
> > We agree that it's theorem when (E!x)F(x).
> > In the event ~(E!x)F(x), the premise
> > ixF(x) = y
> > is false, thus promoting again the whole statement to truthood.
>
> Ok, thanks.

What's the theorem that's part of this comment?
Please don't over clip, it derails continuity of thought.

> Yes, the "x=y−>(A0(x)<−>A0(y))" is not
> the counter example. But the "forall x
> A0(x)" is the counter example.
>
> forall x A0(x) is true, but A0(the x:F0x)
> is false. That violates the following
> valid inference in FOL=:
>
> G |− forall x A0(x)
> −−−−−−−−−−−−−−
> G |− A0(t)

Derived rules of inference, bah.
The axiom
(Ax)G(x) −> G(t)
for any term t, you claim, cannot be used willy nilly with ixF(x).

Case (Ax)F(x)
case (Ax,y) x = y
(Ax)G(x) −> G(ixF(x))

case (Ex,y) x /= y
~G(ixF(x))
~[(Ax)G(x) −> G(ixF(x))]
Case ~(Ax)F(x)
(Ax)F(x) −> G(ixF(x))

That is true, the axiom is for terms of the language,
not for syntactic term constructs, synthetic terms.

Moral of the story: don't use ixF(x) without (E!x)F(x).
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