

Re: Are open formulae really needed?

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From: reader (*not_at_a.b.c.INVALID*)

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george wrote:

> *LordBeotian* wrote:

>

>> *So why the typical approach of logic textbooks*

>> *is based on valutations and*

>> *open formulae as theorems?*

>

>

> *I haven't surveyed what's typical;*

> *I only remember what was in the books I*

> *was taught from. And from the viewpoint of*

> *at least one of those books, open formulas are*

> *simply a mirage. There is simply no such thing,*

> *really. The question is arguably not so much*

> *"are open formulae really needed" as "are existential*

> *quantifiers really needed?". The answer to that*

> *question turns out to be "no". Once you have eliminated*

> *them, the only possible use you can have for a variable*

> *(as opposed to a constant) is to identify a place where*

> *you're going to do universal quantification. So you might*

> *as well assume that all the variables are in fact undergoing*

> *that (universal quantification) anyway. And that closes the*

> *formula. Typographically, at that point, you don't need*

> *universal quantifiers either, since ALL variables are*

> *universally quantified by definition.*

>

Thank you for clarifying this point.

My introduction to predicate language came via Prolog, in which, by convention, constants are alphanumeric identifiers that start with a lowercase letter and variables are alphanumeric identifiers that start with an uppercase letter. Variables are assumed to be universally quantified, and Prolog processors typically issue a warning whenever a variable that occurs only once in a clause is detected.

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