

Re: predicate in a predicate

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- *From:* herbzet <herbzet@xxxxxxxxxx>
 - *Date:* Fri, 07 Dec 2007 02:24:28 -0500
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Keenlearner wrote:

On Dec 6, 7:46 pm, William Elliot <ma...@xxxxxxxxxxxxxxxxxxxxxx> wrote:

On Thu, 6 Dec 2007, Keenlearner wrote:

I was wondering how should I represent these two sentences
in First
Order Logic Form

John lives in Bali
John lives with Marry

live_in(John , Bali)
live_with(John, Marry)

or Can I have a predicate in the predicate,
live(John, in(Bali))
live(John, with(Marry))

No.

As you can see that the second arguments of "live" predicate
can either
refer to the person or place. But can we use the same
predicate "live"
with the second argument refer to person and place ? Thank
you.

Re: predicate in a predicate

It refers to a proposition. Thus you have hybrid propositional constant, $\text{live}(x,P)$ which isn't FOL.

So I need to use the $\text{live_in}(\text{John}, \text{Bali})$ and $\text{live_with}(\text{John}, \text{Marry})$ in order to be compliance with FOL ? or what do you think ? I am doing natural language processing research, where a English sentence will be converted into FOPC and then Prolog clauses to be proved. Thank you for the reply.

You've received a number of good replies, but I just want to state the point in terms of arguments and output.

A predicate takes terms as arguments and returns a sentence.
A function takes terms as arguments and returns a term.

In natural language there are also functors that take sentences as arguments and return a term. A not very good example is the single quote marks: "'It is hot' is a short sentence".

Also there are operators that take sentences as arguments and return a sentence, e.g. the logical operator "and": "John went to the store and Mary didn't." Or modal operators, such as "It was believed by the ancients that ...".

hz

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