

## Re: A question about FOL theories and models

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- *From:* Nam Nguyen <[namducnguyen@xxxxxxx](mailto:namducnguyen@xxxxxxx)>
  - *Date:* Mon, 21 Aug 2006 21:31:29 GMT
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Nam Nguyen wrote:

...(Think of Shoenfield's finite axiomatization of  $\mathbb{N}$ , and the "standard model" of arithmetic of the natural numbers, which is  $\mathbb{N}$  itself – which is quite circular! [Given that we're talking about the foundation of reasoning!])

Imho, it's time that we need to revamp FOL, to move on with modern day needs of reasoning. We should not pretend, for instance, that the arithmetic syntactic formalization is consistent, while we just \*assume as a priori\* the existence of a "model", without knowing for absolute logical certainty that this "precious" one be indeed a model.

Consider, for example, the possible situation in which  $\sim GC$  is arithmetically (interpreted to be) true, while  $GC$  is \*also provable\* in Shoenfield's 'N' formal system. The potential peril of the current FOL is that we've not \*absolutely\* excluded this possibility! (Needless to say, neither have we proven absolutely that  $(GC \wedge \sim GC)$  is not provable in PA: we've only shown it's – relatively – so).

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What we call 'T' is just a swinging door which moves when we inhale and exhale.  
Shunryu Suzuki

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