Re: Godel's Incompleteness and Nonmonotonic Logic

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Date: 08/25/04

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Date: Wed, 25 Aug 2004 23:13:08 +0300
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Jamie Andrews; real address @ bottom of message wrote:
*> This *completeness* result does not extend to arithmetic*
*> because no *finite* set of axioms characterizes arithmetic.*
*> Induction on the integers is an axiom *schema*, not a single axiom.*

This is nonsense. Gödel's completeness theorem does apply to infinite sets of axioms and derivations from them. In particular, the deductive closure of a set of axioms A is exactly the set D of its logical consequences. This doesn't imply that the deductive closure of any consistent set of axiom is complete in the sense that for every sentence A, either A is in the deductive closure or the negation of A is. Some are and some are not, but this has nothing to do with the completeness theorem.

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Aatu Koskensilta (aatu.koskensilta@xortec.fi)
"Wovon man nicht sprechen kann, daruber muss man schweigen"
  - Ludwig Wittgenstein, Tractatus Logico-Philosophicus
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