

Re: A missing definition in "Gödel's Proof" by Nagel & Newman (open letter)

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- *From:* David C. Ullrich <ullrich@xxxxxxxxxxxxxxxxxxxx>
 - *Date:* Thu, 01 Nov 2007 06:42:09 -0600
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On Wed, 31 Oct 2007 20:20:29 +0100, G. Frege <nomail@invalid> wrote:

On Wed, 31 Oct 2007 15:55:11 -0000, translogi <wilemien@xxxxxxxxxxxxxxxx> wrote:

Without this definition the exposition of the system (described in the book) is simply incomplete (for example, without it not even $p \rightarrow p$ can be derived); and hence imho it should be added to the text.

Actually, a footnote by the Ed. would do.

Send an private email to Douglas Hofstadter
Hope he will respond

Thanx for your support. Actually, I already got a slap in the face by Hofstadter. His reply to my email was as follows:

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Hello, and thanks for your note. I appreciate your interest in "Gödel's Proof" and your thoughts. There are always things that one person or other would like to see "fixed", but at this point the text is "fixed" (in another sense of the word) and unlikely to be changed. But thanks for the suggestion. -- Douglas Hofstadter.

You should really get a grip – that's not a slap in the face, it's a perfectly polite reply. He

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even thanks you.

Anyway: Can you tell us exactly what the axioms and rules of the system in the book are?

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Thus I decided "to go public". My point (which Hofstadter kindly decided to ignore) is that several distinguished claims by Nagel & Newman (made in their book) are false without explicitly stating the missing definition as part of the system described.

This is especially unfortunate because they spend a whole chapter (chapter V) to rigorously prove that the system in question is /consistent/. This proof relies on the (alleged) "theorem" ' $p \rightarrow (\sim p \rightarrow q)$ '. But this "theorem" is not derivable in the system as described in the book.*)

Actually, they write/claim:

"Now, it happens that ' $p \rightarrow (\sim p \rightarrow q)$ ' (in words_ 'if p, then if not-p, then q') is a theorem in the calculus. (We shall accept this as a fact, without exhibiting the derivation.)"

Well, actually, it's NOT a fact, since ' $p \rightarrow (\sim p \rightarrow q)$ ' cannot be derived in the system /as described/.

If THIS is not something that SHOULD be "fixed" (at least by mentioning the missing definition in a footnote) what then?!

F.

*) In chapter V Hilbert & Ackermann's variant of Russell & Whitehead's system for propositional logic (in PM) is introduced. Even the formation rules for wffs are given. The ONLY thing that is missing is the crucial information that ' $A \rightarrow B$ ' means ' $\sim A \vee B$ ' (where A, B are wffs).

David C. Ullrich

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