

sci.logic: Name the thesis: "Formal sentences capture informal ones"

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The Church–Turing thesis is familiar to many people, largely because it has been widely discussed both in textbooks and in popular science writing. Having a name helps, too.

There is an analogous thesis that is relevant to logic and the foundations of mathematics:

(\*) Formal sentences (in PA or ZFC for example) adequately express their informal counterparts.

Years of discussion, on USENET and elsewhere, has convinced me that the average level of understanding of foundational issues would be enormously improved if (\*) were, like the Church–Turing thesis, given a name and widely discussed.

As matters stand today, a lot of people don't seem to even acknowledge the existence of informal mathematical discourse, despite the fact that all but a tiny fraction of mathematical discourse they've ever seen is informal (in the sense of (\*)).

At a somewhat more sophisticated level, I can testify that my own ability to grasp intermediate–level concepts such as the proof of the reflection theorem and Rosser–style proof predicates would have been improved if I had already had a firm grasp of the significance of (\*).

Any candidates for a catchy name for (\*)?

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The range of our projectiles---even ... the artillery---however great, will never exceed four of those miles of which as many thousand separate us from the center of the earth. ---Galileo, Dialogues Concerning Two New Sciences