(08) BILL HOWARD - LOGIC ACCORDING TO HALMOS AND WEIL

Subject: Logic according to Halmos and Weil
From: Howard, William A.
To: fthulin
Cc: robtully
Date: Saturday, 30 July 2016, 8:30

Dear Fred,

After Friday's conversation I remembered another Halmos episode.

Sometime in 1954 I mentioned to Halmos that I was working on a finitary consistency proof for Peano arithmetic. From then on, for months afterward, whenever I passed Halmos in the hallway, he would say, with a show of anxiety, "Bill, have you proved the consistency of mathematics yet? We need to know, so we can get on with our research without being afraid that it is all inconsistent."

Also, he liked to go around saying, "Intuitionistic mathematics? Doing mathematics without the use of the law of the excluded middle is like taking a centipede, cutting off all but one its legs and seeing how far it gets." I wonder what he thought when Errett Bishop, one of his best students, from 1965 onward devoted his life to developing constructive mathematics which avoids use of the law of the excluded middle?

Here are a couple of Weil episodes. In the fall of 1951 I mentioned to him that I was taking a course from Carnap on The Axiomatic Method. From that time onward, Weil kept asking me, "Well, are you through with your axiomatic nonsense yet?" Once, when we were out for a walk, he said, "I hope you are not involved with Brouwer's intuitionistic mathematics, which is an *abomination*." He said "abomination" with great emphasis, stamping his foot on the sidewalk.

So that was logic at the U. of C. in the 1950s. Not that I found episodes of this sort discouraging. It just increased my resolve to keep doing what I was doing.

From the above, and also Stan's remarks quoted in my email of 7/27/16 to Rob Tully, one would conclude that Halmos was unfriendly towards logic. A different perspective is provided by Nerode in his obituary of Hartley Rogers in the Bulletin of Symbolic Logic, June 2016, p. 295. Nerode is talking about what led to the five week NSF Summer Institute in Symbolic Logic at Cornell in August, 1957. He says that it was this meeting that created the mathematical logic community. Halmos played a crucial role: "Halmos, then at the University of Chicago, had the motto, `Mathematics is

a social science', and suggested to Tarski a meeting of all those doing research in mathematical logic." Tarski and Rosser then got funding, etc. But I found a much more detailed account of this:
https://math.stanford.edu/~feferman/papers/cornell.pdf
Alfred Tarski and a watershed meeting in logic: Cornell, 1957, by Solomon Feferman.

Feferman says that Halmos got the ball rolling when he contacted Edwin Hewitt in 1955. In his letter to Hewitt, he says:

"In regard to the non-availability of other support, I think little need be said. Although logic is one of the oldest subjects of mathematical interest and although I am convinced that its continued study is of tremendous mathematical value, the subject is not such as to capture the imagination of an admiral of the navy or a tycoon of industry."

Hey Paul, right on!

As ever,

Bill