(04) BILL HOWARD - TO JAZMIN ARELLANO, THE BOURBAKI

Subject: Re: Bourbaki
From: Howard, William A.
To: jazmin
Cc: robtully
Date: Thursday, 24 September 2015, 10:35

Dear Jazmin,

Maybe you are referring to Tully's passages:

Spring 1965 - Fall 1965 "distrustful of Lang (or at least Lang was of him), who was at the University of Chicago at the same time, perhaps because of his association with the Bourbaki, red rag to a bull anathema to Stan."

Spring 1966 - Winter 1966 "For Stan mathematics should be concrete, hands-on, the proof of any statement, no matter how complex, could, if the keys were found, be written on a single sheet, most often attended with the right 'picture' ..... it was this persuasion, prejudice if you will, that leaned him towards Klein, Hilbert (Geometry and the Imagination), Courant, Polya, Poincare, made him dismissive of, distrustful of the Bourbaki, an effort he philosophically opposed as being inimical to the creative and continuing flowering of mathematics. (Andre Weil, at Chicago when Stan was there, was the purported head of the Bourbaki. Much of his life spent trying to solve the Riemann Hypothesis, Stan claimed that he used to walk around the commons room asking new students how old they were, and if they were over 21, used to cackle 'Ha!! ... It's too late for you!!')"

Bourbaki's approach emphasizes abstractions: no diagrams or pictures. As V. I Arnold says at the beginning of
(*) http://math.sun.ac.za/wp-content/uploads/2013/03/Bourbaki.pdf
it is left-brained, no right brain. Also no concrete examples. So Stan did not like this.

The Bourbaki group wrote a number of volumes intended for students at about the first year of graduate school. The style is very austere. I did not like them much, except for the historical passages (obviously written by Weil), which are superb. As indicated in the second paragraph of page 2 of (*), this series of volumes was meant to do for today's mathematics what Euclid's Elements did for the mathematics of his time, an impossible goal. The next couple of paragraphs describe one of Bourbaki's pranks. By "the truth", Weil meant that Bourbaki was an actual person. As Mac Lane says in his autobiography (p. 202): "Wow!" Mac Lane goes on to say, "I wrote an ambiguous letter to the editor; fortunately, Weil did not stop speaking to me." Bourbaki then spread the rumor that Boas did not exist;

rather Boas was an acronym, B.O.A.S., for a group of Americanmathematicians. I was a student there at the time, and we were all
gossiping about it. My impression at the time was that Boas was quite peeved. Maybe he got over it; he talks about it in an article, Bourbaki and Me, in the Mathematical Intelligencer, 1986 (use to be available for free online; now they want to charge for it; so to hell with them).

I got a kick from Grothendieck's remark, col. 1, page 2 of (*), near bottom.

Tully (above) reports that Stan claimed that Weil used to walk around the commons room asking new students how old they were, and if they were over 21, used to cackle 'Ha!! ... It's too late for you!!')" Maybe this was Stan's version of the following story, which I undoubtedly told him. In the fall of 1953, when Weil and I were walking in the park, he suddenly had a thought:

WEIL: "How old are you?"

ME: "26."

WEIL: "When Newton was 26, he had already discovered the theory of gravitation, invented the calculus, etc., etc."

I wondered what this was all about. I already knew that Weil had been a child prodigy, and in his teens had been told that he was expected to be Poincaré's successor. When I arrived at the U. of C., there was gossip that Weil was unhappy at not having reached the level of creativity of Poincaré, and that this explained some of Weil's behavior. So, I thought at the time: maybe that was it. The explanation is plausible, but, in pondering this episode in subsequent years, I felt that this was not the whole explanation. In 2003 or 2004, I recounted the episode to Jill. Her reply: "How old was he?" I made a quick calculation and replied: "46 or 47" (actually, he was 47). Then I immediately thought: Well, of course, the retirement age for membership in the Bourbaki group is 50! Jill's intuition about what was on Weil's mind was correct. He was thinking that his own time was running out.

Actually, in 1967 he came up with the Taniyama–Shimura-Weil conjecture (which eventually led to Andrew Wiles' proof of Fermat's Last Theorem in 1994); so there was still some life in the old horse.
It is past my bedtime, so I'll stop here
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Bill