# (01) BILL HOWARD - MY LIFE WITH STAN

**Subject:** Re: STANLEY TENNENBAUM MEMOIR
**From:** Howard, William A.
**To:** robtully;
**Date:** Tuesday, 25 August 2015, 7:39

Thanks for the memoir. I would recommend that you send a copy to Peter
and to Juliette Kennedy  if you have not already done so.

Concerning the 1966 Thanksgiving party:  'the smartest man in the world' From Stan's

description, it sounds like Jack Towber. Also, Paul Cohen used to say: "Towber is the only

person I have ever met who is smarter than I am."

My own relation to the 1966 Thanksgiving party is as follows. I was then
living in Chicago. When Stan phoned and invited me to the party, there was
something about the way he was talking that made me uneasy. I asked him:
"Who is going to be there?" His reply: "Oh, everybody. All your own
friends." That made me even more uneasy. Nonetheless, I bought a plane
ticket to Rochester, and, at the proper time, set out in my car to O'Hare
Airport. I should have taken the Kennedy freeway but, without thinking,
took the Eisenhower freeway instead. I did not realize my mistake until I
got to the end of the Eisenhower. There was a highway that took me to
O'Hare, but I arrived there a few minutes after flight-time. I sat in my
car, pounding the steering wheel in frustration, watching the passenger
jets taking off and thinking too myself: "The modern world is too
complicated for me. I am too old for this." (I was essentially 40 at the
time.) Of course, I could still have gone into the airport and arranged to
get to Rochester one way or another, but, instead, I just gave up. No
doubt my unconscious had been telling me: "Stan is orchestrating
something. Stay away."

Here is the talk I gave at the memorial conference.
-----------------------------------------------
FORTY YEARS OF ADVENTURES WITH STAN
By William A. Howard
(This is the talk I gave at the Conference in Memory of Stanley Tennenbaum
at the Graduate Center of the City University of New York, April 7, 2006.)
I met Stan in the spring of 1950, when we were graduate students at the
University of Chicago. Stan was a handsome young man in a Brooks Brothers
suit who had an obsession with Gödel' incompleteness theorem. If he
spotted you crossing the campus, he would back you up against a tree and
compulsively explain Gödel's incompleteness theorem, like the ancient
mariner in Coleridge's poem, The Rime of the Ancient Mariner. I think he
got this bug from Carnap, for whom the incompleteness theorem was a source
of great unhappiness. (It refuted the positivistic view that the meaning

of a sentence was to be given by a procedure for determining its truth or falsity.)

During the period 1950-1953, my relationship with Stan was rather casual. I was trying to become a great mathematician like Andre Weil, and I had only a casual interest in logic. In the fall of 1953, Myhill and Dekker had visiting appointments at the U. of C. Stan was occupying Prof. Bergstrasser's house and holding a continuing salon in logic and philosophy. Paul Cohen was living upstairs and frequently came down to heckle. Myhill was living in the basement. I switched to logic and saw a lot of Stan during the period 1953-1956. I am not sure how many hours that amounted to: a few hundred, I would guess.

From associating with Myhill and Dekker, Stan became an expert recursion theorist and decided that he would solve Post's Problem. He became obsessed with this and neglected his career. I became concerned, but he would always reply: "This is a problem I think I can solve." I agreed that if he did solve it, it would be a good career step; but what if he didn't? He moved to an apartment at 57th and Kimbark (spring of 1954, I think). Eventually, he thought that he had solved it. He presented the solution to a small group of us at 1:00 o'clock in the morning, then we all went to Gladys' Restaurant on 55th Street to celebrate, and he held forth on philosophy and the nature of mathematics. When I arrived home about 4 in the morning, I suddenly saw the mistake in his proof; I wrote out an explanation, tacked it to his door, and went home to bed. It was probably in connection with this episode that Mo Schreiber said: "That's Stan. A football is punted high. He runs to receive it. Either he makes a heroic receive, or he trips and falls on his face. Nothing in between."

Actually, he was trying to prove that there were no intermediate degrees. But Friedberg (1957) constructed an intermediate degree by use of an argument that was an order of magnitude more subtle than what anyone else was using (priority argument). So Stan did not solve Post's Problem; but he did make himself an expert in recursion theory, and later made a few good contributions (eg., the idea of retraceable sets). Through my association with Stan, I myself acquired a respectable level of expertise in the field.

Conversations with Stan could last quite long. I remember getting into a philosophical discussion with him one afternoon on the corner of 57th and Kimbark. People were passing us, going home from work. The sun set in the west. Some time later, the sun rose in the east. Then the same people passed us on the way to work. "You are still here?" Actually, I doubt that we stood there the full 16 hours; we probably went to an all night restaurant; but, at 8 o'clock in the morning, the same discussion was going on. Most of our discussions did not last that long, but some did go on for a several hours. Years later, Stan used to come through Chicago once or twice a year, and we still had those marathon sessions. Once we ended up sitting on the rocks at Belmont harbor at 6 or 7 in the morning with Stan telling me about someone's early, overlooked work in set theory

(scales, rates of growth) that he was using for a radical simplification
of the continuum problem. I don't know what came of this.

From 1959 to 1965 I was at Penn State. I saw Stan several times during
that period. I visited the farm in Michigan a few times (1960-1962). There
was a dog, Violet, who hid under the table, also a male collie, also a cat
and several kittens. In one visit, Kreisel was there. In another visit,
Stan explained to me his solution to Mostowski's problem (no recursive
nonstandard models of arithmetic) and I liked that very much. Stan's time
on the Michigan farm struck me as a happy time.

During 1962-1963, when he was at Yeshiva University, I encountered him
when visiting Princeton. On the spur of the moment, he had me accompany
him to his farmhouse in Connecticut. I cannot remember what we talked
about, except for some remarks about his colleagues and students at
Yeshiva. It was summery weather and there were ticks in the woods. I loved
the house because it reminded me of a mountain lodge. I slept on
Jonathan's bed, which had a wonderfully comfortable horsehair mattress. A
year later, he was at Stony Brook, and I drove there from State College.
He talked to me at length about his work on Souslin's problem. It was
either then or later that he gave an hour address to the ASL in Manhattan.
At the end of the talk, Tarski stood up and said: "Who ARE you? Who ARE
you?" He meant: You have done magnificent work but I don't know who you
are. High praise.

Stan got me to go to the University of Illinois at Chicago (1965), which
did not take much doing, since I wanted cosmopolitan surroundings and they
needed faculty for the new university. His idea was that he and I and my
pal Norman Hamilton (and Verena Dyson?) would be there. He was in a manic
phase, with vast schemes. He had one of the deans eating out of his hand.
He was acting out his role as Robert M. Hutchins.

I saw a lot of him during my year at the Institute for Advanced Study
(1972-1973). As usual, there were long, interesting conversations about a
wide range of topics (eg., John Nash; the fight between Carl Kayson and
the Math Dept); but there was something compulsive about his behavior. He
was psychologically inaccessible in the sense that he would not talk about
the details of his own life. He took me down into one of the utility
tunnels, where the maintenance staff had a nest where they relaxed, played
cards, and so on. I said: "Stan, what are you doing down here?" He
replied: "I am organizing them to rise against their oppressors."
He was sleeping in Sue Walker's office, which (I think) was Einstein's (orGödel's) old office.
She had the office by virtue of being Whitney's
assistant (in a math education project). A bright spot is that I got to
know the Whitneys, with whom I got along very well. I met with Goedel a
few times, and Stan would wait outside; then we would go over the meeting
line by line. I was just as eager as Stan to understand what had gone on.

In subsequent years, up through 1991, I had long conversations with him
whenever he came through Chicago. Once in the 1980s, I had to bail him out

of jail. He had been sleeping with the homeless in the bus station on Randolph Street; they had slept too long into the morning and the police had rounded them up. The decline of his physical health and psychological condition from (say) 1972 onward distressed me more than I can say; but we did have some interesting conversations.

Gödel showed that, given any nontrivial system of mathematics, there are truths inaccessible from within the system. One has to go outside the system and apply a diagonal argument. Stan could not operate inside a social system: he had to stay outside and diagonalize it. This led to insights, but at a heavy price.

Sometime between 1965 and 1991 he gave a lecture at the University of Chicago math department: "On Current Attempts to Destroy Set Theory." McKeon, very old, was there. This was mainly an attack on Mac Lane, whom Stan accused of trying to replace set theory by category theory. Mac Lane really enjoyed it, saying: "It is just like old times." The U. of C. math department had indeed become a tamer place, and Stan's lecture livened it up a bit.

The last time I saw Stan was in the spring of 1991. I had a large lecture section: finite math for business students. He came to the lecture; afterward he gave me his analysis: I was in a situation that was bad for me. On the grounds of mental health, I should ask the dean to relieve me of these classes; I should offer to clean latrines instead. I agreed with his analysis, though not with his specific solution. As usual, we talked about a variety of topics for the next several hours. We ended up standing on Diversey Street near Sheridan at 7 o'clock in the morning. He was being particularly demanding about something, I cannot remember what. I was having a physical reaction to my psychological stress. Not entirely Stan's fault: I was having problems in my own life. I told Stan that I had to go home to bed. That is the last time I saw him.

WHAT DID STAN AND I TALK ABOUT?

I have been asking myself: What did Stan and I talk about in all those conversations between 1950 and 1991? Roughly: up to 1972 it was mainly about mathematics, logic, and philosophy. Also educational issues: the universities, and, later, what goes on in the high schools (when Jonathan was going to high school). Also psychoanalysis and related topics (in particular the use of psychoactive medication). From 1972 onward, Stan talked a lot about political and social issues. I listened reluctantly.
For example, in the fall of 1972, when Nixon devalued the currency:
Stan: "You are now 25% poorer."
BH: "So?"
Stan: "The rulers have decided to teach your social class a lesson. For 25 years, after WWII, your class has been lifted up. But now your class has become unruly, so they have given you a little drop, as a reminder of who is in control."
By "my class" he meant: people in the academic world.

I did not know what to make of this. It sounded a bit too conspiratorial to me.

Once, in the 1980s:

BH: "Stan, you tend to see conspiracies behind various situations."

Stan: "Often it is useful to see a situation *as if* it is the result of a conspiracy."

Sometimes we talked about educational issues. In 1959 I began teaching at Penn State. Visiting Stan in Michigan, I complained of the restricted framework in which I was expected to teach.

Stan: "Teach the way you think you ought to. You are the professor."

This was good advice. Sometimes it led to problems; but, over the years, it has often been helpful.

------------------------------------------------------

Best regards,

Bill