Stan Reiter at 100

Someone would stand at the chalkboard going line by line through Debreu's *Theory of Value*. Stan would sit stolidly in the corner. Fully present. As soon as the presenter began to gather steam, Stan would toss out an innocuous, "Debreu wrote `it follows readily from (8)', how readily?" The person holding the chalk would freeze, or perhaps panic. And then in a moment of relief, realize it did follow readily. Crisis avoided, the person would explain the logic and then, pulse reduced, begin anew. Stan would then coyly ask, "Why didn't Debreu just prove it. "How does one decide what follows readily?" At this moment, the presenter's mind would rush to Russell and Whitehead's three hundred plus page proof that 1+1=2.

The morning would be long.

As the term went on, we would be more prepared. If responsible for Chapter 6 which includes the sentence:

It easy to check that the relation <, defined on the set A of attainable states of E by this unanimity principle for consumers, is a preordering

you would not only prepare the "easy" check, you would also read up on preorderings. And, because you had played this game before, you would also read up on partial orderings, and be able to defend either (a) why the relation was not a partial ordering or (b) why Debreu only needed it to be a partial ordering.

You had this. But, being young, you would have a tell. You would pause at the word `preordering'. A silent plea for the ask. Stan would smell your confidence. He'd just say "we probably don't need to go into detail on that claim. Let's move on."

Stan knew that we knew. And we knew that Stan knew that we knew. Ehud Kalai would call this k-common knowledge. No need to bother walking through the proof if we understood. It was always thus with Stan. He was never about the show. He wanted us to learn

Stan ran deep, yet with no pretense. To reread the remembrances of his passing in 2014 is to be reminded of a person who believed in the possibility of economics as a science, a person who believed in his core that one could logical discern the possible from the impossible [1].

Consider the opening sentence of his capstone 2006 book with Leo Hurwicz:

`Our aim in this book is to present systematic methods for designing decentralized economic mechanisms whose performance attains specific goals.

Straightforward, logical, serious. A prelude of the precise, deep analysis that to follow. To read Stan's paper *Information and Performance in the (new)*² *Welfare Economics* is to encounter a mind of uncommon clarity.

In such a problem the allocations which are the outcome of the system are just one of the important aspects of its functioning, but others are also important, among them its administrative feasibility, the costs of operating the system itself, the extent to which private incentives are incompatible with the system. These considerations pertain to properties of the economic mechanism itself, not merely of its resulting allocation.

We are being led, logically, scientifically, to think outside the (Edgeworth) box. The discipline never returns fully back inside.

Stan spent his lifetime exploring the boundaries of what could be addressed scientifically and what could not. Lionel Robbin's description of his own intellectual struggle reminds one of Stan.

Was it not only the timidity of an age which had lost all confidence in ultimate values which led us to attempt to claim " scientific " justifications for attitudes which in the nature of things could not be justified (or refuted) by appeal to laboratory methods."

Much has been and should be made of Stan's remarkable hiring record [2] Stan did identify people who went on to become giants of the economics profession. But in our view, Stan's greatest accomplishment was to construct an intellectual space, to set the culture. At MEDS and the math center, the coins of the realm were precision of thought and depth of reasoning. Stan viewed ideas like streetcars. They pulled into the station regularly. Some ideas were important. Others were not. Stan possessed the wisdom to know who had important ideas and then to help them do the hard part. Get the ideas right. Do the science [3].

At a moment when departments struggle to get faculty to come into their offices, it is worth remembering that, as one of us put it, Stan created a place were "you were afraid if you didn't go to work, you were going to miss something new and be left behind." And so it was and may it continue to be.

We now mark Stan's 100th birthday. As two former students, we find this to be a day like every other day. A day that we wish we could be a little more like Stan, as scholars and as human beings.

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