## Thinking about Zvi

## Delivered to CRIW audience, 4-5:30pm in Bethesda, MD, Sept 20, 2003

Almost four years after his death, this is my first real chance to write a memorial speech about Zvi.

I'll talk about Zvi both in terms of his pervasive contributions to economics and also provide a few anecdotes relating his influence and interactions with me.

Zvi had no small ego. He would have loved to be here to listen to us talk about him. In his last two years, between 1997 and 1999, he thought about the Nobel prize. It was a tragedy that he did not win it, as he surely deserved to.

Zvi's death was predicted more than a year in advance. No economist, and perhaps no one else, had more tributes paid to him in person over that last year than Zvi. A memorial dinner at that Italian restaurant behind the Charles hotel. A memorial conference at the Charles Hotel. One story, which I probably got from Ernie, is that Zvi actually had a chance to read his NYT obituary in advance, clearly a privilege that the rest of us should not anticipate.

I came out of MIT PhD program, there from 1964 to 1967. Zvi was recruiting for the University of Chicago, which was then at its absolute peak of its stature, a true hotbed of innovation and influence, and they needed someone to teach a single graduate course, "macro public finance, Econ 362."

So in the pits of winter, Julie and I traveled to the Univ of Chicago in January 1967, drove down the Dan Ryan, saw the hateful Robert Taylor homes, couldn't imagine actually moving to this hell-hole from beautiful Boston or turning down offers from places like serendipitous Stanford. Yet Zvi was the magnet that got me to go there; the brainwaves were worth the sacrifice in living standards. It was just an amazing place in the late 1960s.

In that generation, coming from MIT and going to Chicago, it is not surprising that there were three major figures who formed my view of an academic career. The first was Bob Solow, my thesis adviser. He was the guru of elegant, clean, theory. That certainly did not rub off on me at all. Later in life, I did messy emprics, not clean theory, but Bob Solow still remained a friend and constructive critic.

#2 role model and mentor was Milton Friedman, whose famous workshop in the late 60s and early 1970s was the core of my intellectual excitement, as the friction between my MIT macro upbringing and Chicago monetarism spurred creativity. In my MIT-trained view, Milton combined obnoxious monetarism with simplistic econometrics. But I surely did learn at least two things from him, besides the creative juices flowing out of his workshop.

(1) Don't be shy. No economist ever had a greater ability in debating skills than Milton. I watched him give a 45 minute impromptu lunch talk, with no notes, just the man talking coherently with the entire outline of his talk in his head (a gift he shares with Larry Summers). And many times I witnessed

- his famous ability to dictate a three-page single-spaced letter on a Dictaphone without a pause. That was inspiring.
- (2) Milton's other lesson for me was how much you could influence the Washington policymakers without ever taking up a job in Washington. I followed that to the letter. I've never had a single day in government employment, thanks to Milton.

And the third influence was Zvi. He hired me to come to Chicago, and then in summer 1968 he dropped in on my Harvard office to announce that he had decided to move one year later to Harvard from Chicago, only one year after I was about to move in the opposite direction. I tried to suppress my disappointment, but I was shattered! Lured to Chicago by this magnetic man and then spurned like a rejected bride.

Why did he move? Two reasons. First was his restless curiosity; he felt that, as much as he loved and respected his Chicago colleagues, he was ready for the new challenges that would be presented by a new set of colleagues and a new environment. The other reason was more significant and far-seeing, Zvi predicted that he would have better students at Harvard than at Chicago. He turned out to be right, in part because of something he did not foresee in 1968 -- the NBER and his pivotal role in making the "Bureau" the nation's research center in his own topic areas over the 20 years after 1978. Thanks to the Bureau, Zvi was able to bring together a critical mass of students whom he could inspire, help, and invite to be co-authors, not just from Harvard but from MIT, Boston University, and other nearby academic institutions.

We are here organizing conferences in Zvi's honor because of his contributions to economics. He not only owned the production function, but with an awesome breadth. He started with diffusion of hybrid corn, an interest stemming from his initial home as an agricultural economist at Berkeley. Then he introduced hedonic regressions into economics, soon was questioning the basic validity of George Jaszi's BEA (then OBE) output and input data, turned with Jorgenson to launch a devastating critique of Denison' first sources of growth book – an enterprise about which Zvi was later apologetic and humble, in that it was overstated and sometimes wrong. He was sufficiently annoyed with Denison's treatment of education and ability to start a whole new research topic in labor economics on that issue. And then he went on and on into patents, R&D, and kept coming back to measurement. His research interests made the careers of numerous economists.

Oddly enough, my first professional paper after my PhD thesis tore apart the J-G 1967 Sources of Growth paper, making the basic point often associated with Tom Rymes, that you can't have capital deepening without technical change. It was also an old Evsey Domar point, that capital deepening without technical change would amount to "piling wooden ploughs on top of more wooden ploughs." Zvi knew that Rymes and I were right about the folly of the 1967 Jorgenson-Griliches enterprise, in their assignment of most of growth to inputs rather than technical change, although Dale has not yet confessed his sins.

What I learned from Zvi back then in the 1960s was the virtue and importance of owning a topic. My own research life is a pale shadow of his, but I have worked in his

model, digging back into the same topics again and again, whether the time-series

Phillips curve, cyclical movements in productivity, and aspects of that vast Zvi-inspired literature on measurement.

I think of Zvi and his ownership of the production function topic as if it were a river with tributaries. He had the central conception of what economic research broadly, and measurement research more narrowly, was all about. The tributaries were those that he declared to be opon game for research, whether in labor economics, sources of growth, R&D, micro organizational behavior, or whatever. He made that research happen and made it respectable, both through his innumerable co-authorships and widespread influence.

Those are my general comments, now some personal anecdotes.

Zvi recruited me to come to Chicago in a most unusual way. He was staying in Mike Bruno's apartment in Dec 1966 and invited me out to breakfast with him. I always claimed to him that this was our first meeting, but he, with his superior memory, remembered having met me in my father's office at Berkeley several years earlier, possibly in 1964 when he was working with Jorgenson on their joint papers.

What a glorious year it was when we overlapped in 1968-69, before he left. He had a particular fascination in that year with Erwin Diewert. I was humbled as Zvi made it his major life purpose in that year to "learn everything I can from Erwin." So much for me, but there were so many other reasons to be grateful for being there. Not just Milton, and all the other future Nobels, but the unique social life that I've never seen duplicated elsewhere.

Just as Milton dominated his workshop, so Zvi dominated the econometrics workshop, but in a very different way that will be familiar to many of you who have sat through workshop presentations with him. He did not dominate the proceedings as Milton did, but rather asked mainly clarifying questions. The at the end, there would be silence and everyone would turn around to look at where Zvi was sitting, anticipating his final verdict. With a shrug of a shoulder, he could save a paper that was flawed by looking for directions of improvement. He rarely let loose either unrestrained praise or outright condemnation.

Doubtless the biggest influence of Zvi on my life is probably unknown to anyone here. In 1975 he was aware that my wife Julie was having job problems at Chicago's pale imitation of MIT called IIT. Zvi was then president of the Econometric Society and faced with the problem of replacing Charlotte and Joe Stiglitz, who were the somewhat unlikely couple who "ran" the business side of the ES in those days. Zvi saw Julie as the post-Charlotte figure who would save the Society. Wow, did we save it. Starting in 1975 when the Society had a negative net worth, we helped bring the Society to the strong financial health that it has enjoyed since the late 1970s. Both Julie and I have always been grateful for the chance that Zvi gave us so long ago.

There was a lull in our friendship in the 70s and 80s, he was thriving at Harvard, I moved from Chicago to Northwestern. All that time my book on durable goods prices was bubbling on the back burner. Zvi didn't know what to do, whether to tell me to hurry up and finish it, or slow down and get it right. As an aside, there's no doubt who was the big positive influence on that book -- Jack Triplett, rarely was an adversarial

relationship so constructive in the end. I just couldn't consider a chapter complete until Jack could tolerate it. He has probably never heard me deliver such heartfelt thanks before.

As everyone knows, Zvi was the king of gossip. He was "gossip central" long before the invention of e-mail. He expected me to be on top of gossip in my limited sphere of Chicago and Northwestern, and he was frustrated and upset with me when on a phone call I failed to give him some new gossip tidbit that he didn't know already.

And there was very little that he didn't know already.

As a mentor, you didn't go to Zvi for ego-gratification. At some point in the mid-80s I reported to him, I think he was chair at Hvd at the time, that an obscure bunch of people had invented a way of hiring me to an obscure reseach post at Harvard.

Obviously, I was thrilled at the prospect. Who wouldn't want to be at Harvard? Zvi's reaction which rings to this day in my ears was to dump on the entire prospect with the phrase: "that's a bird in a very far bush."

Now we get to the real friendship period, starting in 1993. Why then? Because despite my well known techno-skepticism, the invention of e-mail changed my life completely. Believe it or not, the first e-m I ever sent was to Zvi. The first e-m I ever received was from Zvi. It was in the tone of "you idiot, look how easy this is, look what you've been missing all these years!"

Soon after the arrival of e-mail into my life in Aug 1993 came the Williamsburg conference on New Goods, which Tim and I organized in May 1994. I had planned the

seating at dinner, making sure that Zvi was at the big round dinner table, and I asked, among other things, how am I so far as an e-mail companion??

He answered to my amazement, you are somewhat "curt." Me, curt, when what I really am is long-winded. Eventually, over the next six years of his life, he relented on that accusation.

Some people here may not know that Zvi was heavily influenced by Diane's activity of directing musical comedies in local community theaters. This brought Zvi together with me, since I am a big fan of musical comedies. Knowing this, Zvi was at a Washington conference back about ten years ago and said, "I'm going to Sondheim tonight, you wanna come along?" Good grief, God was speaking, of course I would come. The musical was "Merrily We Roll Along" where the plot rolls backwards through time.

Speaking of musical comedies, one of my favorite moments in the annals of Zvi friendship involved the famous R&H musical "Carousel," which had been revived in a much-admired production by the London National Theatre, and then it came to NYC. I happened to see it first, and raved about it to Uncle Zvi. Then he had his occasion to go with Diane to NYC, and they saw Carousel in the same space as I had, and, imagine the thrill that upon arriving back in Cambridge from NYC, Zvi hopped out of the taxicab, ran to his PC, and sent me an instant e-mail about how much he loved the production. That was a big moment for me, that point when he wasn't a mentor, he wasn't an economist, he was my buddy, talking about "Carousel."

Then came the end, I'll never forget the Berlin Hilton in August 1998, after endless difficulties hooking up to e-mail, and I received that devastating message from Ernie, that Zvi had been diagnosed with terminal pancreatic cancer.

Let me conclude with the last e-mail that Zvi sent to me on Sept 4 1999.

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---- Original Message -----
From: "Zvi Griliches" < grilic@kuznets.fas.harvard.edu>
To: "Robert J. Gordon" <rig@NWU.edu>
Sent: Saturday, September 04, 1999 2:43 PM
Subject: Re: ToY
> Thanks for the good words. I have done an interview for JEP, with Alan
> Krueger. Whether I'll write more remains to be seen. Right now the rate of
> my mistakes in typing is increasing. Perhaps I'll use a tape recorder.
> We saw a good video last night: Tango By Carlos Saura. Very beautiful,
> great dancing, and very mysterious and confusing. It is a film within a
> film and the plot is difficult to figute out, with shifts of time and
> points of view. But still worth it.
>
> I have been enjoying an old sound track, Pennies from Heaven. Nice and
> silly songs from the thirties, eg My Baby said yes, yes..
>
> That is about the extent of my energy,
> Take care, Zvi
> Zvi Griliches
                               grilic@kuznets.harvard.edu
> Dept of Economics
> Harvard University
                                   617-495-2181
> Cambridge, MA 02138
                                       495-7730f
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9