**Framing Lynn’s VLSI Reminiscences**

There are two-levels of framing that unfold meanings in Lynn’s Reminiscences:

(i) “What’s the story?” and (ii) “How did we miss this story?”

**(i) INNER FRAMING** (the paradigm shift)**:**

What’s the story?

Reflecting on the past events, it appears that even those involved back then didn’t grasp the profound nature of the paradigm shift they experienced.

When they now think of “Mead and Conway”, they mostly think that we wrote a cool book that helped simplify things a bit, that Mead was the principle source of ideas, and that I was merely a helpful co-author (think dutiful-secretary, etc.).

What folks don’t realize is that the VLSI revolution actually involved the planned-coordinated-innovation and systematic-rapid-evolution of (i) new VLSI system design methods, (ii) new ways of teaching those methods, (iii) the architecture of a book that sketched those teachings, (iv), the design of a new form of project-oriented course that actually did the teaching, (v) the innovation of new QTA internet-based infrastructure for implementing student chip-design projects to confirm the learning, (vi) the use of emerging networked-PCs and laser-printers at PARC to self-publish and widely disseminate pre-publication versions of the book, the Implementation Guide, and the Instructor’s Guide (so that others could easily teach it all) and (vii) the wide internet dissemination of “implementation documentation” confirming the results and stoking the fires of competition and collaboration amongst all participants.

Since those days, almost all focus re what happened has been on Mead. However, since Mead had little to do with much of what happened beyond the initial crafting of the book, he’s never been able to explain what actually happened.

Thus the significance of the events has gone untaught and unrecognized, even by most participants, and even though the world had been changed out from under them. Seems that most participants and observers thought that the book, the courses, MOSIS, etc., was just a “cleverly-simplified-way of doing what was already being done”, and that Mead was the boy-genius behind it all.

Of course from the paradigm-shifting-architect’s point of view (i.e., mine), this effect was a necessary situational-design-requirement (done with smoke and mirrors) in order to get everyone participating in the first place - that being the nature of paradigm-shifting happenings. I.e., one needs to launch such things in such a way that few people grasp the entire picture, and thus no one is in a position to “stop it” until it’s too late to do anything about it.

And it went that fast: from one course in the fall of ’78 (MIT), to 12 courses in the fall of ’79 (MPC79), to 113 courses in universities all around the world in ’82-’83:

<http://ai.eecs.umich.edu/people/conway/VLSI/MPCAdv/Instructors.html>

This meant that almost no one afterward had any appreciation for what had just happened, especially given the reality that you "can't look backwards through paradigm shifts", and remember what it was like before. Folks simply took it all for granted and ran with it, as if that's the way it was and had always been, only now “they understood it”.

Going-Meta on all that, MPC79 and then MOSIS also taught a whole generation of EECS students what e-commerce technology would look and feel like, way back in 1979.

But that's another story, for another time.**(ii) OUTER FRAMING** (the invisible innovator)**:**

How did we miss seeing this story?

We knew something amazing had happened. However, we all got so caught up in the onrush of events that we never stopped to reflect on how it happened.

We knew the “Mead-Conway” book had something to do with it, and the book became iconic as a result. But no one seemed able to explain what had actually happened.

Untold went Lynn’s story as the hidden hand that innovated, shaped and guided the paradigm-shift via the book, the courses and the MPC79/MOSIS-infrastructure.

It's now becoming clearer why this story was missed:

Lynn had been fired by IBM from her research position when she transitioned, and she had rebuilt her career in stealth mode.

And then, in a time when gender transitioners were pathologized, stigmatized, socially ostracized and virtually unemployable, she suddenly found herself the innovator at the center of the VLSI revolution.

Constantly fearing an “outing”, she worked passionately in the back-rooms at Xerox PARC to orchestrate events while minimizing external exposures – thereby remaining a mystery-person to those outside.

In the end, Lynn was reflexively perceived as a dutiful assistant and co-author of the book, and as such achieved modest acclaim. But the real story was lost, and folks were clueless about Lynn’s full role in the events.

After all, she didn’t have a major technical track record, didn’t have a Ph.D., had no ‘powerful connections’ and furthermore she was female – at a time when women were considered unable to contribute at “top-levels” in science and engineering. How could she step forward and explain what happened? To do so would have only risked controversy, outing, and even loss of her career. Who would have believed her anyways?

But times have changed and Lynn can now explain what happened. There are many lessons in this story, and we should study them well.