

Lifelong Interactions: My Father's Kitchen Table

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One late night, I sat at my father's kitchen table swapping "work stories." I told him about my drowning in lab meetings and email, and he told me about his unending fights with his computer. At 65, my father is an active consultant to the plastics industry, with a Ph.D. in chemical engineering and a wall of awards that chronicle his busy career. Yet despite all his success, what seemed to consume him on this late night was, of all things, a *wireless mouse*. His computer support consultant insisted it was "the thing to have," yet in a few short months my father had knocked it on the floor countless times, misplaced it twice, and finally broke it recently. A wireless mouse was not the thing to have for my father. In fact, he was quite furious at "this wandering mouse."

While I was trying to be sympathetic and supportive of my father's mouse adventures, I couldn't help but let my mind wander to the children in my lab who had redesigned numerous computer mice over the years. In my early days as an academic, I would work with five and six-year-olds using paper, clay, pipe-cleaners and old socks to make "mice of the future." My young design partners suggested everything from tying small pillows on mice, to expecting computer mice to sprout wings, all to "keep their mice safe from falling on the floor and breaking" (Druin, 2002).

Little did these young child designers know they were envisioning solutions to my father's challenging interactions with a wireless mouse. That late night at the kitchen table, I was struck by how similar the concerns are of users at the extremes of life. Those people who are at the beginning of their lives or those who have experienced a great deal of life can be concerned about their physical abilities, memory recall, and how robust the technology really is. When we can support the interactions of users that may have special challenges (they can't spell *elephant*, can't remember what button to press, or can't find the mouse), we can better support all users from age seven to age seventy-seven.

That is why when I was asked to edit this new forum, I was quite excited. This will be a place to investigate the relationship between children, teenagers, and older adults, with technologies they interact with – from screen-based worlds, to tangible/ubiquitous computing. These interactions may take place at home, in school, at work, or in public places. What will be a critical part of this forum, no matter what the subject matter will be the respect we need to have for users of any age, life experience, with diverse dreams and needs.

Randy Pausch, in his profound last talk this past September at Carnegie Mellon University pointed out that "enabling the dreams of others" is something perhaps as important as achieving your own dreams (Pausch, September 18, 2007). As interaction

professionals, there is nothing more important we can all do than understand users' lifelong interactions between people and their technologies, and support the opportunities for new dreams and possibilities for the future. By giving ourselves the "permission to dream," as Randy explained, we can create the needed technologies that can support people's diverse lives. In the coming months I hope this forum can explore such topics as:

- **Is Less More?**
Should we be creating more simplified technologies for children and older adults? Will these simplifications help users to focus on the task at hand or will these technologies just become "uncool" or "unsable"?
- **Intergenerational Design**
When children partner with older adults to create new technologies what methods need to be changed? Can diverse ages and view points be bridged to find new solutions to old problems?
- **When Social Computing is too Social**
What are the perils for children when their interactions online become questionable? Are there technologies that need to be built or social norms that need to be established, or both?
- **How to Stay Healthy Online**
What are the challenges for older adults of relying on consumer health information over the Internet? Is it what older adults need, or can this information lead to wrong paths to staying well?

If any of these topics or ones that are inspired by these get you excited to write an article, please contact me. This is your forum to share ideas, concerns, and inspiration about this area of Lifelong Interactions. Herbert Kohl, the writer, educator, and reformer has pointed out, "By valuing the imagination, we empower ourselves to dream of the world becoming a better or more decent place, which provides an opening for us to act to transform it" (Kohl, 2003, p.76).

Kohl's words suggest we can make a difference. One of my favorite examples of when accommodations for challenged users made a difference for all users is a sidewalk "technology" called "curb cuts". These indentations in the sidewalks (which activists spent years fighting for) have enabled travellers in wheelchairs to move freely between curbs. This simple design has also enabled bikers, roller-bladers, parents with strollers, and people with shopping carts to maneuver the sidewalks more effectively; the technological advancement intended to support those with limited mobility has actually supported everyone.

Another example of making a small difference in technology that can lead to big usability gains can be seen in newer refrigerators. A simple "beeping sound" is now triggered once the refrigerator door has been opened for a given amount of time. While this new techno-refrigerator-feature is an excellent reminder to close the door for forgetful older adults, or curious young children, it can still be an important feature to remind the

average adult rushing around trying to make dinner. These few examples can serve to remind us that “universal usability” can happen when we consider how small and large changes in interactions can lead to unifying people of difference (Hochheiser & Shneiderman, March-April 2001).

It is important however to acknowledge that no matter how much we attempt universal solutions, sometimes the differences between people just need to be acknowledged. Users of different ages in different parts of life may never be able to interact and understand the world in the same way. My colleagues and I find this out on a monthly basis thanks to our work on the *International Children’s Digital Library* (www.childrenslibrary.org). We developed tools that enable children to search for books online by how long a book is, how a book makes you feel (e.g., happy, sad), and even by the color of a book cover (Druin et al., 2007). However, what continues to surprise me is that every month we get at least one email from a bewildered adult that has no idea why there are colors that you can choose from to search. In over five years, we have never once received an email from a child asking why that tool was there (children have sent us many other emails such as why the *Harry Potter* books aren’t in our library, but that’s for another discussion on intellectual property).

In thinking back to my kitchen table discussions with my father, it now strikes me that his computer consultant truly did not understand my father’s interactions with his world. He needed to acknowledge my father’s way of “talking with his hands” which for years has led to more than a wireless mouse on the floor, but papers, pens, and the occasional water glass. Today I believe my father is content with a “wired” mouse, a new computer support consultant, and knowing he’ll one day write a strongly worded letter to Steve Jobs the maker of his recently-deceased wireless mouse. As for me, I look forward to more late night discussions at the kitchen table to better understand lifelong interactions.

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<http://video.google.com/videoplay?docid=362421849901825950&hl=en>. For a transcript of the talk: <http://www.cs.cmu.edu/~pausch/Randy/pauschlastlecturetranscript.pdf>.