Roadblocks and Resolutions in the Technological Journey

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ABSTRACT
A twelve-year ethnographic study of the use of computers by older adults (70+) in a U.S. retirement community spans the years of 1996 to 2008. The challenges of learning about new information and communication technologies are chronicled through the personal stories of members of a self-started computer club. Described here are the social networks that resulted from computing as well as the emotional and physical costs of keeping up with cultural innovations in a later stage of the life cycle. Also considered are the merits of a prolonged relationship with research participants. *

INTRODUCTION and CONTEXT
Throughout a twelve-year period, from 1996 through 2008, I conducted an ethnographic study of the uses of information and communication technologies in a U.S. retirement community. My qualitative approach employed the methods of participant observation, extended interviews and hands-on assistance in the form, for example, of computer tutoring. This retirement community, which I call “Flamingo Park” (a pseudonym), is in a southern state of the U.S. It has approximately 1000 members whose average age, in the early years of 2000, was 85. Flamingo Park is an adults-only, Continuing Care **
Residential Community comprised of middle class individuals who live in either small cottages or the several apartment buildings. The community is far removed from my place of residence which made fieldwork challenging. For the convenience of research participants and researcher alike, I conducted the study using a protocol that I call “intermittent immersion.” This entailed periodic visits of residing in the Park for one to two weeks averaging once a year. In between visits, contact was maintained with primary participants via various communication devices, such as telephones, postal and electronic mail. Participants entered and dropped out (due to illness or death) of the study at various times during the twelve-year research period. I ended formal data collection in 2008 but by virtue of my continuing contact with some members of the research population, informal data collection continued through 2011.

In 1995-96, a few of the Flamingo Park residents formed a computer club for the express purpose of exploring this technology. I was befriended by a club member in 1996, while visiting in the Park, and was thereby drawn into the Computer Club world. [1] Thus began what became an ongoing interaction with some of the Flamingo Park residents who were aspiring computer users. Several dozen individuals aged 70 and above were willing over the course of twelve and a half years to share their thoughts and feelings with me about the culture of the Park and the role of I-C technologies [2] in their lives. By the time I concluded active data collecting, my core participants were in their mid-80s to late 90s and I was in my late 60s.

[For a more comprehensive description of my research design, methodology and analysis, link to “A Design for Qualitative Research” at:] http://hdl.handle.net/2142/26600.

As a result of this prolonged period of interaction I had ample opportunity to observe the evolution and—in many cases—the devolution of the Park residents’ I-C technology explorations. I began this study with a focus on the content of computing—on the information that older adult users might obtain that could enhance their wellbeing. I envisioned information in categories such as health, finance, creative pursuits, interpersonal communication, and entertainment/games. Eventually I discovered that information per se was not the only, or necessarily the most relevant, issue with regard to computing technology. Consider the conundrum of the novice user in the mid-1990s (when web browsers were in their incipient and less robust stages) as expressed by this exchange in one of my interviews:

Q: “What information do you hope to find with your computer?”

A: “I don’t know, I don’t know what’s on there. And I don’t know how to get there.”

Hearing similar sentiments from more than one research participant, I began to realize that my what question was not as germane as a variety of how questions. How were beginning computer users going to discover what computers had in the way of information or applications that were useful for them? How were they going to learn of any benefits they might have? And it is the how questions that are especially significant for the oldest of our citizens. Once young computing aspirants envision the what question, the how does not seem particularly puzzling. They are in school, they take
courses, they imitate their friends and peers, they “look over the shoulders” (Twidale 2006) of their colleagues, or they ask their local help desks. For Senior citizens, many of whom are retirees, a portion of whom are living in age-limited communities, the resources for major task learning may not be well integrated into their environments.

In Flamingo Park in the mid-1990s, for example, there were no communal provisions such as a public space with accessible computers for learning about the digital technology that was being promoted by mass media. In order to explore this mystery several dozen residents banded together to help each other learn about computing. Only a portion of them owned computers, but all were curious. Initially, the information that they most eagerly sought was how to use the machine. One of my roles in the research in Flamingo Park was to assist the computing efforts of anyone who asked for help. This took place both at Computer Club meetings and in the homes of individual members. As we worked together, I learned of the many challenges that confronted these older learners. Equally noteworthy were the strategies that they devised to resolve the dilemmas that arose in the course of this journey on which they had embarked.

These roadblocks and the attempted resolutions for overcoming them are described in the following two sections. With concrete examples, these descriptions constitute a summary of one aspect of my study findings. In order to substantiate the observations, I refer often to specific research participants [3]. The backgrounds of these participants [4] are briefly sketched in Appendix 1. The sketches offer an insight into their technological interests and concerns and can serve as a context for this discussion. In the subsequent four sections I consider the ramifications for elder computer users of their efforts to resolve technological roadblocks.

**ROADBLOCKS IN THE PATH OF I-C TECHNOLOGY USE**

There were myriad ways in which the computing progress of Computer Club members was stymied, slowed down, or even reversed. These setbacks, problems and impediments were met with a wide range of responses, including: frustration, resignation, anger, humor, curiosity, confusion and puzzlement. Beginning users tended to blame themselves rather than their machines and thereby absorbed more than a fair share of psychic blows.

1. **Ill-Defined Purpose for Computer**

Flamingo Park resident, Al Swenson, told me in a 1999 interview that people his age should not acquire a computer until or unless they had a clearly defined purpose in mind for its use. The absence of a clear vision of use or of an informed understanding of the function of computers was one reason for the self-described failure in the computing efforts of five or six members of my research population. Laslo Unterweg, Helmut Rossler and Myrtle Likert, for example, had had no previous experience with these devices and were mainly motivated by curiosity stimulated by mass media. Although Neva Evans, too, was moved by curiosity, hers was primed by the demonstration of her grandson’s Apple computer—a more personal connection. Furthermore, she had a strong
system of defense against potential failure, unlike several of the men who believed that they should, by virtue of previous careers, be able to master this next generation of technology. Barbara Howard, like several women in this study, used her computer initially and occasionally as a glorified typewriter although the ‘glory’ part of that concept faded as word processing programs increased in complexity.

Those who had some concrete tasks in mind were less disappointed with their computing endeavors. Sam Dunlop’s purpose was to use the computer to obtain information about a new creative pursuit like designing invitations or in the service of his already established one of making leaded glass panels. Al Swenson himself, one of the most accomplished computer users in the Park, had many visions of how this technology could improve his life. But his computer explorations had a deeper underlying motivation, and that was his strong desire to teach others. It was in order to satisfy this drive that he continued searching for new computer applications that he could share with his fellow Park residents. Nearly everyone whom I met used their computers—on however limited a basis—for electronic communication, but for a fair number of owners, e-mail was more a novelty than a reliable means of staying connected with significant people in their lives. In no small measure, this was a result of poor online connections, but there were a variety of other reasons such as a distaste for typing, distrust of the safety of the “WWW,” the desire to hear the voices of their family members, and their lack of understanding of how to use the mail programs. Except for Al, few people used the Internet with any regularity during the beginning years of my study, nor did they evidence a clear concept of how it might be of use to them.

2. Inability or Refusal to Redefine Computer Functions

Several individuals were reluctant to embrace the computer as an information resource. Don McDonald had long used a PC for entering data related to his sales work and “loved computers” as an apparatus that helped his business. However he looked askance at the ‘crazed’ Internet trawlers he believed many of the Club members to be and wanted nothing to do with “it.” Some of the women who were comfortable with word processors were reluctant to stretch their use of computers beyond that. Marion Probst’s attempts to explore the Internet were half hearted, and she was content to use her new, expensive Mac as a home filing system. [5] Will Mahler’s wife, Winnie, who conducted family business on her old word processor, was firm in her refusal to use Will’s computer although she would read printouts of their children’s e-mail. This was so even after I showed her several excellent sites related to her strong botanical interests. She had for too long trusted books for any information she desired and did not wish to abandon this resource format.

3. Overestimation of Machine Intelligence

Both Laslo Unterweg and Helmut Rossler apparently thought that a computer would bring order to their lives and “organize things,” as they said. They did not anticipate the amount of micromanaging of the machine that would be entailed. Theirs was evidently a future concept of a time when one could say to—or with a single keystroke command—
the machine, “do this for me, retrieve this file for me, systematize these records for me and tell me when/what I need to do with them.” They, of course, were not the only ones in the Park to be daunted by the many things that had to be done to and for their computers to accomplish even simple tasks. Many users found it impossible to either remember the start-up strategies of the computing process or to then build on them. The difficulty of the matter is well expressed in an article by interface design scholars:

Automation, iteration and branching get to the heart of computing, both the power and the complexity of programming. No matter how helpful, congenial, benign or graphical the interface, once these features are available, end users are in some way programming and will need to acquire the basic concepts of trying to plan for unexpected and unwanted outcomes such as dead ends, anomalous inputs and outputs and appropriate termination. (Twidale and Jone, 2005, 71)

The elderly “end users” whom I interviewed did not—with one or two notable exceptions—have the ability to tailor computer applications to suit their needs. Furthermore, they had already contended with sufficient amounts of unwanted outcomes and dead ends in the course of their long lives and could hardly relish being in the vicinity of such mishaps in the digital realm.

4. Lack of Support

There were some Park residents who were unable to marshal any useful support for their computing efforts. Primary reasons for this were inadequate social skills within the Park context, a lack of strong family ties, or the inability to make use of the resources at hand (such as the Computer Club) due to either cognitive or physical limitations. Unfortunately, Laslo Uunterweg suffered from all of these conditions. His deteriorating vision and hearing eventually prevented him from attending Computer Club meetings, he was estranged from his one close relative and his personality was out of sync with the typical Park resident. By nature, he was a loner and disinclined to ask for help from other Park computer users. Two other men in my study, Sam Dunlop and Nelson Jones were, like Laslo, severely hindered by poor vision and, in Nelson’s case, by poor hearing as well. However, the two of them had very close family ties in the form of nearby children or, in Nelson’s case, a younger, healthier wife, and both men had outgoing personalities and positive worldviews. It was their family support that enabled their continued computer use, however limited that might become.

Another enthusiastic technology explorer, Dr. Querengasser, lost most of his social support system when he was transferred to the Nursing Care Center (NCC) as a result of his Parkinson’s disease. Once his wife subsequently died, he was completely bereft of support since many of his fellow NCC residents were beyond the ability to converse coherently and few if any of them shared his interest in the computer he brought with him to his room there. His children did not live nearby nor visit often so I was the only person with whom he could converse about technology for any length of time. During my visits to his room, he and I made a few trial runs on his computer and it was apparent to me that with patient guidance, he would have been able to use it, albeit in a different capacity.
than before. His would be the very circumstance in which an interventionist use of assistive technology—such as a specially adapted PC—would be warranted.

Myrtle Likert, one of the longest of Park residents, had never married and had lived alone in her Park cottage for many years after the death of her mother. Although her hearing and vision, at age 97, were quite good, Myrtle started her computer explorations at the rather late age of 88 and had not been able to crack the computing code, so to speak. She was clearly beset by a weakened inhibitory control system, resulting in her inability to focus on one aspect of a computing task at a time. She had outlived the friends she once had in the Park and seemed unable to attract any others.

Not all support problems stemmed from a lack of a friend or partner. In some instances close family members exhibited negative emotions towards the new technological ‘member’ of the household or towards any voiced interest in computing. Several non-computing spouses made known their feelings about being displaced as the center of attention through on-going joking. Neva Evans’s husband, Peter, felt so threatened by computers that she had to tiptoe around the subject and actually hid her computer. She might have given up her learning efforts were it not for her overwhelming curiosity about this technology.

5. Inability to Learn the Language of Computing

One of my study hypotheses was that computing technology comprised a language—one that has not only a new vocabulary in the form of a technical jargon, but also its own syntax, including many distinctive verbs. I also suggested that language acquisition becomes increasingly difficult as people age. Some scholars continue to find the theory of critical learning useful to explain this difficulty:

_Chaelhood is the time for learning. Many cognitive and motor skills are gained quickly during childhood and are not mastered as easily if the learning process begins later. Developmental neurobiologists are keenly interested in this “window” of opportunity. . . . Recent work on the acquisition of language has underscored how profoundly early neuronal activity can influence the organization of the brain. . . . If a child learns a second language early in life, both the native and second language are represented in the same cortical region. In contrast, when a second language is acquired in adulthood, a new language center that is clearly separated from the native language center is established in the cortex. Although these findings do not yet explain why young children are able to learn a new language more easily than older individuals, they do support the findings that early experiences affect the way the brain develops._ (Hockfield and Lombroso 1998, 992, 93)

Other research shows that language use, in general, is compromised in older adults due to inevitable cognitive changes. And language comprehension is likewise subject to the vagaries of aging:
In listening, when the pace is controlled by the speaker, older adults may have particular difficulty in understanding and retaining the information, especially as propositional density (ideas expressed per word) is increased or in noisy environments.

Age-related declines in sensory processes and cognitive capacity impact the ability to derive meaning from text and spoken language, especially as syntactic structure becomes more complex or speech rate is increased. Age-related declines also impact name retrieval and the syntactic complexity of production. (Stine-Morrow and Shake 2009, 339-341).

Given the deterioration of even the primary language use in the aging individual, it seems reasonable to assume that undertaking the learning of another language constitutes an enormous challenge. Most of the Park individuals with whom I spoke despaired of ever learning computerese at even a rudimentary level. Is the acquisition of the language an important component of using the technology effectively? With his references to “controlling discourses” and “mastering the language of technology,” one scholar suggests that it is. Although he was speaking in broad terms in regard to multiple kinds of literacy, this statement is applicable to the specific task of learning computerese:

*Literacy is intimately bound up with language. We need to learn a language before we can become literate users of it and we use literacy as a way to learn other things through languages.* (Bruce 1995, 10)

Sam Dunlop stated that he could not retain the sense of the words that were used to describe computer functions, implying that this problem constituted an impediment in his computer use and understanding. In the midst of trying to accomplish a computing task, Neva Evans was beset with terms that she only vaguely understood such as a “flash thing” or a “flash plug in.” When Barbara Howard misnamed a gift of a “flash drive” as a “flush bar,” did that make the difference in her understanding of its use? It might if she had tried an online search for that phrase. Recalling new vocabulary words was not the only or even the heart of the matter for these computing aspirants. There were more important language learning components that were also missing such as repeated practice drills, use in context, having skilled teachers and a strong drive to learn new information. These Flamingo Park residents were not, after all, in school or at jobs six to eight hours a day.

6. Hindering Help

Not all proffered help was helpful. Early computer users are, understandably, influenced by the opinions of their significant others, their friends, instructors and helpers. What are they to do when these various agents offer conflicting opinions and advice? Indeed, what are they to do in the face of the limited knowledge and skills of their informal tutors? Neva Evans’ companion, Tally, was unafraid of the online world of commerce and enthusiastically conducted business via the Internet which included gambling, trading with collectors, and transactions on eBay. On the other hand, Neva’s son-in-law (“a computer genius”) vehemently opposed personal exposure in the realm of the Internet.
And, when these two men created a “his and hers” desktop/computer environment on Neva’s computer, she was often buffaaxed by how to get into “hers.”

Several of the male tutors in the Park, like Sturgis Johnson, had a ‘my way or the highway’ attitude and discouraged their acolytes from getting second opinions or taking computing advice from others. The early leaders of the Computer Club, Don McDonald and Al Swenson, insisted that the members all have the same kinds of services and equipment so that they could more easily trouble shoot for them. I joked with club members about being “AOL Zombies,” which reflected my misgivings about the manner in which they were locked into a rigid set of reduced choices. In the interest of facilitating group instruction individual needs were not always met. Thus, Club members who did not own PCs or subscribe to AOL were usually on their own simply because Al and Don did not know other systems.

There was confusion in the wake of tutors who took command of the machines of others, often changing the appearance and/or functions of a user’s machine. When trouble-shooting remotely (as Sturgis did for Barbara Howard and an outside tutor wanted to do for other Park residents in 2009), the user could be unclear as to how a problem was solved and thereby distanced from the process of computing. When such proxies sent e-mail on behalf of an incapacitated user, the latter lost privacy and autonomy and, possibly, her/his virtual community. And for some categories of computer users in the Park, there was no reliable help at all; this was especially true for Apple/Mac users, who were regarded by Club members as another specimen of exotic Park fauna.

7. Computing Despite Technology

Manufacturers of soft/hardware act, no doubt, with the belief that their products aid in the process of using I-C technologies. However, their rapidly changing iterations foiled many of the Flamingo Park computer users who could not keep up with them and who resented being confronted with continuous learning curves. The necessity of having to switch—when her computer had to be replaced—from a Windows XP to the VISTA operating system wreaked havoc on Barbara Howard’s mind, from which she never fully recovered. This event was the beginning of the end for her—one of the most persevering computer users in the Park. Changes in operating systems, interface designs, peripherals and levels of program complexity test the abilities of many computer users. But when present in conjunction with the aging bodies and brains of older users, the demand is a formidable one.

8. Failure of Embedment

The domestic space can be described in terms of three main elements: social space, technological space and physical space. . . . The technological space consists of the household technologies that are embedded in the physical space and used by the members of the family as part of the social space. (Vankatesh, Chen and Gonzalez 2006, 110-11)
Very few computer owners in the Park placed their computers in the shared spaces of the household such as the living room. Helmut Rossler was a notable exception and one or two others, such as Laslo Unterweg, did not always tuck their machines ‘out of sight.’ Since these early computers were large desktop models that required more than one person to set up, they tended to stay put, once situated. An initial misplacement, however, could interfere with changing computer needs. This occurred, for instance, in the Cooper household when Marvin Cooper lost interest in using the computer that had been placed in the Sun Porch, which doubled as a TV room. As his attention shifted to watching TV at increasingly louder volumes, Mary Cooper was unable to concentrate on her tasks at the computer. Contrariwise, Helmut could never ‘forget’ about his computer as it was front and center in his primary living space. Perhaps it was too present, silently reprimanding him in front of others for his technological stumbles.

If, on the other hand, a computer was too discretely placed out of sight, it might become out-of-mind for the potential user. In Myrtle Likert’s cottage her computer in her spare bedroom was rendered almost invisible as it became surrounded by piled-up cardboard boxes that overflowed with her collected ‘treasures.’ Occasionally, Park residents had to pack up their possessions and disrupt their routines. This happened to many people in the wake of changes in the zoning codes of the city in which the Park was located. Cottages had to be remodeled and their inhabitants temporarily or permanently relocated. This remodeling-induced relocation was hard on Laslo because it took months to resettle him and during that time, his computer along with his treasured scientific tools were inaccessible. Sometimes, Park residents voluntarily relocated when better cottages became available. The Mahlers chose to switch cottages for a better view, but once Will Mahler’s computer was boxed up it took him the better part of a year to organize his things and reconnect it. During this time, he seemingly got out of the habit of computing and reportedly never returned to using it as frequently as before.

The most painful kind of relocation for Park residents was the downsizing of a household in the wake of a spouse’s death or due to the need for assistance in daily living. With severe space limitations residents were hard-pressed to include large computing systems, nor could all of them afford to replace them with smaller models. Of the five individuals who did bring their computers with them to the assisted living building, two used them very little. All things considered, I would argue that the computing technology of many Park residents did not achieve embeddedness and therefore cannot be seen as truly domesticated.


The Computer Club was a major source of support in its first years of existence in the 1990s. But as the years went by and members gained experience, they wanted more from the Club than it could provide. Even in the beginning it was not intended to serve as a training venue. After the initial meeting that attracted more than one hundred attendees, interest in the Club dropped off sharply and soon consisted of a core of thirty to forty attendees—a miniscule percent of the total Park population of almost one thousand. The probable reason for this lack of attendance was because most people had hoped for
hands-on instruction rather than Don McDonald’s ‘under the hood’ expositions (although this did attract some of the male members). At first, the Club didn’t even have a computer on which to demonstrate functions. As Al Swenson pointed out, the Club was not a class; it was just a club—in his view, a “comedy club.” Many club attendees, however, tried to treat the Club as a class in the absence of other options. There was also a core group that continued to meet for the socializing it provided even though their computer use was not thereby advanced.

By 2004, Al and Don had grown tired of trying to find new topics of interest and they turned the leadership over to a younger man, George Brinkley, just as the club meeting location was moved to a new building. That core group of old club members soon found that the cozy ambiance provided by Don and Al’s jocularity was missing. Some of them were deterred from attending by the longer distance to the new building. The men with vision and hearing problems said that the lighting and introduction of amplification in the new meeting room bothered them. The second-generation leaders of the Club held meetings monthly instead of weekly and not at all during the summer. Furthermore, a younger cohort of residents with a possibly more advanced level of I-C technology experience began attending meetings. Thus, on every dimension, the original members were distanced from the familiar face(s) of the Computer Club. They had lost a cherished part of their social network even as they, by virtue of aging, were becoming frail.

10. Absence of Good Infrastructure in the Park

Early I-C technology adopters are, to begin with, alone within the greater social order. Without the support of other users of an interactive technology, they have no communication partners and there is little impetus for the provision or broadening of an infrastructure to support the technology. This “critical mass” phenomenon (Markus 1987) was operative in Flamingo Park for at least the first decade of the Computer Club’s existence. Although repeatedly frustrated in his attempts to make Park administrators aware of the need for technological infrastructure beyond telephones, Al Swenson kept trying. The Park wasted many years before it arranged for the at-your-elbow help Barbara Howard and others needed to progress with their computing. It wasn’t until the Club had attracted a regular attendance of thirty or so individuals that Park administrators in the late 1990s arranged for a larger room, a projection screen and a single, used computer to be available for the club. It took another couple of years to arrange for an Internet connection.

Around 2004, or eight years after the inception of the Computer Club, Park administrators were persuaded by Club members to provide a few items of equipment such as a proper computer projection system. In order to raise money to purchase a new computer, Club members conducted raffles for various items like printers. The room in which this equipment was located was not a dedicated space for the Club, and the computer equipment was locked up between meetings. Unlike some other retirement communities, the administrators of Flamingo Park did not provide public computers for use by residents who did not own them. And in the absence of such a computing center, there was no programmed instruction of a hands-on nature. Had the Park directors had a
more visionary view or understanding of I-C technology, many more Park residents might have learned to use computers or at least have gained some acquaintanceship with the phenomena that mass media outlets were promoting.

11. Traumatic Life Changes and Physical Decline

The deaths of their wives had drastic impacts on the computer use of several husbands. Helmut Rossler’s chronic depression deepened after his wife’s death and his subsequent move to the Assisted Living building. Although he took his computer with him, he rarely used it and he did not take it to the Nursing Care Center once transferred there, where he spoke only of waiting to die. The death of Dr. Querengasser’s wife after he was transferred to the Nursing Care Center added to his isolation and lessening of interest in all things. Illness and sensory loss also impacted use, as was the case with several of the men suffering from macular degeneration. Cognitive decline resulted in the loss of interest in computing by a number of the research participants. The burden of taking care of ill spouses was another reason for a disruption in computer use.

[The following figure summarizes interviewee computer use by household, as well as changes in their household locations and health conditions throughout the research period.]
Figure 1. Comparison of computer use in household and change of household location and change in health condition of interviewees from 1996 to 2008.

*Only Wife Uses I-C technology*  
*Barbara Howard &*  
*Neva Evans (&&)*  
*Marion Probst (&&&)*

*Only Husband Uses I-C technology*  
**Albert Swenson**  
**Don McDonald**  
*Helmut Rosller &&###*  
Dr. Querengasser & ###  
*Samuel Dunlop &*  
Will Mahler (&&)  
Sturgis Johnson

*Couples Using I-C technology (first named = predominate user)*  
Nelson and Sue Jones  
Mary and Merwin Cooper #  
George Brinkley (equal use with that of his partner)

*Single Individual (widowed/divorced/not married) Use of I-C technology*  
Myrtle Likert  
Laslo Unterweg (&&)  
*Carmen Nouvel ####*

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* spouse ill/in decline at time of meeting, subsequently died  
** spouse ill/in decline and still alive (through 2008)  
# by 2008: deceased  
### by 2008: deceased, spouse alive but ill  
#### by 2008: deceased, as well as spouse (if there was one)  
& one move: from cottage to Assisted Living or Health Care Center  
&& two moves: from cottage to AL and then to HCC  
(&&) move: to upgrade cottage (voluntary or mandatory)  
(&& ) location/status uncertain in 2008

Italicized names: one interview only
RESOLUTIONS AND PARTIAL SOLUTIONS FOR ROADBLOCKS

Efforts by these older explorers to solve technological problems and improve their computer use did not always achieve the desired result. Nonetheless, the following set of attempted strategies and work-arounds demonstrate the strong desire by many Club members to acquaint themselves with the technological advances of their society. For other members, however, the best solution they found for their aggravation was to walk away from the computer.

1. Opting Out

A few of the Computer Club attendees quietly stopped computing. Will Mahler and Myrtle Likert are examples of individuals who simply decided to occupy themselves with other tasks that they reportedly found satisfying. For Myrtle it was collecting and shopping at the Park resale store, and for Will it was attending to his voluminous postal mail and watching old movies on TV. Will insisted, however, that his computing days were not necessarily over, and Myrtle’s computer remained plugged into its power strip. Other participants, such as Laslo Unterweg, stopped their active computer use with vociferous denunciations about the failed promise of the technology.

2. Redoubling Effort

There were a sparse number of individuals like Barbara Howard, who decided, despite major setbacks and health crises, to keep trying to remain active computer users and explorers. Getting back to her computer became Barbara’s primary motivation for enduring the many months of therapy following several major surgeries and at least three strokes in her late 80s and early 90s. For her, multiple roadblocks constituted additional but worthwhile challenges to be added onto that of computing. To augment her own mighty efforts Barbara invited help from all and sundry, including her visiting children, Park acquaintances and special friends like Sturgis Johnson or myself. Al Swenson, as the most experienced computer user he knew in the Park, was more alone in solving his problems. His computer gave up the ghost in 2008 when Al was 91 and in declining health. Nevertheless, he expended considerable quantities of his waning stamina and mental acuity wading through a four-day morass of India-based help agents (whom he could not hear or understand) and restored it to a functional state. This took place six months before his death.


Helmut Rossler used his knowledge of videography to try to understand computer functions. He videotaped his niece using e-mail, focusing his camera on her hands on the keyboard and her narrated step-by-step account. He thereby achieved a modicum of success, though short-lived and ultimately frustrated. As former HAM radio operators, Al Swenson and Mervin Cooper approached computers in part as a substitute technology for long distance communication and were able to embrace this promise via e-mail. But it was the advent of Skype that really excited Al and inspired his enthusiastic use; it had
the component that he was missing in e-mail—the human voice of his HAM days. For Nelson Jones, the computer was just one more gadget to play with. He was the first to mount a camera on top of his desktop machine and tinkered with every application he came across including voice recognition software in the late 1990s. As his vision failed, Nelson augmented his eyesight with binoculars; to soften screen glare, he wore a visor. He figured out early on how to enlarge font within computer texts such as e-mail, and he continually searched for devices that would allow him to continue to use his computing equipment.

Whereas keyboarding proved a deterrent for some beginning computer users, those who were already accomplished typists could relate to that aspect of computing with ease. For the most part these were women such as Barbara Howard, Marion Probst, Mary Cooper and Carmen Nouvel. However, Al Swenson expressed gratitude for a high school teacher who had once made him take a typing class, declaring that this ability facilitated his computer use and that the lack of this skill hindered his male friends. Don McDonald was comfortable with computing devices; his DOS-based PC served his data entry needs adequately. Although he eschewed the Internet and its suspicious contents, he eventually warmed up to the idea of electronic mail and when he found a service for it that did not include a Web browser, he signed on. Had he not mastered the elemental function of a data processing machine, he would never, I suggest, have experimented with the next incarnation of computers—as a communication or information resource; indeed, it took him a decade from the time he started the Computer Club to take that step.

4. Building on Existing Interests and Life Practices

The card game of Solitaire—widely known by U.S. adults—was reportedly included in the applications of an omnipresent operating system for computers in order to ‘train’ novice users on how to manipulate a mouse. This worked quite well for many Computer Club members such as Nelson Jones, Neva Evans, and Laslo Unterweg, to name a few. Alas, several of these members, including Laslo, did not master other computing applications nearly so well. In fact, playing Solitaire was the only computer function Laslo liked. However, half a dozen men enjoyed the game of Flight Simulator which appealed to the life experiences of three former pilots and several engineers.

A large number of women, some of whom had little interest in the Internet, were enthusiastic about making greeting cards with CD-Rom programs because the sending of greetings was an activity with which they were already familiar. Similarly, the ability to type with fancy fonts and print onto decorated paper appealed to those who were used to sending holiday letters. Mary Cooper was excited about extending her penchant for scrap booking with the aid of her computer and created professional quality scrapbooks for each of her grandchildren. She surmounted—with the help of her children—what she considered to be a fairly steep learning curve in the mastery of scanning and page layout design with which she was experienced in paper form. Many men laid aside the Wall St. Journal and used their computers to check on their stock portfolios; a portion of them never did anything else online.
For some Club members the appeal of the Internet (mostly e-mail) was heightened when they learned that it enabled them to enter a global network of their special interests. For the Coopers, it was connecting with missionary workers affiliated with their church denomination. For Dr. Querengasser it was communicating with fellow therapists from around the world and for Neva Evans it was reuniting with old classmates. Al Swenson and other Park men were delighted to discover online Bridge games and Barbara Howard finally decided to pay for a more reliable Internet connection when she discovered an online Scrabble partner. Marvin Cooper and Al were pleased to find that a network of HAM operators was organized via the Internet, and Al engaged in conversations with these amateur radio operators in other countries. And, after twelve years of reluctance, even Don McDonald became interested in the Net when he realized that he could thereby participate in prayer groups; in 2008 he asked Al to help him establish a faster connection to get online. Thus, strong interest in selected subjects eventually spurred some Club members to seek assistance to overcome their disdain for or ineptitude in the realm of computing technology [7].

5. Sequestration and Kind-hearted Subterfuge

The integration of new technologies into a household entails the many factors that these authors mention:

As the computer technology diffuses and becomes gradually domesticated . . . we need to supplement traditional evaluation metrics, such as productivity and efficiency, with those that take into consideration aesthetics, convenience, family dynamics, and the social and emotional needs of household members . . . . (Vankatesh, Chen and Gonzalez 2006,109)

The majority of Computer Club attendees set up their computer equipment in a second bedroom or on their enclosed sun porches. This spared the non-user of the household the sight of what for many spouses (both male and female) was a less than welcome guest. As Marvin Cooper lost interest in using their computer, Mary Cooper had it moved from their sun porch/TV room to a second bedroom—a quieter setting for her and removal of a distraction for him. The most pronounced case of sequestration was that of Neva Evans’ peripatetic laptop. While her husband, Peter, was still alive, Neva kept the offending instrument in a desk drawer and used it when he was not at home or was in another room. After Peter died, Neva’s laptop moved out into the open space of her bedroom and eventually was allowed to migrate to her living room. Her small laptop burgeoned into an adjacent and larger monitor set up as she developed a relationship with Tally, another widowed Park resident who was enthused about computing.

Although some Park couples enjoyed doing everything together, others were able to pursue their interests separately. Some of the spouses of Computer Club attendees went to other club meetings or activities during its weekly meetings or simply stayed home. When Neva’s husband refused to return to a computer class they had attended together at a local community college, she later enrolled in other computer classes by herself. Thus, some Park residents managed to find a way to fly solo in pursuit of their tech interests while others did not or could not leave an ailing or unhappy spouse behind.
6. Life Repositioning: Loss and Acquisition

While no one obviously wished for the death of her/his spouse, it was apparent that this event proved ultimately liberating for some individuals—mostly for the women whose husbands had for years been experiencing physical and cognitive decline. Marion Probst, Barbara Howard, Mary Cooper and Neva Evans all expanded their computer use after the deaths of their husbands. This occurred for at least two reasons—as a means of distracting themselves from their grief and/or because their spouses’ disapproval (subtle or overt) was absent. In two instances, widowed women acquired new companions and in Neva’s case, her gentleman-friend increased and improved her computing. Another life change that affected computer use was the geographic relocation of some residents’ children. Such moves were often prompted by the declining health of a parent. When Sam Dunlop’s daughter moved across the country to her father’s town (his son already lived nearby) his diminished computer use was resuscitated during his children’s frequent visits. In addition to helping him with his computer tasks, they jointly searched the Internet on topics of interest and with great merriment they also merged computer searches with TV game show watching.

7. Family and Friends

No one I knew of in the Park used his/her computer without periodic or even continuous help. Family support was vital for many beginners. Residents’ children donated cast-off computers to them and then dispatched their children to help the grandparents figure it out. Of course, such help could be a mixed blessing since the younger generations had interests in and approaches to computing that were not always in line with those of older users. Some Park couples explored computing together, attending classes and giving each other moral support. If, as was usually the case, one partner became the dominant user the other tried to encourage and support her/his efforts. But other couples, such as Neva and Peter Evans, did not achieve a meeting of the minds on the new technology. And, as Neva once observed, when it was the male partner who was less interested or capable, he did not acquiesce quite so willingly as wives did to being “left behind.” These technologically “decoupled” individuals—like other Park residents who were divorced, never married, and/or childless—had to rely on “outside” sources of support, such as other residents or classes. However, many of the Park residents who attended courses offered at nearby schools or Elder Hostels reported them as less than ideal because there was too little carryover to the configurations of their home PCs.

8. Computer Club and Park Classes

Thus, for a core of Park computer users, the Computer Club became the mainstay for unseasoned and experienced residents alike. At their weekly meetings, attendees commiserated, struggled to mesh divergent interests and skills and watched each other come and go over the years. The co-leaders who kept it running were very instrumental in influencing new members’ choices of hard/software, much to the dismay of Marion Probst, initially the sole Mac user/member, who had no one to talk to about her computing issues. Co-director Al Swenson heavily promoted AOL as an Internet
provider, although there were other options. A few of the members who early on discovered JUNO, a free service provider for e-mail, eventually switched to AOL before JUNO included an Internet browser in its services. Barbara Howard, for reasons of economy, was one of the last to join AOL even though JUNO was unreliable as an Internet provider.

Another influential voice was that of Cody Peabody, a middle aged, male tech tutor who came into the Park to give talks at the Club, hold occasional group classes, and offer individual computer trouble shooting for a fee of about $80 per hour. He counseled club members to use AOL, Yahoo and, by 2002, Google for their Internet explorations; apparently, he was rather dogmatic in his suggestions. For example, when I once suggested the search engine Alta Vista as an alternative to the hierarchical, indexed nature of Yahoo, club members expressed doubt, explaining that Cody had said they should all use the same thing so that he could help them better by keeping everyone on the same page. But such is the nature of “help;” it is constrained by the skills, knowledge and biases of those who provide it. As a fellow Mac owner I tried to help Marion with her computing questions and we often speculated about whether Neva Evans and other tech explorers would have had more gentle learning curves if they had not been discouraged from trying the Apple operating system as had been Neva’s original desire.

9. Proxies

When several study participants found themselves unable to use their computers but not yet willing to give up their computing personas, they turned their keyboards over to others who became their proxies either temporarily or permanently. Laslo Uunterweg’s visiting secretary performed all of his important computing tasks with increasing frequency. She conducted his business, checked his stock portfolio, wrote his e-mail, and searched matters of interest under his direction and/or dictation. She and Laslo were able to do so based on their complementary knowledge of the potential uses of the computing apparatus, which, in turn, rested on his personal experience of previous use. A similar situation existed in Sam Dunlop’s ‘household’ when his children used his computer on his behalf for a variety of purposes like sending e-mail to family members, executing print commands and the like. Legally blind, Sam requested this help and instructed them on the tasks. These examples are of on-site proxy computer use. There is a remote proxy use now in effect as Sturgis Johnson and outside computer tutor, Cody Peabody ‘take over’ the desktops of willing Park residents. We might wonder, then, if Barbara Howard were to reach the point of inability (due to the increasing weakening of her hands, for example) to use her computer and directed Sturgis in its use from his computer, what would become of her status as computer/I-C technology user?

There are more temporary proxy-ships that generally do not negate primacy of use. Whenever a computer tutor, Computer Club helper, or visiting family member took over the use of a resident’s keyboard to instruct, solve a problem, etc., that too was a kind of proxy use. This typically short-term experience, however, did not obviate continued use by the computer owner. Interesting questions arise with regard to proxies and computer use. If Laslo, for example, is no longer able to see well enough to use his computer, do we subtract him from the pool of active users? Or, do we take into account his directed
use of his computer three times a week by his secretary? Clearly, he is still—however indirectly—using his computer. Thus, when considering the issue of I-C technologies in households, the concept of use should include that of proxies. This is a noteworthy issue for pollsters.

10. Warm vs. Cold Experts and Directional Help

In many cases, the Park computer users cared less about the content of Computer Club meetings and more about the group support which was the attraction that kept people attending. And equally important were the individualized, one-on-one, face-to-face, or side-by-side interactions among club members and with the co-directors that encouraged computing efforts in the face of perpetual frustration. This nurturing support was offered by what one researcher calls “warm experts:”

_They possess the knowledge needed to operate with a reasonable degree of success in the world of technology, but, at the same time, they are part of the user’s life-world and share experiences, interests and knowledge with them. Taking this position allows the warm expert to mediate between the . . . overwhelmingly diverse content of the medium, on the one hand, and the novice user’s concrete local situation, needs and background._

(Bakardjieva 2006, 101)

Club members, Park neighbors [8], family members and I all served as warm experts (or, at least, semi-experts) for many of the computer users. Paid tutors from the outside, such as Cody Peabody, on the other hand, were more lukewarm or cold experts who were somewhat knowledgeable about Park life and people but not friends or close associates. Without the presence of warm experts, many fewer Park residents would have ventured down a high-tech pathway. Within a warm network of support, instruction was offered in a multi directional fashion. Some information traveled vertically: teacher/experienced computer user to student/novice user. This verticality could go north or south generationally speaking. That is, the teacher might be one’s grandchild or, as in Neva Evan’s family, the students might be one’s grown children. Instruction also had a horizontal directionality in which two individuals with similar knowledge levels instructed or advised each other. Although this tended to be gender limited, sometimes equally knowledgeable male and female residents shared technological discoveries with each other. There were also instances of horizontal help dyads that were cross-generational. Carmen Nouvel, for example, learned to compute long before her son reached adulthood but once he matured and became computer accomplished, they engaged in mutual teaching and advising. What I never witnessed, however, was a teacher/student relationship between married couples; no one wanted to risk upsetting her or his mate by giving him or her driving lessons on the highway of technology.

[These differing kinds of tutelage are illustrated in figures 2, 3 and 4 shown below: “ICT instruction by generational age.” For enlarged versions of these figures, see Appendix 2.]
11. Communal Climate

A more subtle and diffused source of support for Club members was the community itself. I witnessed countless instances of generosity and encouragement among the Park residents. They supported one another in times of grief, as Neva Evans described when her husband died, and in coping with all manner of illness and travail. The most obvious channel for mutual help was the Park volunteer program, which engaged about half of the community. Many Park events, services and leisure activities were sustained by a corps of volunteers. [9] The volunteer program helped residents become acquainted which fostered social interaction which in turn encouraged the volunteer impulse.

EXPANDING SOCIAL NETWORKS THROUGH COMPUTING

The Park members’ spirit of communitas, generated in good measure by volunteer activity, provided a foundation for the Computer Club. The Club and computing activities, in turn, extended the reach of the volunteer program and added to the sociability of Park life. This occurred in several ways. Whereas female residents had many opportunities to socialize and enter each other’s private spaces—both through volunteering and by virtue of their status as ‘natural’ care givers—male socializing was more limited. Adhering to the social norms of this age cohort, married men and their wives interacted mainly with other couples—a small portion of the larger community. Single men, unless they were very outgoing, had an even more circumscribed social network. [10] Consider Laslo Unterweg. Once he was moved to a different cottage and lost contact with a friendly neighbor in the old one, his only socializing took place around his computer. Social agents for him were: 1) a paid computer tutor who came to his home, 2) a paid secretary who came to his home several times a week, 3) occasional visits from this researcher studying his computer use and 4) attendance (until his hearing failed) at Computer Club meetings. In the absence of his computer ownership, Laslo would have been severely isolated and alone.

Barbara Howard’s circumstance illustrates a richer instance of this process. After her husband died, she initially had fewer male ‘dining partners’ as her association with couples ebbed. Eventually, however, her circle of acquaintances in the Park was substantially widened as a result of her computer knowhow. Notwithstanding the strong political views that might have otherwise prevented it, Barbara interacted with all those in the Park who needed her technological skills and who offered her similar help when she requested it. In the first category were those who asked her to type business letters, make greeting cards and design leaflets. She served as a semi-official reporter gathering
information for the Park Flyer which she produced for several summers. When she was no longer able to live independently, she became an interviewer of her fellow residents in the Assisted Living (A.L.) complex. With the aid of her computer, which she brought with her to her 10 by 14 foot room, she wrote their biographies for the A.L. newsletter. In turn, Barbara received uncountable hours of help from many Park residents who assisted with her hardware failures, software installation, instruction on the use of new applications, and so on. Even those who were not interested in computers helped her by constructing aids (such as a dropped keyboard) for her use, moving hardware in and out and generally singing her praises as an accomplished tech devotee.

Early scholars of digital technology envisioned a palliative role for the Internet through which the socially isolated could find a virtual community. Although selected computer users in Flamingo Park experienced this benefit, it was not the cyber world that proved to be the most crucial conduit for expanding personal networks. It was the mere fact of ownership and the challenges of using this technology that generated increased socializing. It was their computing expertise that afforded Park men expanded opportunities to serve as volunteers—as tech tutors—and to enter the homes of residents with whom they otherwise would not have interacted. It was their common interest in the technology that allowed women—married and single—to forge platonic relationships with Park men. It was the act of computing that brought together individuals from diverse backgrounds and ideologies as their tech anguish overrode any previous reluctance to become acquainted.

THE LONG VIEW
It was not my initial intention to sustain my research in Flamingo Park for over a decade. But as my life and inquiries became entwined with those of the Park residents, I felt compelled to return again and again to chart their progress and to now and then right someone’s course. We were, in reality, on the same sojourn through the foreign territory of technology, even though each of us may have been at a different place along the path. As the years went by I became increasingly appreciative of my prolonged interaction with the residents of Flamingo Park because the merits of a long-term study of the role of I-C technology in the lives of older adults are many. One can follow the arc of progress with technology, gauge the sustainability of human effort, observe how use waxes and wanes, chronicle how life-changes interfere with or improve abilities, identify life motifs, and discern immutable traits that impact learning.

Another advantage of a long-term view is that, with time, a consistent core of concerns emerges for each individual. It was only after many years’ of interviews with Laslo Unterweg that I fully appreciated the depth of his frustration over lost time and how much he valued that commodity. Similarly, it was the constant repetitions of their personal mantras that finally allowed me to hear the despair that Neva Evans felt over her husband’s anti-technology stance and the love of connecting with people experienced by Al Swenson. It was through long years of association with Barbara Howard that I could comprehend the all-encompassing quality of her determination to fully embrace her life in the present and to be ever ready for whatever came her way.
Most importantly, I experienced the folly of hasty conclusions and was often reminded that research is, in a sense, never done. When I visited with Al Swenson in 2005, I learned that he had become bored with his computer explorations and could find little new on the Internet to excite him. Thus, at the age of 88, he had drastically reduced the number of hours he spent on his computer, and he emerged from his at-home office and rejoined his wife in their living room to watch their stored programs on TiVo. One could have reasonably predicted a continuing decline in his interest. But approximately two years later, he was introduced to Skype and it reinvigorated his computing persona. In 2008 he was still enthusiastically Skyping and trying to interest other Park residents in its use. One such resident was his friend Will Mahler, who had two sons living in New Zealand—the perfect candidate for Skyping. But Will had not had his computer working for over a year and he resisted Al’s urging, saying he would rather communicate by telephone. Notwithstanding Will’s apparent lack of interest, he assured me that he would have his computer running by the time of my next visit. With regard to this vow, I have learned to make no predictions.

Gerontological research of the last two to three decades has focused on the notion of a life-long development for human beings. The Life Span Theory, for example, posits that development continues throughout the life cycle. “That gain or growth as well as loss or decline can be observed throughout the life course has provided a general framework for researchers to explore some of the positive attributes of aging.” Some tenets of this theory are that “aging is a life-long process; . . . no one age or period of life is any more important than any other age or period . . . [and that] there is plasticity and resiliency in function throughout the life span” (Hoyer and Rybash 1996, 67). Two particularly salient concepts are “resiliency and reserve capacity:”

Resiliency . . . refers to a capacity for successful adaptation and recovery in response to stressful life events. Reserve capacity refers to the individual’s resources for responding effectively to challenging situations. Some researchers have suggested that there is a diminished reserve capacity at the end of one’s life span and that the individual is vulnerable to a variety of circumstances associated with mortality. However, studies of reserve capacity and resiliency do not address how development can be enhanced in situations where there is optimal support. (Hoyer and Rybash 1996, 68)

The idea of continuous development provides a compelling rationale for the longitudinal examination of the learning challenges we all face throughout our life cycle. Individuals’ lives in old age are not static. Their interests, pursuits and abilities fluctuate. Appreciating these changes and the factors that influence them requires patience and re-viewing.

AMBIVALENCE, AMBIGUITIES AND INEDIBLE TRUTHS
Out there in the land of American citizenry, research findings seem, of late, to be regarded as an edible commodity. Many approach the lunch counter of information and request their daily “take away” of factoids. Here, then, are some wisdom morsels from my Flamingo Park research that I can serve up to interested diners.
The content of computing was in many instances not as significant as the act of computing.

Computing expanded the in-person (i.e., co-located) social networks of the users.

Computing increased the self-esteem of users when they were adjudged “cool” and “with it” by their progeny, most particularly their grandchildren.

Owning computers—a luxury item—enhanced the esteem and status of individuals as persons of means.

Owning/displaying a computer served as a symbol of intelligence and accomplishment to others (even when use had ceased).

If we take the time to consider the research findings more extensively we may find less digestible aspects but achieve a more nuanced understanding. In place of a tasty conclusion of desserts, there is the less palatable dish of ambivalence. As described in earlier sections, it is obvious that the resolutions and solutions for the computer-related roadblocks of Park Club members had as many drawbacks as benefits—help that was harmful, support that was equivocal, user outcomes that were ambiguous, value that was indeterminate. It became apparent, especially as residents aged, that computing was not an altogether salutary experience for the computer owners in Flamingo Park. At one end of the spectrum, Barbara Howard and Al Swenson thrived on computing and were indefatigable in their efforts to expand their knowledge and use of the technology. They both referred to computing as lifesaving. At the other end, Laslo Unterweg and Helmut Rossler were driven (further) into anger, despair and depression by their perceived inability to learn computer functions. Laslo’s anger was rooted in the proportion of effort, time and brainpower expended in relation to the paltry gains in technological understanding and use. For Helmut the despair grew out of his conclusion that he was not mentally capable of using the technology.

Some residents tasted a bit of the promise of virtual community through electronic mail: Sam Dunlop with Army buddies, Neva Evans with classmates, Al with former HAM operators, Mary and Marvin Cooper with their fellow missionaries, and many with family members in distant towns. Others such as Myrtle Likert, however, never found any viable e-pals. Those individuals who never got beyond a rudimentary use of e-mail were living Al Swenson’s worst-case scenario, of owning a $3,000 mail machine. Al was, in fact, the only member of the original Computer Club to experiment with social networking sites. He was ‘put on Facebook’ by his grandchildren during their visit with him in December, 2008. He sent me a ‘friend request’ in January, 2009, but he confessed that he didn’t like using Facebook, preferring e-mail for communication. Had he had time to discover more than one former schoolmate before his death two months later, he might have eventually warmed up to it. But this is the point: he had run out of time.
The number of Flamingo Park computer owners who expressed positive sentiments about
the things they had learned to do with computer technology was equaled by those who
had tales of regret as well—mostly for their perceived lack of success in their endeavors.
Everyone, at some time in the course of computing, encountered frustration and felt a
sense of desperate helplessness—even savvy Al Swenson when his computer expired in
2008. They recounted a Kafkaesque nightmare of stagnation, of waiting: waiting for
something to happen on their screens, waiting for a connection to the Internet, waiting for
a tutor to arrive, waiting on the telephone for a help desk explanation, waiting for
understanding to descend. To many Park computer users their machine seemed
unforgiving no matter how hard they tried to placate it. This was the implication in their
complaints as they suffered through the unforeseen consequences of errant keystrokes
and mouse clicks and finally just gave up on a task.

In addition to mechanical issues, beginning and intermediate level users were undone by
the amount of information confronting them on their computer screens. Myrtle Likert was
the most extreme example of the inability to choose any one ‘item’ (icons, words, menus
etc.) to focus on while trying to execute a given task, but more experienced users had
similar difficulties. Barbara Howard was losing track of where things were on her
desktop as a result of her simultaneous cognitive slowing and the increasing complexity
of her operating system. Shneiderman’s (2000) notion of “evolutionary learning,” which
includes “progressive disclosure” of the contents of computers, is intriguing in this
context. If, as he suggests, users could control the presentation of the content, they could
better match their skill level with the machine capabilities. But the notion of evolutionary
learning would have to include the design for a devolution of learning ability such that
the user could also de-complexify the program as needed.

Life-long development is a worthy concept with which to approach the subject of aging.
The question is how to enhance the quality of the ever-developing life course. My
research inquiry included the assumption that the well being of our oldest citizens would
benefit from their engagement in meaningful challenges, and I theorized that learning to
use the latest I-C technology would be such a challenge. This challenge was in the
category of keeping up with cultural change which I regarded as a worthy goal (as did
many of my interviewees). However, as a result of witnessing first hand the toll of this
endeavor, I have modified my view. To return to the metaphors of roads and journeys, I
would now recommend that we downshift our expectations regarding the content of
learning tasks. Perpetual technological pace keeping can constitute too great a burden to
mandate for our final years.

THE NON-ADOPTION OPTION
At present, young brains are being trained by electronic media to speed up, to fracture
attentions spans, to multi-task as never before. Many older brains cannot sync up with
this pace, cannot reorganize their structures accordingly. And the rapid pace of
technological change is apparently overwhelming middle-aged citizens as well, if the
recent advertising campaign of a major retailer of electronic goods is a reliable indicator.
With slogans like, “technology changes faster than the weather,” “stay on top of the ever-
changing technological world,” and “future-proof your technology,” a large U.S. chain
store promised, in early 2011, to buy back their customers laptops, cell phones and TVs as they become outdated. [11]

For approximately two decades pundits have been declaring the new info-communication technologies—with the Internet at their center—to be a major cultural shift. In fact, one discernible form of cultural movement has been a great deal of technological pushing. For the Senior Citizens with whom I was computing, it seemed more like shoving as they listened to television and radio announcers rattle off incomprehensible letters. More than one member of the research population in Flamingo Park commented that at every turn they heard, “H-T-P or something” and “WWWs everywhere.” These individuals did not know, in the mid to late 1990, how to translate or make use of the letters. But they were increasingly aware that these arcane symbols were shunting them to the sidetrack of some larger cultural context. When they initially did try to work with “all the letters” they found that they could rarely get the “addresses” (i.e. the URLs) typed or moved into the “box” correctly and thus could not even get onto the super highway they were hearing about. Since that time, those widely-advertised letters have, of course, become so integrated into the national technological consciousness that the need to say them has nearly vanished. First the ‘HTTP’ was rendered unnecessary; then the ‘WWW’ too was omitted. This was followed by the advice, “for more information on this story, go to “NPR dot org” and now it’s “see us on Facebook” and “join our Twitter feed.” The desktop computer is en route to obsolescence even before large segments of the U.S. population have learned how to use it. Taking its place is an increasing array of hand-held devices that require the nimbleness and acuity of youthful hands and eyes.

During the long period of time in which I participated in the lives of older individuals who were exploring a new generation of I-C technologies, I observed how they triumphed and despaired over their mini successes and failures with the machine, absorbing both kudos and blows to their self-esteem along the way. I noted the fact that they needed enormous amounts of help and assistance in this endeavor and that they spent considerable sums from dwindling resources of time, energy and money in the process. (In less felicitous circumstances than Flamingo Park, these major learning challenges would have presumably represented impossible costs.) Who can be the final arbiter of the balance of loss and gain in these accounts? There is, in the scope of my research, no obvious way to concretely or “objectively” assess the benefits that individuals may have experienced as a result of exploring computing, e.g.: brains stimulated to grow more synaptic connections; an increase in flexibility of thought; an appropriate stretching of resiliency or a positive plumbing of reserve capacity.

Without such measurements, are we justified in assuming (as mass media and academic literature seem to do) that older adults should want and should be urged to undertake the arduous journey of learning new and complex tasks in their last years? Are we ignoring the positive aspects of non-adoption of new technology? A significant majority of Park residents did not own or use computers during the years of my research. Based on my observations and the passing remarks made or conveyed to me by and about I-C technology non-adopters, my impression is that there were many contented computer-less people there. Perhaps they basked in the knowledge that they had achieved contentment
sufficient to see them through the rest of their lives. Perhaps they were not tuned in so closely to the news media as to be bothered by or unduly curious about the ubiquitous pointers to websites, or they had effectively screened them out. In reality, given the present circumstances of old age, non-adoption of new technologies is understandable. The rationale is well described below.

The constraints of old age are not only material but may derive from ill health, loss of social networks, and unfamiliarity with the new. . . . The “problem,” if it is a problem, comes from the lack of resources to move along the learning curve inherent in the need to adapt to any new technology. This insufficiency might be material, but it also derives from reduced energy and, in the sense of perceived life span, even of available time. . . . Older people are exposed to new ways of doing things that belong to an era in which they will only marginally participate. Virtually all people who are young today will, when they are older, be able to operate a computer without difficulty. Yet they will face new processes when older which they will find difficult and that will not warrant their time or effort to learn to use. A learning curve is like a playground slide: although once to the top it is possible to enjoy the ride, getting up the stairs to the slide’s starting point becomes increasingly difficult with age. (Raban and Brynin 2006, 43-44)

In truth, an inescapable dilemma awaits us all. It is the tension between keeping-up with that which is imposed by societal change versus coming to terms with our inevitable limitations. Weighing the costs and benefits of keeping pace with cultural innovation, each of us will have to find her own measure of peace and reconciliation as technology brokers try to translate across generations.

RESEARCH RECOMMENDATIONS

In my ideal vision of research, the seeker of information or “researcher” has a set of overlapping life experiences with the holder of information or the “study participant.” This body of shared experiences fosters empathy, engagement and nuanced understanding. My own late arrival—in my 5th decade—to the attempted mastery of ‘new technologies’ provided me with profound appreciation of this challenge for those twenty and thirty years older than I. Furthermore, during the course of this research project I experienced a family tragedy that opened up doors of understanding through which I could not have otherwise walked. It also bonded me more tightly to the participants in the study many of whom had grappled with increasing loss and sorrow as they aged.

Conducting research studies among the elderly requires time and patience. Elderly participants generally respond with deliberation. They enjoy situating their ideas in their life experiences, which often take the form of stories and anecdotes from earlier historical eras. The wisdom they have to offer cannot be adequately ‘captured’ through surveys, questionnaires, brief interviews, laboratory trials or other traditional quantitative methodologies. The vagaries of their health and physical conditions may alter their outlook and responses from one day to the next. In addition, sudden changes in the conditions of their family members and immediate surroundings add to the lability of
their outlook and interests. It is only through repeated contacts and prolonged interaction that researchers can attain deep truths from those whose lives span many years.

FOOTNOTES
[1] The Computer Club active membership was two to three dozen people at any given time. In addition, I met several individuals who felt that their level of computing skill was sufficient for their purposes and did not attend Club meetings but they often interacted with Club members. A reasonable estimate of the population who used computers in the Park in the mid-90s is 5%. By 2008, the Club co-director, George Brinkley, estimated that about 300 people—a little less than 30% of Park residents—were computer users. In 2011 Brinkley estimated that 45% of Park residents had computers in their residences. He also stated that the Club averaged 35 attendees per meeting in 2011.

[2] In deference to members of my research population who complained about not being able to keep up with the acronymizing of language, I choose to use this compromise phrase, I-C technology/ies standing for “information-communication technology/ies.” Thus any interested reader has more of a hint of the subject compared with the usual abbreviation, “ICT.” Keeping the word ‘technology’ also affords varying grammatical versions of it.

[3] I am dedicated to the rightness of allowing the voices of research participants to be heard, and I devoted 194 pages to interview extracts in the dissertation (Linton 2009) based on this research. For this article, in the interest of brevity, I summarize rather than quote participants’ stated feelings.

[4] All names of people and places are pseudonyms. Within this group of research participants, ten are now deceased. Seven spouses of those listed in this essay died during the course of the research project.

[5] We can acknowledge that Marion’s files and Don’s sales data constituted important information for them. In this context, however, I use ‘information’ to mean that which was created by others in the virtual realm and available via Internet browsers.

[6] The cost of hardware dented quite a few budgets in the Park. More than half of those with computers updated their computers and/or peripherals at least once. Some, like Nelson and Sue Jones replaced their equipment multiple times as computing capacities expanded. They spent money “like drunken sailors” squandering, they half jokingly remarked, their children’s inheritance.
[7] This could only take place once Web browsers became more powerful and comprehensive; initially these early computer users had to move through the iterations of Mosaic, Netscape, and several versions of Internet Explorer before they were able to pursue their interests.

[8] In addition to those individuals who attended Computer Club meetings there were a few others in the Park whose computer use and knowledge were much more extensive. Unlike Al Swenson, they were not motivated to teach computer use to a group of beginners such as the Computer Club attendees. However, they were willing to help some of their friends on an occasional basis as their time allowed, clearly serving as “warm experts” for them.

[9] Older Americans are well trained in volunteerism and, in addition, the Park Administration was able to persuade many residents that their volunteered labor contributed, among other things, to maintaining Park solvency.

[10] Given the predominance of females in Flamingo Park, it is surprising that single men would find themselves bereft of companionship, and certainly not all were. It is beyond the scope of this article to account for those who remained solitary, but some factors were their health, mental acuity, grief for a deceased spouse and being overwhelmed by the sheer volume of female residents in a community of 1000.

[11] That store’s 2011 Super Bowl ad featured a vignette of a 63 year-old rock star being replaced by a 16 year-old pop icon because the former could not keep up with the number of “Gs” in his cell phone. Other 2011 ads by this retailer showed various citizens evidencing frustration as they discovered newer iterations of what they thought were the latest versions of their own laptops and mobile phones.

APPENDIX 1

Descriptions of Computer Club Members

Encapsulated in these brief descriptions are revealing aspects of the lives and levels of interest in I-C technologies of selected members of the Computer Club (C.C.) in Flamingo Park between 1996 and 2008. Their ages, (in parentheses) indicate their life span during our interaction.

Early computer club members and interview participants, starting in mid-1990s.

• Barbara Howard (age 82 to 94): former teacher; fervently dedicated to maintaining her computer skills well into her mid-90s; finally turned use over to
proxy-friend; her husband did not compute due to ill health but while still alive supported her interest with patience and humor.

• Samuel Dunlop (76 to 89): former pastor; received frequent tech help from son; enjoyed searching the Web; became a devotee of genealogy research; avid user of assistive devices for the visually impaired; his wife did not compute due to eye problems but remained supportive until her death.

• Albert Swenson (83 to 91): former engineer and high school teacher; most exploratory user; eventual C.C. co-director; dedicated to teaching computing to fellow residents which he continued until a week before he died; wild for Skype; wife (stroke victim) vicariously enjoyed family communication through Al’s use.

• Helmut Rossler (88 to 93): former videographer who thought this experience would translate to computing and became depressed when it didn’t; stated that computing was his first/only tech failure; wife commiserated with his efforts to learn about computers but did not attempt use due to failing health.

• Marion Probst (82 to 91): former secretary; only (and therefore frustrated) Mac user in the C.C.; wanted to do pragmatic things like organize files; despite modest efforts, did not become accomplished Internet user; husband not interested in computing and ignored her interest due, possibly, to failing health.

• Don McDonald (70 to 82) still working as salesman; founded the C.C. in order to share his enthusiasm for spreadsheets and to create a personal social outlet; believed that computing was a one-person endeavor; claimed that Internet was evil influence; wife did not use due to ill health.

Later Club members and interview participants, starting in 1999.

• Neva Evans (75 to 85): former teacher/practitioner of holistic therapies; curiosity prompted computing exploration; her physician husband threatened by this technology, didn’t want to hear about/see it; her computer use increased under influence of Park companion, Tally, whom she ‘dated’ after her husband’s death.

• Laslo Unterweg (79 to 88): former high-powered scientist who became increasingly enraged by his unanticipated failure to master computing (except for Solitaire which proved therapeutic); finally turned tech duties over to visiting secretarial assistant/proxy; lived alone.

• Will Mahler (77 to 86): former research laboratory technician; initially comfortable with his computer with which he authored articles for Park Flyer; eventually seemed to lose interest but despite a year of non-use declared he wasn’t done; his wife—an avid reader—was dedicated to not using a computer.

• Myrtle Likert (90 to 97): former utility company employee; was inspired to try (in her late 80s) to learn computing because she saw little children doing it; she grew
quickly frustrated by her inability to screen out irrelevant stimuli; eventually closed the door to her computer room but did not unplug the machine.

- Nelson and Sue Jones (89 to 96; 81 to 82): former pilot, former stewardess; he loved all gadgets; enjoyed playing games like Flight Simulator; kept trying to find ways to compute despite losing vision and hearing; Sue used the computer to communicate with family members and make greeting cards.

- Richard Querengasser (“Dr. Q;” 80 to 89): former psychiatrist; first Internet use in 1999 was to order his wife a book on Amazon; even after he could no longer use his computer due to failing health, refused to give up his computing equipment which occupied a large space in his nursing care room.

- Mary and Marvin Cooper (79 to 86; 81 to 83): former homemaker (& current volunteer secretary at local church), former field engineer for utility co.; equal interest at start of use; his interest faded while hers grew; after his death, she became accomplished in page layout; occasional help from children.

- Carmen Nouvel (78): former government employee who learned computing on the job; started exploring the Internet in late 1990s; was disheartened by the computing systems she encountered in libraries and was unable to use; stopped attending C.C. due to a disfiguring cancer in last years of life.

- Sturgis Johnson (85): former business executive; newer Park resident; experienced computer user; became tech tutor and remote-system proxy user for some Park residents, most especially Barbara Howard when her ability to compute faded; his teaching maxim: “the Sturgis way is the only way.”

- George Brinkley (69 to 72): former computer scientist; newer resident and second-generation co-director of C.C.; introduced more contemporary topics into Club meetings; readily acknowledged contributions of original Club founders; he and partner fond of cruises, creating lacunae in C.C. schedules.
APPENDIX 2
Enlargements of Figures 2-4: “ICT instruction by generational age.”

Fig. 2. ICT instruction by generational age
\(x\): old share information with old
\(y\): older teach younger
Fig. 3. ICT instruction by generational age

x: old teach old

y: younger teach older
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** Photograph taken in 2008 by Norma J. Linton with the permission of the Flamingo Park resident whose stroke-weakened hands are pictured.
REFERENCES


[For a more comprehensive overview of the literature that informed my research, link to “Citations for a Qualitative Research Project” at:] http://hdl.handle.net/2142/26527