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Footprints on the Sands of Time: 
A Student-Senior Citizen Community Project*

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ABSTRACT

The indisputable growth which will take place in the older American population over the next four decades and the predictable changes in the characteristics of that population allow occupational forecasts of an increase in jobs which directly or indirectly serve the aged. This is one reason for the persistence of gerontology training programs in higher education.

While such programs obviously develop a solid academic foundation in gerontology, it is equally important that prospective gerontologists or gerontological human service professionals gain first-hand experience in working with the elderly. Such an experience, and the student’s reaction to it, achieves several goals, including broadening the student’s understanding of aging and the elderly and helping the student decide on the type of career for which he or she is best suited.

It is suggested that such field experience with the aged is not only essential, but should be accomplished as early as possible in the gerontology curriculum. As an example of such an endeavor and the results it can yield, information is presented on the development, implementation, and outcomes of a project pairing students with senior citizens. Limitations and the applicability of this type of project to other sociology subfields are discussed.

* All students quoted in this paper have given their permission to use brief excerpts from their writings. I gratefully acknowledge the constructive comments of W. Edward Folts
Is not wisdom found among the aged?
Does not long life bring understanding?
Job 12:12

Introduction

To any student of demography or gerontology, the past, current, and future growth of the American older population is no surprise. The population aged 65 and over comprised but 2 percent of Americans in 1790, the year of the first decennial census, and it took more than a century for this proportion to double (to about 4 percent in 1900). In this century, however, the growth rate of the aged population has been nothing short of spectacular, with the elderly proportion of the population more than tripling; it is currently 12.5 percent and growing.

The first third of the 21st century will see a “Gray Boom,” as the Baby Boomers reach the retirement years. At its peak, about 22 percent of all Americans will be over age 64. Imagine the emerging challenges to a nation with a proportion of elderly nearly 25 percent greater than that of Florida (17.8 percent) today!

There are obvious training and career-choice implications in these data for college students and others who are currently in or who are contemplating gerontology-related careers. This growth in the older population, accompanied by other correlates of an aging population structure, implies increasing career openings in all goods and service sectors dealing with the aged.

These trends have been duly noted in higher education; Sterns and Atchley (1991) believe the 1990s will be a decade of growth for gerontology programs. The number of colleges and universities offering gerontology courses exceeds 1,100, with over 100 offering degree programs (Rich, Atchley, & Douglas, 1990). Federal funding for gerontology training programs, currently severely restricted, may increase under the new administration.

One of the first tasks in career preparation in any social service field is to develop a realistic picture of the subject matter, a process that often results in the demise or modification of pre-existing stereotypes. For older Americans, the history of relations between young and old and the social status and role of the elderly have been less than encouraging. While various explanations for changes in age relations have been advanced (see, e.g., Achenbaum, 1978; Cowgill and Holmes, 1972; Fischer, 1978), the prevailing trend since the American Revolution has been toward a society more
fearful of, anxious about, and repulsed by aging and the elderly. The consequent "gerontophobia" and "cult of youth" (to use Fischer's terms) contain stereotypes and stigmas that make aging an unappealing inevitability for Americans. Despite gerontologists' and other researchers' efforts to present a more realistic appraisal, tempering the negative with the positive, the image of the devalued older American remains. Younger people overestimate the severity of the elderly's problems (Harris and Associates, 1975:31; 1981:10), while older people may accept as fact many of the negative stereotypes about themselves, thus giving initial momentum to a downward spiral in self-esteem. (Akin to the "self-fulfilling prophecy," this has been labeled "social breakdown"; see Kuypers and Bengston, 1973.)

While prejudice and stereotyping tend to reduce intergroup contact and preserve inaccurate evaluations of others, research in race/ethnic relations and other fields has consistently shown that intergroup contact, if it can be brought about, can rapidly dispel stereotypes and reduce prejudice. While acquiring gerontological knowledge is not guaranteed per se to improve attitudes toward the elderly (Holtzman and Beck, 1979; Michielutte and Diseker, 1985), the odds of positive attitude change increase when new knowledge is combined with interactions with the elderly (Coccaro and Miles, 1984). It thus seemed both useful and logical to me, as a gerontologist and professor, to bring my students—potential gerontology careerists—into contact with their subject matter.

There were other reasons for this as well. First, if some students weren't going to enjoy working with the elderly, it would be best for them to find out as soon as possible, before a timely and expensive commitment had been made (by them) in their training. Second, for an introductory gerontology class, working with older people and keeping a written record of these experiences might be more appealing (and, I hoped, more meaningful) than spending days, or even hours, in the library writing a term paper. They would actually get to work with their subject matter. Third, some students never knew their grandparents, while others—and this was more common—had never known any older people except their grandparents. They seemed to think of their grandparents as relatives first and elderly second (if, in fact, the grandparents were even that old). The paucity of opportunities for intergenerational contact was well summed up by one student:

It is out of ignorance when we generalize and hold the view that the elderly are nonproductive members of society, a burden to the economy. I am guilty of stereotyping their behavior and expecting certain attitudes and actions of them, based on society's
age norms. However, these opinions of mine are based on lack of previous interaction with seniors.

Structuring the Project

The first time I brought gerontology students and senior citizens together was in the fall of 1978. The project proved so successful that, when possible, I've done it in my social gerontology class ever since.

The first task, finding the seniors, was no problem. The local Service Corps of Retired Executives (SCORE) or Retired Senior Volunteer Program (RSVP) are good places to start. In such cases one will obviously find a somewhat nonrepresentative sample of elderly; those who participate in these programs (especially one like the RSVP, where I began) are typically healthier, more educated, better off financially, and more active than many of their age peers. However, I felt that this would be a good group for beginning gerontology students. In subsequent semesters my advanced students, more knowledgeable, and with this initial project under their belts, worked with institutionalized elderly.

Contact with the agency director was made by phone. The goal of the phone call was to broach the topic and schedule a face-to-face meeting. At the meeting we discussed the proposal in detail; in addition, the director had a chance to get to know me. While I've encountered hesitant directors over the years, none have refused; their concerns have always been due primarily to the novelty of the project. Once the project was underway they were always quite enthusiastic.

The seniors in the organization were also initially reluctant. This was something new, something being done for the first time, something unfamiliar. (I'm not succumbing to the "old dog new tricks" stereotype—as we'll see, the students were equally anxious.) The project was to prove so rewarding to them, however, that there was a waiting list the next time around, and some seniors participated every term that the project was offered. Their desire for intergenerational social contact was genuine and strong.

The initial meeting of students and seniors was (and remains) the sole awkward aspect of the project. Everyone, including myself and the agency director, was apprehensive. After all, with but brief introductions, each student was going to have to make a term-long commitment to an unknown senior citizen, and vice versa. One student wrote, "I felt apprehensive toward meeting with [my senior partner]. Would I like her? Would she like me?" A second described how a senior came to her rescue:
My first thoughts about our class meeting with members of RSVP admittedly were a little nervous....Thoughts of “What do I say?” and “What can I talk about with people I don’t know?” ran through my head....No sooner did I get a cup of coffee than this petite little lady came up to me and introduced herself. From that moment the butterflies left.

Another student noted how her initial discomfort proved unjustified:

When I heard the assignment of this term project in class I thought to myself, “Oh no, another time commitment. I don’t know how to talk to an old person.” Well, my viewpoint has changed quite a bit. Meeting with [her] has been one of the high points of my week.”

The students and seniors briefly introduced themselves and described their activities and hobbies. Both groups had been advised to identify any members of the opposite group with whom they shared interests. After the introductions, the groups were allowed to mingle and settle on partners for the project. The agency director and I kept a list of all students and their senior partners, along with addresses and phone numbers.

The students and their senior partners were to set up a weekly meeting at a mutually convenient time. The meetings would be to discuss topics being covered in class. Some students, whose image of the elderly lifestyle was one of disengaged leisure, were in for a scheduling shock:

We wrote a copy of our weekly schedules to trade with one another. I thought she would be impressed with how busy and involved I was as a college coed—I was wrong. Her schedule was far more complex and full compared to mine. She works at the RSVP office three mornings a week, is enrolled in two guitar classes through [the nearby] Community College (she didn’t figure she would learn enough in one class so she’s taking two!), and is teaching three yoga classes at the Senior Center. Along with all of that she swims at least twice weekly with a handicapped friend, plays in a couple of musical groups, and attends all sorts of luncheons and teas. (Mind you, this goes on every week!) We decided that the only time we could meet would be Tuesday mornings at 7:30.
By this time—typically the third week of the semester—the students had some foundation of gerontological knowledge. I distributed the topic schedule to them (Appendix 1); it corresponded roughly with the topics we'd be covering each week in class. In this way, the students would know something about each topic before meeting with their senior partners, and they would be able to use their senior as a case study "reality check" against the readings and in-class materials.

I also gave the students some advice and cautions. They were to avoid any topics or subtopics which seemed to make their senior partner uneasy; the seniors were volunteering their time and energy and should not have to endure any discomfort. The same held for the students. If anything began to go wrong—if their senior developed a health problem, was going on vacation for a month (we tried to discourage such people from participating), began to miss meetings, or made the student feel uncomfortable in any way—they were to see me immediately and, along with the agency director, we'd find a remedy for the problem. In one case, this meant disqualifying a senior from the program and finding a new partner for the student. Both for the sake of the project and because such problems are best nipped in the bud, it was important to become aware of and deal with these events as early as possible.

The students were to keep journals of their conversations with their senior partners. The final submission, a paper of 15-20 pages in length, was to interpret their seniors' experiences and attitudes gerontologically, i.e., to apply in-class concepts and theoretical perspectives to a life story. Rather than merely writing a biography or descriptive narration, they were actually conducting case studies in aging. The guidelines I gave them for their final write-up included remarks about confidentiality.

Barring difficulties, the students were then on their own with their seniors. Virtually all were extremely conscientious about their weekly meetings, and independently made alternative arrangements (e.g., a double meeting) if a meeting was missed. Meeting sites would vary, even for the same pair: one week at the Senior Center, the next at the senior's home for dinner, then at the student's apartment, at the senior's hobby club, church, etc.

By the end of the term, students and seniors knew each other well. A party was organized by the agency director and me to bring us all together (for only the second time!) and allow us to share our new friends with the others. The students had been encouraged to give a copy of their papers to their respective senior partners, and everyone—students and seniors alike—had a chance to say a few words about their partner and their experiences over the term. Finally, to add a tangible reward for the seniors, a Certificate of
Appreciation was given to each participating senior. I was pleased to later find that nearly all of the seniors had framed and hung their certificates.

**Outcomes and Evaluation**

The overall results exceeded all expectations: mine, the agency director's, the seniors' and the students'. One student wrote:

> We seemed to hit it off just fine, which really surprised me. I don't know why the fact that we hit it off so well surprised me, but it did. Maybe I was uneasy because in the past my encounters with the elderly had been so few and far between and not very pleasant.

A few samples from student's journals suffice to show how any initial awkwardness quickly disappeared as young and old eagerly shared themselves and their interests. "I guess this might not be as scary as I thought it would be!" exclaimed one. "I'm already anxious to talk to her again." Another wrote: "When we first started I was a little scared because I was always a little uneasy around old people. This project really helped me."

I had expected that many of the students would enter the class and the project with some of the negative stereotypes of the elderly we encounter so often in society. I also anticipated that most, if not all, such beliefs would decline or dissipate during the term, in large part due to the counterevidence discovered during student-senior interactions. This did, indeed, seem to occur. Here's what the students had to say about their preconceptions of the elderly (such as boring, dull, homogeneous, having nothing to teach us or contribute to society) and the fate of those preconceptions:

> It's so hard trying to ask [her] questions. Not that she's hard to talk to, she's just so interesting to listen to. She told me today that someday when we had more time she'd tell me about the time she was a paratroop instructor!

As we finished our coffee and were leaving we decided to meet next Tuesday for breakfast. I walked over to my Toyota and got in. [She] walked over to her van, with curtains, sunroof, and very loud pipes, got in, waved, and drove off. Her vehicle fits her personality. Very mod, very youthful, with a lot of snap, crackle, pop!
At the beginning of this project there was no way I could have envisioned how much I would learn from my visits with [her]. She has shown me a totally different outlook on aging, something I had never faced before. It makes me both mad and sad to think about all the stereotypes that I’ve heard about the elderly, because from my first-hand experience all of these have been disproven.

I learned so much from him. I have learned that the elderly are just as easy to talk to as young people, and what they have to say is often more wise and experienced. I have learned that old people can’t be categorized because there are so many people with so many different backgrounds and experiences. Most of all, I have learned that the elderly are an invaluable part of our society.

At our first meeting, [she] told me the reason she got involved in this project was because she never had any children, and had no contact with any young people. All she knew about young people was what she read about them in the newspaper, and that wasn’t very good. She wanted to meet and get to know a young person to find out what makes them tick. So this project has been one of sharing and learning on both our parts. We have both learned a lot about each other’s generation, and I feel for both of us it has been a success.

The preceding quote describes a “bonus” outcome. Many of the seniors harbored negative images of today’s youth. The students provided real-life counterexamples. Just as the students reported having to modify their stereotypes of the aged, so did the seniors relinquish—happily, it seems—their lack of faith in today’s young adults.

There were two other pleasant results from the project. First, virtually every senior partner expressed strong interest in participating, the next time the opportunity arose. Second, in many cases, although everyone knew it wasn’t required, students and their senior partners continued to see each other on a regular basis long after the term and course had concluded. For some, the relationship was perhaps best described as “adoptive,” filling some unmet needs of both old and young.

The papers submitted by the students at the project’s conclusion were the standard quality mix, but a few generalizations can be made. In most
cases, the journal entries were complete, enthusiastic, and in depth. Some students, however, found it difficult to interpret their case studies using the concepts and theoretical frameworks to which they'd been exposed in class. In some cases, the reason for this was lack of understanding, but in most it seemed instead to be lack of practice. In future projects I asked for a draft of one week's write-up, commented upon it and returned it to the student. Knowing what improvements (if any) were needed, the students' final submissions were of markedly higher quality.

Like their senior partners, the students' responses to the project were overwhelmingly positive. A representative evaluation read, "This project has meant a lot to me, and I know it has to [her], also. For myself, I think it's great that an educational class allows students to learn not only from textbooks but also from people and their experiences."

The outcome most frequently mentioned by students was their more balanced picture of aging due to the unmasking of stereotypes of the elderly:

As far as my concept of the elderly is concerned, I realize and admit my reliance on the stereotypes and images of old people and I feel that I can now safely say that those images were pretty much torn down one by one.

I guess I thought that when I turned 65 I would automatically want to learn to knit or crochet and continue to do so until I died. I guess I thought that's all that would be available for me to do. I learned from [my senior partner] that I was wrong.

I have always felt that it must be terrible to grow old. But seeing how [he] has adjusted to it, I don't think it will be bad at all.

[She] said there were no classes like this when she was young, and if there were, she would have taken them because she feels as I do, that knowledge of aging or knowledge of anything decreases fear.

As hoped, the project also served the students as a "reality check," enabling them to discuss or test what they'd read or heard in class with a member of the older population. Their awareness of this process and its results are evident in the following student comments:
The term heterogeneity [of the aged as a group] comes to my mind when I think of [him]. He doesn’t fit the stereotype of the “little old man.” He is very motivated and has a great productive capacity in many areas. All older people simply cannot be placed in the same category because there is a great diversity among their population.

This was very helpful to me because everything that I’ve heard and read all term was verified through [her] own opinions and views.

For me, it was good to discuss some of the things that were brought up in class with an older person to see what [she] thought of it. I think that because of this project, the principles that we learned seem more real and practical than if I had only learned about them in class. I can see that they aren’t just principles, but that we have learned about people and their way of life.

Students also noted the project’s benefits, both in general and in terms of career preparation, in bringing them into contact with elderly nonrelatives:

When I first began this program, I had not had a relationship with anyone over 60 other than relatives....After meeting [my senior partner]...more than ever I am questioning “whom” we call old and what “old” means.

[My senior partner] has shown me that the aged are not deviants; they are people who have gone a little distance ahead of us on the life journey....It is necessary for us to learn more about the needs of the elderly so that in the future we can work more effectively with and live among the growing population of the elderly. Also, it is to our own benefit that we become familiar with the process and adjustment of aging, since all of us will become old someday.

Finally, as the following quotes illustrate, the students recognized the life perspective insights that the experience of advanced years can bring. Their expressions of personal growth were gratifying.
I really enjoy [her] company and our conversations together. Her attitude towards life is so positive and encouraging—it is changing my own fears and insecurities about aging into feelings of expectation, peace, and a little curiosity.

This term has been a valuable learning experience for me. I have gained applicable knowledge on the aging process, the situations the elderly face in our society, how they are treated and also how it is to grow old in America today. I feel that many of my previous prejudices have been dissolved and I am more assured about my own journey down the path into old age—that it will be as rewarding and satisfying as I let it be.

I've learned that people, despite age differences, can open up to one another, express their feelings and be understood. In many cases there need be no communication gap between generations if we would only sit down and take the time to talk and listen to one another.

I think that I can understand older people's situation better now. I can understand my grandparents better and appreciate they things that they do. This class opened my eyes to some things I didn't really think about before.

Conclusions

The goals of the student-senior citizen community project are (1) to allow the student to conduct research and write a research paper using the case study method; (2) to promote a more realistic understanding of aging and the elderly by exposing stereotypes through direct contact with the aged; (3) to reinforce in-class learning by providing an outside “reality check”; (4) to enhance gerontology career preparation through lengthy interactions with nonrelative elderly; and (5) to provide an opportunity for personal growth. Fifteen years after the project's initiation I feel confident in saying that it achieves every goal, given a minimally sufficient effort on the student's part. Students and seniors enjoy the project, once the inevitable initial uneasiness is overcome. The students' papers indicate feelings of academic and personal growth; seniors' comments and willing-
ness to participate again imply enhanced life satisfaction and a sense of meaningful contribution.

Students should be cautioned, however, against overgeneralizing their positive experiences with an admittedly nonrepresentative group of elderly. They should also be made aware that the project’s aim is not simply to replace negative stereotypes with positive ones (for there are dangers in that, too), but also to gain insight into the origins and nature of (age) stereotyping and to emerge with a greater respect for the heterogeneity and ongoing potential of this population segment. In a more advanced gerontology class, this project was successfully replicated, with appropriate modifications, in a nursing home and with a support group for widowed persons.

There is no reason why this form of learning experience cannot be used in other classes (or even nonacademic settings), given necessary adaptations and adequate preplanning. Many classes in the social sciences and human services fields can easily specify at least one target population for such an undertaking. Also, this project bridges the gap between “day-trip” field experiences and semester- or year-long practica or internships (the latter recommended by AGHE for any gerontology program [Connelly, 1990]).

Working with one’s subject matter—in this case, the aged—is an educational approach which, at the very least, significantly supplements and complements pure classroom instruction. The interaction which occurs first-hand seems to make a great impression on students and represents a gift from their senior partners that will outlast the partners themselves. One student, no doubt echoing the sentiments of others, concluded her paper on the student-senior citizen community project with these words of Henry Wadsworth Longfellow:

Lives of great men all remind us
We can make our lives sublime,
And, departing, leave behind us
Footprints on the sands of time.

Notes

1. Unlike fertility projections, forecasts of the older population are quite accurate—after all, everyone who will become elderly within the next 65 years has already been born, and we know how many of them there are. A simple application of age-specific mortality rates yields the number of elderly for the next six and one-half decades (excepting international migration).
2. This is not to be misconstrued as suggesting that Florida's elderly are representative of all Americans age 65 plus, either today or in the future. Florida's senior citizens tend, for example, to be wealthier, healthier, more mobile, and better educated than national norms for the older population.

3. One reviewer noted, "These opportunities already exist—the problem that needs to be addressed is why people won't take these jobs." This point deserves exploration and explanation, but is outside the scope of this paper. In addition, as the elderly comprise a growing consumer market, there should be increasing employment opportunities in private sector businesses for people with gerontology training (Kahl, 1988).

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Appendix 1

Case Study Project: Weekly Topics

Here are topics to cover and guideline questions for your visits to your senior partners beginning with the third week of the semester. You will probably want to expand on the questions and gather additional information, but these should help get you going.

Weekly Topic and Questions

3 Get acquainted. Exchange names and phone numbers. Set day and time for future meetings. Explain term project.

4 Biography. Gather fairly detailed biographical information: your senior’s parents, his/her upbringing, work history, marriage/s, family, hobbies, current relations with family and friends, etc.

5 Economics and housing. Get an “economic history” of your senior—parents’ situation, senior’s income, investments, etc. What’s the situation now—Soc. Sec., pensions, etc.? How does this affect his/her lifestyle? Housing history—what type, where, still maintain outside home? Feelings about other senior citizens’ economic and housing situations—are they better or worse off?

6 Health care. Get your senior’s health history and that of his/her family. Current health status and problems. How are current problems being treated? Opinions of doctors, nurses, the nursing home staff, the medical
system in general. More or less fortunate than other senior citizens in terms of access to health care?

7 Independence and services. Importance of autonomy. How much does he/she have? Compare to how much you think he/she really has. Impact of dependency on self-esteem, expressed satisfaction with current situation. Awareness of community services available. Past use of such services.

8 Nursing homes. Has he/she ever been placed in one? If so, opinion of, prior to institutionalization. Opinion now. View of other seniors’ opinions of nursing homes. What might be improved, in your opinion? In your senior’s opinion?

9 Emotional problems, mental health. Feelings about family, current health and economic situation, self. Ever get depressed, lonely, etc? What could be done? What’s your impression of your senior’s mental and emotional stability? What’s your senior’s impression of emotional/mental problems for seniors in general?

10 Marital status, sexuality. Marriage history, including changes (children, divorce, widowhood). Satisfaction with marital status(es) throughout life. Opinions of other seniors’ marital satisfaction. Opinions on sex and the elderly. Own feelings/desires/behaviors. [CAUTION: be careful here. At the first sign of discomfort, back off. Don’t invade your senior’s privacy.]

11 Spring Break—no mandatory meeting. Be sure to tell your senior if you won’t see him/her this week.


14 End-of-project party at senior center. Be sure to bring an edited copy of your paper for your partner. Certificates of appreciation will be given to senior participants.

15 Project paper due date.
The Older Person as Mediator between Technology and Environment:
Toward the Role of "Technoguide"*

Arthur B. Shostak, Drexel University

"We shouldn't be thinking of old people first in terms of social security and what they need, but as a matter of what old people can do for the rest of us."

Marjorie Hunt
26 April 1985, p. A-18,
New York Times

Within the space of just over 100 years, since the victory of the North in the Civil War unleashed the full energy of a nationwide industrialization process, older Americans have played at least three major roles as mediators between technology and environment: cast initially as skeptic detractors, they were compelled from '41 to '47 to serve as pro-change mentors, and have ever since filled a valuable role as "future shock" debunkers (that is, as a cohort seemingly capable of adapting to "damn near anything!").

In this “think piece,” the history of role revision is explored, current gaps in role performance are assessed, and a future role—technoguide—is both explained and advocated.

History of Role Revision

Even a cursory examination of the ages of Nobel Prize winners in the physical sciences over the decades makes plain the advanced years of most (though not all) such luminaries. Similarly, distinguished early American technologists like Bell, Edison, Westinghouse, and others, while middle-aged when first noticed by the public, earned authentic celebrity status only later, as gray-haired “wizards,” an imagery that firmly linked technological acumen with advanced years in the public’s mind. To be sure, daredevils and marvel workers, such as the youthful Wright brothers, seemed an exception to this rule. But, by and large, the race seemingly went to the oldest. A typical photogravure portrait of a leading technologist from 1800 through 1940 highlighted an individual rather far along in years.

Paradoxically, a related linkage evolved in just the opposite direction. As members of the general public aged, in contrast to the scientific wizards, they were thought to become less and less available to cheer this or that technological breakthrough—even when their cohort was the special beneficiary of a new gadget, process, or insight. Old-timers were linked, in the public’s mind, with hostility toward new-fangled items, and with a deep-reaching preference for the old ways, for the tried and true, and for the familiar, user-friendly artifacts represented by off-the-shelf hardware.

Impact of World War II

Among its many impacts on standard ways of doing things, the war experience in the United States helped to alter the imagery of technological innovators and users alike. Under pressure to outproduce the extraordinary manufacturing system that the Third Reich directed from 1934 to 1944, the Allies revamped stodgy “standard operating procedure” and made unprecedented room for technological innovation.

This time, however, younger-than-ever inventors were welcomed, supported, and rewarded. New “soft” technologies, such as systems analysis, operations research, econometric research, survey research, and personnel relations, along with advances in more familiar technologies (steel fabrication, shipbuilding, radar, etc.) were pioneered by relatively young individuals—and
the team gathered for the Manhattan Project was far younger, on average, than any comparable task force in memory.

Similarly, in the war plants themselves, the absence of males aged 18 to 45 put a disproportionate responsibility on the shoulders of older workers (including some over 65, who declined to retire for patriotic reasons). Several types of new work force entrants—women ("Mabel the Welder" and "Rosie the Riveter"), handicapped adults, individuals of borderline intelligence and/or learning disabilities, individuals with only an agricultural background—looked to gray-haired plant and office employees for instruction, guidance, and role-modeling. Almost overnight a cohort of "seniors" became, by war-driven necessity, a resilient and even dynamic bloc of mentors.

Post-War America

With the spread of Levittown-like tract developments in the 1950s, the modern era of the two-generation family overcame the traditional three generational model: a new age of "on-your-own" oldsters profoundly revamped intergenerational relations. Excluded by the physical design of Levitt homes from living with their adult children and their grandchildren, this cohort of oldsters were either left behind in gritty urban ethnic enclaves or took to the road themselves. First Florida, then Arizona, then California, and thereafter, the Sunbelt and Middle Atlantic States began to reap the rewards (and attendant stressors) of an unprecedented gray-hair migration.

Obliged now not by World War II productivity expectations, but by far more personal pressures to make the best of things, older Americans tackled the perplexities of such post-War technologies as TV, home laundries, mobile homes, cataract operations, total hip replacements, double mastectomies, open heart and bypass surgeries, and so on. Bolstered by agencies such as the Veterans Administration hospital system, American Association of Retired People (AARP) chapters from coast-to-coast, and the emergence, by the late 1980s, of over 2,400 retirement communities, the over-65 cohort "got with it"—rapidly and emphatically. For every oldster who shied from utilizing an automatic teller machine, two others joined a line of "yuppies" to bank in this fashion. While an unfortunate five percent were confined to institutional care, a contingency twice as large stayed zesty at retirement communities, while the vast majority kept their lifelong residence up-to-date with VCRs, phone service enhancements, "life line" warning systems, and other high-tech gadgets.
The point is not to exaggerate the pro-change dimension of post retirement life, but instead to urge overdue attention to the technological openness of the elderly, who have commonly been given far too little credit for this attribute.

An AARP telephone survey (1981-1983) of 1,308 adults confirmed the keen interest that older persons have in new technologies. Indeed, the former head of the Association’s Institute of Lifetime Learning has boasted that “our research suggests older people are not far behind everyone else in the use of technology” (La Buda, 1984:17).

Gaps in Role Performance

At the same time, however, the AARP noted with rue that new technological applications for the elderly are often poorly publicized and, therefore, little used. Particularly invisible, much to the regret of concerned parties, are such frontier innovations as a voice-activated robotic arm that can grasp things from nearby surfaces for bedridden persons, and a “Robot pet” that scuttles protectively up to a door at the sound of an intruder and attempts to frighten off the lawbreaker—while phoning the police (Englehardt, 1984:17-23).

In addition to those technologies that directly aid retirees are a number of gadgets and gimmicks through which retirees can aid others—and enjoy themselves at the same time. Typical is their ability to review new computer software now being used in major companies to help employees over 50 prepare for retirement. This software contains many basic (and hidden) assumptions about the spending needs and practices of those over 65, assumptions that gray-haired technoguides could help validate, or challenge and correct.

Similarly, retirees could assess and help improve our use of non-exhaustible fuel technologies, such as biomass, geothermal, photovoltaic, wave, wind, and wood. For, as the founder of the Gray Panthers, Maggie Kuhn, insists, her generation (those born in the early 1900s), having been part of more changes than any other, “are the ones who must be advocates for...safe, renewable sources of energy” (Kuhn, 1981:44).

Finally, given the leadership of Florida in clarifying desirable roles for retirees, it is vital that more and more seniors help politicians resolve the fate of America’s first high-speed (250 mph) magnetic levitation train. Organizations of the elderly lobbied in 1985 on behalf of the state bill authorizing a Tampa-Orlando-Miami route, and a Florida oversight committee has explored awarding a franchise for a 1995 completion date.
However, with costs of Japanese and German hardware running about $3 million per car and $30 million per mile for track, Florida taxpayers have been understandably hesitant. (Hillkirk, 1985:4-B).

Technoguides: Toward the Development of a New Role

As more and more older Americans learn how to achieve what gerontologists term “successful aging,” or the ability to make transitions of normal aging in a constructive and graceful way, new roles are being claimed by these seniors. Retirees in the hundreds of thousands serve daily as volunteers in nursing homes, children’s day-care centers, hospice programs, health fairs, part-time job location programs, and a wide array of other such opportunities.

While quite varied in content, objectives, and sponsorship, each of these new roles makes the most of the polished competence and special insider grasp of subtleties that mature “veterans” can uniquely bring to a focused task—whether it be the sensitive transmission of English language skills or the tricks of the trade entailed in keeping an overseas business enterprise alive (Thorp, 1985).

Another role which may soon be worthy of being added to this honor roll is that of volunteer service as a technoguide, an option that would maximize the contribution retirees could make to themselves and America in still another welcomed way. In this role, retirees could supplement their previous career knowledge with newly acquired skills in technology assessment: participants would help test, evaluate, and propose improvements in cutting-edge products of special relevance to the needs and wants of older Americans (Haber, 1986).

Background

An ongoing study of life in a large, well-established, and well-managed Florida retirement community has revealed many missed (technological) opportunities. The condo apartments of the 23,000 residents, for example, are wired for emergency alarm systems that could rapidly summon police, fire, or medical aid, but the systems have never been installed. Few residents seem to care, or to be able to explain why the life-protecting infrastructure was installed in the first place.

Similarly, the condo apartments in this sunbelt development make no use whatsoever of active or passive solar technology. Instead, old-fashioned
reliance is placed on large, noisy, and expensive air-conditioners and fans, much as if nothing useful had been learned in the past twenty years about heat pumps, photovoltaics, hot-water assist systems, solar collectors, solar greenhouse space conditioning, or the dynamic like. Even most community pools, located every block or two, go without solar aid, though this is the most common (and economically advisable) use being made of this fast-developing technology elsewhere in the region.

Tours of other retirement communities around the country indicate the total absence of such venturesome, but promising technologies as:

- **community fish tanks**, for raising edible fish, like Philippine carp and other species;
- **community vegetable gardens**, for experiments with new seeds and aides to tillage yield;
- **community bartering systems**, based on computer record keeping, and devoted to the swapping of desirable goods and services;
- **community electronic bulletin boards**, based on home computer and modem use, and devoted to the rapid exchange and storage of valued messages;
- **community hydroponics stations**, for raising vine-clinging vegetables year-round in a soil-less, chemical-and-water solution; and
- **storefront studios**, for the video recording of oral histories by retirees.

Technoguides: Role and Goals

An observation at this early point in the concept’s formation is that retirees who chose to serve as technoguides would operate much like the staff of the 57-year-old Consumer’s Union.

To begin with, they would purchase or lease cutting-edge technologies in the open market (home robots; year-round hydroponics stations; state-of-the-art heat pumps, solar panels, windmills, for example). They would then test their purchases in exacting ways, drawing on their pre-retirement career expertise, and advise older Americans and businesses alike about the merits and drawbacks of the items they had evaluated. Unlike CU, however, which focuses on conventional mass market products of an everyday variety, the technoguides would focus on the newest, latest, and the least tried-and-proven products, especially those of relevance primarily to older persons, and only thereafter, to society-at-large.

Technoguides would then finally recommend or advise against test items as they chose, taking care, however, to accompany negative assessments with clear guidance for the improvement of the futuristic product or service.
Certain club leaders, of course, would serve as assessors of technology, environmental impact, and social impact, striving to adapt key concepts, models, and methodologies of these fast improving fields to informed use by eager retirees (OTA, 1984).

Technoguides would seek to involve the largest possible number of their peers in the testing process—the better to help raise future-consciousness among older persons. Surveys and mini-usage tests could be conducted in small plazas where older persons congregate, as well as in senior centers and retirement village clubhouses. A network of technoguide clubs across the nation could coordinate their testing to use the same or similar surveys or mini-usage exercises, thereby upgrading the validity and usefulness of the findings (see Appendix 1 for model of a Technoguide Club).

Technoguide clubs could reach out to nearby community colleges and four-year universities for help with the more esoteric aspects of state-of-the-art items under review. Both students and faculty, intrigued by advances in home robotics, the “intelligent” electronic home, the basement (edible) fish culture option, and so on, might welcome a chance to collaborate with bright and energetic retirees, strong in available time and mature insights into product and service possibilities.

Technoguide Implementation

Given the apparent absence of new technologies in retirement communities and the apparent interest of certain older people in such technologies, an unrealized opportunity would seem to exist to bring these two related matters together—for the good of the retirees in particular, and the benefit of the nation in general.

Models for implementation exist, albeit without the acclaim they merit. Typical of meritorious pioneering in this connection is the Cable TV committee of the AARP chapter in Bethesda, Maryland. Formed in 1984 in anticipation of the arrival of cable television in the community, the committee set out to create special cable programs of direct relevance to older persons. Committee members divided into areas of personal interest, with some pursuing the technical side of production, including camera work and editing, and others focusing on planning TV programs and writing scripts. All learned how to systematically assess and rigorously evaluate cable TV offerings, thereby enhancing their role as constructive TV critics and users, a major technoguide option for active retirees.

Other models exist in Florida, Missouri, and Vermont, where the states operate unique “barter” programs for senior volunteers (Kouri, 1884;
Thorpe, 1985). In each case, state-operated computerized system maintains a registry of the names, skills, and interest of retirees who volunteer home-care services to their frail or disabled peers. These volunteers earn service credits that either they or their spouse can redeem later in return for free in-home services for themselves. Such a barter system, appropriately hailed as an overdue social invention, could be expanded in nature to include service rendered as a technoguide club member, which service might also qualify one for home-care or similarly precious services in the years to come.

A third model is available in the operation of Title V of the 1969 Older Americans Act (Kouri, 1884; Thorp, 1985). Better known as the Senior Community Service Employment Program, it provides part-time work for unemployed, low-income persons aged 55 or older by enabling them to perform useful and necessary jobs in their communities (over 65,000 older men and women in 1985 worked on Title V funds at day-care centers, hospitals, job placement offices, legal service offices, libraries, and senior centers). Eligibility for this popular and cost-effective program could be expanded to include retirees who work as full-fledged technoguides.

Still another model is available in the small, but growing number of computer user clubs run by and for seniors. Early in 1985, about 250,000 retirees were thought to have personal computers in their homes, and research has found that many actually enjoy programming, as well as word processing, database management, and the use of electronic spreadsheets. A typical users’ club in Menlo Park, CA., requires prospective members to complete 12 of 24 lessons it offers, prizes the many new friendships members form among themselves, and boasts of new links forged by members with computer-using grandchildren. Above all, as demonstrated by Senior Net, with its 40 Learning Centers and more than 4,000 members, and as made clear by a leading computer magazine in 1984, “the new group of computer zealots are dispelling the myth that people stop functioning and lose their usefulness once they grow old” (CHIN, 1984:28).

Finally, the proposed technoguide clubs could draw implementation and operational lessons of merit from the long-standing example of consulting firms of retired executives who aid needy organizational clients for little or no fee. Typical is the Executive Service Corps of the Delaware Valley, a nonprofit organization that lines up retired business leaders as consultants for “do good” outfits unable to meet the fees asked by major consulting firms. Part of the National Executive Service Corps, which has independent affiliates from coast-to-coast, the ESC could help a technoguide club organize itself (and probably provide many new members, as well).
With the possible backing, then, of the largest association in America (the 33-million-member AARP), and with relevant advice available from Consumers Union, the Council of Better Business Bureaus of America, the National Executive Service Corps, and the U.S. Office of Technology Assessment, a 50-state network of technoguide clubs of future-shaping retirees beckons as both an achievable and a desirable prospect.

Summary

From the onset of post-civil war industrialization until about 1940, the role of the older person as mediator between technology and environment was fairly clear and stable: older geniuses pushed innovations along, while older Americans generally grumbled about where the country was heading. The Second World War helped to make innovation the province of much younger scientists, even as it also required gray-haired workers to shape up, adopt new tools, and even help newcomers rapidly “get with it.” Similarly, post-War developments have given additional impetus to the utilization of new technologies by oldsters, and, as we rush toward the 21st century, the “baby-boomers” reaching 65 after 2010 are likely to prove the most technologically comfortable such cohort in American history (Dychtwald, 1989).

All the more reason, therefore, to urge the development of a new role—technoguide—for those retirees able and eager to bring years of field-tested knowledge to bear on the technology assessment tasks before us. Older persons have contributed much as mediators here before. Given the mind-boggling technological changes just ahead—including the impact of superconductivity, parallel-processing computers, hyperplanes, fusion energy, and the like—their services tomorrow could be of greater-than-ever value, provided these services are honed and organized by a corps of volunteer technoguides.
Appendix 1

Technoguide Clubs:

Older American Possibility

1. How many different ways could a TGC contribute?

*Information Provision*
1. Convey needs of seniors to potential providers.
2. “Dream up” new products and services: call attention to fresh ideas.
3. Raise consciousness of retirees about potential products and services; increase cognitive grasp of futuristics.

*Public Policymaking*
1. Monitor proposed laws and regulations concerning new products and services relevant to the lives of seniors.
2. Help raise consciousness among policymakers of the interest of seniors in futuristics and technology assessment.
3. Offer testimony at local, state, and federal hearings concerning cutting-edge technology, technology assessment, and so on.

*Technology Transfer*
1. Promote serendipity in new uses of existing technology.
2. Promote serendipity in new uses of proposed technology.
3. Research obstacles to technology transfer where seniors are concerned.

*Corporate Guidance*
1. Give merit awards annually to companies with outstanding cutting-edge products and services.
2. Establish working ties with the “R & D” arm of major American corporations.
3. Seek the loan of executives and expertise to help guide the technology assessment process in TG clubs.

*Technology Assessment*
1. Help test the strengths and drawbacks of cutting-edge technology.
2. Help retirees learn the art of technology assessment.
3. Help retirees practice the art of technology assessment.
2) What might a retiree get out of this?

New role option - A retiree could take a Proactive "recareering" stance, and help shape the future—rather than just be passive and responsive.

A retiree could focus on the career or profession he/she has left, and help assess cutting-edge possibilities, thereby remaining influential in the course of a field to which they had given many decades of service.

Alternatively, a retiree could focus on an entirely new area, such as little-used edible plants for incorporation into the American diet, and thereby expand his/her horizons.

New contracts - A retiree could enjoy the company of self-selected enthusiasts for TG goals and methods, and make new, valuable friendships.

Empowerment - A retiree could enjoy the pleasure of experiencing real-time reactions and results from the "cooperative redesign" efforts of TG clubs across the country—individually or collectively.

Personal Profit - While by no means a major or highlighted prospect, the average TG club member may be pleased to learn early on about new investment prospects, both those likely to reward and to disappoint the use of venture capital.

Inter-generational Ties - A retiree could enjoy working with middle-age inventors, "R & D" types, and other promoters of cutting-edge items eager to get proactive feedback from TG clubs.

Similarly, a retiree could enjoy interactions with college students (undergraduates and graduates) deliberately "lent" as aides to local TG clubs by nearby colleges and universities with TA, technology transfer, and/or gerontology courses.

3) Should the TG Clubs be sponsored?

It may be possible to get the AARP, the Consumer Federation of America, the Ralph Nader Network, or the Consumers' Union to accept the sponsorship of a nationwide chain of TG clubs.

This would secure experience, bona fides, and resources (funds, personnel, PR ties, clerical support, organizational infrastructure, etc.)

On the other hand, however, this might also entail the drawbacks of bias, controversy, reputation, etc., linked to the sponsor.

At this early point in the planning process, the optimum design would combine strict independence with an Advisory Council of a single representative each from relevant groups (AARP, OWL, Gray Panthers, etc.).
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