

Aging Technical Group newsletter

“People should live their lives as if their life depended on it.”

Willie P. Bennett*

As we watch the young and old Olympians performing superhuman feats, we may not understand the thousands of steps that were taken to reach the top, since all we see is the peak of the iceberg, built on years of training. Ian Millar of Canada won his first Olympic medal after 9 attendances.

As we think of our own fitness and the preservation of it, we forget the steps that we used to take to stay in shape, because we did not know that is what we were doing.

When we were in public school we walked, because there was no school bus for our neighborhood. This led to longer walks to different schools, and carrying items. We wore heavy clothes and boots and walked through snow. Some of us ran because we were always late. We rode bicycles in the Spring, and we carried Euphoniums home from high school, which were carried back on Monday morning, never opened.

When we got our first digs, we carried bags of groceries on the handlebars of our bikes, and carried our bike upstairs. We thought nothing of it.

Sometimes we could not always afford the bus, and we carried too much weight, too far. It was a great relief to get a car ride. And then we started driving,

and that was the end of the struggling with bags of groceries on bicycles and buses.

Adults who spend their lives sitting and driving automobiles don't build their fitness automatically like young people do. And when health declines, they find out that they don't walk very fast up hills any more. Some people find out much too late, after a myocardial infarction.

I had a friend in high school who smoked. He visited his grandfather in Greece who had a farm. My friend came back and said that old man sure was in good shape, and that he couldn't keep up with him. Good for Grandpa.

There is a modern culture which wants to make life easier for us. Some specialists would like to design the world so that no effort is required. Some people will always insist on parking inside the front lobby of the store.

My point of view is different. We should introduce a bit more inefficiency here and there. So we can get more regular activity. It becomes more and more important as we get older to maintain muscle mass and strength and balance. The Disablement Process (A Jette) does not have to be an automatic spiral after a major injury, if we have a basic level of regular activity, in my opinion.

I rode my bicycle home from work yesterday. The hills killed my muscles. They are a bit tighter today. Perhaps I should celebrate that. That's the miracle of a thousand muscular contractions. I was building muscles as well as riding home. We should all be doing that more often. If we cannot ride the whole way, then ride at least part of the way, and carry the bicycle into the office. After a while, you'll think nothing of it.

If you know a senior who rides a bicycle, and takes transit, and lives in her own home, you are witnessing the product of years of daily training. Encourage them to keep going. We should all live our lives like that.

C.J. Orok, Sudbury, ON

**Willie P. Bennett was a Canadian Folk Musician, Mandolin Player, Singer and Songwriter.*

Aging Technical Group Annual Business Meeting

Thank you to all who chimed in regarding the arrangements for the Annual Business Meeting of the Aging TG. All comments and viewpoints were appreciated. I did decide to let tradition reign again in New York and we will be hosting the annual luncheon meeting of the Aging TG. The lunch will be at noon on Wednesday, September 24, with the location as of yet, undisclosed. Please look for a sign-up sheet on the information table at the HFES Registration area. Full members of HFES will be asked to pay \$30 and students will be guests of the TG.

See you in New York City!

Randa Shehab,
Chair, HFES Aging Technical Group
Norman, OK

Aging Technical Group Session Information

Diana J. Schwerha, Athens, OH

I want to thank everyone for their work and their submissions for this year's conference. Although the Aging Technical Group normally has two sessions, the combination of a slightly smaller number of submissions and fewer overall sessions put us in the position to support only one session (this is approximately a 55 percent acceptance rate compared with the 80 percent acceptance rate last year). It's a great session, however, and I know that you will not want to miss it!

I would like to thank the following reviewers for their careful and timely review of the papers and posters submitted for this year's conference:

Kari Babski-Reeves, Kristen Gilbert, Jeff Hardee, James Howard, Sharon Joines, Sherry Mead, Beth Meyer, Dan Morrow, Frank Schieber, John Thomas, Rick Barker, Darin Ellis, Daryle Gardner-Bonneau, Julie Gilpin-McMinn, Richard Pak, Steve Wiker, Rebecca Boren, David Windell, Neil Charness and Nancy Broen.

The theme of the session is **Older Adults and Technology Use**. Our session will be Wednesday

morning from 8:30 to 10:00 AM. We have five wonderful papers:

Analysis of Visual Demands of In-Vehicle Test Displays Reveals an Age-Related Increase in Time Needed to Reallocate Attention to the Road. Schieber, F., Holtz, A., Schlorholtz, B. and McCall, R. (U. of South Dakota)

The purpose of this study was to evaluate age differences in the visual demands imposed by reading in-vehicle text message displays during simulated driving. Visual demand was operationalized in terms of five eye gaze data parameters. Sixteen young (mean age=20) and 16 older (mean age=77) licensed drivers served as participants. They were required to read variable length text messages from a console mounted display while driving on straight segments on a simulated rural highway. Older drivers required much more time to complete the concurrent text reading task – especially for messages of longer lengths. As hypothesized, most of this age-difference resulted from an increase in the time spent reacquiring the road scene between successive glances to the text display. Lane keeping variability increased and driving speed decreased while reading text for older, but not younger, drivers. This pattern of findings is consistent with prior claims that driving performance in older adults is negatively influenced by problems with attention switching mechanisms.

Older Adults and Technology Adoption. Czaja, S., Lee, C.C., Nair, S., and Sharit, J. (U. of Miami)

Access to computers and the Internet is a major public policy concern as technology has become a significant aspect of economic, social and health equity. Recent data suggest that although computer and Internet use is lower among older, as compared to younger adults access is increasing among older people. This paper examines changes in use of computers and the Internet over time (2000-2002 and 2006-2007) among two samples (N=424) of older adults ranging in age from 50–85 yrs. Data are also reported on changes in attitudes towards computers and how adoption is influenced by attitudes and demographic characteristics. Technology adoption and attitudes towards computers were assessed via questionnaire. Over

time, although there was no difference in percentage of participants who had computer experience, both breadth of computer use and Internet use increased. Participants from the more recent time point also reported more comfort with computers. The data also indicated that age, education, and comfort with computers predicted breadth of computer and Internet use. Understanding factors that influence access is important to the development of strategies to close the gap between adopters and non-adopters.

Investigation of Innovative Input Devices for the Age-differentiated Design of Human Computer Interaction. Schneider, N., Wilkes, J., Grandt, M., and Schlick, C. (RWTH Aachen U.)

Demographic change demands new concepts for the support of computer work by aging employees. In particular, computer interaction presents a barrier due to a lack of experience and age-specific changes in performance. This article presents a study in which different input devices (mouse, touch screen and eyegaze input) were analyzed regarding their usability and according to age diversity. Furthermore, different Hybrid Interfaces that combine eye-gaze input with additional input devices were investigated.

Age Differences, Expectancy, and Resultant Reliance and Compliance Behavior Using an Automated System. Mayer, A., Fisk, A., and Rogers, W. (Georgia Tech)

People of all ages are often forced to interact with unfamiliar automated systems. Users may rely on expectations of likely automation performance to guide their reliance and compliance behavior in such situations. The purpose of this research was to investigate age differences and expectancy effects on reliance and compliance behavior using a 90% reliable automated aid. User expectancies were manipulated by providing participants with a low, high, or standard expectancy description. Findings suggest that user expectancies have a significant affect on reliance behavior but have no overall effect on compliance. Overall, older adults relied on and complied with automation more than younger adults but their patterns of reliance and compliance behavior were similar. The findings

suggest that subtle changes to system descriptions influence expectations of an automated system.

Monitor Viewing Distance for Younger and Older Workers. Charness, N., Dijkstra, K., Jastrsebski, T., Weaver, S., and Champion, M. (Florida State U.)

Rempel, Willms, Anshel, Jaschinski & Sheedy (2007) recommend 52-73 cm for eye distance to a computer monitor based on an experiment that manipulated viewing distance. Jaschinski (2002) found a preferred viewing distance of 63 cm. However, these and other studies of preferred viewing distance used relatively small samples of young adults below age 40. In this study a representative sample of 206 university employees in two age ranges, ≤ 40 years and ≥ 50 years, were observed in their offices at their computer workstations. Mean distance to the center of the screen was 68 cm (95% confidence interval: 66 to 71 cm). Regressions showed that factors such as gender, whether a lens was worn, type of monitor, monitor resolution, and monitor contrast ratio did not predict preferred distance to screen. However, there was an age by job class interaction for preferred view distances with younger faculty at 64 cm, older faculty at 71 cm, young staff at 73 cm and older staff at 67 cm. Reported eye strain was related solely to glare rating. Results indicate that monitor positioning guidelines are reasonable for older workers and that glare sources could be reduced in typical office environments.

In addition to our technical session, the Aging Group will have its annual lunch right after our session from noon to 1:30. I hope to see everyone there.

Diana J. Schwerha

Aging Technical Group (ATG)

Chair:

Randa L. Shehab
Associate Professor and Director
School of Industrial Engineering
University of Oklahoma
202 West Boyd St., Rm 124
Norman, OK 73019
rlshehab@ou.edu

Chair Elect: Richard Pak

Program Chair Elect: Anne McLaughlin

Secretary/Treasurer: Kari Babski-Reeves

Newsletter Editor: Cal Orok
1436 Sunnyside Road
Sudbury, ON, P3G 1J1
calvinorok@yahoo.com

Web Master: Anne Adams
Graduate Student
School of Psychology
Human Factors and Aging Lab
Georgia Institute of Technology
654 Cherry Street
Atlanta, Georgia
30332-0170
<http://www.hfaging.org>

The Aging Technical Group consists of people interested in human factors applications appropriate to meeting the needs of older people and other special populations in a wide variety of life settings. This includes understanding the performance capabilities and user needs of these populations and identifying and designing environments, products, and activities that best fit these needs and characteristics. The focus of the group encompasses work, home, and leisure settings.

Technical Focus

It is generally acknowledged that age-related changes in physiological and cognitive functioning affect, to some extent, the ability of older people to successfully perform or function in many life activities. The performance problems encountered

by this population are becoming increasingly important given the change in the demographic structure in the population and the "graying" of society. Human factors engineering, with its emphasis on the analysis of human capabilities and design to fit these capabilities, is highly suited to solving problems encountered by older individuals in work, home, and leisure activities.

The human factors practitioner is concerned with incorporating information regarding the functional capabilities of older adults into the design of products, transportation, safety, work and home environments, and leisure aids. Specific areas of emphasis include the following:

- Designing home, work, and recreational environments to minimize safety hazards and optimize the functional abilities of older adults within these environments
- Designing user interfaces, controls, and displays that accommodate the needs of the elderly
- Understanding the relationship between aging and work performance - specifically how aging affects or does not affect specific jobs and job functions
- Understanding aging in relation to driver and pedestrian skills and developing strategies to allow older individuals to maintain these skills and successfully perform these activities
- Developing and evaluating training strategies that are effective in teaching older people new skills (e.g., job) or how to maintain skills (e.g., driving)

Most research related to human factors and aging is carried out at universities, governmental agencies, and companies concerned with the design and manufacturing of products. Current research activities include the following:

- Developing effective training strategies to teach older people computer skills
- Identifying problems older people encounter in the performance of daily living activities such as meal preparation, and identifying design solutions
- Understanding the range of functions that are crucial to driving, developing an appropriate test

battery to assess these skills, and examining how these skills change as a function of age

- Designing highway environments to accommodate the older driver
- Collecting anthropometric and biomechanical data for older populations
- Examining the relationships among aging, exercise, and performance

Membership

The ATG consists of about 300 members. These individuals work for government agencies, universities and colleges, branches of the military, research and consulting firms, and manufacturers. The ATG seeks to foster the exchange of information among members and to promote the development and application of human factors data to age-related issues. Most ATG members are members of the Human Factors and Ergonomics Society.

Benefits of Membership

The Aging Technical Group, like other technical groups within the Human Factors and Ergonomics Society, performs a variety of functions and services for its members. Its sponsorship of technical sessions at the Annual Meeting of the Human Factors and Ergonomics Society provides the opportunity for exchange of information among leading professionals in the field.

A newsletter is sent to all members about four times a year. Annual dues are \$5. Additional information on the Aging Technical Group is available on the HFES Web site at <http://hfes.org>.

It is not necessary to belong to the Human Factors and Ergonomics Society in order to join the Aging Technical Group.

Human Factors and Ergonomics Society

The Human Factors and Ergonomics Society is an international, multidisciplinary, nonprofit organization of close to 5,000 members involved in the human factors field. HFES is the largest organization of human factors professionals in the world.

HFES members are concerned with the safety, usability, and maintainability of systems and products that involve the human as an operator or maintainer. Since its formation in 1957, the Human Factors and Ergonomics Society has promoted the discovery and exchange of human factors knowledge, as well as the education and training of students and practitioners.

The Human Factors and Ergonomics Society is a member of the International Ergonomics Association.



Editor's Note

This is your Aging Technical Group newsletter – We welcome your contributions and suggestions. We want to hear what you're working on and thinking about.

Here are some work-related words to ponder. Sprinkle these gems into your correspondence, and then send us new ones to publish. CO

erg – a unit of work or energy, equivalent to 2.4×10^{-8} gram (small) calories, or to 0.624×10^{12} electron volts.

ergophobia – morbid dread of work

ergasiomania – a morbid desire to be continually at work

ergasthenia – debility from overwork

ergastic – having potential energy

egototherapy – treatment by physical exertion

(From the Encyclopedia and Dictionary of Medicine and Nursing, 1972)

Letters and E-mails

Newsletter Name

Dear Editor,

I am wondering if we can coin our newsletter as:
amAGING [like I am aging...we all are aging and thought represents a continuum...]

Or

AgeFactors

OR

ergoAGING

OR

AGEnomics [this might not be that good because it may be confused with Age and Economics]!

Anyways, just a thought!

Ram
Rammohan V. Maikala, PhD
Research Scientist
Liberty Mutual Research Institute for Safety
Liberty Mutual Group
71 Frankland Road, Hopkinton, MA, 01748.
email: rammohan.maikala@libertymutual.com

P.S. My dumb definition of Ergonomics:
Keep it Simple and Safe for the User [KISSU]

Aging Blog

Dear Editor,

Dr. Richard Pak (at Clemson) and myself (at North Carolina State) maintain a human factors blog that frequently addresses aging issues (as we are both are interested in aging in our research). It is a collection of human factors related items from the news, etc.

Feel free to include it in your list of websites.
www.humanfactorsblog.org

and this is the link to all articles specific to aging:
<http://humanfactorsblog.org/category/aging/>

Best,

Anne McLaughlin
anne_mclaughlin@ncsu.edu

The space below is kept intentionally blank to avoid editorial ergasthenia. Please send us a short note.

