Correspondence

What is NORMAL aging?

Being a relative late-comer to academia, I am always intrigued at how academic terminology evolves. Since most older adults are not sick, one would assume that a literature search would yield many gerontological articles with the term *normal aging* in them. But this is not the case. So I asked myself, why isn't this term widely used in past and current gerontological and gerontechnological literature?

In 1987, Rowe and Kahn explained that within the category of normal aging, a distinction can be made between usual aging and successful aging[1]. Here we see *normal* as the highest level of the aging hierarchy. Instead of remaining at this level, almost immediately, the optimist movement in aging begins[2]. That of *successful aging*.

Successful aging spawns more positive-focused terminology like productive[3], active[4], healthy[5], and adaptive aging[6]. *Usual aging* is associated with 'not-so-good aging', and should be transitioned to successful aging with the help of research[4]. *Bad aging* would be anything associated with disease or loss of vitality. This niching and specification of terminology may be a necessary thing, but the overall architecture needs readjusting.

Instead of good and bad, a better approach is normal and non-normal. Non-normal aging would encompass sickness (pathological) and disease. Normal aging is everything else. Statistically speaking, normal would refer to the majority and what happens to the masses with older adults; perhaps we start with the median of this population and work one or two standard deviations away from that. Naturally complexities arise such as the fact that normal is a moving target; what was once considered 'normal' – for instance, life expectancy, diseases, technological adoption in the home or hospital – can and will change[6]. Also, the distinction between normal and non-normal may not be black and white in a given person; if an older adult develops a disease, every element of aging in that person may not necessarily resort to non-normality.

Instead of using the term successful as the overall umbrella to aging, let's go back to using the term normal. And, underneath that, have the subcategories like successful, productive, usual, etc.; all that refers to normalcy except the categories of non-normalcy. Herein *normal* should include sub-categories that reference what may have historically been associated with *bad aging*: biological changes, cognitive declines, etc. There needs to be an area in the aging architecture that addresses these topics as separate from sickness and disease, to encompass the many dimensions and variability that result from the aging of such a vast audience. To illustrate, some older adults have minimal hearing loss, some don't. Some older adults become far-sighted to a larger degree than others. Memory loss, corneal hardening, balance control, all have ranges in degrees specific to every older adult. These all should be categorized under normal aging. Glaucoma, an eye disease, is a part of non-normal aging.

I am suggesting the elimination of idealistic and emotional terminology. Save that for the marketing brochures. I am suggesting we readjust the categorization of aging terminology to be less good vs. bad and be more majority-focused and objective.

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Book review

Fogg, B.J., (2002). Persuasive technology. Using computers to change what we think and do. San Francisco, US: Morgan Kaufmann Publishers. ISBN 1-55860-643-2. Price: $ 39,95 (VAT included)

Persuasive technology is defined as any interactive computer system designed to change people's attitudes or behavior. A major interest of social scientists is to understand how people change. Nevertheless most studies have failed to recognize the power and pervasiveness of a range of subtle variables that operate on us in subtle ways. Examples based on laboratory experiments and real-world experiments failed to control crime or reduce criminal behavior. The editor considers technology to overcome these barriers.

Computers were initially meant to persuade. Nowadays computers have replaced (traditional) persuaders, such as teachers, coaches, clergymen, therapists, doctors and sales people. An example of persuasive technology from the 80s is the introduction

of the personal computer in office environments to increase productivity on the work floor. An example from the 90s is the widespread introduction of the internet. Websites were designed to persuade people to change both attitude and behavior.

Persuasive technology is described by the new paradigm 'captology'. The author defines captology as an acronym based on the phrase "computer as persuasive technologies". In brief, it captures the domain of research, design, and application of persuasive technology to change attitudes and behavior. Captology has its focus on human machine interaction: the interaction with and through computers. Persuasion is based on intentions and not on outcomes. Persuasion can take place on two levels; macro and micro, defined by the author as macrosuasion and microsuasion. Macrosuasion describes the overall persuasive intent of a product while microsuasion will incorporate smaller persuasive elements to achieve a different overall goal. Features (sounds, additional credits) in video games are, for instance, examples of microsuasion to keep gamers interested in the game.

The major advantage of persuasive technology is its interactivity. Based on personalized information on needs and situation, tailor made products, services and programs are delivered in interactivity. Besides this advantage over traditional media, persuasive technology has advantages over human persuaders. It (i) is more persistent than human beings, (ii) offers greater anonymity, (iii) manages huge volumes of data, (iv) uses many modalities to influence, (v) scales easily, and (vi) goes where humans cannot go or may not be welcome. A major part of the book is devoted to understanding captology through the use of the so-called functional triad with three corner points: (i) tool, (ii) media, and (iii) social actor.

All three corner points of the triad affect persuasion. The author has identified seven tools of persuasive technology: (i) reduction technology, to reduce complex tasks through simplification, (ii) tunnelling technology to guide users, (iii) tailoring technology to provide the information that is relevant to a certain person at a certain time, (iv) suggestion technology to suggest a behavior at the most opportune moment, (v) self-monitoring technology to let the user monitor oneself in order to achieve a predetermined goal or outcome, (vi) surveillance technology to enable individuals to learn about themselves, and (vii) conditional technology to use principles of operant conditioning to change behavior.

Media may be directed towards compelling simulated experiences. The author has proposed three categories of simulation: (i) simulated cause-and-effect scenarios to observe immediately the link between cause and effect, (ii) simulated environments to provide users with new (virtual) environments, and (iii) simulated objects to improve everyday routines using portable simulation technologies.

Although no extensive studies have shown how computers affect or trigger social responses in humans, plenty of casuistic exists. This third corner point of the functional triad –the social actor- is divided into five social cues: physical, psychological, language, social dynamics, and social roles.

The book considers the credibility of computers and recognizes two dimensions: trustworthiness and expertise to determine perceived quality. Relevant errors and faults are discussed. Credibility is considered essential to be effective in persuasion. In addition, connectivity and mobility nowadays enhance the potential of persuasive technology. The introduction of wireless internet, smart mobile phones and PDAs supports this.

Ethics is paramount in persuasive technology. Most of the ethical issues fall into one of three areas (i) intention, (ii) methods, and (iii) outcomes. The intention can be seen as the question "Why was the product created?". Methods concern establishing intend and assessing ethics. Using emotions is acceptable in some cases. Outcomes may be intended or unintended.

This interesting book is primarily based on social sciences applied to state-of-the-art technology. Best practices and finished academic study results are well described to empower most of the definitions launched by the author. It provides evidence that persuasive technology indeed changes attitudes and behavior.

The book, however, lacks a reflection on social models. The foreword, written by Zimbardo, is paying some attention to a few of these models. The model of Machiavelli (human beings are the effective agents of influence) has been adopted, while the model of Orwell (technology could be corrupted by Big Brother to control the minds of the masses) has been ignored. It is hard for non-social scientists to determine how good the new paradigm of captology really is. The author also does not mention relevant new technological paradigms, such as 'ubiquitous computing' and 'ambient intelligence' (See: Gerontechnology 2005;4(4): 240-242). Matching the new technology-based paradigms with the social-based paradigm of 'persuasive technology' could increase persuasiveness.

The book may help gerontechnology in being more adaptive and adaptable -in short- more persuasive.

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People

Voltaire (1694-1778): successful ageing in the 18th century

Born in 1694, 'Voltaire' (real name François-Marie Arouet) remains one of France's most famous writers and intellectual figureheads. Although a central character in French 18th century history, philosophy and literature, Voltaire's later years were lived literally on the margins of France; at the age of 60, he faced exile from Paris on the wishes of King Louis XV. He chose to live first in Geneva, before settling nearby at Ferney, close to the French-Swiss border[1,2]. This final period of his life, spanning almost a quarter of a century, was to be an unexpectedly happy and impressively productive time. Voltaire's later years, it can be argued, were an example of successful ageing.

An understanding of how Voltaire aged is possible thanks to his letters[3], and the recent publication of a biography by Ian Davidson (*Voltaire in Exile*)[2], which focuses attention on his later life. A prolific and famous letter writer, Voltaire corresponded with hundreds of people, including his friends and enemies, princes, politicians and other playwrights. Voltaire's published correspondence amounts to almost 15,300 letters; over three quarters of these were written from 1754 onwards when he was 60. His exile from Paris and failing health meant that letters were an important way of maintaining contact with those he could no longer visit – comparable in a way to the modern-day e-mail. According to Davidson, he wrote about 550 letters annually in his 60s and 70s. The content of these letters provide some insight into how Voltaire lived his later years in 18th century Europe.

Voltaire's early letters from Geneva indicate a new found interest in cultivating the estates where he decided to set up home. Although he was now in his 60s, he embraced this new lifestyle, designing ornate gardens, planning vineyards, and organising herb, vegetable and fruit crops. He had special shoes made for his walks around the farmland, where he inspected the livestock and oversaw the development of his estate.

Gerontechnologists will be interested by his enthusiasm for cultivating the recently acquired farmland using the most up-to-date equipment, such as five-bladed sowing ploughs and the latest in grape-press devices. Keen to accommodate the needs of the many visitors to his villa, his letters also reveal his efforts to modernise his bathrooms with bidets, following complaints from a lady guest. This whole-hearted engagement in refurbishing his property and cultivating the land seems to have paid off: he wrote in 1759 "*Four years ago, I was getting ready for death, but now I find that I am stronger than I have ever been…*"

In his early 70s, he reconverted his theatre to farm worms for silk production, and he even learned how to weave stockings. At 76 years of age, he established a successful watch-making industry at Ferney. Ever the shrewd business man, he sourced the raw materials, and organised the marketing, sales and exporting of the watches. Having financed the construction of factory space and homes for the dozens of craftsmen, Voltaire remained actively involved in the running of the watch-making business into his eighties, as well as the management of the village that grew around Ferney as a result of this enterprise.

Voltaire as depicted by Jean-Antoine Houdin (sculptor) in 1781

Voltaire's letters highlight some of the issues that preoccupied him into old age. In his late 60s, he became a surrogate father, as he appeared to regret his childlessness; the nurturing relationship with this adoptive daughter (and later, a grand-daughter) was an important source of happiness for him. He was conscious that his considerable wealth was an enormous privilege as he grew older; both in his private and work-life, he developed a sense of responsibility for providing for those who were dependent upon him, including his employees and his family.

As he grew older, Voltaire became increasingly preoccupied by miscarriages of justice in France and elsewhere. Although powerless to prevent executions, Voltaire invested considerable time and money in his efforts to investigate and clear the names of people he felt had been wrongly accused within the French justice system.

Indeed, his most memorable and popular work, *Candide*, was published when Voltaire was 65; part of this story was inspired by the recent execution of a British admiral in England. Candide sold more than 20,000 copies in its first year of publication (1759), making it an 18th century bestseller; book production was a less technologically advanced activity than today, yet at least 20 editions were published around Europe in the first year, including copies in French, Italian and English.

Despite Voltaire's remarkable achievements and productivity, his later years were not an easy time. His writings, his behaviour and his opinions were lifelong sources of conflict with the Church and State authorities. Although Voltaire was a wealthy man, he frequently worried about his financial future; he was owed large sums of money from loans, which were not always repaid. In his eighties, he campaigned against tax reforms which were threatening the watchmaking industry in Ferney. Voltaire entertained hundreds of admirers and visitors at his home, yet he experienced feelings of loneliness, notably in his 70s, when his long term companion, Madame Denis, deserted him abruptly for about 18 months. He was also distressed by the deaths of younger friends. He suffered various health problems, including gout, failing eyesight, diabetes and prostate cancer. Nevertheless, Voltaire remained both physically active and intellectually engaged right up to the week of his death in 1778.

The final months of his life were spent back in Paris, as Louis XV had died a few years earlier. By now a frail eighty-three year old man, Voltaire attended meetings, planned new publications, revised and oversaw rehearsals of his new play, and socialised around Paris. This time in Paris was a triumphant period, as Voltaire was besieged by hundreds of visitors, hailed as a hero by crowds in the street, and appointed director of the prestigious Académie Française.

From a psychological point of view, Voltaire appears to have been an exceptionally resilient man. His banishment from Paris was an unexpected setback, but he adapted successfully to his changed circumstances. He went on to live a strikingly productive later life, despite chronic health problems, recurrent financial worries and a turbulent relationship with the French and Swiss authorities. As he grew older, Voltaire remained engaged in familiar activities (writing, theatre, reading), while enthusiastically embracing new roles and responsibilities. Far from retiring as he grew older, Voltaire provides a striking example of creativity, resilience and dynamism in later life.

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ISG BUSINESS

At the start of the 5th volume: A message from the editors

At the start of the 5th volume we thank the members of our editorial board for their peer reviewing of the manuscripts received during volume 4, as well as Tatjana Bulat (*USA*), Soutrik Banerjee (*France*), David Burdick *(USA*), Fergus Craik (*Canada*), Sara Czaja (*USA*), Katinka Dijkstra (*USA*), Mili Docampo Rama (*Netherlands*), Klaus Fellbaum (*Germany*), Laura Gitlin (*USA*), Jan Graafmans (*Belgium*), Peter Graf (*Canada*), Paul de Greef (*Netherlands*), George Havenith (*United Kingdom*), Florian Kaiser (*Switzerland*), William Kearns *(USA*), Gari Lesnoff (*USA*), William Mann (*USA*), David Martin (*United Kingdom*), Anne-Sophie Melenhorst (*Netherlands*), Alex Mihailidis (*Canada*), Roger W. Morrell *(USA*), Dan Morrow (*USA*), Masaru Miyao (*Japan*), Laxman Nayak (*United Kingdom*), Richard Pak (*USA*), Cor E.E. Pernot (*Netherlands*), Richard Pew (*USA*), Gail M. Powell-Cope (*USA*), Liliane Rioux (*France*), Wendy Rogers (*USA*), Jennifer Salmon (*USA*), Frank Schieber (*USA*), Thijs Soede (*Netherlands*), Anthea Tinker (*United Kingdom*), Paivi Topo (*Finland*), Eva Lindh Waterworth (*Sweden*), Linda Webber (*USA*), Gill Whitney (*United Kingdom*), and Bo Xie (*USA*). In total 49 manuscripts (originals, shorties, student papers and best practices) completed the peer reviewing process; 28 (57%) were rejected.

In addition we would like to inform the members of the International Society for Gerontechnology and other readers of some of the changes that will take place starting this issue.

To have more space for research in the issues the instructions to contributors can only be found on the website (*www.gerontechnology.info/Journal/instructions.htm*). Formerly, they were also printed in the first issue of each volume.

A more important change has to do with the peer reviewing process. Starting from May 1, 2006 peer reviewing of all new manuscripts will be completely anonymous. Not only are the authors unaware of the identity of the peer reviewers (as has been the case all along), also the peer reviewers will no longer be aware of the names of the authors when reviewing manuscripts. This has resulted in some changes in the up-

loaded instructions for authors.
Our honorary member prof.dr. Vappu Taipale has resigned her membership of the editorial board. We are grateful for her input during the last 5 years, and are pleased that she found a worthy 'replacement'. Scandinavia was further strengthened by a representative from Denmark. Other 'additions' to the board came from Argentina and the Netherlands.
Starting from volume 5, authors who are also member of the ISG may upload their published contributions to Gerontechnology on their own website for non-commercial use, provided that a link is included to the journal.
The editors of Gerontechnology
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World News

Ageing well in Australia

There have been two significant national networking initiatives in Australia to facilitate multi-disciplinary research in the field of ageing and to encourage proactive planning in mid-life for old age.
The Australian Government, through a joint venture of the Australian Research Council (ARC) and the National Health and Medical Research Council (NHMRC), has developed a *Research Network in Ageing Well (www.ageingwell.edu.au)*. The expectation is that this Network will generate the innovative and multidisciplinary approaches necessary to understand ageing people, relations between age groups, and the economic, social, and policy contexts that shape ageing experiences. The Research Network in Ageing Well places great emphasis on linking researchers from many disciplines in order to address the bio-psycho-social dimensions of ageing that need to be understood at the individual and population levels. The Network also emphasizes the need to strengthen international collaboration and to involve and inform end-point users. Four theme areas are identified: (i) Productivity and Economic Security including labour markets for older workers, retirement planning and asset management; (ii) Independent Living and Social Participation including aged and community care and social policies, information technology, housing and transport; (iii) Healthy Ageing including determinants of healthy ageing, cognitive competence and mental capacities, physical activity and functional independence; and (iv) Population Research Strategies including population projections and modeling the future, multidisciplinary analysis of existing Australian longitudinal data, review of international survey literature relevant to Australia, and building international collaborations.
The other initiative is the Ageing Research Online (ARO) (www.aro.gov.au), a joint venture of the Department of Health and Ageing, Department of Veteran Affairs and the Australian Institute of Health and Welfare. The ARO produces a quarterly newsletter and enables researchers to register any ageing related project online thus providing access to information on ageing relevant policy responses and research initiatives.
It is of note that the term 'gerontechnology' does not appear in the title of any project associated with either of these initiatives. However research related to technology, whether in the area of continuing employment, medical assistance, entertainment or domestic ease, is referenced.
An example of the operation of the Research Network in Ageing Well is a *Symposium on Ageing Research* that was held in Perth, Western Australia in September 2005 (*http://cracs.curtin.edu.au/partners/AgeingWellStateNode02.html*). The main aims of that Symposium described by Professors Duncan Boldy and Hal Kendig were to facilitate ways in which existing research could be enhanced, to identify areas of ageing research that were not covered or were inadequately covered and to discuss disciplines that were not represented or were underrepresented in the Ageing Well Research Network of Australia. Thirty-six short presentations were made to an audience of approximately 60 participants. The research interests covered a wide range of issues including factors related to independent living and quality of life, ageism in the media, the impact of intergenerational change in communities, the quality of the physical environment in housing for older people, maintaining physical and mental health and how technology can assist ageing in place. The event was successful because of its interdisciplinary nature. An evaluation of the symposium showed that approximately half the participants planned to make contact with other participants to expand their research thinking. It was also suggested that such a symposium becomes a regular event.
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Calendar of Events

The forthcoming list this time may be found at www.gerontechjournal.net
Announcements of meetings and other events for the Gerontechnology Calendar should be submitted by e-mail to: *j.e.m.h.v.bronswijk@gerontechnology.info*.
The editors decide to include or not include the announcement of a certain event.