



Victoria Longitudinal Study

Edmonton • Victoria
Canada



VLS Newsletter

Issue 2: 2006-2007



VLS Labs: Edmonton, AB
(above) and Victoria, BC (below)

Welcome to the “VLS Newsletter”

As was the first issue of the VLS Newsletter, this one is directed to readers near and far. The VLS continues to grow and expand in its research agenda and purview, while remaining a part of the lives of its many staff, alumni, and participants. We had a very favourable response to our first Newsletter (Issue 1: 2004-2005), so we are delighted to prepare the current edition in the same format and style. Please let us know what you think of the Newsletter: Our contact information is on page 4. We would like to extend a very special greeting to those readers who are VLS participants: To you we express how deeply grateful we are for your continuing dedication to this project. We are doing our best to honour your contribution by conducting and publishing the very best research we can muster. We would also like to thank both sponsoring universities for their continued support.

Dr. Roger A. Dixon

VLS Director

Canada Research Chair in Cognition and Aging (University of Alberta)

Adjunct Professor of Psychology (University of Victoria)



New Research from the VLS

Research on aging is the main purpose of the VLS. In each issue of the VLS Newsletter, we highlight some actual research projects conducted with the ever-growing VLS database. In this edition, we present summaries of two recent projects.

Project 1: What roles do “health” and “biology” play in adults’ cognitive performance?

Throughout adulthood—but perhaps especially in older adults—one’s health status and biological vitality can affect cognitive performance in everyday life. Some chronic conditions can reduce one’s health and biological functioning to the extent that it becomes difficult to perform cognitive tasks successfully. In one earlier study, we developed a way to estimate older adults’ “biological age” by combining selected measures of biological vitality. In that study, we found that an estimated “BioAge” was a very promising marker of differences in cognitive changes with aging. In our latest study on this topic, our Swedish colleague, **Dr. Åke Wahlin**, led a VLS team in exploring the relative effects of BioAge, chronological age, and health status on cognitive performance in older adults. We found that all three factors played important roles in determining cognitive performance for VLS participants. Our finding that health and BioAge predict cognitive variation independent of chronological age demonstrates the importance of evaluating the many “contexts” of human aging. It has inspired us to continue exploring health and biological contexts in the VLS.

Citations: MacDonald, S.W.S., Dixon, R.A., Cohen, A., & Hazlitt, J.E. (2004). Biological age and 12-year cognitive change in older adults: Findings from the Victoria Longitudinal Study. *Gerontology*, 50, 64-81.
Wahlin, Å. MacDonald, S.W.S., de Frias, C.M., Nilsson, L.-G., & Dixon, R.A. (2006). How do health and biological age influence chronological age and sex differences in cognitive aging: Moderating, mediating, or both? *Psychology and Aging*, 21, 318-332.

Project 2: Exploring “executive functions” in the VLS

Some theories of cognitive changes with aging focus attention on the role of executive functioning (EF). EF is thought to reflect the basic abilities of controlling, planning, and applying one’s cognitive skills. Through aging-related changes in particular regions of the brain, EF skills may decline in a manner that affects a wide variety of other everyday cognitive performances. However, much research remains to be done. VLS researchers have recently begun exploring the characteristics of EF in normal aging. In one study, we carefully developed and published much-needed norms for EF performance among healthy older adults. In a second study, we examined whether various new and traditional measures of EF actually evaluated the same construct. (We found evidence that they did!) We look forward to much future work on this promising aspect of human aging.

Citations: Bielak, A.A.M., Mansueti, L., Strauss, E., & Dixon, R.A. (2006). Performance on the Hayling and Brixton tests in older adults: Norms and correlates. *Archives of Clinical Neuropsychology*, 21, 141-149.
de Frias, C.M., Dixon, R.A., & Strauss, E. (2006). Structure of four executive functioning tests in healthy older adults. *Neuropsychology*, 20, 206-214.

Recent Research Activities

VLS researchers often present their latest information at national and international conferences, such as "Cognitive Aging Conference" and "Gerontological Society of America". Here is a small sample of our recent presentations.

Dixon, R.A. (2006). Epidemiology of cognitive aging.

Dixon, R.A., & de Frias, C.M. (2006). Compensatory strategy use.

Dixon, R.A., Garrett, D.D., Lentz, T., MacDonald, S.W.S., Strauss, E., & Hultsch, D.F. (2006). Neurocognitive markers of mild cognitive impairment.

Feltmate, S.E., Gagnon, L.M., Kang, S.J., & Dixon, R.A. (2006). Metacognition and collaboration.

Garrett, D.D., MacDonald, S.W.S., & Dixon, R.A. (2006). Subclinical cognitive impairment.

Small, B.J., McArdle, J.J., MacDonald, S.W.S., & Dixon, R.A. (2006). Growth-survival models of terminal decline.

Tippe, S.E., de Frias, C.M., & Dixon, R.A. (2006). NSAIDs and normal aging.

Bielak, A., Hughes, T.F., Small, B.J., & Dixon, R.A. (2005). Engaged lifestyle and cognition.

Hughes, T.F., Bielak, A., Small, B.J., & Dixon, R.A. (2005). Lifestyle activities, cognitive reserve, and intraindividual variability.

MacDonald, S.W.S., & Dixon, R.A. (2005). Cognitive trajectories of terminal decline.

Small, B.J., Dixon, R.A., & McArdle, J.J. (2005). Health predictors and episodic memory.

Master Mentoring in the VLS

Dr. David Hultsch has been with the VLS since its inception. In fact, along with **Drs. Christopher Hertzog** and **Roger Dixon**, he was one of the founding members of the project. In 2006, Dr. Hultsch was awarded a prestigious honour by the Division of Adult Development and Aging of the American Psychological Association. He is the 2006 recipient of the Master Mentor Award, which is sponsored in part by the Retirement Research Foundation. A good mentor is a trusted counselor or teacher, and an outstanding mentor is recognized by his or her former students and advisees.

Dr. Hultsch had a role in the training of many present and former VLS graduate students and research assistants, including Debbie Ball, Allison Bielak, Cindy de Frias, Mark Hammer, Stuart MacDonald, Leslie McDonald-Miszczak, and Brent Small. Dr. Small organized the submission for the award. Letters on Dr. Hultsch's behalf were written by some of his former students and colleagues. Congratulations to Dr. Hultsch for a well-deserved honour!

Changes

Dr. David Hultsch completed his term as Director of the Centre on Aging at the University of Victoria. He returns to teaching and research in the Department of Psychology in January 2007. He continues to be active in the VLS.



From NIH, To NIH!

Much of the research that occurs in the VLS is supported by the National Institutes of Health (NIH), and especially the National Institute on Aging (NIA). NIA is one of about 20 research institutes that are included in NIH. NIH is the largest health-related research organization in the world, funding a wide range of research through each of its many institutes. We are very fortunate in the VLS to have been supported continuously for over 16 years by NIA. Sometimes the hand that giveth also taketh, and the resulting balance can be good for everyone. **Dr. Roger Dixon**, the VLS Director, is currently a member of one of the NIH scientific review boards. As a member of the board, he is privileged to review some of the 70-80 research pro-

posals on each of three occasions every calendar year. Virtually all proposals to NIH that are related to the following areas are likely to be reviewed by his board: cognitive aging (adults), cognitive development (children), cognitive neuroscience (brain-behaviour relationships), and cognitive science (perception, vision). It is a very challenging and time-consuming job, but it is also quite rewarding. Not only does he regularly visit fascinating Washington DC, but he works closely with a group of interesting and talented researchers, all of whom are dedicated to promoting integrity and excellence in research on human health. He reports that he is

“delighted to contribute something to NIH on behalf of the VLS, and both labs in Edmonton and Victoria.”



Celebrating 10 Years at the VLS

My experiences with the Victoria Longitudinal Study (VLS) began in March of 1996 as the result of an application for a position and eventually a job interview with Drs. Roger Dixon and David Hultsch. After being accepted for the position of research assistant, I began a rigorous tester training regimen with staff from the VLS. Who could have foreseen that I would have enjoyed it so much and am still doing so today? My belief is that the enjoyment has been supported not only by the people I have had the privilege to work along side, but also by all of the wonderful participants who have graced our project with their continuing commitment to an inspiring endeavor of research on health, cognition, and aging. These topics are truly fascinating components of the human condition.

People have come and gone here at the VLS, including staff. I have been fortunate to meet some young men and women with exceptional academic skills and have enjoyed the opportunity to work with them in

this environment of high quality research. Having the opportunity to train many of those people in various methods of data collection and scoring, as well as in how to establish and maintain working statistical datasets for data analyses, has been very satisfying and educational for me. It has also been a valuable tool in helping me gain new insights and knowledge as a research investigator.

Over the past 10 years, the VLS has seen some rather dynamic transformations. From a technological standpoint, we now have significantly upgraded computers. This allows us to maintain our datasets independently from the antiquated mainframe computer technology of the earlier years of the study. There have also been a number of new measurement tools introduced through the 10 years since I began here, and with each has come little quirks and problems which needed to be addressed to create a

smooth flow of presentation to our participants. The four sessions of testing for all returning participants enable us to collect vast amounts of data.

Without input from our participants, nothing would be possible and we would not have become the world-renowned research project that we are now. In fact, I recently attended the “European Society of Developmental Psychology” (ESDP) conference in the Canary Islands and happened to see several presentations by conference attendees from Spain who were using references from articles published by Drs. Dixon and Hultsch from the VLS. I know that news of our research has spread worldwide!

I continue to enjoy the experiences with all of our participants and look forward to an ongoing relationship with the VLS.



Terry Perkins

Congratulations!

Allison Bielak (UVic) received a doctoral award from the Canadian Institutes of Health Research.



Allison Bielak and VLS research assistant **Debbie Ball** recently achieved personal best times in the Times Colonist 10K race.



research over the last two years.

Sarah Feltmate (UAlberta) received a master’s award from the Canadian Institutes of Health Research. Sarah also recently completed her First Year Research Project.



After working in the VLS lab for two years (1999-2000), **Dr. Andisheh Eslamboli**



Research assistant **Jackie Lane** was recently married. Coincidentally, the officiate who performed the ceremony is a VLS participant.



Doug Garrett (UVic-UToronto) received a graduate award from the Natural Sciences and Engineering Research Council.



received her PhD in experimental psychology at the University of Cambridge in 2003. She has been interested in Parkinson’s disease, stroke research, and most recently professional photography!

VLS consultant **Dr. Brent Small** recently received the University of South Florida Outstanding Faculty Research Achievement award.



Sonia Kang (UAlberta-UToronto) received a doctoral award from the Social Sciences and Humanities Research Council. Sonia also recently completed her Master’s degree.



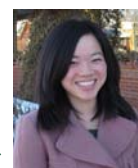
Dr. Lisa Gagnon has completed her residency in Psychiatry and taken a position as a psychiatrist in Calgary. We miss her (and daughter Jillian) in the Edmonton VLS lab, where she spent many hours of postdoctoral



Research Assistant **Sarah Tippe** received a B.Sc. from the University of Alberta.



Sophie Yeung received the 2006-07 undergraduate scholarship through the Alberta Centre on Aging. Sophie is a research intern in the VLS lab.



VLS

Edmonton - Victoria

VLS NEWSLETTER

Issue 2: 2006-2007

Editorial Staff: Sonia Kang, Jill Jenkins,
Roger A. Dixon



A recent meeting of some VLS staff in Victoria

The Victoria Longitudinal Study (VLS) is a large-scale and multi-faceted investigation of human aging. The VLS began modestly in the 1980s at the University of Victoria. In 2002, the headquarters of the VLS moved to the University of Alberta. Today, VLS labs operate on both campuses.

The initial goal of the VLS was to examine profiles and predictors of cognitive changes in healthy, community-dwelling, middle-aged and older adults. The ambitious research design called for a series of three large samples of adults (initially ranging in age from 55 to 85 years) to be repeatedly interviewed and tested over a long period of time.

Now over 17 years old, the VLS has grown dramatically in recent years. New participants, collaborators, and measures have been added. The latest battery of measures reflects the goal of further understanding interrelated aspects of human aging. Our cognitive measures include numerous indicators of memory, neurocognitive processes and resources, and other cognitive functions. In addition, we have a broad swath of measures of related constructs such as medication and illness information, health beliefs and reports, health risks, physiological capacities, sensory status, personality and affect, activities and lifestyle, neuropsychological indicators, and metacognitive knowledge and beliefs.

The VLS has been continuously funded by the U.S. National Institute on Aging, one of the National Institutes of Health. Roger Dixon is the Principal Investigator for the NIA grant supporting the VLS and both labs. We are funded by NIA grant R37 AG08235.

WE'RE ON THE WEB!
www.ualberta.ca/~vlslab/

Memory, Aging, and Brain

In honor of Lars-Göran Nilsson



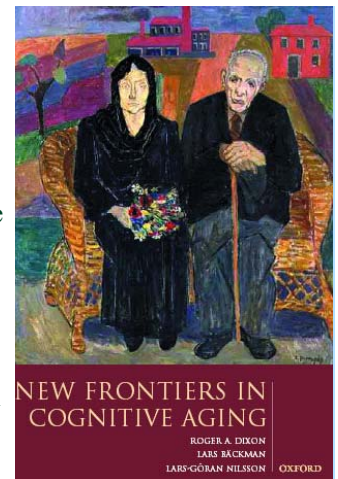
Näsby Slott, October 6-7, 2006

Organizers: Lars Bäckman & Lars Nyberg

In 2006 a celebration was held in Sweden to honour the contributions and career of VLS colleague, **Dr. Lars-Göran Nilsson** (Stockholm University). Numerous VLS collaborators were in attendance at the "Memory, Aging, and Brain" conference, including **Drs. Lars Bäckman, Cindy de Frias, Roger Dixon, Stuart MacDonald, and Åke Wahlin**. For the full program, visit the NEWS page of the VLS website.

Together with colleagues from Canada, Sweden, USA, Australia, and Germany, we recently published a book on the "New Frontiers in Cognitive Aging" (Oxford University Press, 2004). The new frontiers covered include perspectives on neuroscience, health, genetic, and biological aspects of cognitive aging.

The editors are **Roger A. Dixon, Lars Bäckman, and Lars-Göran Nilsson**.



HELP KEEP US UP TO DATE

If you have moved or changed your name or phone number, please contact one of our offices.

VLS Lab Edmonton
Department of Psychology
P-217 Biological Sciences Building
University of Alberta
Edmonton, AB T6G 2E9
Phone: (780) 492-7602 Email: vlslab@ualberta.ca

VLS Lab Victoria
Department of Psychology
University of Victoria
P.O. Box 3050 Stn. CSC
Victoria, BC V8W 3P5
Phone: (250) 721-6296 Email: vls@uvic.ca