

Salthouse Cognitive  
Aging Lab

# Virginia Cognitive Aging Project

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Running since 2001, the Virginia Cognitive Aging Project is currently one of the largest longitudinal studies focusing on age differences in cognitive functioning in the world. Our research would not be possible without your continued support and participation!



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## Paired Associates: Friend or Foe?

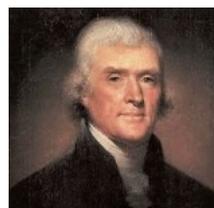
Work with as many participants as we have and you'll come to see some common attitudes about our various tasks. One clear trend: many of you find the "Paired Associates" particularly challenging! During this memory task, we ask participants to listen to lists of six pairs of unrelated words. During the test phase, the participant hears the first word from the pair and is asked to supply the second word.

Many people become frustrated at not being able to recall all the words during this seemingly straightforward task. If you find this task irritating, you should know you're already doing this on a daily basis! This task is intended to study a person's ability to form cognitive associations, which are crucial in our day-to-day lives—for example we pair a type of cuisine with a particular restaurant or faces with names.

New, unrelated word pairs are utilized to test one's ability to make associations so no one has practice from previous experience with the tested pairings. The more practice we have relating one idea to another, the stronger the connection between them becomes and the faster the thought of one item will activate a thought of the other.

A few people are successful at recalling all six, but across age groups averages

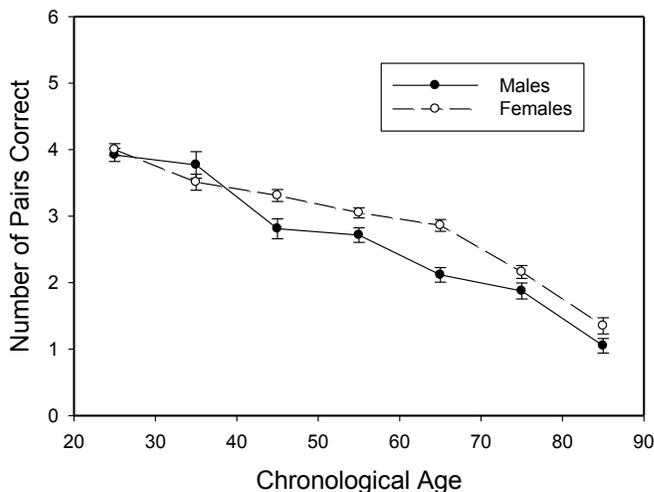
vary from one to four correct pairs. Accuracy generally decreases as age increases regardless of gender, but females tend



*You learned to pair Thomas Jefferson's name with his face just like you learn the word pairs!*

to remain more accurate than their male peers after the age of 40. The reason for this gender difference remains unclear. Regardless of age or gender, we

hope the next time you choose to participate with us you will think of this test more like a routine task than a diabolical invention by our lab!



## We'd love to see you back again!

The Virginia Cognitive Aging Project is a longitudinal study, meaning data are collected from the same individuals over several years. It's very important that as many people as possible participate again so that we can get information about changes occurring within individuals over time rather than simply differences across people of different ages.

At this time, we are particularly interested in people who last participated in 2008 or earlier. Participation would entail tasks similar to those you performed during your last visit with us. You would complete various cognition and memory tests in three 2-hour sessions

along with several questionnaires to be completed at home. Sessions can usually be accommodated to your schedule and you will be compensated for your time.

If you are willing to participate again, please call us at (434) 982-6320 or email us at [cognitiveaginglab@virginia.edu](mailto:cognitiveaginglab@virginia.edu).



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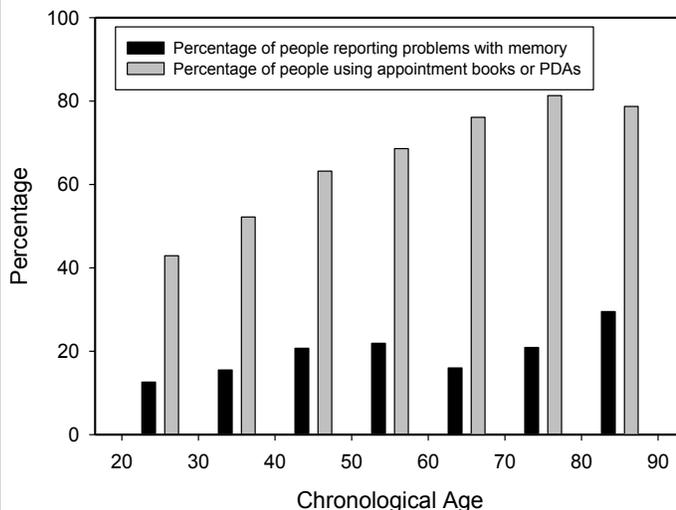
**GUEST**

PASSWORD:

**COGAGE**

## What are people forgetting?

One of our take-home questionnaires asks about what participants tend to have the most problems remembering. Commonly forgotten things include telephone numbers and preceding paragraphs or chapters of books while reading.

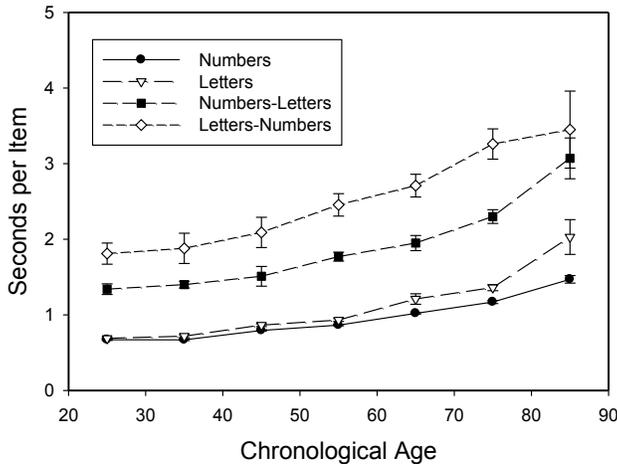


Our participants report significantly more difficulty remembering names than faces, but trouble remembering both increases with age. As you might expect, people tend to report more problems with memory as they get older, but it is noteworthy that fewer than one out of three people report considerable difficulty with remembering.

It appears that to compensate for this increase in memory difficulty, use of memory aids such as appointment books and PDAs also increases with age—from only 40 percent in their twenties to almost 80 percent of people in their seventies using these memory aids!

## Trailblazing with Connections

In the Connections task, we ask participants to connect circles numerically, alphabetically, or by alternating numbers and letters. A variant of trail-making tasks



that were originally developed in the 1940s, these tests are very sensitive to brain damage. People tend to be slower when asked to alternate numbers and letters than just connecting a single set, which may reflect cognitive difficulty in multi-tasking or set-

switching. As you can see from the graph, our participants have performed significantly slower when asked to connect letters-numbers sequences (A-1-B-2) than numbers-letters (1-A-2-B). This unusual finding has not yet been explained! You will also notice that performance across all versions of the trail-making task is slower with increased age, but to a similar degree across each type of connection. This may reflect people slowing down cognitively with age, but not becoming disproportionately worse at multi-tasking or switching between activities.

## Participants like YOU!

Working in the Cognitive Aging Lab has many benefits, including gaining excellent research and job experience. But ask the research assistants and they'll say their favorite part of the job is meeting participants like you! Here's a look at two of the very many people like you whom we have had the opportunity to meet.

Herman and Marian Ortmann have participated in the Virginia Cognitive Aging Project since the first year of testing in 2001. What's kept them coming back to us over the years? They say they enjoy the challenge and feeling as though they're contributing something.

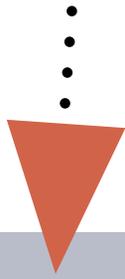
Their most and least favorite tasks reflect the attitudes of many of you. They particularly enjoy picture vocabulary and the Logical Memory task, during which stories are read from the computer and you are asked to repeat back what you can remember. Least enjoyed tasks: Paper Folding and Spatial Relations, in which you are asked to match 2-D patterns to their 3-D shape.

Outside of participating in our lab, the Ortmanns are active members of the Charlottesville community. They volunteer at the Kluge Children's Rehabilitation Center in the Care Bear Clinic, have been Kindergarten teacher's aides, and volunteer at holidays and book fairs at the UVa Hospital.

The couple hails from New York, where Marian worked as a teletype operator, a secretary, and a homemaker while Herman worked in banking. After retiring, the couple spent several years traveling across the US and Europe, finally settling in Charlottesville.

They have been happily married for 56 years and have four children and four grandchildren. The research assistants can also attest to the fact that Mrs. Ortmann's brownies are exceptional! We'd like to thank them, as well as all of our faithful participants like you, for their time and participation with us.





### Where are they now?

The Cognitive Aging Lab has employed more than 20 research assistants every summer since its opening in 2001. Our assistants have gone on to clinical psychology Ph.D. programs, law school, volunteer programs and more! Here's a spotlight on what a few of them have been up to recently.



Bios on all of our 2011 spring research assistants can be found on our website at [www.mentalaging.com](http://www.mentalaging.com) under "Lab Members"

### Katt Henry

Research assistant, 2009

After graduating from UVa in 2009, Katt now teaches 6th grade special education at Chavez Prep Public Charter School in Washington, D.C. through Teach for America. Highlights of her past year have included field trips to the Natural History Museum and Georgetown University, plus lots of hugs from her students! After finishing her Teach For America commitment, she intends to continue working in education.



### Elliot Tucker-Drob

Graduate student, 2009

Elliot received his Ph.D. in Psychology from UVa in 2009 after presenting his dissertation on global- and domain-specific cognitive decline. He is now an Assistant Professor of Psychology at the University of Texas, where his lab focuses on various factors leading to different cognitive and personality changes. He also continues to research aging and cognitive functioning.

### Jing Fang

Research assistant, 2007

After graduating from UVa in 2007, Jing continued on to study medicine at UVa's School of Medicine. Now in her final year, she intends to specialize in pediatrics and become a neonatologist. She is still involved in research, investigating how nitric oxide compounds contribute to pediatric pulmonary arterial hypertension.



The Virginia Cognitive Aging Project is an ongoing project which is able to continue because of your participation and support. We will most likely be contacting you in the future and hope that you will participate with us again!

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