

Attention Failures Seminar

Spring 2013

Time: 12:00-1:50

Location: Straub 143

Instructor: Nash Unsworth

Office: LISB 327

Contact: nashu@uoregon.edu

COURSE DESCRIPTION

In this seminar we will examine attentional failures such as lapses of attention assessed by variability in reaction times, mind-wandering and external distraction in the form of task-unrelated thoughts, various factors thought to influence such lapses (interest, motivation, time on task), as well as individual differences, aging, and neuropsychological disorders.

We follow a seminar format, so we learn from each other. That means you need to come to class. You need to speak up, ask questions, provide answers or indicate confusion (no shame in that!). You also will lead a discussion of a topic or paper. You will also write a final paper which is a research proposal.

HOW TO USE THIS SYLLABUS

This syllabus contains most of the information that you need for understanding how the course is organized. I will not take up your time by going over all of the material in the syllabus in class. You should read the syllabus and make sure that you understand it. If you have a question, first check the material in the syllabus and if you still need information, by all means ask.

COMPONENTS OF THE COURSE GRADE

Discussion Lead: Students will be required to lead the discussion on papers throughout the semester. The discussion of each article will be led by one student. That student is responsible for a clear, concise (10-12 min) presentation of the article, including the critical questions asked, the methods, *the findings* and the conclusions. You will also tell us your take on the paper, and provide a few questions to discuss. To do this well, the leader may need to read an additional article or two. Doing a good job in leading a discussion requires that you (a) understand the paper and its issues and findings and (b) use your own words to describe the paper.

Final Paper: Each student will write a final paper of no more than 15 pages (1 inch margins, doubled spaced, 11-12 pt font, excluding references) on a topic of your choice closely related to attentional failures due on **June 3**. The paper should culminate in a proposal for an experiment that could be conducted on this topic. As a model, I would recommend organization similar to the Introduction section in a Journal of Experimental Psychology article. Your experiment should be tractable and concrete. You do not need to include a complete Methods section. Primary source material for your paper must be peer review journals from some area of experimental psychology. There must be a minimum of 10 such references. Books, tech reports, and other sources are acceptable but are not a substitute for peer reviewed research and these do not count towards the minimum references required. Please be aware that it is inappropriate to cite papers that you have not actually read. If you wish to refer to sources that you have not directly accessed, you should refer to it "as cited in ...".

If you have never written a research paper of this type, I also strongly recommend speaking with me soon.

GRADING BREAKDOWN:

- 50% will be based on the final paper
 - 25% leading discussion of papers
 - 25% will be based on class participation
- Total = 100%**

A straight grading scale is the default (e.g., 90-100=A, 80-89=B, 70-79=C, 60-69=D, 59 or lower=F). However, I reserve the right to adjust the grades up depending on the distribution of scores (i.e., curve). Grades will never be adjusted downward. Those taking the class Pass/Fail must obtain a "C" to pass.

Criteria used in making grading decisions:

- I will usually round up, for example from 79.5% to 80%, but do not count on it (sometimes the tests may have been extra easy, for example—then the cutoffs will be firm).
- **As a general principle, I will never work harder for your grade than you do.** Students who have poor attendance should not expect me to “make up” points for them. Students who have done all that is in their power to do their best can be assured that will be carefully considered in making any borderline decision. I try to apply consistent standards and treat students fairly, as well as fulfill my responsibilities to UO in making difficult decisions about grades.

Grading problems: If you feel there has been an error in working out your grade please let me know as soon as possible. Work out your grade as described above and specify the reason for your concern when contacting me. I want you to get every point you have earned. If you are unhappy with your final grade but agree that it has been worked out correctly as described above, please don't ask for a better grade, or extra opportunities to make a better grade, as a "favor" at the end of the semester. The answer to such unfair requests must always be "no".

Schedule of Topics and Readings**

<u>Tentative Date</u>	<u>Topic</u>
Week 1 4/1	Introduction to Class/General
Week 2 4/8	Lapses of Attention and RT
Week 3 4/15	Task-Unrelated Thoughts I
Week 4 4/22	Task-Unrelated Thoughts II
Week 5 4/29	Individual Differences in TUTs
Week 6 5/6	Real World Correlates
Week 7 5/13	Neuroimaging of Lapses
Week 8 5/20	Mind-wandering vs. External Distraction
Week 9 5/27	Memorial Day (No Class)
Week 10 6/3	Other Topics

****All readings, and assignments dates are tentative and subject to change. Any revisions to this syllabus will be announced during class time. It is your responsibility to make a note of any changes in this syllabus.**

Readings

Week 1

- Reason, J. T. (1984). Lapses of attention in everyday life. In R. Parasuraman & D. R. Davies (Eds.), *Varieties of attention* (pp. 515-549). Orlando, FL: Academic Press.
- Duncan, J., Emslie, H., Williams, P., Johnson, R., & Freer, C. (1996). Intelligence and the frontal lobe: The organization of goal-directed behavior. *Cognitive Psychology*, 30, 257-303.
- Engle, R. W., & Kane, M. J. (2004). Executive attention, working memory capacity, and a two-factor theory of cognitive control. In B. Ross (Ed.), *The psychology of learning and motivation*, Vol. 44. (pp. 145–199) NY: Elsevier.

Week 2

- De Jong, R. D., Berendsen, E., & Cools, R. (1999). Goal neglect and inhibitory limitations: Dissociable causes of interference effects in conflict situations. *Acta Psychologica*, 101, 379-394.
- Unsworth, N., Redick, T.S., Lakey, C.E., Young, D.L. (2010). Lapses in sustained attention and their relation to executive and fluid abilities: An individual differences investigation. *Intelligence*, 38, 111-122.
- West, R., Murphy, K. J., Armilio, M. L., Craik, F. I. M., & Stuss, D. T. (2002). Lapses of intention and performance variability reveal age-related increases in fluctuations of executive control. *Brain and Cognition*, 49, 402-419.
- MacDonald, S.W.S., Nyberg, L., & Bäckman, L. (2006). Intraindividual variability in behavior: Links to brain structure, neurotransmission, and neuronal activity. *Trends in Neurosciences*, 29, 474-480.

Week 3

- Antrobus, J. S., Singer, J. L., & Greenberg, S. (1966). Studies in the stream of consciousness: Experimental enhancement and suppression of spontaneous cognitive processes. *Perceptual and Motor Skills*, 23, 399-417.
- Giambra, L. M. (1995). A laboratory method for investigating influences on switching attention to task-unrelated imagery and thought. *Consciousness and Cognition*, 4, 1-21.
- Teasdale, J. D., Dritschel, B. H., Taylor, M. J., Proctor, L., Lloyd, C. A., Nimmo-Smith, I., & Baddeley, A. D. (1995). Stimulus-independent thought depends on central executive resources. *Memory and Cognition*, 23, 551-559.

Week 4

- Smallwood, J., Davies, J. B., Heim, D., Finnigan, F., Sudberry, M., O'Connor, R., & Obonsawin, M. (2004). Subjective experience and the attentional lapse: Task engagement and disengagement during sustained attention. *Consciousness and Cognition*, 13, 657-690.
- Smallwood, J.M., & Schooler, J.W. (2006). The restless mind. *Psychological Bulletin*, 132, 946–958.
- McVay, J.C., & Kane, M.J. (2010). Does mind wandering reflect executive function or executive failure? Comment on Smallwood and Schooler (2006) and Watkins (2008). *Psychological Bulletin*, 136, 188-197.

Week 5

McVay, J.C., & Kane, M.J. (2012). Why does working memory capacity predict variation in reading comprehension? On the influence of mind wandering and executive attention. *Journal of Experimental Psychology: General*, 141, 302-320.

Mrazek, M. D., Smallwood, J., Franklin, M. S., Chin, J. M., Baird, B., & Schooler, J. W. (in press). The role of mind-wandering in measurements of general aptitude. *Journal of Experimental Psychology: General*.

Unsworth, N., & McMillan, B.D. (in press). Mind wandering and reading comprehension: Examining the roles of working memory capacity, interest, motivation, and topic ` experience. *Journal of Experimental Psychology: Learning, Memory, & Cognition*.

Week 6

Kane, M.J., Brown, L.E., Little, J.C., Silvia, P.J., Myin-Germeys, I., & Kwapil, T.R. (2007). For whom the mind wanders, and when: An experience-sampling study of working memory and executive control in daily life. *Psychological Science*, 18, 614-621.

McVay, J.C., Kane, M.J., & Kwapil, T.R. (2009). Tracking the train of thought from the laboratory into everyday life: An experience-sampling study of mind-wandering in controlled and ecological contexts. *Psychonomic Bulletin & Review*, 16, 857-863.

Unsworth, N., McMillan, B.D., Brewer, G.A., & Spillers, G.J. (2012). Everyday attention failures: An individual differences investigation. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 38, 1765-1772.

Week 7

Weissman, D.H., Roberts, K.C., Visscher, K.M. & Woldorff, M.G. (2006). The neural bases of momentary lapses in attention. *Nature Neuroscience*, 9, 971-978.

Mason, M.F., Norton, M.I., Van Horn, J.D., Wegner, D.M., Grafton, S.T., Macrae, C.N. (2007). Wandering minds: the default network and stimulus-independent thought. *Science* 31, 393-395.

Christoff, K., Gordon, A.M., Smallwood, J. Smith, R. & Schooler, J.W. (2009). Experience sampling during fMRI reveals default network and executive system contributions to mind wandering. *Proceedings of the National Academy of Sciences of the United States of America*. 106(21), 8719-24

Week 8

Barron, E., Riby, L. M., Greer, J., & Smallwood, J. (2011). Absorbed in thought: The effect of mind wandering on the processing of relevant and irrelevant events. *Psychological Science*, 22(5), 596-601.

Stawarczyk, D., Majerus, S., Maj, M., Van der Linden, M., & D'Argembeau, A. (2011a). Mind-wandering: Phenomenology and function as assessed with a novel experience sampling method. *Acta Psychologica*, 136, 370-381.

Stawarczyk, D., Majerus, S., Maquet, P., & D'Argembeau, A. (2011b). Neural correlates of ongoing conscious experience: Both task-unrelatedness and stimulus-independence are

related to default network activity. *PLoS ONE* 6: e16997.

Week 9

No Class

Week 10

Smallwood, J., Fitzgerald, A., Miles, L. K., & Phillips, L. H. (2009). Shifting moods, wandering minds: Negative moods lead the mind to wander. *Emotion*, 9(2), 271-276.

McVay, J., Meier, M.E., Touron, D.R., & Kane, M.J. (2013). Aging ebbs the flow of thought: Adult age differences in mind wandering, executive control, and self-evaluation. *Acta Psychologica*, 142, 136-147.

Baird, B., Smallwood, J., Mrazek, M. D., Kam, J. W. Y., Franklin, M. S., & Schooler, J. W. (2012). Inspired by distraction: Mind wandering facilitates creative incubation. *Psychological Science*, 23(10), 1117-1122.