

Department of Psychology
The University of North Carolina at Chapel Hill

Psychology 336, Fall 2001
Graduate Seminar in Cognitive Aging (3 credit hours)

Time: Tue 2:00p to 4:45p
Place: 347 Davie

Instructor: Dr. Ute Bayen
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Course Description:

We will discuss current theories of human cognitive aging (e.g., cognitive slowing, limited resources, lack of inhibition, common cause, contextual deficit) and how these theories seek to explain age-group differences as well as individual differences in various domains of adult cognitive functioning (such as episodic memory, source memory, language and text processing, social cognition, psychomotor functioning). We will also discuss implications of theories and empirical findings for clinical issues and applied issues of cognitive aging.

Readings will consist of primary-source research articles from scholarly journals, and comprehensive review articles. The course has a seminar format and will center around discussions of the major themes, concepts, and empirical findings in the readings.

Course Objectives:

1. The student will understand major trends in the current literature on cognitive aging, and be able to identify major leaders in the field and their theoretical and empirical contributions.
2. The student will be able to critically review primary-source empirical articles and comprehensive reviews, and will be able to stimulate and sustain active scholarly discussion about this literature.
3. The student will be able to identify a topic of interest in the cognitive aging literature and develop an independent term project that builds on knowledge gained in the class.

CLASS SCHEDULE

SL = Seminar Leader

Aug. 28	Introduction, Class Organization, History, Methodology, Theoretical issues	(SL: UJB)
Sept. 4	Processing Speed Theory	
Sept. 11	Processing Resource Theories; Inhibition Theory	
Sept. 18	Cognition and Sensory Loss; Psychomotor Skills	
Sept. 25	Long-Term Memory: Overview	(SL: UJB)
Oct. 2	Contextual Theory: Source Memory	
Oct. 9	Contextual Theory: Encoding Specificity	
Oct. 16	Language; Social Cognition	
	TERM PAPER PROPOSAL DUE	
Oct. 23	Reasoning, Problem Solving, Decision Making, Wisdom	(SL: UJB)
Oct. 30	Individual Differences, Longitudinal Studies	(SL: UJB)
Nov. 6	Plasticity of Cognitive Functioning ; Applied Cognitive Aging Research	
Nov. 13	Neuropsychology of Aging; Clinical Issues	
Nov. 20	Student Presentations	
Nov. 27	Student Presentations	
Dec. 4	Summary and Wrap-Up	
Dec. 7, 5pm	TERM PAPER DUE	

Note: The dates for particular topics are somewhat flexible depending on how our discussions proceed.

READINGS

Weekly discussions will rely entirely on the assumption that all students have read and thought about the materials. There are three types of readings: “required readings” and “further readings” for each class session, and “elective readings” for some class sessions. Read the “required readings” thoroughly. “Further readings” are optional; they include background readings you may find useful, readings the Seminar Leader (see below) may use for class preparation, and other readings that might be of interest to you. For some class sessions, there are “elective readings”. For these class sessions, you elect (during the first class session) one of several possible topics, and read all “elective readings” for this topic. In addition to the required readings listed in the reading list, there will be readings that students will assign to their class mates in preparation for class presentations of term projects (see “Student Presentations” below).

SEMINAR LEADERS

Students will, during the first class session, select topics for which they will serve as Seminar Leader. The Seminar Leader will read articles in addition to the “required” readings. Some articles that the Seminar Leader might find useful for the preparation of the session are listed under “further readings”. You are free to find other articles that relate to the topic and that you find interesting. During the seminar session, the Seminar Leader will in general provide background information, provide in-depth information, and lead the discussion. Each Seminar Leader will receive more specific suggestions for seminar preparation from the instructor. These are only suggestions. You may structure “your” session any way you want as long as it involves discussion of the major issues. The Seminar Leader meets with the instructor at least one week before the seminar session to discuss the preparation of the session. To this meeting, the Seminar Leader will bring a tentative written outline of the seminar session.

TERM PAPER OPTIONS:

Papers should be *about* 20 pages in length (references not included) and in APA style. The deadline is Dec.7, 5pm (mailbox on the second floor). There are six options for the paper.

Option 1. Literature Review

You may write a literature review of any topic within the area of cognitive aging. The review should be up to date, integrate findings from different sources, and critically evaluate the reviewed literature.

Option 2. Book Review

Write a review of a recent (2000 or 2001) book in the area of Cognitive Aging (it may also include other topics). The book may be written for any audience (e.g., students, researchers, practitioners, older adults). The review should be ready to be submitted to a journal. Include a cover letter to the editor of the journal you have chosen. The book review may be shorter than 20 pages depending on the requirements of the journal you are submitting it to. Journals that publish book reviews include *Educational Gerontology*, *The Gerontologist* and others. Note that some journals do not accept unsolicited reviews. You should contact the Book Review Editor before considering to submit your review to a particular journal.

Option 3. Research Proposal

Your proposal for a research project in the area of cognitive aging should include an introduction and rationale, proposed methods, and expected results. It should either be a complete master's thesis or dissertation proposal you are developing this semester, or a proposal that is ready for submission to a grant agency. Examples of organizations that support student research on aging include: APA (for dissertation research), Division 20 of the APA, Sigma Xi, Association for Gerontology in Higher Education. There are regular workshops on *Funding and Proposal Writing for Graduate Student Research* (Info: Beverly Wiggins, 966-2350, bwiggins@irss.unc.edu).

Option 4. Report of Research Project

If you are currently working on a research project in the area of cognitive aging, you may want to write up the results of your study for publication. The paper should have the form of a manuscript ready for journal

submission. If your paper is co-authored include a detailed statement of your contributions to the research and the writing. This statement should be signed by your co-authors.

Option 5. Course Development

Develop an undergraduate course on Cognitive Aging (either introductory or advanced undergraduate level). Develop a complete syllabus, exams or assignments, term project, outline of lectures/discussions, list of readings, videos (see e.g., Landon Whitt's video collection), demonstrations, etc. You might get some ideas from the APA Division 20 web site which has a collection of syllabi in Adult Development and Aging.

The URL is <http://aging.ufl.edu/apadiv20/syll.htm>

When you adopt or adapt somebody else's idea please note this in an annotation. Your syllabus and supporting materials should be ready to be submitted for publication on the AD&A web page.

Option 6. Cognitive Enhancement Program for Older Adults

Develop a program that is designed to enhance cognitive abilities of older adults. Develop a lesson plan, materials, and instructor manual (or outline thereof). This may be a memory training program, a program to teach older adults particular skills (such as using computer software), or anything else that enhances the cognitive functioning of older adults. I can give you several references for memory-training and other programs. Feel free to incorporate ideas from existing programs into yours, but give references where appropriate.

TERM PAPER PROPOSAL

On or before Oct. 16, students will submit a proposal (one or two pages) for the term paper they are planning to write by the end of the course. The proposal should include a tentative title, and a plan for your work (e.g., outline of literature review, schedule for empirical work, agency to which you want to submit your funding proposal etc.). Please schedule an appointment with the instructor at any time you would like my input regarding your paper. It is fine to give me drafts until one week before the deadline. I will give comments on the drafts and you can then revise and resubmit. If you use this option please mark your changes on the final version (e.g., bold or underlined).

STUDENT PRESENTATIONS

On Nov. 20 and 27, each student will present the contents of his/her paper in class. You will assign a published paper (either a review article or an empirical study) to your classmates so that they can prepare for your topic. These reading assignments must be made by Nov. 6. You will announce the assignment at the beginning of class on this day and you are to provide the instructor and each member of the class with a copy of the readings. Depending on how many students are in the class, we will have about 30 to 45 min for each student presentation including the discussion. Leave enough time for discussion. You are encouraged to use overheads and/or handouts. You may use feedback you receive on your talk and points brought up in the discussion to improve your paper.

EVALUATION

Grades will be based on student participation in class discussions (30% of grade), seminar leadership (30%), project presentation (10%), and the paper (30%).

Final grades will be as follows:

H clear excellence	= 100-90%
B entirely satisfactory	= 89-80%
C low passing	= 79-70%
F failed	= 69 or less

ATTENDANCE POLICY

Attendance is required, since the seminar format needs input from everyone. If you have an inevitable absence, please talk with the instructor before the scheduled class.

HONOR CODE

The University Honor Code will be reinforced. Violations will be reported to the Student Attorney General. Violations of the honor code include any form of academic dishonesty such as cheating, plagiarism, or the deliberate misrepresentation of fact.

READING LIST

Note: Other (e.g., newly published) readings may be added during the semester. If you have suggestions please let the instructor know.

BOOKS ON COGNITIVE AGING

Blanchard-Fields, F., & Hess, T. M. (1996). *Perspectives on cognitive change in adulthood and aging*. New York: McGraw-Hill.

Craik, F. I. M., & Salthouse, T. A. (Eds.) (2000). *The handbook of aging and cognition* (2nd ed., pp. 293-357). Hillsdale, NJ: Erlbaum.

Park, D., & Schwarz, N. (Eds.) (1999). *Cognitive aging. A primer*. Philadelphia: Taylor & Francis.

Hess, T. M., & Blanchard-Fields, F. (1999). *Social Cognition and Aging*. San Diego, CA: Academic Press.

Kausler, D. H. (1994). *Learning and memory in normal aging*. San Diego: Academic Press.

Perfect, T. J., & Maylor, E. A. (2000). *Models of cognitive aging*. Oxford: Oxford University Press.

INTRODUCTION, HISTORY, METHODOLOGY, THEORETICAL ISSUES**Required Readings:**

Dixon, R. A., & Hertzog, C. (1996). Theoretical issues in cognition and aging. In F. Blanchard-Fields, & T. M. Hess, *Perspectives on cognitive change in adulthood and aging* (25-65). New York: McGraw-Hill.

Salthouse, T. A. (2000). Methodological assumptions in cognitive aging research. In F. I. M. Craik & T. A. Salthouse (Eds.), *The handbook of aging and cognition* (2nd ed., pp. 467-498). Hillsdale, NJ: Erlbaum.

Further Readings:

Hess, T. M., & Blanchard-Fields, F. (1996). Introduction to the study of cognitive change in adulthood. In F. Blanchard-Fields, & T. M. Hess, *Perspectives on cognitive change in adulthood and aging* (pp. 3-24). New York: McGraw-Hill.

PROCESSING SPEED THEORY**Required Readings:**

Salthouse, T. A. (1996). The processing-speed theory of adult age differences in cognition. *Psychological Review*, 103, 403-428.

Ratcliff, R., Spieler, D., & McKoon, G. (2000). Explicitly modeling the effects of aging on response time. *Psychonomic Bulletin & Review*, 7, 1-25.

Further Readings:

Sliwinski, M., & Buschke, H. (1999). Cross-sectional and longitudinal relationships among age, cognition, and processing speed. *Psychology and Aging*, 14, 18-33.

PROCESSING-RESOURCE THEORIES; INHIBITION THEORY**Required Readings:**

Stoltzfus, E. R., Hasher, L., & Zacks, R. T. (1996). Working memory and aging. Current status of the inhibitory view. In J. T. E. Richardson, R. W. Engel, L. Hasher, & Robert H. Logie (Eds.), *Working memory and human cognition* (pp. 66-88). New York: Oxford University Press.

May, C. P., Zacks, R. T., Hasher, L., Multhaup, K. S. (1999). Inhibition in the processing of garden-path sentences. *Psychology and Aging*, 14, 304-313.

Rogers, W. A. (1999). Attention and aging. In Park, D., & Schwarz, N. (Eds.), *Cognitive aging. A primer* (pp. 57-73). Philadelphia: Taylor & Francis.

Further Readings:

If you are unfamiliar with the concept of working memory you might want to consult a textbook of cognitive psychology or memory.

Lustig, C., Hasher, L., Tonev, S. T. (2001). Inhibitory control over the present and the past. *European Journal of Cognitive Psychology*, 13, 107-122.

- Lustig, C., May, C. P., Hasher, L. (2001). Working memory span and the role of proactive interference. *Journal of Experimental Psychology: General*, 130, 199-207.
- May, C. P., Hasher, L., Kane, M. J. (1999). The role of interference in memory span. *Memory and Cognition*, 27, 759-767.
- McDowd, J. M., & Shaw, R. J. (2000). Attention and aging: a functional perspective. In F. I. M. Craik & T. A. Salthouse (Eds.), *The handbook of aging and cognition* (2nd ed., pp. 221-291). Hillsdale, NJ: Erlbaum.

COGNITION AND SENSORY LOSS

Required Readings:

Baltes, P. B., & Lindenberger, U. (1997). Emergence of a powerful connection between sensory and cognitive functions across the adult life span: A new window to the study of cognitive aging? *Psychology and Aging*, 1, 12-21.

Anstey, K. J., Luszcz, M. A., & Sanchez, L. (2001). A reevaluation of the common factor theory of shared variance among age, sensory function, and cognitive function in older adults. *Journals-of-Gerontology:-Series-B:-Psychological-Sciences-and-Social-Sciences*, 56B, P3-P11.

Further Readings:

Schneider, B. A., Pichora-Fuller, M. K. (2000). Implication of perceptual deterioration for cognitive aging research. In F. I. M. Craik & T. A. Salthouse (Eds.), *The handbook of aging and cognition* (2nd ed., pp. 155-219). Hillsdale, NJ: Erlbaum.

Lindenberger, U., & Baltes, P. B. (1994). Sensory functioning and intelligence in old age: A strong connection. *Psychology and Aging*, 9, 339-355.

Marsiske, M., Delius, J., Maas, I., Lindenberger, U., Scherer, H., Tesch-Römer, C. (1999). Sensory systems in old age. In P. B. Baltes, & K. U. Mayer (Eds.), *The Berlin Aging Study. Aging from 70 to 100*. Cambridge: Cambridge University Press. (ask instructor where book is available)

PSYCHOMOTOR SKILLS

Required Readings:

Lindenberger, U., Marsiske, M., & Baltes, P. B. (2000). Memorizing while walking: Increase in dual-task costs from young adulthood to old age. *Psychology and Aging*, 15, 417-436.

Further Readings:

Kausler, D. H. (1994). Adult age differences in motor-skill learning. In D. H. Kausler, *Learning and memory in normal aging* (pp. 26-46). San Diego: Academic Press.

Li, K. Z. H., Lindenberger, U., Freund, A. M., & Baltes, P. B. (2001). Walking while memorizing: Age-related differences in compensatory behavior. *Psychological Science*, 12, 230-237.

Maylor, E. A., & Wing, A. M. (1996). Age differences in postural stability are increased by additional cognitive demands. *Journal of Gerontology: Psychological Sciences*, 51B, P143-P154.

LONG-TERM MEMORY: OVERVIEW

Required Readings:

Zacks, R. T., Hasher, L., & Li, K. Z. H. (2000). Human memory. In F. I. M. Craik & T. A. Salthouse (Eds.), *The handbook of aging and cognition* (2nd ed., pp. 293-357). Hillsdale, NJ: Erlbaum.

Further Readings:

Light, L. (2000). Memory changes in adulthood. In S. H. Qualls, & N. Abeles (Eds.), *Psychology and the aging revolution: How we adapt to longer life* (pp. 73-97). Washington, DC: American Psychological Association.

Verhaeghen, P., Marcoen, A., & Goossens, L. (1993). Facts and fiction about memory aging: A quantitative integration of research findings. *Journals of Gerontology: Psychological Sciences*, 48, P157-P171. (focus on the parts on episodic memory)

Textbooks on memory (available from UJB):

Haberlandt, K. (1999). *Human memory. Exploration and application*. Needham Heights, MA: Allyn & Bacon.

Neath, I. (1998). *Human memory. An introduction to research, data, and theory*. Pacific Grove: Brooks/Cole.

Searleman, A., & Herrmann, D. (1994). *Memory from a broader perspective*. New York: McGraw-Hill.

Tulving, E., & Craik, F. I. M. (Eds.) (2000). *The Oxford handbook of memory*. New York, NY: Oxford University Press.

Optional Readings (choose one of the topics)

Episodic Memory: Dual-process theories

Light, L. L. (1999). Dual-process theories of memory in old age. In T. J. Perfect, & E. A. Maylor (2000). *Models of cognitive aging* (pp. 238-300). Oxford: Oxford University Press.

Hay, J. F., & Jacoby, L. L. (1999). Separating habit and recollection in young and elderly adults: effects of elaborative processing and distinctiveness. *Psychology and Aging, 14*, 122-134.

Interplay of episodic and semantic memory

Verhaeghen, P., Palfai, T., Cerella, J., Buchler, N., Johnson, M. P., D'Eredita, M., Green, D. R.; Hoyer, W. J., & Makekau, M. (2000). Age-related dissociations in time-accuracy functions for recognition memory: Utilizing semantic support versus building. *Aging, Neuropsychology, and Cognition, 7*, 260-272.

Episodic memory and bias

Jacoby, L. L. (1999). Deceiving the elderly: Effects of accessibility bias in cued-recall performance. *Cognitive Neuropsychology, 16*, 417-436.

Autobiographical memory

Rubin, D. C. (1999). Autobiographical memory and aging. In D. Park, & N. Schwarz (Eds.), *Cognitive aging. A primer* (pp. 131-149). Philadelphia: Taylor & Francis.

Rubin, D. C., & Schulkind, M. D. (1997). Distribution of important and word-cued autobiographical memories in 20-, 35-, and 70-Year-Old adults. *Psychology and Aging, 12*, 524-535.

Prospective memory

Einstein, G. O., Holland, L. J., McDaniel, M. A., & Guynn, M. J. (1992). Age-related deficits in prospective memory: The influence of task complexity. *Psychology and Aging, 7*, 471-478.

CONTEXTUAL THEORY: SOURCE MEMORY

Required Readings:

Mitchell, K. J., Johnson, M. K., Raye, C. L., Mather, M., & D'Esposito, M. (2000). Aging and reflective processes of working memory: Binding and test-load deficits. *Psychology and Aging, 15*, 527-541.

Mather, M., & Johnson, M. K., & De Leonardis, D. M. (1999). Stereotype reliance in source monitoring: Age differences and neuropsychological test correlates. *Cognitive Neuropsychology, 16*, 437-458.

Further Readings

Johnson, M. K., Hashtroudi, S., & Lindsay, D. S. (1993). Source monitoring. *Psychological Bulletin, 114*, 3-28. (for background on theory of source monitoring; the empirical parts are outdated)

Trott, C. T., Friedman, D., Ritter, W., Fabiani, M., Snodgrass, J.-G. (1999). Episodic priming and memory for temporal source: Event-related potentials reveal age-related differences in prefrontal functioning. *Psychology and Aging, 14*, 390-413.

Henkel, L., & Johnson, M. K. (1998). Aging and source monitoring: Cognitive processes and neuropsychological correlates. *Journal of Experimental Psychology: General*.

Norman, K. A., & Schacter, D. L. (1997). False recognition in younger and older adults: Exploring the characteristics of illusory memories. *Memory & Cognition, 25*, 838-848.

CONTEXTUAL THEORY: ENCODING SPECIFICITY

Required Readings:

Bayen, U. J., Phelps, M. P., & Spaniol, J. (2000). Age-related differences in the use of contextual information in recognition memory: A global matching approach. *Journals of Gerontology: Psychological Sciences, 55B*, P131-P141.

Naveh-Benjamin, M. (2000). Adult age differences in memory performance: Tests of an associative deficit hypothesis. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 26*, 1170-1187.

Further Readings:

Light, L. L., LaVoie, D., Valencia-Laver, D., Albertson Owens, S.A., & Mead, G. (1992). Direct and indirect measures of memory for modality in young and older adults. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *18*, 1284-1297.

Kliegl, R., & Lindenberger, U. (1993). Modeling intrusions and correct recall in episodic memory: Adult age differences in encoding of list context. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, *19*, 617-637.

LANGUAGE AND DISCOURSE PROCESSING

Required Readings:

Wingfield, A. (1999). Speech perception and the comprehension of spoken language in adult aging. In D. Park, & N. Schwarz (Eds.), *Cognitive aging. A primer* (pp. 175-195). Philadelphia: Taylor & Francis.

Kemper, S., & Kemtes, K. (1999). Aging and message production and comprehension. In D. Park, & N. Schwarz (Eds.), *Cognitive aging. A primer* (pp. 197-213). Philadelphia: Taylor & Francis.

Further Readings:

Stine, E. A. L., Soederberg, L. M., & Morrow, D. G. (1996). Language and discourse processing through adulthood. In F. Blanchard-Fields, & T. M. Hess (Eds.), *Perspectives on cognitive change in adulthood and aging* (pp. 255-290). New York: McGraw-Hill.

Wingfield, A., & Stine-Morrow, E. A. L. (2000). Language and speech. In F. I. M. Craik & T. A. Salthouse (Eds.), *The handbook of aging and cognition* (2nd ed., pp. 359-415). Hillsdale, NJ: Erlbaum.

Kwong S., Sheree T., & Ryan, E. (1995). Cognitive mediation of adult age differences in language performance. *Psychology and Aging*, *10*, 458-468.

SOCIAL COGNITION

Required Readings:

Blanchard-Fields, F. (1996). Social cognitive development in adulthood and aging. In F. Blanchard-Fields, & T. M. Hess, T. M. (1996). *Perspectives on cognitive change in adulthood and aging* (pp. 454-487). New York: McGraw-Hill.

Further Readings:

Hess, T. M., & Blanchard-Fields, F. (1999). *Social Cognition and Aging*. San Diego, CA: Academic Press.

Hess, T. M., Bolstad, C. A., Woodburn, S. M., & Auman, C. (1999). Trait diagnosticity versus behavioral consistency as determinants of impression change in adulthood. *Psychology and Aging*, *14*, 77-89.

REASONING, PROBLEM SOLVING, JUDGMENT & DECISION MAKING, WISDOM

Required Readings:

Sanfey, A. G., & Hastie, R. (1999). Judgment and decision making across the adult life span: A tutorial review of psychological research. In D. Park, & N. Schwarz (Eds.), *Cognitive aging. A primer* (pp. 253-273). Philadelphia: Taylor & Francis.

Elective Readings: (choose one of the following topics)

Reasoning:

Gilinsky, A. S., & Judd, B. B. (1994). Working memory and bias in reasoning across the life span. *Psychology and Aging*, *9*, 356-371.

Problem Solving:

Willis, S. L. (1996). Everyday problem solving. In J. E. Birren, & K. W. Schaie (Eds.), *Handbook of the psychology of aging* (4th ed., 287-307). San Diego: Academic Press.

Judgment & Decision Making:

Bayen, U. J., Erdfelder, E., & Bearden, N. J. (manuscript in progress). *Hindsight bias and aging*.

Park, D. C., Morrell, R. W., & Shifren, K. (Eds., 1999). *Processing of medical information in aging patients. Part II: Medical decision making* (pp. 31-143). Mahwah, NJ: Erlbaum.

Wisdom:

Baltes, P. B. (1993). The aging mind: Potentials and limits. *Gerontologist*, *33*, 580-594.

Baltes, P. B., Staudinger, U. M., Maercker, A., & Smith, J. (1995). People nominated as wise: A comparative study of wisdom-related knowledge. *Psychology and Aging*, *10*, 155-166.

INDIVIDUAL DIFFERENCES AND LONGITUDINAL STUDIESRequired Readings:

Baltes, P. B., Reese, H. W., & Nesselroade, J. R. (1988). Simple cross-sectional and longitudinal methods. Sequential cross-sectional and longitudinal strategies (pp. 120-138). In P. B. Baltes, H. W., Reese, & J. R. Nesselroade, *Life-span developmental psychology*. Hillsdale, NJ: Erlbaum.

Schaie, K. W. (2000). The impact of longitudinal studies on understanding development from young adulthood to old age. *International Journal of Behavioral Development*, 24, 257-266.

Elective Readings (choose one of the following four topics):Seattle Longitudinal Study:

Schaie, K. W. (1994). The course of adult intellectual development. *American Psychologist*, 49, 304-313.

Schaie, K. W. (1996). Intellectual development in adulthood. Cambridge: University Press.

Schaie, K. W. (1998). The Seattle Longitudinal Studies of adult intelligence. In M. P. Lawton, & T. A. Salthouse, Eds. (1998). *Essential papers on the psychology of aging* (pp. 263-271). New York, NY: New York University Press.

Bosworth, H. B., Schaie, K. W., & Willis, S. L. (1999). Cognitive and sociodemographic risk factors for mortality in the Seattle Longitudinal Study. *Journals of Gerontology: Psychological Sciences*, 54B, P273-P282.

Manchester Longitudinal Study:

Rabbitt, P., Donlan, C., Bent, N., McInnes, L. et al. (1993). The University of Manchester Age and Cognitive Performance Research Centre and North East Age Research Longitudinal Programmes, 1982 to 1997. *Zeitschrift für Gerontologie*, 26, 176-183.

Rabbitt, P., Donlan, C., Watson, P., McInnes, L., & Bent, N. (1995). Unique and interactive effects of depression, age, socioeconomic advantage and gender on cognitive performance of normal healthy older people. *Psychology & Aging*, 10, 307-313.

Victoria Longitudinal Study:

Hultsch, D. F., Hertzog, C., Dixon, R. A., & Small, B. J. (1998). *Memory change in the aged*. New York, NY: Cambridge University Press.

Hultsch, D. F., Hertzog, C. Small, B. J., & Dixon, R. A. (1999). Use it or lose it: Engaged lifestyle as a buffer of cognitive decline in aging? *Psychology and Aging*, 14, 245-263.

Betula Longitudinal Study:

Nilsson, L.-G. (1997). The Betula prospective cohort study: Memory, health, and aging. *Aging, Neuropsychology, & Cognition*, 4, 1-32.

Effects of Education on Cognitive Functioning:

Shimamura, A. P., Berry, J. M., Mangels, J. A., Rusting, C. L., et al. (1995). Memory and cognitive abilities in university professors: Evidence for successful aging. *Psychological Science*, 6, 271-277.

PLASTICITY OF COGNITIVE FUNCTIONING; APPLIED COGNITIVE AGING RESEARCHRequired Readings:

Baltes, P. B., & Kliegl, R. (1992). Further testing of limits of cognitive plasticity: Negative age differences in a mnemonic skill are robust. *Developmental Psychology*, 28, 121-125.

Rogers, W. A., & Fisk, A. D. (2000). Human factors, applied cognition, and aging. In F. I. M. Craik & T. A. Salthouse (Eds.), *The handbook of aging and cognition* (2nd ed., pp. 559-591). Hillsdale, NJ: Erlbaum.

Further Readings:

Park, D. C., Morrell, R. W., & Shifren, K. (Eds., 1999). *Processing of medical information in aging patients*. Mahwah, NJ: Erlbaum.

Verhaeghen, P., & Marcoen, A. (1996). On the mechanisms of plasticity in young and older adults after instruction in the method of loci: Evidence for an amplification model. *Psychology and Aging*, 11, 164-178.

Verhaeghen, P., Marcoen, A., Goossens, L. (1992). Improving memory performance in the aged through mnemonic training: A meta-analytic study. *Psychology and Aging*, 7, 242-251.

Floyd, M., & Scogin, F. (1997). Effects of memory training on the subjective memory functioning and mental health of older adults: A meta-analysis. *Psychology and Aging*, 12, 150-161.

Willis, S. L., & Nesselroade, C. S. (1990). Long-term effects of fluid ability training in old-old age. *Developmental Psychology*, 26, 905-910.

NEUROPSYCHOLOGY OF AGING; CLINICAL ISSUESRequired Readings:

Reuter-Lorenz, P. A. (1999). Cognitive neuropsychology of the aging brain. In D. Park, & N. Schwarz (Eds.), *Cognitive aging. A primer* (pp. 93-114). Philadelphia: Taylor & Francis.

Further Readings:

Raz, N. (2000). Aging of the brain and its impact on cognitive performance: Integration of structural and functional findings. In F. I. M. Craik & T. A. Salthouse (Eds.), *The handbook of aging and cognition* (2nd ed., pp. 1-90). Hillsdale, NJ: Erlbaum.

Prull, M. W., Gabrieli, J. D. E., & Bunge, S. A. (2000). Age-related changes in memory: A cognitive neuroscience perspective. In F. I. M. Craik & T. A. Salthouse (Eds.), *The handbook of aging and cognition* (2nd ed., pp. 91-154). Hillsdale, NJ: Erlbaum.

Nussbaum, P.D. (Ed.). (1997). *Handbook of neuropsychology and aging*. Plenum Publishing. (especially Part III: neuropsychology of dementias, and Part IV: assessment)