
7. REFERENCES

- Aarsten, M. J., Smits, C. H. M., Van Tilburg, T., Knipscheer, K. C. P. M., & Deeg, D. J. H. (2002). Activity in older adults: Cause or consequence of cognitive functioning? A longitudinal study on everyday activities and cognitive performance in older adults. *Journal of Gerontology: Psychological Sciences, 57B*, P153 – P162.
- Abernethy, B. (1988). Dual-task methodology and motor skills research: Some applications and methodological constraints. *Journal of Human Movement Studies, 14*, 101 – 132.
- Abraham, J. D., & Hansson, R. O. (1995). Successful aging at work: An applied study of selection, optimization, and compensation through impression management. *Journal of Gerontology, 50*, 94 – 103.
- Ackerman, P., Schneider, W., & Wickens, C. D. (1984). Deciding the existence of a time-sharing ability: A combined methodological and theoretical approach. *Human Factors, 26*, 71 – 82.
- Anderson, N. D., Craik, F. I. M., & Naveh-Benjamin, M. (1998). The attentional demands of encoding and retrieval in younger and older adults: 1. Evidence from divided attention costs. *Psychology and Aging, 13*, 405 – 423.
- Anstey, K., Stankov, L., & Lord, S. (1993). Primary aging, secondary aging, and intelligence. *Psychology and Aging, 8*, 562 – 570.
- Babcock, R. (1994). Analysis of adult age differences on the Raven's Advanced Progressive Matrices Test. *Psychology and Aging, 9*, 303 – 314.
- Ball, K. K., Beard, B. L., Roenker, D. L., Miller, R. L., & Griggs, D. S. (1988). Age and visual search: Expanding the useful field of view. *Journal of the Optical Society of America, 5*, 2210 – 2219.
- Baloh, R. W., Fife, T. D., Zwering, L., Socotch, T., Jacobson, K., Bell, T., & Beykirch, K. (1994). Comparison of static and dynamic posturography in young and older normal people. *Journal of American Geriatric Society, 42*, 405 – 412.
- Baltes, B. B., & Dickson, M. W. (2001). Using life-span models in industrial-organizational psychology: The theory of Selective Optimization with Compensation. *Applied Developmental Science, 5*, 51 – 62.
- Baltes, M. M., & Carstensen, L. L. (1996). The process of successful ageing. *Ageing and Society, 16*, 397 – 422.

- Baltes, M. M., & Carstensen, L. L. (1998). Social psychological theories and their applications to aging. From individual to collective selective optimization with compensation. In V. L. Bengtson & K. W. Schaie (Eds.), *Handbook of theories of aging* (pp. 209 – 226). New York: Springer.
- Baltes, M. M., & Lang, F. R. (1997). Everyday functioning and successful aging: The impact of resources. *Psychology and Aging, 12*, 433 – 443.
- Baltes, P. B. (1993). The aging mind: Potentials and limits. *The Gerontologist, 33*, 580 – 594.
- Baltes, P. B. (1997). On the incomplete architecture of human ontogeny: Selection, optimization, and compensation as foundation of developmental theory. *American Psychologist, 52*, 366 – 380.
- Baltes, P. B., & Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P. B. Baltes & M. M. Baltes (Eds.), *Successful aging: Perspectives from the behavioral sciences* (pp. 1 – 34). New York: Cambridge University Press.
- Baltes, P. B., Baltes, M. M., Freund, A. M., & Lang, F. R. (1995). *Measurement of selective optimization with compensation by questionnaire*. Berlin: Max Planck Institute for Human Development.
- Baltes, P. B., Baltes, M. M., Freund, A. M., & Lang, F. R. (1999). *The measurement of selection, optimization, and compensation (SOC) by self report: Technical report 1999*. Berlin: Max Planck Institute for Human Development.
- Baltes, P. B., & Lindenberger, U. (1997). Emergence of a powerful connection between sensory and cognitive functions across the adult life span: A new window at the study of cognitive aging. *Psychology and Aging, 12*, 12 – 21.
- Baltes, P. B., Lindenberger, U., & Staudinger, U. M. (1998). Life-span theory in developmental psychology. In W. Damon (Series Ed.), R. M. Lerner (Vol. Ed.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (5th ed., pp. 1029 – 1143). New York: Wiley.
- Baltes, P. B., & Mayer, K. U. (Eds.). (1999). *The Berlin Aging Study. Aging from 70 to 100*. New York: Cambridge University Press.
- Baltes, P. B., Mayer, K. U., Helmchen, H., & Steinhagen-Thiessen, E. (1999). The Berlin Aging Study (BASE): Sample, design, and overview. In P. B. Baltes & K. U. Mayer (Eds.), *The Berlin Aging Study: Aging from 70 to 100* (pp. 15 – 55). New York: Cambridge University Press.

- Baltes, P. B., Reese, H. W., & Nesselroade, J. R. (1988). *Life-span developmental psychology: Introduction to research methods* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Baltes, P. B., & Singer, T. (2001). Plasticity and the ageing mind: An exemplar of the bio-cultural orchestration of brain and behavior. *European Review, 1*, 59 – 76.
- Baltes, P. B., & Willis, S. L. (1982). Plasticity and enhancement of intellectual functioning in old age. Penn State's adult development and enrichment project (ADEPT). In F. I. M. Craik & S. Trehub (Eds.), *Aging and cognitive processes* (pp. 353 – 389). New York: Plenum.
- Bandura, A. (1989). Self-regulation of motivation and action through internal standards and goal systems. In L. A. Pervin (Ed.), *Goal concepts in personality and social psychology* (pp. 19 – 85). Hillsdale, NJ: Erlbaum.
- Baron, A., & Mattila, W. R. (1989). Response slowing of older adults: Effects of time-limit contingencies on single-and dual-task performance. *Psychology and Aging, 4*, 66 – 72.
- Bernstein, N. (1967). *Co-ordination and regulation of movements*. New York: Pergamon Press.
- Birren, J. E., & Fisher, L. M. (1995). Aging and speed of behavior: Possible consequences for psychological functioning. *Annual Review of Psychology, 46*, 329 – 353.
- Borchelt, M., & Steinhagen-Thiessen, E. (1992). Physical performance and sensory functions as determinants of independence in activities of daily living in the old and the very old. *Annals of the New York Academy of Sciences, 673*, 350 – 361.
- Bortz, J. (1999). *Statistik für Sozialwissenschaftler* (5th ed.). Berlin: Springer-Verlag.
- Box, G. E. P. (1950). Problems in the analysis of growth and wear curves. *Biometrics, 6*, 362 – 389.
- Brandtstädter, J. (1989). Personal self-regulation of development: Cross-sequential analyses of development-related control beliefs and emotions. *Developmental Psychology, 25*, 96 – 108.
- Brandtstädter, J., & Renner, G. (1990). Tenacious goal pursuit and flexible goal adjustment: Explication and age-related analysis of assimilative and accommodative strategies of coping. *Psychology and Aging, 5*, 58 – 67.
- Brandtstädter, J., Wentura, D., & Rothermund, K. (1999). Intentional self-development through adulthood and later life: Tenacious pursuit and flexible adjustment of goals. In J. Brandtstädter & R. M. Lerner (Eds.), *Action and self-development: Theory and research through the life span* (pp. 373 – 400). Thousand Oaks, CA: Sage.

- Broadbent, D. E. (1958). *Perception and communication*. New York: Pergamon Press.
- Brown, L. A., Shumway-Cook, A., & Woollacott, M. H. (1999). Attentional demands and postural recovery: The effects of aging. *Journal of Gerontology: Medical Sciences*, 54A, M165 – M171.
- Bunce, D. J., Warr, P. B., & Cochrane, T. (1993). Blocks in choice responding as a function of age and physical fitness. *Psychology and Aging*, 8, 26 – 33.
- Cabeza, R. (2001). Functional neuroimaging of cognitive aging. In R. Cabeza & A. Kingstone (Eds.), *Handbook of functional neuroimaging of cognition* (pp. 331 – 377). Cambridge, MA: MIT Press.
- Cabeza, R. (2002). Hemispheric asymmetry reduction in older adults: The HAROLD model. *Psychology and Aging*, 17, 85 – 100.
- Cabeza, R., Anderson, N. D., Locantore, J. K., & McIntosh, A. R. (in press). Aging gracefully: Compensatory brain activity in high-performing older adults. *Neuroimage*.
- Cerella, J. (1985). Information processing rates in the elderly. *Psychological Bulletin*, 98, 67 – 83.
- Cohen, J., & Cohen, P. (1983). Bivariate correlation and regression. In J. Cohen, & P. Cohen (Eds.), *Applied multiple regression/correlation analysis for the behavioral sciences* (pp. 25 – 78). Hillsdale, NJ: Erlbaum.
- Conway, A. R., & Engle, R. W. (1994). Working memory and retrieval: A resource-dependent inhibition model. *Journal of Experimental Psychology: General*, 123, 354 – 373.
- Craik, F. I. M. (1977). Age differences in human memory. In J. E. Birren & K. W. Schaie (Eds.), *Handbook of the psychology of aging* (1st ed., pp. 384 – 420), New York: Van Nostrand Reinhold.
- Craik, F. I. M. (1986). A functional account of age differences in memory. In F. Klix & H. Hagendorf (eds.), *Human memory and cognitive capabilities: Mechanisms and performances* (pp. 409 – 422). Amsterdam: Elsevier Science.
- Craik, F. I. M., & Byrd, M. (1982). Aging and cognitive deficits: The role of attentional resources. In F. I. M. Craik & S. Trehub (Eds.), *Aging and cognitive processes* (pp. 191 – 211). New York: Plenum.
- Craik, F. I. M., & Jacoby, L. L. (1996). Aging and memory: Implications for skilled performance. In W. A. Rogers, A. D. Fisk, & N. Walker (Eds.), *Aging and skilled*

- performance: Advances in theory and applications* (pp. 113 – 137). Mahwah, NJ: Erlbaum.
- Craik, F. I. M., & Salthouse, T. A. (Eds.). (2000). *The handbook of aging and cognition* (2nd ed.). Mahwah, NJ: Erlbaum.
- Craik, K. J. W. (1948). Theory of the human operator in control systems: II. Man as an element in a control system. *British Journal of Psychology*, *38*, 142 – 148.
- Crossley, M., & Hiscock, M. (1992). Age-related differences in concurrent-task performance of normal adults: Evidence for a decline in processing resources. *Psychology and Aging*, *7*, 499 – 506.
- Damos, D. L. (1991). Dual-task methodology: Some common problems. In D. L. Damos (Ed.), *Multiple-task performance* (pp. 102 – 119). London: Taylor & Francis.
- De Jong, R. (2001). Adult age differences in goal activation and goal maintenance. *European Journal of Cognitive Psychology*, *13*, 71 – 89.
- De Jong, R., Berendsen, E., & Cools, R. (1999). Goal neglect and inhibitory limitations: Dissociable causes of interference effects in conflict situations. *Acta Psychologica*, *101*, 379 – 394.
- Dempster, F. N. (1992). The rise and fall of the inhibitory mechanism: Toward a unified theory of cognitive development and aging. *Developmental Review*, *12*, 45 – 75.
- Dietz, V. (1992). Neuronal control of stance and gait. In G. E. Stelmach & J. Requin (Eds.), *Sensorimotor impairment in the elderly* (pp. 483 – 499). Amsterdam: North-Holland.
- Duke, J., Leventhal, H., Brownlee, S., & Leventhal, E. A. (2002). Giving up and replacing activities in response to illness. *Journal of Gerontology: Psychological Sciences*, *57B*, P367 – P376.
- Düker, H. (1963). Über reaktive Anspannungssteigerung. *Zeitschrift für Experimentelle und Angewandte Psychologie*, *10*, 46 – 72.
- Era, P., Schroll, M., Ytting, H., Gause-Nilsson, I., Heikkinen, E., & Steen, B. (1996). Postural balance and its sensory-motor correlates in 75-year-old men and women: A cross-national comparative study. *Journal of Gerontology: Medical Sciences*, *51A*, M53 – M63.
- Eslinger, P. J. (1996). Conceptualizing, describing, and measuring components of executive function: A summary. In G. R. Lyon & N. A. Krasnegor (Eds.), *Attention, memory, and executive function* (pp. 367 – 395). Baltimore, MD: Paul H. Brookes.

- Fisk, A D., & Rogers, W. A. (1991). Development of skilled performance: An age-related perspective. In D. L. Damos (Ed.), *Multiple-task performance* (pp. 415 – 443). London: Taylor & Francis.
- Freund, A. M. (2001). Developmental psychology of life management. In N. J. Smelser & P. B. Baltes (Eds.), *International encyclopedia of the social and behavioral sciences* (pp. 8827 – 8832). Oxford: Elsevier Science.
- Freund, A. M., & Baltes, P. B. (1998). Selection, optimization, and compensation as strategies of life management: Correlations with subjective indicators of successful aging. *Psychology and Aging, 13*, 531 – 543.
- Freund, A. M., & Baltes, P. B. (2000). The orchestration of selection, optimization, and compensation: An action-theoretical conceptualization of a theory of developmental regulation. In W. J. Perrig & A. Grob (Eds.), *Control of human behavior, mental processes, and consciousness: Essays in honor of the 60th birthday of August Flammer* (pp. 35 – 58). Mahwah, NJ: Erlbaum.
- Freund, A. M., & Baltes, P. B. (2002). Life-management strategies of Selection, Optimization, and Compensation: Measurement by self-report and construct validity. *Journal of Personality and Social Psychology, 82*, 642 – 662.
- Freund, A. M., Li, K. Z. H., & Baltes, P. B. (1999). Successful development and aging: The role of selection, optimization, and compensation. In J. Brandtstädter & R. M. Lerner (Eds.), *Action and self-development: Theory and research through the life span* (pp. 401 – 434). Thousand Oaks, CA: Sage.
- Friedman, A., Polson, M. C., & Dafoe, C. G. (1988). Dividing attention between the hands and the head: Performance trade offs between rapid finger tapping and verbal memory. *Journal of Experimental Psychology: Human Perception and Performance, 14*, 60 – 68.
- Geigy, J. R. (1977). *Wissenschaftliche Tabellen* [Scientific tables]. Basel, Switzerland: Geigy.
- Glass, J. M., Schumacher, E. H., Lauber, E. J., Zurbriggen, E. L., Gmeindl, L., Kieras, D. E., & Meyer, D. E. (2000). Aging and the psychological refractory period: Task-coordinations strategies in young and old adults. *Psychology and Aging, 15*, 571 – 595.
- Gopher, D. (1986). In defense of resources: On structures, energies, pools and the allocation of attention. In G. R. J. Hockey, A. W. K. Gaillard, & M. G. H. Coles

- (Eds.), *Energetics and human information processing* (pp. 353 – 371). Dordrecht, The Netherlands: Martinus Nijhoff.
- Gopher, D. (1993). The skill of attention control: Acquisition and execution of attention strategies. In D. Myers & S. Kornblum (Eds.), *Attention and performance XIV* (pp. 299 – 322). Hillsdale, NJ: Erlbaum.
- Gopher, D., Brickner, M., & Navon, D. (1982). Different difficulty manipulations interact differently with task emphasis: Evidence for multiple resources. *Journal of Experimental Psychology: Human Perception and Performance*, *1*, 146 – 157.
- Gopher, D., & Navon, D. (1980). How is performance limited: Testing the notion of central capacity. *Acta Psychologica*, *46*, 161 – 180.
- Greenhouse, S. W., & Geisser, S. (1959). On methods in the analysis of profile data. *Psychometrika*, *24*, 95 – 112.
- Handl, J. (1984). Educational chances and occupational opportunities of women: A sociohistorical analysis. *Journal of Social History*, *17*, 463 – 487.
- Hartley, A. A. (1992). Attention. In F. I. M. Craik & T. A. Salthouse (Eds.), *The handbook of aging and cognition* (pp. 3 – 49). Hillsdale, NJ: Erlbaum.
- Hasher, L., & Zacks, R. T. (1979). Automatic and effortful processes in memory. *Journal of Experimental Psychology: General*, *116*, 68 – 81.
- Hasher, L., & Zacks, R. T. (1988). Working memory, comprehension, and aging: A review and a new view. In G. K. Bower (Ed.), *The psychology of learning and motivation* (Vol. 22, pp. 193 – 225). San Diego, CA: Academic Press.
- Hawkins, H. L., Kramer, A. F., & Capaldi, D. (1992). Aging, exercise, and attention. *Psychology and Aging*, *7*, 643 – 653.
- Hay, L. (1996). Posture control and muscle proprioception in the elderly. In A.-M. Ferrandez & N. Teasdale (Eds.), *Changes in sensory motor behavior in aging* (pp. 133 – 161). Amsterdam: Elsevier Science.
- Heckhausen, J. (Ed.). (1999). *Developmental regulation in adulthood: Age-normative and sociostructural constraints as adaptive challenges*. New York: Cambridge University Press.
- Hertzog, C., & Hultsch, D. F. (2000). Metacognition in adulthood and aging. In F. I. M. Craik & T. A. Salthouse (Eds.), *Handbook of aging and cognition* (pp. 417 – 466). Mahwah, NJ: Erlbaum.

- Hertzog, C., Vernon, M. C., & Rypma, B. (1993). Age differences in mental rotation task performance: The influence of speed/accuracy tradeoffs. *Journal of Gerontology: Psychological Sciences*, 48, P150 – P156.
- Heuer, H. (1996). Dual-task performance. In O. Neumann & A. F. Sanders (Eds.), *Handbook of perception and action. Vol. 3: Attention* (pp. 113 – 153). London: Academic Press.
- Hockey, R. (1984). Varieties of attentional state: The effects of environment. In R. Parasuraman & D. R. Davies (Eds.), *Varieties of attention* (pp. 449 – 483). Orlando, FL: Academic Press.
- Huang, R. P., Rubin, C. T., & Kenneth, J. M. (1999). Changes in postural muscle dynamics as a function of age. *Journal of Gerontology: Biological Sciences*, 54A, B352 – B357.
- Huddleston, H. F. (1974). Personality and apparent operator capacity. *Perceptual and Motor Skills*, 38, 1189 – 1190.
- Hultsch, D. F., Hertzog, C., Small, B. J., & Dixon, R. G. (1999). Use it or lose it: Engaged lifestyle as a buffer of cognitive decline in aging? *Psychology and Aging*, 2, 245 – 263.
- Jennings, J. M., & Jacoby, L. R. (1993). Automatic versus intentional uses of memory: Aging, attention, and control. *Psychology and Aging*, 8, 283 – 293.
- Kahneman, D. (1973). *Attention and effort*. Englewood Cliffs, NJ: Prentice-Hall.
- Kenshalo, D. R. (1977). Age changes in touch, vibration, temperature, kinesthesia and pain sensitivity. In J. E. Birren & K. W. Schaie (Eds.), *Handbook of the psychology of aging* (pp. 562 – 579). New York: Van Nostrand.
- Kerr, B. (1973). Processing demands during mental operations. *Memory and Cognition*, 1, 401 – 412.
- Kerns, K. A., & Mateer, C. A. (1996). Walking and chewing gum: The impact of attentional capacity on everyday activities. In R. J. Sbordone, & C. T. Long (Eds.), *Ecological validity of neuropsychological testing* (pp. 147 – 169). Delray Beach, FL: GR Press.
- Kiss, G. R., & Savage, J. E. (1977). Processing power and delay – Limits on human performance. *Journal of Mathematical Psychology*, 16, 68 – 90.
- Kliegl, R., & Baltes, P. B. (1987). Theory-guided analysis of mechanisms of development and aging through testing-the-limits and research on expertise. In C. Schooler &

- K. W. Schaie (Eds.), *Cognitive functioning and social structure over the life course* (pp. 95 – 119). Norwood, NJ: Ablex.
- Kliegl, R., Smith, J., & Baltes, P. B. (1989). Testing-the-limits and the study of adult age differences in cognitive plasticity of a mnemonic skill. *Developmental Psychology*, 25, 247 – 256.
- Kliegl, R., Smith, J., & Baltes, P. B. (1990). On the locus and process of magnification of age differences during mnemonic training. *Developmental Psychology*, 26, 894 – 904.
- Korteling, J. E. (1991). Effects of skill integration and perceptual competition on age-related differences in dual-task performance. *Human Factors*, 33, 35 – 44.
- Korteling, J. E. (1994). Effects of aging, skill modification, and demand alternation on multiple-task performance. *Human Factors*, 36, 27 – 43.
- Kramer, A. F., Humphrey, D. G., Larish, J. F., Logan, G. D., & Strayer, D. L. (1994). Aging and inhibition: Beyond a unitary view of inhibitory processing in attention. *Psychology and Aging*, 9, 491 – 512.
- Kramer, A. F., & Larish, J. F. (1996). Aging and dual-task performance. In W. A. Rogers, A. D. Fisk, & N. Walker (Eds.), *Aging and skilled performance: Advances in theory and applications* (pp. 83 – 112). Hillsdale, NJ: Erlbaum.
- Kramer, A. F., Larish, J. F., & Strayer, D. L. (1995). Training for attentional control in dual task settings: A comparison of young and old adults. *Journal of Experimental Psychology: Applied*, 1, 50 – 76.
- Kramer, A. F., Larish, J. F., Weber, T. A., & Bardell, L. (1999). Training for executive control: Task coordination strategies and aging. In D. Gopher & A. Koriath (Eds.), *Attention and performance XVII. Cognitive regulation of performance: Interaction of theory and application* (pp. 617 – 652). Cambridge, MA: The MIT Press.
- Lajoie, Y., Teasdale, N., Bard, C., & Fleury, M. (1996). Attentional demands for walking: Age-related changes. In A.-M. Ferrandez & N. Teasdale (Eds.), *Changes in sensory motor behavior in aging* (pp. 235 – 256). Amsterdam: Elsevier Science.
- Lehrl, S. (1977). *Mehrfachwahl-Wortschatz-Test B (MWT-B)* [Multiple-choice vocabulary test]. Erlangen: Straube.
- Lerner, R. M., Freund, A. M., De Stefanis, I., & Habermas, T. (2001). Understanding developmental regulation in adolescence: The use of the Selection, Optimization, and Compensation model. *Human Development*, 44, 29 – 50.

- Lexell, J. (1993). What is the cause of the ageing atrophy? Assessment of the fiber type composition in whole human muscles. In G. E. Stelmach & V. Hömberg (Eds.), *Sensorimotor impairment in the elderly* (pp. 143 – 153). Dordrecht: Kluwer.
- 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.
- Li, S.-C., Jordanova, M., & Lindenberger, U. (1998). From good senses to good sense: A link between tactile information processing and intelligence. *Intelligence*, *26*, 99 – 122.
- Lindenberger, U., & Baltes, P. B. (1994). Sensory functioning and intelligence in old age: A powerful connection. *Psychology and Aging*, *9*, 339 – 355.
- Lindenberger, U., Gilberg, R., Little, T. D., Nuthmann, R., Pötter, U., & Baltes, P. B. (1999). Sample selectivity and generalizability of the results of the Berlin Aging Study. In P. B. Baltes & K. U. Mayer (Eds.), *The Berlin Aging Study: Aging from 70 to 100* (pp. 56 – 82). New York: Cambridge University Press.
- 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*, *3*, 417 – 436.
- Lindenberger, U., Scherer, H., & Baltes, P. B. (2001). The strong connection between sensory and cognitive performance in old age: Not due to sensory acuity reductions operating during cognitive assessment. *Psychology and Aging*, *16*, 196 – 205.
- Lintern, G., & Wickens, C. D. (1991). Issues of acquisition and transfer of timesharing and dual-task skills. In D. L. Damos (Ed.), *Multiple-task performance* (pp. 123 – 138). London: Taylor & Francis.
- Logan, G. D. (1978). Attention in character-classification tasks: Evidence for the automaticity of component stages. *Journal of Experimental Psychology: General*, *107*, 32 – 63.
- Lopez, I., Honrubia, V., & Baloh, R. W. (1997). Aging and the human vestibular nucleus. *Journal of Vestibular Research*, *7*, 77 – 85.
- Lundberg, U. (1982). Psychophysiological aspects of performance and adjustment to stress. *Series in Clinical and Community Psychology: Achievement, Stress, and Anxiety*, *1982*, 75 – 91.
- Macar, F., Grondin, S., & Casini, L. (1994). Controlled attention sharing influences time estimation. *Memory and Cognition*, *22*, 673 – 686.

- Madden, D. J., Pierce, T. W., & Allen, P. A. (1993). Age-related slowing and the time course of semantic priming in visual word identification. *Psychology and Aging, 8*, 490 – 507.
- Manchester, D., Woollacott, M., Zederbauer-Hylton, N., & Martin, O. (1989). Visual, vestibular and somatosensory contributions to balance control in the older adult. *Journal of Gerontology: Medical Sciences, 44*, M118 – M127.
- Marsiske, M., Lang, F. R., Baltes, P. B., & Baltes, M. M. (1995). Selective optimization with compensation: Life-span perspectives on successful human development. In R. A. Dixon & L. Bäckman (Eds.), *Compensation for psychological defects and declines: Managing losses and promoting gains* (pp. 35 – 79). Hillsdale, NJ: Erlbaum.
- 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* (pp. 360 – 383). New York: Cambridge University Press.
- Mayer, K. U. (1980). Sozialhistorische Materialien zum Verhältnis von Bildungs- und Beschäftigungssystemen bei Frauen. In U. Beck, K. H. Hörning, & W. Thomssen (Eds.), *Bildungsexpansion und betriebliche Beschäftigungspolitik: Aktuelle Entwicklungstendenzen im Vermittlungszusammenhang von Bildung und Beschäftigung* (pp. 60 – 79). Frankfurt/M.: Campus.
- Mayer, K. U., & Baltes, P. B. (Eds.). (1996). *Die Berliner Altersstudie*. Berlin: Akademie Verlag.
- Maylor, E. A., Allison, S., & Wing, A. M. (2001). Effects of spatial and nonspatial cognitive activity on postural stability. *British Journal of Psychology, 92*, 319 – 338.
- 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.
- Mayr, U., & Kliegl, R. (1993). Sequential and coordinative complexity: Age-based processing limitations in figural transformations. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 19*, 1297 – 1320.
- Mayr, U., Kliegl, R., & Krampe, R. Th. (1996). Sequential and coordinative processing dynamics in figural transformations across the life span. *Cognition, 59*, 61 – 90.
- Mayr, U., & Liebscher, T. (2001). Is there an age deficit in the selection of mental sets? *European Journal of Cognitive Psychology, 13*, 47 – 69.

- McDowd, J. M., & Craik, F. I. M. (1988). Effects of aging and task difficulty on divided attention. *Journal of Experimental Psychology: Human Perception and Performance*, *14*, 267 – 280.
- McDowd, J., Verduyssen, M., & Birren, J. E. (1991). Aging, divided attention, and dual-task performance. In D. L. Damos (Ed.), *Multiple-task performance* (pp. 387 – 414). London: Taylor & Francis.
- Means, K. M., Rodell, D. E., O’Sullivan, P. S., & Winger, R. M. (1998). Comparison of a functional obstacle course with an index of clinical gait and balance and postural sway. *Journal of Gerontology: Medical Sciences*, *53A*, M331 – M335.
- Meyer, D. E., Glass, J. M., Mueller, S. T., Seymour, T. L., & Kieras, D. E. (2001). Executive-process interactive control: A unified computational theory for answering 20 questions (and more) about cognitive ageing. *European Journal of Cognitive Psychology*, *13*, 123 – 164.
- Meyer, D. E., & Kieras, D. E. (1997a). A computational theory of executive cognitive processes and multiple-task performance: Part 1. Basic mechanisms. *Psychological Review*, *104*, 3 – 65.
- Meyer, D. E., & Kieras, D. E. (1997b). A computational theory of executive cognitive processes and multiple-task performance: Part 2. Accounts of psychological refractory-period phenomena. *Psychological Review*, *104*, 749 – 791.
- Miyake, A., Friedman, N. P., Emerson, M. J., Witzki, A. H., & Howerter, A. (2000). The unity and diversity of executive functions and their contributions to complex “Frontal Lobe” tasks: A latent variable analysis. *Cognitive Psychology*, *41*, 49 – 100.
- Moray, N. (1967). Where is capacity limited? A survey and a model. *Acta Psychologica*, *27*, 84 – 92.
- Moscovitch, M., & Winocur, G. (1995). Frontal lobes, memory, and aging. In J. Grafman, K. J. Holyoak, & F. Boller (Eds.), *Structure and functions of the human prefrontal cortex* (pp. 119 – 150). New York: New York Academy of Sciences.
- Navon, D. (1984). Resources – A theoretical soup stone? *Psychological Review*, *91*, 216 – 234.
- Navon, D., & Gopher, D. (1979). On the economy of the human processing system. *Psychological Review*, *86*, 214 – 255.
- Navon, D., & Gopher, D. (1980). Task difficulty, resources, and dual-task performance. In R. S. Nickerson (Ed.), *Attention and performance VIII* (pp. 297 – 315). Hillsdale, NJ: Erlbaum.

- Navon, D., & Miller, J. O. (1987). Role of outcome conflict in dual-task interference. *Journal of Experimental Psychology: Human Perception and Performance*, *13*, 438 – 448.
- Nesselroade, J. R., & Labouvie, E. W. (1985). Experimental design in research on aging. In J. E. Birren and K. W. Schaie (Eds.), *Handbook of the psychology of aging* (pp. 35 – 60). New York: Van Nostrand Reinhold.
- Nissen, M., & Bullemer, P. (1987). Attentional requirements of learning: Evidence from performance measures. *Cognitive Psychology*, *19*, 1 – 32.
- Norman, D. A., & Bobrow, D. J. (1975). On data-limited and resource limited processes. *Cognitive Psychology*, *7*, 44 – 64.
- Norman, D. A., & Bobrow, D. J. (1976). On the analysis of performance operating characteristics. *Psychological Review*, *83*, 508 – 519.
- Nyberg, L., Nilsson, L-G., Olofsson, U., & Bäckman, L. (1997). Effects of division of attention during encoding and retrieval on age differences in episodic memory. *Experimental Aging Research*, *23*, 137 – 143.
- Pashler, H. (1984). Processing stages in overlapping tasks: Evidence for a central bottleneck. *Journal of Experimental Psychology: Human Perception and Performance*, *10*, 358 – 377.
- Pashler, H. (1990). Do response modality effects support multiprocessor models of divided attention? *Journal of Experimental Psychology: Human Perception and Performance*, *16*, 826 – 842.
- Pashler, H. (1994). Dual-task interference in simple tasks: Data and theory. *Psychological Bulletin*, *16*, 220 – 244.
- Pashler, H., Johnston, J. C., & Ruthruff, E. (2001). Attention and performance. *Annual Review of Psychology*, *52*, 629 – 651.
- Patla, A., Frank, J., & Winter, D. (1990). Assessment of balance control in the elderly: Major issues. *Physiotherapy Canada*, *42*, 89 – 97.
- Perfect, T. (1997). Memory aging as frontal lobe dysfunction. In M. Conway (Ed.), *Cognitive models of memory* (pp. 315 – 339). Cambridge, MA: MIT Press.
- Ponds, R. W. H. M., Brouwer, W. H., & Van Wolfelaar, P. C. (1988). Age differences in divided attention in a simulated driving task. *Journal of Gerontology: Psychological Sciences*, *43*, P151 – P156.
- Rabbitt, P., Lowe, C., & Shilling, V. (2001). Frontal tests and models for cognitive ageing. *European Journal of Cognitive Psychology*, *13*, 5 – 28.

- Raz, N. (2000). Aging of the brain and its impact on the cognitive performance: Integration of structural and functional findings. In F. I. M. Craik & T. A. Salthouse (Eds.), *Handbook of aging and cognition* (pp. 1 – 90). Mahwah, NJ: Erlbaum.
- Raven, J. C., Court, J. H., & Raven, J. (1983). *Manual for Raven's progressive matrices and vocabulary scales: Advanced Progressive Matrices Sets I and II*. London: H. K. Lewis.
- Reder, L. M., & Schunn, C. D. (1996). Metacognition does not imply awareness: Strategy choice is governed by implicit learning and memory. In L. M. Reder (Ed.), *Implicit memory and metacognition* (pp. 45 – 77). Hillsdale, NJ: Erlbaum.
- Riediger, M. (2001). *On the dynamic relations among multiple goals: Intergoal conflict and intergoal facilitation in younger and older adulthood*. Doctoral thesis, Free University of Berlin. Available online: <http://www.diss.fu-berlin.de/2001/266/>.
- Rogers, R. D., Andrews, T. C., Grasby, P. M., Brooks, D. J., & Robbins, T. W. (2000). Contrasting cortical and subcortical activation produced by attentional-set shifting and reversal learning in humans. *Journal of Cognitive Neurosciences*, *12*, 142 – 162.
- Rogers, W. A., Bertus, E. L., & Gilbert, D. K. (1994). Dual-task assessment of age differences in automatic process development. *Psychology and Aging*, *9*, 398 – 413.
- Rogers, W. A., Hertzog, C., & Fisk, A. D. (2000). An individual differences analysis of ability and strategy influences: Age-related differences in associative learning. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *26*, 359 – 394.
- Rosenhall, U. R. (1975). Degenerative changes in the human vestibular sensory epithelia. *Acta Otolaryngology*, *79*, 67 – 80.
- Salthouse, T. A. (1985). Speed of behavior and its implications for cognition. In J. E. Birren & K. W. Schaie (Eds.), *Handbook of the psychology of aging* (pp. 400 – 426). New York: Van Nostrand Reinhold.
- Salthouse, T. A. (1991). *Theoretical perspectives on cognitive aging*. Hillsdale, NJ: Erlbaum.
- Salthouse, T. A. (1996). The processing-speed theory of adult age differences in cognition. *Psychological Review*, *103*, 403 – 428.
- Salthouse, T. A. (2000). Methodological assumptions in cognitive aging research. In F. I. M. Craik & T. A. Salthouse (Eds.), *Handbook of aging and cognition* (pp. 467 – 498). Mahwah, NJ: Erlbaum.

- Salthouse, T. A. (2001). A research strategy for investigating group differences in a cognitive construct: Application to ageing and executive processes. *European Journal of Cognitive Psychology, 13*, 29 – 46.
- Salthouse, T. A., Kausler, D. H., & Saults, J. S. (1988). Investigation of student status, background variables, and the feasibility of standard tasks in cognitive aging research. *Psychology and Aging, 3*, 29 – 37.
- Salthouse, T. A., Rogan, J. D., & Prill, K. A. (1984). Division of attention: Age differences on a visually presented memory task. *Memory and Cognition, 12*, 613 – 620.
- Salthouse, T. A., & Somberg, B. L. (1982). Skilled performance: The effects of adult age and experience on elementary process. *Journal of Experimental Psychology: General, 111*, 176 – 207.
- Sattin, R. W. (1992). Falls among older persons: A public health perspective. *Annual Reviews in Public Health, 13*, 489 – 508.
- Schneider, W., & Fisk, A. D. (1982). Concurrent automatic and controlled visual search: Can processing occur without resource cost? *Journal of Experimental Psychology: Learning, Memory, and Cognition, 8*, 261 – 278.
- Schooler, C. (1987). Psychological effects of complex environments during the life span: A review and theory. In C. Schooler & K. W. Schaie (Eds.), *Cognitive functioning and social structure over the life course* (pp. 24 – 49). Norwood, NJ: Ablex.
- Schröger, E., & Wolff, C. (1998). Behavioral and electrophysiological effects of task-irrelevant sound change: a new distraction paradigm. *Cognitive Brain Research, 7*, 71 – 87.
- Seiple, W., Szlyk, J. P., Yang, S., & Holopigian, K. (1996). Age-related functional field losses are not eccentricity dependent. *Vision Research, 36*, 1859 – 1866.
- Sekuler, A. B., Bennett, P. J., & Mamelak, M. (2000). Effects of aging on the useful field of view. *Experimental Aging Research, 26*, 103 – 120.
- Shallice, T., & Burgess, P. (1991). Deficits in strategy application following frontal lobe damage in man. *Brain, 114*, 727 – 742.
- Shumway-Cook, A., & Woollacott, M. H. (1985). The growth of stability: Postural control from a developmental perspective. *Journal of Motor Behavior, 17*, 131 – 147.
- Shumway-Cook, A., & Woollacott, M. H. (2000). Attentional demands and postural control: The effect of sensory context. *Journal of Gerontology: Medical Sciences, 55A*, M10 – M16.

- Shumway-Cook, A., Woollacott, M., Kerns, K. A., & Baldwin, M. (1997). The effects of two types of cognitive tasks on postural stability in older adults with and without a history of falls. *Journal of Gerontology: Medical Sciences*, 52A, M232 – M240.
- Simoneau, G. G., & Leibowitz, H. W. (1996). Posture, gait, and falls. In J. E. Birren & K. W. Schaie (Eds.), *Handbook of the psychology of aging* (pp. 204 – 217). San Diego, CA: Academic Press.
- Sloane, P. D., Baloh, R. W., & Honrubia, V. (1989). The vestibular system in the elderly: Clinical implications. *American Journal of Otolaryngology*, 10, 422 – 429.
- Slobunov, S. M., Moss, S., Slobunova, E. S., & Newell, K. M. (1998). Aging and time to instability in posture. *Journal of Gerontology: Biological Sciences*, 53A, B71 – B78.
- Somberg, B. L., & Salthouse, T. A. (1982). Divided attention abilities in young and old adults. *Journal of Experimental Psychology: Human Perception and Performance*, 8, 651 – 663.
- Sperling, G. (1984). A unified theory of attention and signal detection. In R. Parasuraman & D. R. Davies (Eds.), *Varieties of attention* (pp. 103 – 181). Orlando, FL: Academic Press.
- SPSS Inc. (1999). SPSS for Windows (Version 10.0). Chicago: SPSS.
- Staudinger, U., Marsiske, M., & Baltes, P. B. (1995). Resilience and reserve capacity in later adulthood: Potential and limits of development across the life span. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology. Vol. 2: Risk, disorder, and adaptation* (pp. 801 – 847). New York: Wiley.
- Stelmach, G. E., Teasdale, N., Fabio, R. P., & Phillips, J. (1989). Age related decline in postural control mechanisms. *International Journal of Aging and Human Development*, 29, 205 – 223.
- Stelmach, G. E., & Worringham, C. J. (1985). Sensorimotor deficits related to postural stability. *Clinics in Geriatric Medicine*, 1, 679 – 694.
- Stelmach, G. E., Zelaznik, H. N., & Lowe, D. (1990). The influence of aging and attentional demands on recovery from postural instability. *Aging*, 2, 155 – 161.
- Stevens, J. P. (2002). *Applied multivariate statistics for the social sciences*. (4th ed.). Mahwah, NJ: Erlbaum.
- Stevens, J. C., & Choo, K. K. (1996). Spatial acuity of the body surface over the life span. *Somatosensory and Motor Research*, 13, 153 – 166.

- Strayer, D. L., & Johnston, W. A. (2001). Driven to distraction: Dual-task studies of simulated driving and conversing on a cellular telephone. *Psychological Science, 12*, 462 – 466.
- Swets, J. A. (1984). Mathematical models of attention. In R. Parasuraman & D. R. Davies (Eds.), *Varieties of attention* (pp. 183 – 242). New York: Academic Press.
- Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics*. (3rd ed.). New York: Harper-Collins.
- Teasdale, N., Bard, C., Dadouchi, F., Fleury, M., LaRue, J., & Stelmach, G. E. (1992). Posture and elderly persons: Evidence for deficits in the central integrative mechanisms. In G. E. Stelmach & J. Requin (Eds.), *Tutorials in motor behavior II* (pp. 917 – 931). Amsterdam: Elsevier Science.
- Teasdale, N., Bard, C., LaRue, J., & Fleury, M. (1993). On the cognitive penetrability of posture control. *Experimental Aging Research, 19*, 1 – 13.
- Telford, C. W. (1931). The refractory phase of voluntary and associative response. *Journal of Experimental Psychology, 14*, 1 – 35.
- Thapa, P. B., Gideon, P., Brockman, K. G., Fought, R., L., & Ray, W. A. (1996). Clinical and biomechanical measures of balance as fall predictors in ambulatory nursing home residents. *Journal of Gerontology: Medical Sciences, 51A*, M239 – M246.
- Thompson, L. A. (1995). Encoding and memory for visible speech and gestures: A comparison between young and older adults. *Psychology and Aging, 10*, 215 – 228.
- Thompson, L. A., & Guzman, F. A. (1999). Some limits on encoding visible speech and gestures using a dichotic shadowing task. *Journal of Gerontology: Psychological Sciences, 54B*, P347 – P349.
- Tinetti, M. E. (1986). A performance-oriented assessment of mobility problems in elderly patients. *Journal of the American Geriatrics Society, 34*, 119 – 126.
- Tinetti, M. E., Speechley, M., & Ginter, S. F. (1988). Risk factors for falls among elderly persons living in the community. *The New England Journal of Medicine, 319*, 1701 – 1707.
- Toupet, M., Gagey, P. M., & Heuschen, S. (1992). Vestibular patients and aging subjects lose use of visual input and expend more energy in static postural control. In B. Vellas, M. Toupet, L. Rubenstein, J. L. Albarede, & Y. Christen (Eds.), *Falls, balance and gait disorders in the elderly* (pp. 183 – 198). Paris: Elsevier Science.
- Tsang, P. S., & Shaner, T. L. (1998). Age, attention, expertise, and time-sharing performance. *Psychology and Aging, 13*, 323 – 347.

- Tsang, P. S., Velazquez, V. L., & Vidulich, M. A. (1996). Viability of resource theories in explaining time-sharing performances. *Acta Psychologica, 91*, 175 – 206.
- Tun, P. A., & Wingfield, A. (1995). Does dividing attention become harder with age? Findings from the Divided Attention Questionnaire. *Aging and Cognition, 2*, 39 – 66.
- Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science, 211*, 453 – 458.
- Verhaeghen, P., & Marcoen, A. (1994). Production deficiency hypothesis revisited: Adult age differences in strategy use as a function of processing resources. *Aging and Cognition, 1*, 323 – 338.
- Verhaeghen, P., & Salthouse, T. A. (1997). Meta-analyses of age-cognition relations in adulthood: Estimates of linear and non-linear age effects and structural models. *Psychological Bulletin, 122*, 231 – 249.
- Verrillo, R. T., & Verrillo, V. (1985). Sensory and perceptual performance. In N. Charness (Ed.), *Aging and human performance* (pp. 1 – 46). Chichester: Wiley.
- Wade, M. G., Lindquist, R., Taylor, J. R., & Treat-Jacobson, D. (1995). Optical flow, spatial orientation, and the control of posture in the elderly. *Journal of Gerontology: Psychological Sciences, 50B*, P51 – P58.
- Wechsler, D. (1982). *Handanweisung zum Hamburg-Wechsler-Intelligenztest für Erwachsene (HAWIE)*. Bern, Switzerland: Huber.
- Weinfurt, K. P. (2000). Repeated measures analyses: ANOVA, MANOVA, and HLM. In L. G. Grimm & P. R. Yarnold (Eds.), *Reading and understanding more multivariate statistics* (pp. 317 – 361). Washington, DC: American Psychological Association.
- Welford, A. T. (1952). The “psychological refractory period” and the timing of high speed performance: A review and a theory. *British Journal of Psychology, 43*, 2 – 19.
- Welford, A. T. (1967). Single channel operation in the brain. *Acta Psychologica, 27*, 5 – 22.
- Wickelgren, W. A. (1977). Speed-accuracy tradeoff and information processing dynamics. *Acta Psychologica, 41*, 67 – 85.
- Wickens, C. D. (1984). Processing resources in attention. In R. Parasuraman & D. R. Davies (Eds.), *Varieties of attention* (pp. 63 – 101). New York: Academic Press.
- Wickens, C. D. (1991). Processing resources and attention. In D. L. Damos (Ed.), *Multiple-task performance* (pp. 3 – 34). London: Taylor & Francis.

- Wickens, C. D., Braune, R., & Stokes, A. (1987). Age differences in the speed and capacity of information processing: 1. A dual-task approach. *Psychology and Aging*, 2, 70 – 78.
- Wiese, B. S., Freund, A. M., & Baltes, P. B. (2000). Selection, optimization, and compensation: An action-related approach to work and partnership. *Journal of Vocational Behavior*, 57, 273 – 300.
- Wilk, H. B., Shapiro, S. S., & Chen, H. J. (1968). A comparative study of various tests of normality. *Journal of the American Statistical Association*, 63, 1343 – 1372.
- Winter, D. A. (1992). Foot trajectory in human gait: A precise and multifactorial motor control task, *Physical Therapy*, 72, 45 – 53.
- Wittmann, W. W. (1988). Multivariate reliability theory: Principles of symmetry and successful validation strategies. In J. R. Nesselroade & R. B. Cattell (Eds.), *Handbook of multivariate experimental psychology* (pp. 505 – 560). New York: Plenum.
- Woollacott, M. H. (2000). Systems contributing to balance disorders in older adults. *Journal of Gerontology: Medical Sciences*, 55A, M424 – M428.
- Woollacott, M. H., Moore, S., & Hu, M. H. (1993). Improvements in balance in the elderly through training in sensory organization abilities. In G. E. Stelmach & V. Hömberg (Eds.), *Sensorimotor impairment in the elderly* (pp. 377 – 392). Dordrecht: Kluwer.
- Woollacott, M. H., & Shumway-Cook, A. (1990). Changes in posture control across the life span: A systems approach. *Physical Therapy*, 70, 799 – 807.
- Woollacott, M. H., Shumway-Cook, A., & Nashner, L. M. (1986). Aging and posture control: Changes in sensory organization and muscular coordination. *International Journal of Aging and Human Development*, 23, 97 – 114.
- Wu, G. (1998). The relationship between age-related changes in neuromusculoskeletal system and dynamic postural responses to balance disturbance. *Journal of Gerontology: Medical Sciences*, 53A, M320 – M326.

