Why teens take risks ... : a neurocognitive analysis of developmental changes and individual differences in decision-making under risk

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References

Achenbach T. M., (1991) *Manual for the Child Behavior Checklist/4-18 (CBCL)*. Burlington: University of Vermont, Department of Psychiatry.

Acredolo, C., O'Connor, J., Banks, L., & Horobin, K. (1989). Children's ability to make probability estimates: Skills revealed through application of Anderson's functional measurement methodology. *Child Development, 60* (4)*,* 933-945.

Adleman, N. E., Menon, V., Blasey, C. M., White, C. D., Warsofsky, I. S., Glover, G. H., et al. (2002). A developmental fmri study of the stroop color-word task. *NeuroImage, 16,* 61-75.

Adolphs, R. (2003). Cognitive neuroscience of human social behaviour. *Nature Reviews Neuroscience, 4* (3)*,* 165-178.

Alloway T. P. & Gathercole S. E. (2005). Working Memory and short-term sentence recall in young children. *European Journal of Cognitive Psychology, 17,* 207-220.

Alloway, T. P., Gathercole, S. E., & Pickering, S. J. (2006). Verbal and visuo-spatial short-term and working memory in children: Are they separable? *Child Development, 77,* 1698-1716.

Anderson, M. (2001). Annotation: Conceptions of intelligence. *Journal of Child Psychology and Psychiatry, 42,* 287-298.

Arnett, J. (1992). Reckless behavior in adolescence: A developmental perspective. *Developmental Reviews, 12,* 391–409.

Arnett, J. J. (1996). Sensation seeking, aggressiveness, and adolescent reckless behavior. *Personality and Individual Differences, 20* (6)*,* 693-702.

Arnett, J. J. (1999). Adolescent storm and stress, reconsidered. *The American Psychologist, 54* (5)*,* 317-326.

Aron, A. R., Shohamy, D., Clark, J., Myers, C., Gluck, M. A., & Poldrack, R. A. (2004). Human midbrain sensitivity to cognitive feedback and uncertainty during classification learning. *Journal of Neurophysiology, 92,* 1144-1152.

Backs, R. W. & Seljos, K. A. (1994). Metabolic and cardiorespiratory measures of mental effort: The effects of level of difficulty in a working memory task. *International Journal of Psychophysiology, 16,* 57-68.

Baddeley, A. D. & Hitch, G. J. (1974). *Working memory.* In: G. Bower (Ed.), The psychology of learning and motivation: Advances in research and theory (pp. 47-90). New York: Academic Press.

Baddeley, A. D. & Logie, R. H. (1999). *Working memory: the multiple component model.* In. A. Miyake & P. Shah (Eds.) Models of Working Memory (pp. 28-61). New York: Cambridge University Press.

Baddeley, A. D. (1992a). Working memory. *Science, 255,* 556-559.

Baddeley, A. D. (1992b). Is working memory working? The fifteenth Bartlett Lecture. *The Quarterly Journal of Experimental Psychology, 44a,* 1-31.

Baddeley, A. D., Emslie, H., Kolodny, J., & Duncan, J. (1998). Random generation and the executive control of working memory. *The Quarterly Journal of Experimental Psychology, 51a,* 819-852.

Baddeley, A. D., Gathercole, S. E. & Papagno, C. (1998). The phonological loop as a language learning device. *Psychological Review, 105,* 158-173.

Baltes, P. B., Staudinger, U. M. & Lindenberger, U. (1999). Lifespan psychology:

Barcelo, F. & Knight, R. T. (2002). Both random and perseverative errors underlie WCST deficits in prefrontal changes. *Neuropsychologia, 40,* 349-356.

Barcelo, F. (1999). Electrophysiological evidence of two different types of error in the Wisconsin Card Sorting Test. *Cognitive Neuroscience, 10,* 1299-1303.

Barraclough, D. J., Conroy, M. L. & Lee, D. (2004). Prefrontal cortex and decision making in a mixed-strategy game. *Nature Neuroscience, 7,* 404-410.

Bayliss, D. M., Jarrold, C., Gunn, D. M., & Baddeley, A. D. (2003). The complexities of complex span: Explaining individual differences in working memory in children and adults. *Journal of Experimental Psychology: General, 132,* 71-92.

Bechara, A. (2001). Neurobiology of decision-making: Risk and reward. *Seminars in Clinical Neuropsychiatry, 6,* 205–216.

Bechara, A., Damasio, A. R., Damasio, H. & Anderson, S. W. (1994). Insensitivity to future consequences following damage to human prefrontal cortex. *Cognition, 50,* 7-15.

Bechara, A., Damasio, H., & Damasio, A. R. (2000). Emotion, decision making and the orbitofrontal cortex. *Cerebral Cortex, 10* (3)*,* 295-307.

Bechara, A., Damasio, H., Tranel, D & Anderson, S. W. (1998). Dissociation of working memory from decision-making within the human prefrontal cortex. *The Journal of Neuroscience, 18,* 428-437.

Bechara, A., Damasio, H., Tranel, D. & Damasio, A. R. (1997). Deciding advantageously before knowing the advantageous strategy. *Science, 275,* 1293-1295

Bechara, A., Tranel, D. & Damasio, H. (2000). Characterization of the decision-making deficit of patients with ventromedial prefrontal cortex lesions. *Brain, 123,* 2189-2202.

Bechara, A., Tranel, D., Damasio, H. & Damasio, A.R. (1996). Failure to respond autonomically to anticipated future outcomes following damage to the prefrontal cortex. *Cerebral Cortex, 6,* 215-225.

Belger, A., Puce, A., Krystal, J. H., Gore, J. C., Goldman-Rakic, P. & McCarthy, G. (1998). Dissociation of mnemonic and perceptual processes during spatial and nonspatial working memory using fMRI. *Human Brain Mapping, 6,* 14-32.

Beyth-Marom, R. Austin, L., Fischhoff, B., Palmgren, C., Jacobs-Quadrel, M. (1993). Perceived consequences of risky behaviors: Adults and adolescents. *Developmental Psychology, 29* (3), 549-563.

Bjork, J. M., Knutson, B., Fong, G. W., Caggiano, D. M., Bennett, S. M., & Hommer, D. W. (2004). Incentive-elicited brain activation in adolescents: Similarities and differences from young adults. *Journal of Neuroscience, 24*, 1793-1802.

Blakemore, S. J., & Choudhury, S. (2006). Development of the adolescent brain: Implications for executive function and social cognition. *Journal of Child Psychology and Psychiatry, 47* (3), 296-312.

Boyer, T. W. (2006). The development of risk-taking: A multi-perspective review. *Developmental Review, 26* (3), 291-345.

Boyer, T. W. (2007). Decision-making processes: Sensitivity to sequentially experienced outcome probabilities. *Journal of Experimental Child Psychology, 97,* 28-43.

Breiter, H. C., Aharon, I., Kahneman, D., Dale, A., & Shizgal, P. (2001). Functional imaging of neural responses to expectancy and experience of monetary gains and losses. *Neuron, 30* (2), 619-639.

Brett M, Anton J-L, Valabregue R, Poline J-B. (2002). Region of interest analysis using an SPM toolbox [abstract] 8th International Conference on Functional Mapping of the Human Brain, June 2-6, Sendai, Japan. *NeuroImage, 16,* 2.

Bunge, S. A., & Wright, S. B. (2007). Neurodevelopmental changes in working memory and cognitive control. *Current Opinions in Neurobiology, 17* (2)*,* 243-250.

Bunge, S. A., Dudukovic, N. M., Thomason, M. E., Vaidya, C. J. & Gabrieli, J. D. E. (2002a). Immature frontal lobe contributions to cognitive control in children: Evidence from fMRI. *Neuron, 33,* 301-311.

Bunge, S. A., Hazeltine, E., Scanlon, M. D., Rosen, A. C. & Gabrieli, J.D. (2002b) Dissociable contributions of prefrontal and parietal cortices to response selection. *NeuroImage, 17,* 1562-71.

Bush, G., Vogt, B. A., Holmes, J., Dale, A. M., Greve, D., Jenike, M. A., & Rosen, B.R. (2002). Dorsal anterior cingulate cortex: a role in reward-based decision making. *Proceedings of the National Academy of Sciences of the United States of America, 99,* 523-528.

Byrnes, J. P. (1998). The nature and development of decision making: a self-regulation model. Mahwah, NJ: Lawrence Erlbaum.

Carter, C. S., Botvinick, M. M., & Cohen, J. D. (1999). The contribution of the anterior cingulate cortex to executive processes in cognition. *Rev Neurosci, 10* (1)*,* 49-57.

Carter, C., Braver, T. S., Barch, D. M., Botvinick, M., Noll, D. & Cohen, J. D. (1998). Anterior cingulate cortex, error detection, and the on-line monitoring of performance. *Science, 280,* 747-749.

Case, R. (1992). *The mind's staircase: exploring the conceptual underpinnings of children's thought and knowledge.* Hillsdale, NJ: Erlbaum.

Case, R., Kurland, D. M., & Goldberg, J. (1982). Operational efficiency and short-term memory span. *Journal of Experimental Child Psychology, 33,* 386-404.

Casey, B. J. et al. (1997) A developmental functional MRI study of prefrontal activation during performance of a Go/No-go task. *Journal of Cognitive Neuroscience, 9,* 835–847.

Casey, B. J., Galvan, A., Hare, T. A. (2005). Changes in cerebral functional organization during cognitive development. *Current Opinions in Neurobiology, 15,* 239-244.

Casey, B. J., Getz, S., Galvan, A. (2008). The adolescent brain. *Developmental Review, 28,* 62-77.

Casey, B. J., Giedd J. N., Thomas, K. M. (2000). Structural and functional brain development and its relation to cognitive development. *Biological Psychology, 54,* 241-257.

Casey, B. J., Jones, R. M., Hare, T. A. (2008b). The adolescent brain. *Annals of the New York Academy of Sciences, 1124,* 111-126.

Casey, B. J., Cohen, J. D., Jezzard, P., Turner, R., Noll, D. C., Trainor, R. J., ... Rapoport, J. L. (1995). Activation of prefrontal cortex in children during a nonspatial working memory task with functional MRI. *Neuroimage, 2,* 221-229.

Casey, B. J., Galvan, A., & Hare, T. A. (2005). Changes in cerebral functional organization during cognitive development. *Current Opinions in Neurobiology, 15* (2)*,* 239-244.

Casey, B. J., Getz, S., & Galvan, A. (2008). The adolescent brain. *Developmental Review, 28*, 62-77.

Casey, B. J., Giedd, J. N. & Thomas, K. M. (2000). Structural and functional brain development and it's relation to cognitive development. *Biological Psychology, 54,* 241-257.

Casey, B. J., Tottenham, N., Liston, C., & Durston, S. (2005). Imaging the developing rain: What have we learned about cognitive development? *Trends in Cognitive Sciences, 9* (3)*,* 104-110.

Casey, B. J., Davidson, M. & Rosen, B. (2002). Functional magnetic resonance imaging: Basic principles of an application to developmental science. *Developmental Science, 5,* 301-309.

Cerella, J. & Hale, S. (1994). The rise and fall in information-processing rates over the life span. *Acta Psychologica, 86,* 109-97.

Cocosco, C. A., Kollokian, V., Kwan, R. K. S., & Evans, A. C. (1997). Brain web: Online interface to a 3D MRI simulated brain database. *Neuroimage, 5*, S452.

Cohen, M. X, Heller, A. S., Ranganath, C. (2005). Brain connectivity with anterior cingulate and orbitofrontal cortices during decision-making. *Cognitive Brain Research, 23,* 61-70.

Cohn, L. D., & Westenberg, P. M. (2004). Intelligence and maturity: Meta-analytic evidence for the incremental and discriminant validity of loevinger's measure of ego development. *Journal of Personality and Social Psychology, 86* (5)*,* 760-772

Cools, R., Clark, L., & Robbins, T. W. (2004). Differential responses in human striatum and prefrontal cortex to changes in object and rule relevance. *The Journal of Neuroscience, 24,* 1129-1135.

Cools, R., Clark, L., Owen, A. M., & Robbins, T. W. (2002). Defining the neural mechanisms of probabilistic reversal learning using event-related functional magnetic resonance imaging. *The Journal of Neuroscience, 22,* 4563-4567.

Courtney, S.M., Ungerleider, L.G., Keil, K., Haxby, J.V. (1996). Object and spatial visual working memory activate separate neural systems in human cortex. *Cerebral Cortex, 6,* 39-49.

Cowan, N, Towse, J. N., Hamilton, Z., Saults, J. S., Elliott, E. M., Lacey, J. F. Moreno, M. V., & Hitch, G. J. (2003). Children's working-memory processes: A response-timing analysis. *Journal of Experimental Psychology: General 132* (1), 113-132.

Cowan, N. (2002). Childhood development of working memory: an examination of two basic parameters. In: P. Graf & N. Ohta (Eds.), *Lifespan development of human memory* (pp. 39-57). Cambridge, MA: MIT Press.

Critchley, H. D., Mathias, C. J., & Dolan, R. J. (2001). Neural activity in the human brain relating to uncertainty and arousal during anticipation. *Neuron, 29,* 537–545.

Critchley, H. D. (2005). Neural mechanisms of autonomic, affective, and cognitive integration. *The Journal of Comparative Neurology, 493* (1), 154-166.

Critchley, H. D., Corfield, D. R., Chandler, M. P., Mathias, C. J. & Dolan, R. J. (2000). Cerebral correlates of autonomic cardiovascular arousal: a functional neuroimaging investigation in humans. *The Journal of Physiology, 523,* 259-270

Critchley, H. D., Mathias, C. J. & Dolan, R. J. (2001). Neural activity in the human brain relating to uncertainty and arousal during anticipation. *Neuron, 29,* 537-545.

Critchley, H. D., Mathias, C. J., Josephs, O., O'Doherty, J., Zanini, S., Dewar, B., Cipolotti, L., Shallice, T. & Dolan, R. J. (2003). Human cingulate cortex and autonomic control: converging neuroimaging and clinical evidence. *Brain, 126,* 2139-2152

Crone, E. A. , Van der Veen, F. M. , Van der Molen, M. W. , Somsen, R. J. M. , Van Beek, B. & Jennings, J. R. (2003). Cardiac concomitants of feedback processing. *Biological Psychology, 64,* 143–156.

Crone, E. A., & Van der Molen, M. W. (2004). Developmental changes in real-life decision-making: performance on a gambling task previously shown to depend on the ventromedial prefrontal cortex. *Developmental Neuropsychology, 25* (3), 251-279.

Crone, E. A., & Van der Molen, M. W. (2007). Development of decision-making in school-aged children and adolescents: Evidence from heart rate and skin conductance analysis. *Child Development, 78,* 1288-1301.

Crone, E. A., Bullens, L., Van der Plas, E. A., Kijkuit, E. J., & Zelazo, P. D. (2008). Developmental changes and individual differences in risk and perspective taking in adolescence. *Developmental Psychopathology, 20* (4)*,* 1213-1229.

Crone, E. A., Bunge, S. A., de Klerk, P., & Van der Molen, M. W. (2005a). Cardiac concomitants of performance monitoring: Context dependence and individual differences. *Cognitive Brain Research, 23* (1)*,* 93-106.

Crone, E. A., Bunge, S. A., Latenstein, H., & Van der Molen, M. W. (2005b). Characterization of children's decision making: Sensitivity to punishment frequency, not task complexity. *Child Neuropsychology, 11* (3)*,* 245-263.

Crone, E. A., Jennings, J. R. Van der Molen, M. W. (2004). Developmental change in feedback processing as reflected by phasic heart rate changes. *Developmental Psychology, 40,* 1228-1238.

Crone, E. A., Somsen, R. J., Van Beek, B., & Van Der Molen, M. W. (2004b). Heart rate and skin conductance analysis of antecendents and consequences of decision making. *Psychophysiology, 41* (4)*,* 531-540.

Crone, E. A., Somsen, R. J., Zanolie, K., & Van der Molen, M. W. (2006). A heart rate analysis of developmental change in feedback processing and rule shifting from childhood to early adulthood. *Journal of Experimental Child Psychology, 95* (2)*,* 99-116.

Crone, E. A., Wendelken, C., Donohue, S., Van Leijenhorst, L., & Bunge, S. A. (2006). Neurocognitive development of the ability to manipulate information in working memory. *Proceedings of the National Academy of Sciences of the United States of America, 103* (24)*,* 9315-9320.

Dagher A. (2007). Shopping centers in the brain. *Neuron, 53,* 7-8.

Dahl, R. E. (2004). Adolescent brain development: A period of vulnerabilities and opportunities. Keynote address. *Annals of the New York Academy of Sciences, 1021* (1)*,* 1-22.

Dahl, R. E., & Gunnar, M. R. (2009). Heightened stress responsiveness and emotional reactivity during pubertal maturation: Implications for psychopathology. *Developmental Psychopathology, 21* (1), 1-6.

Dale, A. M. (1999). Optimal experimental design for event-related fMRI. *Human Brain Mapping, 8,* 109-114.

Damasio, A. R. (1994). *Descartes' error.* New York: Grosset /Putnam.

Davidson, M. C., Amso, D., Anderson, L. C., & Diamond, A. (2006). Development of cognitive control and executive functions from 4 to 13 years: Evidence from manipulations of memory, inhibition, and task switching. *Neuropsychologia, 44* (11), 2037-2078.

Davies, P. L., Segalowitz, S. J., & Gavin, W. J. (2004b). Development of response-monitoring ERPs in 7- to 25-year-olds. *Developmental Neuropsychology, 25* (3), 355-376.

Davies, P. L., Segalowitz, S. J., & Gavin, W. J. (2004a). Development of error-monitoring event-related potentials in adolescents. *Annals of the New York Academy of Sciences, 1021,* 324-328.

Della Sala, S., Gray, C., Baddeley, A., Allamano, N. & Wilson, L. (1999). Pattern span: a tool for unwelding visuo-spatial memory. *Neuropsychologia, 37,* 1189-1199.

Diamond, A. (2002). Normal development of prefrontal cortex from birth to young adulthood: Cognitive functions, anatomy and biochemistry. In S. A. Knight (Ed.), *The Frontal Lobes*. London: Oxford University Press.

Donkers, F. C. L., Nieuwenhuis, S., Van Boxtel, G. J. M. (2005). Mediofrontal negativities in the absence of responding. *Cognitive Brain Research, 25*, 777-787.

Durston, S., Davidson, M. C., Tottenham, N., Galvan, A., Spicer, J., Fossella, J. A., et al. (2006). A shift from diffuse to focal cortical activity with development. *Developmental Science, 9* (1), 1-8.

Eigsti, I., Zayas, V., Mischel, W., Shoda, Y., Ayduk, O., Dadlani, M. B., et al. (2006). Predicting cognitive control from preschool to late adolescence and young adulthood. *Psychological Science, 17* (6), 478-484.

Elliott, R., Friston, K. & Dolan, R. (2000). Dissociable neural responses in human reward systems. *The Journal of Neuroscience, 20,* 6159-6165.

Engle, R. W., Tuholski, S. W., Laughlin, J. E., & Conway, A. R. A. (1999). Working memory, short-term memory, and general fluid intelligence: A latent variable approach. *Journal of Experimental Psychology: General, 125,* 309–331.

Ernst, M., Nelson, E. E., Jazbec, S., McClure, E. B., Monk, C. S., Leibenluft, E., Blair, J. & Pine, D. S. (2005). Amygdala and nucleus accumbens in responses to receipt and omission of gains in adults and adolescents. *NeuroImage, 25,* 1279-1291.

Ernst, M., Nelson, E. E., McClure, E. B., Monk, C. S., Munson, S., Eshel, N., ... Pine, D. S. (2004). Choice selection and reward anticipation: an fMRI study. *Neuropsychologia, 42,* 1585–1597.

Ernst, M., Pine, D. S., & Hardin, M. (2006). Triadic model of the neurobiology of motivated behavior in adolescence. *Psychological Medicine, 36*, 299-312.

Eshel, N., Nelson, E. E., Blair, J. R., Pine, D. S., & Ernst, M. (2007). Neural substrates of choice selection in adults and adolescents: Development of the ventrolateral prefrontal and anterior cingulate cortices. *Neuropsychologia, 45*, 1270–1279.

Fareri, D. S., Martin, L. N. & Delgado, M. R. (2008). Reward-related processing in the human brain: developmental considerations. *Developmental Psychopathology, 20,* 1191-1211.

Fellows, L. K., Farah, M. J. (2003). Ventromedial frontal cortex mediates affective shifting in humans: evidence from a reversal learning paradigm. *Brain, 126,* 1830-1837.

Fellows, L. K., Farah, M. J. (2005). Different Underlying Impairments in Decision-making Following Ventromedial and Dorsolateral Frontal Lobe Damage in Humans. *Cerebral Cortex, 15,* 58-63.

Figner, B., Mackinlay, R. J., Wilkening, F., & Weber, E. U. (2009). Affective and deliberative processes in risky choice: Age differences in risk taking in the Columbia Card Task. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 35(3),* 709-730.

Friedman, N. P., & Miyake, A. (2000). Differential roles for visuospatial and verbal working memory in situation model construction. *Journal of Experimental Psychology: General, 129,* 61–83.

Fry, A. F. & Hale, S. (2000). Relationships among processing speed, working memory, and fluid intelligence in children. *Biological Psychology, 54,* 1-34.

Furby, L., & Beyth-Marom, R. (1992). Risk taking in adolescence: A decision-making perspective. *Developmental Review, 12*, 1-44.

Fuster, J. M. (2002). Frontal lobe and cognitive development. *Journal of Neurocytology, 31,* 373-385.

Galvan, A., Hare, T. A., Davidson, M., Spicer, J., Glover, G., & Casey, B. J. (2005). The role of ventral frontostriatal circuitry in reward-based learning in humans. *The Journalof Neuroscience, 25,* 8650-8656.

Galvan, A., Hare, T. A., Parra, C. E., Penn, J., Voss, H., Glover, G., et al. (2006). Earlier development of the accumbens relative to orbitofrontal cortex might underlie risk-taking behavior in adolescents. *The Journal of Neuroscience, 26* (25)*,* 6885-6892.

Galvan, A., Hare, T., Voss, H., Glover, G., & Casey, B. J. (2007). Risk-taking and the adolescent brain: Who is at risk? *Developmental Science, 10* (2)*,* F8-F14.

Gardner, M., & Steinberg, L. (2005). Peer influence on risk taking, risk preference, and risky decision making in adolescence and adulthood: An experimental study. *Developmental Psychology, 41* (4)*,* 625-635.

Garon, N. & Moore, C. (2004). Complex decision-making in early childhood. *Brain and Cognition, 551,* 158-170.

Gathercole, S. E. & Hitch, G. J. (1993). Developmental changes in short-term memory: A revised working memory perspective. In A. Colllins, S. E. Gathercole, M. A. Conway, & P. E. Morris (Eds.), *Theories of memory* (pp. 189-210). Hove, UK: Lawrence Erlbaum Associates.

Gathercole, S.E. (2004). Working memory and learning during the school years. *Proceedings of the British Academy, 125,* 365–380.

Gathercole, S.E., Pickering, S. J., Ambridge, B. & Wearing, H. (2004). The structure of Working Memory from 4 to 15 years of age. *Developmental Psychology, 40,* 177-190.

Gehring, W. J. & Knight, R. T. (2000). Prefrontal-cingulate interactions in action monitoring. *Nature Neuroscience, 3,* 516-520.

Gehring, W. J., & Willoughby, A. R. (2002). The medial frontal cortex and the rapid processing of monetary gains and losses. *Science, 295* (5563)*,* 2279-2282.

Geier, C. & Luna, B. (2009). The maturation of incentive processing and cognitive control. *Pharmacology, Biochemistry, and Behavior, 93,* 212-221.

Giedd, J. N., Blumenthal, J., Jeffries, N. O., Castellanos, F. X., Liu, H., Zijdenbos, A., ... Rapoport, J. L. (1999). Brain development during childhood and adolescence: a longitudinal MRI study. *Nature Neuroscience, 2,* 861-863.

Giedd, J. N. (2004). Structural magnetic resonance imaging of the adolescent brain. *Annals of the New York Academy of Sciences, 1021,* 77-85.

Gogtay N, Giedd J. N., Lusk L., Hayashi K. M., Greenstein D., Vaituzis A. C., ... Thompson P. M. (2004). Dynamic mapping of human cortical development during childhood through early adulthood. *Proceedings of the National Academy of Sciences of the United States of America, 101,* 8174-8179.

Hajcak, G., McDonald, N., & Simons, R. F. (2003). To err is autonomic error-related brain potentials, ANS activity, and post-error compensatory behavior. *Psychophysiology, 40* (6)*,* 895-903.

Hall, G. S. (1904). *Adolescence: It's psychology and it's relations to physiology, anthropology, sociology, sex, crime, religion, and education*. New York: D. Appleton & Co.

Hamilton, C. J., Coates, R. O. & Heffernan, T. (2003). What develops in visuo-spatial working memory development? *European Journal of Cognitive Psychology, 15,* 43-69.

Happeney. K. H., Zelazo, P. D. & Stuss, D. T. (2004). Development of orbitofrontal function: Current themes and future directions. *Brain and Cognition, 55,* 1-10.

Harris, J. R. (1995). Where is the child's environment? A groups socialization theory of development. *Psychological Review, 102* (3)*,* 458-489.

Hecker, R. & Mapperson, B. (1997). Dissociation of visual and spatial processing in working memory. *Neuropsychologia, 35,* 599-603.

Hitch, G. J. (1990). Developmental fractionation of working memory. In: G. Vallar & T. Shallice (Eds), *Neuropsychological impairments of short-term memory*. (pp. 211-246). Cambridge, UK: Cambridge University Press.

Hitch, G. J. (2002). Developmental changes in working memory: A multicomponent view. In: P. Graf & N. Ohta (Eds.), *Lifespan development of human memory.* (pp. 15-37). Cambridge, MA: MIT Press.

Hitch, G. J., Towse, J. N., Hutton, U. (2001). What limits children's working memory span? Theoretical accounts and applications for scholastic development. *Journal of Experimental Psychology: General, 130,* 184-198.

Holroyd, C. B. & Coles, M. G. H. (2002). The neural basis of human error processing: Reinforcement learning, dopamine, and the error-related negativity. *Psychological Review, 109,* 679-709.

Holroyd, C.B., & Nieuwenhuis, S., Mars, R. B. & Coles, M. G. H. (2004). Anterior cingulate cortex, selection for action and error processing. In M. I. Posner (Ed.) *Cognitive Neuroscience of Attention.* (pp. 21-23) New York: Guilford Press.

Hooper, C. J., Luciana, M., Conklin, H. M., & Yarger, R. S. (2004). Adolescents' performance on the iowa gambling task: Implications for the development of decision making and ventromedial prefrontal cortex. *Developmental Psychology, 40* (6)*,* 1148-1158.

Huettel S. A., Song A. W. & McCarthy G. (2005). Decisions under uncertainty: Probabilistic context influences activation of prefrontal and parietal cortices. *The Journal of Neuroscience, 25,* 3304-3311.

Huettel, S. A. (2006). Behavioral, but not reward, risk modulates activation of prefrontal, parietal and insular cortices. *Cognitive, Affective, & Behavioral Neuroscience, 6,* 141-151.

Huizinga, M., Dolan, C. V., & Van der Molen, M. W. (2006). Age-related change in executive function: Developmental trends and a latent variable analysis. *Neuropsychologia, 44* (11)*,* 2017-2036.

Huttenlocher, P. R. (1979). Synaptic density in human frontal cortex - developmental changes and effects of aging. *Brain Research, 163,* 195-205.

Jennings, J.R. (1986). Bodily changes during attending. In M. G. H. Coles, E. Donchin, and S. W. Porges (Eds.). *Psychophysiology: systems, processes, and application* (pp. 268-289). New York: Guilford Press.

Jennings, J. R., & Van der Molen, M. W. (2002). Cardiac timing and the central regulation of action. *Psychological Research, 66* (4)*,* 337-349.

Jennings, J. R., Berg, W. K., Hutcheson, J. S., Obrist, P., Porges, S., Turpin, G. (1981). Committee report. Publication guidelines for heart rate studies in man. *Psychophysiology, 18* (3)*,* 226-231.

Kahn, I., Yeshurun, Y., Rotshtein, P., Fried, I., Ben-Bashat, D. & Hendler, T. (2002). The role of the amygdala in signaling prospective outcome of choice. *Neuron, 33,* 983-994.

Kail, R. (1990). *The development of memory in children* (3rd ed.). New York: W. H. Freeman and Company.

Kail, R. (1992). Processing speed, speech rate, and memory. *Developmental Psychology, 28,* 899–904.

Kail, R., & Park, Y.-S. (1994). Processing time, articulation time, and memory span. *Journal of Experimental Child Psychology, 57,* 281–291.

Kane, M. J., Hambrick, D. Z., Tuholski, S. W., Wilhelm, O., Payne, T. W., & Engle, R. W. (2004). The Generality of Working-Memory Capacity: A Latent-Variable Approach to Verbal and Visuo-Spatial Memory Span and Reasoning. *Journal of Experimental Psychology: General, 133,* 189-217.

Kelley, T. M. (2004). Positive psychology and adolescent mental health: False promise or True breakthrough? *Adolescence, 39,* 257-278.

Kerr, A. & Zelazo, P. D. (2004). Development of 'hot' executive function. The children's gambling task. *Brain and Cognition, 55,* 148-157.

Kirkham, N. Z. & Diamond, A. (2003) Sorting between theories of perseveration: performance in conflict tasks requires memory, attention and inhibition. *Developmental Science, 6,* 474-476.

Klauer, K. C. & Zhao, Z. (2004). Double dissociations in visual and spatial short-term memory. *Journal of Experimental Psychology, 133,* 355-381.

Klingberg, T., Forssberg, H. & Wessterberg (2002). Increased brain activity in frontal and parietal cortex underlies the development of visuo-spatial working memory capacity during childhood. *Journal of Cognitive Neuroscience, 14,* 1-10.

Knutson, B., Greer, S. M. (2008). Anticipatory affect: neural correlates and consequences for choice. *Philosophical Transactions of the Royal Society London B Biological Sciences, 363,* 3771-3786.

Knutson, B., Adams, C. M., Fong, G. W., & Hommer, D. (2001). Anticipation of increasing monetary reward selectively recruits nucleus accumbens. *Journal of Neuroscience, 21*, 1-5.

Knutson, B., Wimmer, G. E., Kuhnen, C. M., & Winkielman, P. (2008). Nucleus accumbens activation mediates the influence of reward cues on financial risk taking. *Neuroreport, 19* (5), 509-513.

Kringelbach, M. L. & Rolls, E. T. (2004) The functional neuroanatomy of the human orbitofrontal cortex: evidence from neuroimaging and neuropsychology. *Progress in Neurobiology, 72,* 341–372.

Kwon, H., Reiss, A. L., & Menon, V. (2002). Neural basis of protracted developmental changes in visuo-spatial working memory. *Proceedings of the National Academy of Sciences of the United States of America, 99* (20)*,* 13336-13341.

Lacey, B. C. & Lacey, J. I. (1974). Studies of heart rate and other bodily processes in sensorimotor behavior. In P. A. Obrist, A. H. Black, J. Brenner, & L. V. DiCara (Eds.). *Cardiovascular Pschophysiology* (pp. 538-564). Chicago: Aldine.

Ladouceur, C. D., Dahl, R. E., & Carter, C. S. (2004). Erp correlates of action monitoring in adolescence. *Annals of the New York Academy of Sciences, 1021,* 329-336.

Lejuez, C. W., Aklin, W. M., Zvolensky, M. J., & Pedulla, C. M. (2003). Evaluation of the balloon analogue risk task (BART) as a predictor of adolescent real-world risk-taking behaviours. *Journal of Adolescence, 26* (4)*,* 475-479.

Levin, I., P., Weller, J., A., Pederson, A., A., & Harshman, L., A. (2007). Age-related difference sin adaptive decision making: Sensitivity to expected value in risky choice. *Judgment and Decision Making, 2* (4)*,* 225-233.

Logie, R. H. & Pearson, D. G. (1997). The inner eye and the inner scribe of visuospatial working memory: Evidence from developmental fractionation. *European Journal of Cognitive Psychology, 9,* 241-257.

Logie, R. H. (1995). Visuo-spatial working memory. Hove, UK: Erlbaum.

Logothetis, N. K. (2008). What We Can Do and What We Cannot Do with fMRI, *Nature, 453*, 869–878.

Luna, B., Garver, K.E., Urban, T.A., Lazar, N.A., & Sweeney, J.A. (2004). Maturation of cognitive processes from late childhood to adulthood. *Child Development, 75* (5)*,* 1357-1372.

Luna, B., Thulborn, K. R., Munoz, D. P., Merriam, E. P., Garver, K. E., Minshew, N. J., ... Sweeney, J. A. (2001). Maturation of Widely Distributed Brain Function Subserves Cognitive Development. *Neuroimage, 13,* 786–793.

Maia, T. V. & McClelland, J. L. (2005). The somatic marker hypothesis: still many questions but no answers. Response to Bechara et al. *Trends in Cognitive Sciences, 9,* 162-164.

Maia, T. V. & McClelland, J. L. (2004). A reexamination of the evidence for the somatic marker hypothesis: What participants really know in the Iowa gambling task. *Proceedings of the National Academy of Sciences of the United States of America, 101,* 16075-16080.

Manes, F., Sahakian, B., Clark, L., Rogers, R., Antoun, N., Aitken, M., Robbins, T. (2002). Decision-making following damage to the prefrontal cortex. *Brain, 125,* 624-639.

Masten, A. S., Hubbard, J. J., Gest, S. D., Tellegen, A., Garmezy, N., & Ramirez, M. (1999). Competence in the context of adversity: Pathways to resilience and maladaptation from childhood to late adolescence. *Development and Psychopathology, 11,* 143-169.

May, J. C., Delgado, M. R., Dahl, R. E., Stenger, V. A., Ryan, N. D., Fiez, J. A. & Carter, C. S. (2004). Event-related functional magnetic resonance imaging of reward-related brain circuitry in children and adolescents. *Biological Psychiatry, 55,* 359-366.

McClure, S. M., Berns, G. S., & Montague, P. R. (2003). Temporal prediction errors in a passive learning task activate human striatum. *Neuron, 38*, 339-346.

McClure, S.M., Laibson, D.I., Loewenstein, G. & Cohen, J.D. (2004) Separate Neural Systems Value Immediate and Delayed Monetary Rewards. *Science, 306,* 503-507.

Mecklinger, A. & Pfeiffer, E. (1996). Event-related potentials reveal topographical and temporal distinct neuronal activation patterns for spatial and object working memory. *Cognitive Bain Research, 4,* 211-224.

Miltner, W. H. M., Braun, C. H. & Coles, M. G. H. (1997). Event-related brain potentials following incorrect feedback in a time-estimation task: Evidence for a generic neural system for error detection. *Journal of Cognitive Neuroscience, 9,* 788-798.

Miltner, W. H., Lemke, U., Weiss, T., Holroyd, C., Scheffers, M. K., & Coles, M. G. (2003). Implementation of error-processing in the human anterior cingulate cortex: A source analysis of the magnetic equivalent of the error-related negativity. *Biological Psychology, 64,* 157-166.

Mischel, W., Shoda, Y., & Rodriguez, M. (1989). Delay of gratification in children. *Science, 244,* 933-938.

Miyake, A., Friedman, N. P., Emerson, M. J., Witzki, A. H., Howerter, A. & Wager, T. D. (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.

Miyake, A., Friedman, N., Rettinger, D. A., Shah, P., & Hegarty, M. (2001). How are visuospatial working memory, executive functioning, and spatial abilities related? A latent-variable analysis. *Journal of Experimental Psychology: General, 130,* 621–640.

Nelson, E. E., Leibenluft, E., McClure, E. B. & Pine, D. S. (2005). The social re-orientation of adolescence: a neuroscience perspective on the process and its relation to psychopathology. *Psychological Medicine, 35,* 163-174.

Nelson, C. A., Monk, C. S., Lin, J., Carver, L. J., Thomas, K. M. & Truwit, C. L. (2000) Functional neuroanatomy of spatial working memory in children. *Developmental Psychology,36,*109-116.

Nieuwenhuis, S., Slagter, H. A., von Geusau, N.J., Heslenfeld, D. J. & Holroyd, C. B. (2005) Knowing good from bad: Differential activation of human cortical areas by positive and negative outcomes, *The European Journal of Neuroscience, 21* (11), 3161-3168.

Nystrom, L. E., Braver, T. S., Sabb, F. W., Delgado, M. R., Noll, D. C. & Cohen, J. D. (2000). Working memory for letters, shapes, and locations: fMRI evidence against stimulus-based regional organization in human prefrontal cortex. *Neuroimage, 11,* 424-446.

O'Doherty, J., Critchley, H., Deichmann, R. & Dolan, R. J. (2003). Dissociating valence of outcome from behavioral control in human orbital and ventral prefrontal cortices. *The Journal of Neuroscience, 23,* 7931-7939.

O'Doherty, J. P., Kringelbach, M. L., Rolls, E. T., Hornak, J. & Andrews, C. (2001). Abstract reward and punishment representation in the human orbitofrontal cortex. *Nature Neuroscience, 4,* 95-102.

O'Doherty, J. P. (2007). Lights, camembert, action! The role of human orbitofrontal cortex in encoding stimuli, rewards and choices. *Annals of the New York Academy of Sciences*, *1121,* 254-272.

O'Doherty, J. P., Deichmann, R., Critchley, H. D., & Dolan, R. J. (2002). Neural responses during anticipation of a primary taste reward. *Neuron, 33* (5)*,* 815-826.

Overman, W. H. (2004). Sex differences in early childhood, adolescence, and adulthood, on tasks that rely on orbitofrontal cortex. *Brain and Cognition, 55,* 134-147.

Overman, W. H., Frassrand, K., Ansel, S., Trawalter, S., Bies, B., & Redmond, A. (2004). Performance on the Iowa card task by adolescents and adults. *Neuropsychologia, 42* (13), 1838-1851.

Palmer, S. (2000). Working memory: A developmental study of phonological recoding. *Memory, 8,* 179-193.

Pascual-Leone, J. (1995). Learning and development as dialectical factors in cognitive growth. *Human Development, 38,* 338-348.

Paulus, M. P., Rogalsky, C., Simmons, A., Feinstein, J. S. & Stein, M. B. (2003). Increased activation in the right insula during risk-taking decision making is related to harm avoidance and neuroticism. *NeuroImage, 19,* 1439 –1448.

Paulus, M. P., Hozack, N. Frank, L. & Brown, G. G. (2002). Error Rate and Outcome Predictability Affect Neural Activation in Prefrontal Cortex and Anterior Cingulate during Decision-Making. *NeuroImage, 15,* 836–846.

Paulus, M. P., Hozack, N., Zauscher, B., McDowell, J. E., Frank, L., Brown, G. G. & Braff, D. L. (2001). Prefrontal, parietal, and temporal cortex networks underlie decision-making in the presence of uncertainty. *NeuroImage, 13,* 91-100.

Piaget, J., & Inhelder, B. (1975). The origin of the idea of chance in children. New York: Norton (Original work published 1951).

Pickering, S. J. (2001). The development of visuo-spatial working memory. *Memory, 9,* 423-432.

Pickering, S. J., Gathercole, S. E., Hall, M. E. & Lloyd, S. A. (2001). Development of memory for pattern and path: Further evidence for the fractionation of visuo-spatial memory. *The Quarterly Journal of Experimental Psychology, 54* (2)*,* 397-420.

Poldrack, R. A. (2006) Can Cognitive Processes Be Inferred from Neuroimaging Data? *Trends in Cognitive Science, 10,b* 59–63.

Posner, M. I., & Rothbart, M. K. (1998). Attention, self-regulation and consciousness. *Philosophical Transactions of the Royal Society London B Biological Sciences, 353* (1377)*,* 1915-1927.

Prencipe, A. & Zelazo, P. D. (2005) Development of affective decision making for self and other: Evidence for the integration of first- and third-person perspectives. *Psychological Science, 16,* 501-505.

Preuschoff, K., Quartz, S. R., & Bossaerts, P. (2008). Human insula activation reflects risk prediction errors as well as risk. *The Journal of Neuroscience, 28,* 2745-2752.

Rabinowitz, F. M., Dunlap, W. P., Grant, M. J., & Campione, J. C. (1989). The rules used by children and adults in attempting to generate random numbers. *Journal of Mathematical Psychology, 33,* 227-287.

Raven, J., Raven, J. C., & Court, J. H. (1998). *Manual for raven's progressive matrices and vocabulary scales. Section 1:General overview*. San Antonia TX: Harcourt Assessment.

Reyna, V. F., & Ellis, S. C. (1994). Fuzzy-trace theory and framing effects in children's risky decision making. *Psychological Science, 5*, 275-279.

Reyna, V. F., & Rivers, S. E. (2008). Current theories of risk and rational decision making. *Developmental Review, 28* (1), 1-11.

Ridderinkhof, K. R., Ullsperger, M., Crone, E. A., & Nieuwenhuis, S. (2004). The role of the medial frontal cortex in cognitive control. *Science, 306* (5695)*,* 443-447.

Ridderinkhof, K.R. & Van der Molen, M.W. (1995) A psychophysiological analysis of developmental differences in the ability to resist interference. *Child Development, 66,* 1040-1056.

Rivers, S. E., Reyna, V. F., & Mills, B. (2008). Risk taking under the influence: A fuzzy-trace theory of emotion in adolescence. *Developmental Review, 28*, 107-144.

Rodriguez, P. F., Aron, A., & Poldrack, R. (2005). Ventral-striatal / nucleus-accumbens sensitivity to prediction errors during classification learning. *Human Brain Mapping, 27,* (4)*, 306-313.*

Rogers, R., Everitt, B. J., Baldacchino, A., Blackshaw, A. J., Swainson, R., Wynne, K., ... Robbins, T. W. (1999). Dissociable deficits in decision making cognition of chronic amphetamine abusers, opiate abusers, patients with focal damage to the prefrontal cortex, and tryptophan depleted normal volunteers: evidence for monoaminergic mechanisms. *Neuropharmacology, 20,* 322-339.

Rogers, R. D., Ramnani, N., Mackay, C., Wilson, J. L., Jezzard, P., Carter, C. S., & Smith, S. M. (2004). Distinct portions of anterior cingulate cortex and medial prefrontal cortex are activated by reward processing in separable phases of decision-making cognition. *Biological Psychiatry, 55,* 594-602.

Rolls, E. T. (1999). *The brain and emotion*, Oxford: Oxford University Press

Rolls, E. T. (2000). The orbitofrontal cortex and reward. *Cerebral Cortex, 20*, 284-294.

Rowe, J. B., Toni I., Josephs, O., Frackowiak, R. S., Passingham, R. E. (2000). The prefrontal cortex: response selection or maintenance within working memory? *Science, 5471,* 1656-1660.

Salthouse, T. A. (1992) Influence of processing speed on adult age differences in working memory. *Acta Psychologica, 79,* 177-170.

Samanez-Larkin, G. R., Gibbs, S. E., Khanna, K., Nielsen, L., Carstensen, L. L., Knutson, B. (2007). Anticipation of monetary gain but not loss in healthy older adults. *Nature Neuroscience, 10,* 787-791.

Scheres, A., Dijkstra, M., Ainslie, E., Balkan, J., Reynolds, B., Sonuga-Barke, E., et al. (2006). Temporal and probabilistic discounting of rewards in children and adolescents: Effects of age and ADHD symptoms. *Neuropsychologia, 44,* 2092-2103.

Schlottmann, A. (2001). Children's probability intuitions: Understanding the expected value of complex gambles. *Child Development, 72* (1)*,* 103-122.

Schoenbaum, G., Chiba, A. A. & Gallagher, M. (2000). Changes in functional connectivity in orbitofrontal cortex and basolateral amygdala during learning and reversal training. *The Journal of Neuroscience, 20,* 5179-5189.

Shaw, P., Kabani, N. J., Lerch, J. P., Eckstrand, K., Lenroot, R., Gogtay, N., et al. (2008). Neurodevelopmental trajectories of the human cerebral cortex. *The Journal of Neuroscience, 28* (14)*,* 3586-3594.

Shoda, Y., Mischel, W. & Peake, P. K. (1990). Predicting adolescent cognitive and self-regulatory competencies from preschool delay of gratification: Identifying diagnostic conditions. *Developmental Psychology, 26,* 978-986.

Smith, B. W., Mitchell, D. G., Hardin, M. G., Jazbec, S., Fridberg, D., Blair, R. J., et al. (2009). Neural substrates of reward magnitude, probability, and risk during a wheel of fortune decision-making task. *NeuroImage, 44* (2)*,* 600-609.

Smith, E. E. & Jonides, J. (1997). Working memory: A view from neuroimaging. *Cognitive Psychology, 33,* 5-42.

Smith, E. E., Jonides, J., Koeppe, R. A., Awh, E., Schumacher, E. H. & Minoshima, S. (1995). Spatial versus object working memory: PET investigations. *Journal of Cognitive Neuroscience, 7,* 337-356.

Somsen, R. J., Jennings, J. R., & Van der Molen, M. W. (2004). The cardiac cycle time effect revisited: Temporal dynamics of the central-vagal modulation of heart rate in human reaction time tasks. *Psychophysiology, 41* (6)*,* 941-953.

Somsen, R. J., Van der Molen, M. W., Jennings, J. R., & Orlebeke, J. F. (1985). Response initiation, not completion, seems to alter cardiac cycle length. *Psychophysiology, 22* (3)*,* 319-325.

Somsen, R. J., Van der Molen, M. W., Jennings, J. R., & Van Beek, B. (2000). Wisconsin card sorting in adolescents: Analysis of performance, response times and heart rate. *Acta Psychologica, 104* (2)*,* 227-257.

Sowell, E. R., Thompson, P. M., Leonard, C. M., Welcome, S. E., Kan, E., & Toga, A. W. (2004). Longitudinal mapping of cortical thickness and brain growth in normal children. *The Journal of Neuroscience, 24* (38)*,* 8223-8231.

Spear, L. P. (2000). The adolescent brain and age-related behavioral manifestations. *Neuroscience and Biobehavioral Reviews, 24,* 417- 463.

Steinberg, L. (2004). Risk taking in adolescence: What changes and why? *Annals of the New York Academy of Sciences, 1021*, 51-58.

Steinberg, L. (2005). Cognitive and affective development in adolescence. *Trends in Cognitive Sciences, 9,* 69-74.

Steinberg, L. (2008). A social neuroscience perspective on adolescent risk-taking. *Developmental Review, 28,* 78-106.

Steinberg, L., Albert, D., Cauffman, E., Banich, M., Graham, S., & Woolard, J. (2008). Age differences in sensation seeking and impulsivity as indexed by behavior and self-report: Evidence for a dual systems model. *Developmental Psychology, 44,* 1764-1778.

Steinberg, L. & Scott, E.S. (2003). Less guilty by reason of adolescence: Developmental immaturity, diminished responsibility, and the juvenile death penalty. *The American Psychologist, 58,* 1009-1018.

Stuss, D. T. (1992). Biological and psychological development of executive functions. *Brain and Cognition, 20,* 8-23.

Talairach, J. & Tourneaux, P. (1988). *Co-Planar Stereotactic Atlas of the Human Brain.* New York: Thieme.

Thomas, K. M., King, S. W., Franzen, P. L., Welsh, T. F., Berkowitz, A. L., Noll, D. C., Birmaher, V. & Casey, B. J. (1999). A developmental functional MRI study of spatial working memory. *NeuroImage, 10,* 327-338.

Thompson, C., Barresi, J., & Moore, C. (1997). The development of future-oriented prudence and altruism in preschoolers. *Cognitive Development, 12,* 199–212.

Tobler, P. N., Christopoulos, G. I., O'Doherty, J. P., Dolan, R. J., Schultz, W. (2008). Neuronal distortions of reward probability without choice. *The Journal of Neuroscience, 28,* 11703-11711.

Tom, S. M., Fox, C. R., Trepel, C., & Poldrack, R. A. (2007). The neural basis of loss aversion in decision-making under risk. *Science, 315,* 515-518.

Tomb, I., Hauser, M., Deldin, P., Caramazza, A. (2002). Do somatic markers mediate decisions on the gambling task? *Nature Neuroscience, 5,* 1103-1104; author reply 1104.

Towse, J. N. & McLachlan, A. (1999). An exploration of random generation among children. *British Journal of Developmental Psychology, 17,* 363-380.

Towse, J. N. & Neil, D. (1998). Analysing human random behaviour: A review of methods used and a computer program for describing performance. *Behavior Research Methods, Instruments, & Computers, 30,* 583-591.

Tremblay, L., & Schultz, W. (1999). Relative reward preference in primate orbitofrontal cortex. *Nature, 398,* 704–708.

Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science, 211*, 453-458.

Ursu, S. T. & Carter, C. S. (2005). Outcome representations, counterfactual comparisons and the human orbitofrontal cortex: Implications for neuroimaging studies of decision-making. *Cognitive Brain Research, 23,* 51–60.

Van den Wildenberg, W. P. M. & Van der Molen, M. W. (2004) Developmental trends in simple and selective inhibition of compatible and incompatible responses. *Journal of Experimental Child Psychology, 87* (3)*,* 201-220.

Van den Wildenberg, W. P. M. (2003). Perspectives on stopping behavior: Process analysis of stop-signal inhibition. Universiteit van Amsterdam.

Van der Molen, M. W., Somsen, R. J. M. & Jennings, J. R. (2000). Developmental change in auditory selective attention as reflected by phasic heart rate changes. *Psychophysiology, 37* (5), 626-633.

Van der Molen, M. W., Somsen, R. J. M. & Orlebeke, J. F. (1985). The rhythm of the heart beat in information processing. *Advances in Psychophysiology, 1,* 1-88

Van der Molen, M.W. & Molenaar, P. C. M. (1994). Cognitive psychophysiology: A window to cognitive development and brain maturation. G. Dawson, K. W. Fisher (Eds.) *Human behavior and the developing brain.* Guilford Publications, New York.

Van der Veen, F. M., Van der Molen, M. W., Crone, E. A., & Jennings, J. R. (2004). Phasic heart rate responses to performance feedback in a time production task: Effects of information versus valence. *Biological Psychology, 65* (2)*,* 147-161.

Van Leijenhorst, L., Crone, E. A., & Bunge, S. A. (2006). Neural correlates of developmental differences in risk estimation and feedback processing. *Neuropsychologia, 44* (11)*,* 2158-2170.

Van Leijenhorst, L., Crone, E. A., & Van der Molen, M. W. (2007). Developmental trajectories for object and spatial working memory: A psychophysiological analysis. *Child Development, 78* (3)*,* 987-1000.

Van Leijenhorst, L., Westenberg, P. M., & Crone, E. A. (2008). A developmental study of risky decisions on the cake gambling task: Age and gender analyses of probability estimation and reward evaluation. *Developmental Neuropsychology, 33* (2)*,* 179-196.

Van Leijenhorst, L., Zanolie, K., Van Meel, C. S., Westenberg, P. M., Rombouts, S. A. R. B., & Crone, E. A. (*in press*). What motivates the adolescent? Brain regions mediating reward sensitivity across adolescence. *Cerebral Cortex.*

Van Leijenhorst, L., Westenberg, P. M., & Crone, E. A., (*manuscript in revision*). A Heart Rate Analysis of Risky Decision-Making, Reward Sensitivity and Outcome Monitoring in Adolescence.

Van Leijenhorst, L., Gunther Moor, B., Op de Macks, Z., Rombouts, S. A. R. B., Westenberg, P. M., & Crone, E. A. *(manuscript in revision)*. Brain development and risk-taking: Age related changes in the contributions of affective and control regions.

Van Veen, V., & Carter, C. S. (2002). The anterior cingulate as a conflict monitor: fMRI and ERP studies. *Physiology and Behavior, 77,* 477-82.

Volz, K. G., & Von Cramon, D. Y. (2006). What neuroscience can tell about intuitive processes in the context of perceptual discovery. *Journal of Cognitive Neuroscience, 18,* 2077-2087.

Volz, K. G., Schubotz, R. I., & Von Cramon, D. Y. (2003). Predicting events of varying probability: Uncertainty investigated by fmri. *NeuroImage, 19,* 271–280.

Wagner, A. D. , Bunge, S. A. & Badre, D. (2004). Cognitive control, semantic memory and priming: Contributions from prefrontal cortex. In *The New Cognitive Neurosciences*, (3rd ed., pp. 709-726). Cambridge, MA: MIT Press.

Wallis, J. D. (2007). Orbitofrontal cortex and its contribution to decision-making. *Annual Review of Neuroscience, 30*, 31-56.

Wechsler, D. (1981) *Wechsler adult intelligence scale – Revised*. New York: The Psychological Corporation.

Wechsler, D. (1991) *Wechsler Intelligence Scale for Children - Third Edition*. San Antonio: The Psychological Corporation.

Welsh, M. C. (2002). Developmental and clinical variations in executive functions. In: D. L. Molfese, & V. J. Molfese (Eds.). *Developmental variations in learning: Applications to social, executive function, language, and reading skills*. (pp. 139-185). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Welsh, M. C., Pennington, B. F. & Groisser, D. B. (1991). A normative-developmental study of executive function: A window on prefrontal function in children. *Developmental Neuropsychology, 7* (2)*,* 131-149.

Westenberg, P. M., Hauser, S. T., & Cohn, L. D. (2004). Sentence completion measurement of psychosocial maturity. In M. J. Hilsenroth & D. L. Segal (Eds.), Personality Assessment (pp. 595-616).Volume 2 in M.Hersen (Ed.-in-Chief), Comprehensive Handbook of Psychological Assessment. Hoboken, NJ: John Wiley & Sons.

Wilson, F. A. W., O'Scalaidhe, S. P. & Goldman-Rakic, P. (1993). Dissociation of object and spatial processing domains in primate prefrontal cortex. *Science, 260,* 1955-1958.

Xue, G., Lu, Z., Levin, I. P., Weller, J. A., Li, X., & Bechara, A. (2009). Functional dissociations of risk and reward processing in the medial prefrontal cortex. *Cerebral Cortex, 19* (5)*,* 1019-1027.

Zuckerman, M. (1994). *Behavioral expressions and biosocial bases of sensation seeking*. New York: Cambridge University Press.