

Psychology 666: Cognitive Development
Fall 2008

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Purpose of Course:

This graduate-level course is designed to give you a thorough understanding of cognitive development in infants and children. Theoretical and methodological issues will be covered in addition to empirical research. The goal is to provide a foundation for your later coursework and research.

Readings:

Bjorkland, D.F. (2005). *Children's thinking: Cognitive development and individual differences* (4th edition). Pacific Grove, CA: Brooks/Cole.

All required primary source readings are available via Blackboard Campus Edition 6 (CE6) at <http://courses.gmu.edu>.

Course Format:

This course is a discussion-based seminar, and thus reliant on the energies of all participants in the group. Given this format, it is imperative that everyone *come prepared to participate* in each class in order for us to function as a true seminar of thinkers. In sum, course readings need to be read *and* thought about *in advance* for effective participation in a graduate seminar. To facilitate this course format, a small group of students will act as discussion facilitators for each class meeting by co-leading the discussion of the week's topic, in conjunction with the instructor. Depending upon class participation, each discussion facilitator may be asked to lead a smaller group of students in discussion on an article and then reporting back to the group. The instructor may cover new concepts at the beginning of each new topic in a lecture format.

For each reading (excluding the chapters in the Bjorkland book), *all students* are required to post one thought question and a summary of the major points in the article to the online Blackboard system.

Please note:

- There is a helpful document for paper submissions in the Blackboard system under the "Websites" tab on the Blackboard system.
- A thought question consists of a question asked for the purpose of facilitating class discussion. Questions of clarification can also be sent at this time, *in addition to* the student's thought question.]
- Class members' thought questions and summaries of the articles are due ***no later than 12:00 noon on the Monday of each week.***

In turn, ***no later than 5:00pm on the Tuesday of each week*** the discussion facilitators will be responsible for:

- collating the discussion questions posted from the class in a topical format, with author's name indicated in parentheses, including adding (some of) their own additional discussion questions into the formatted collection
- disseminating these topically organized questions to the instructor and all class members
- sending a short list of the important concepts from the articles and readings that she/he/they will use to guide the discussion to the instructor

Requirements:

The course requirements are designed to emphasize the skills that you will need as a professional in the social and behavioral sciences. These skills are important in academic, intervention, industry, social service, and clinical settings, and include: (1) writing; (2) critical evaluation; (3) application of research to practical problems; and (4) articulating informed opinions in a professional context.

Exams:

There will be two take home examinations during the semester. These exam questions will focus on your ability to integrate the themes and research that we have covered throughout the semester.

Evaluation:

- | | |
|------------------------------------|------------|
| ➤ Class participation and homework | 15% |
| ➤ Discussion leader | 15% |
| ➤ Take home exam #1 | 35% |
| ➤ Take home exam #2 | 35% |

Honor Code:

As your instructor, I will maintain the integrity of the learning and testing process in my courses. Do not cheat, plagiarize, lie, or steal in matters relating to academic work. Exams in this course must be your own work, and students are not to discuss their answers with others.

Accommodations:

If you are a student with a disability and you require accommodations in the classroom, please contact the Disability Resource Center (DRC) at 703.993.2474. All academic accommodations must be arranged through that office. Please also inform the instructor at the beginning of the semester, so we can facilitate equal access to all students.

General Course Policies:

- This class requires active participation by you. You are expected to think, and write, and share, and ask questions, and in general be engaged while you are here!
- Please turn off electronic devices when you come to class. If your device rings, beeps or disrupts the class more than once during the semester, you may be asked to leave. You will still be responsible for the material covered.
- Be respectful of yourself and others in the course. Don't talk during class about other things; when working in groups, keep voices to a low level so all can keep working; don't denigrate others' work or ideas. Give everyone in your group a chance to speak and contribute.
- This class *requires* use of your GMU email account for breaking news and access to Blackboard without complications. There will be *no exceptions*.
- The reading list supplied *may be amended during class meetings*. It is your responsibility to be present each week in order to get this information. I do not provide this information via email.

Important Dates:

See <http://registrar.gmu.edu/calendars/Fall08calendar.pdf>

Last Day to Add (Full-Semester Course)	September 9, 2008
Last Day to Drop (Full-Semester Course)	September 26, 2008

Readings:

WEEK ONE

Issues in cognitive development; Issues in assessment of cognitive development

class meeting: 08/27/08

Bjorkland, Chapter 1

WEEK TWO

Biological bases of cognitive development

class meeting: 09/03/08

Bjorkland, Chapter 2

Thomas, M.S.C. (2003). Limits on plasticity. *Journal of Cognition and Development*, 4, 99-125.

Amso, D. & Casey, B.J. (2006). Beyond what develops when: Neuroimaging may inform how cognition changes with development. *Current Directions in Psychological Science*, 15, 24-29.

WEEK THREE

Development of perception and attention

class meeting: 09/10/08

Bjorkland, Chapter 7, Chapter 6 pages 160-163-168

Pick, H.L., Jr. (1992). Eleanor J. Gibson: Learning to perceive and perceiving to learn. *Developmental Psychology*, 28, 787-794.

Columbo, J. (2002). Infant attention grows up: The emergence of a developmental cognitive neuroscience perspective. *Current Directions in Psychological Science*, 11, 196-200.

Swanson, J.M., Casey, B.J., Nigg, J., Castellanos, F.X., Volkow, N.D., & Taylor, E. (2004). Clinical and cognitive definitions of attention deficits in children with AD/HD. In M.I. Posner (Ed.) *Cognitive neuroscience of attention*. New York: The Guilford Press.

*Bertenthal, B.I. (1996). Origins and early development of perception, action, and representation. *Annual Review of Psychology*, 47, 431-459.

WEEK FOUR

Development of spatial cognition; Piaget's theory and the neo-Piagetians

class meeting: 09/17/08

Bjorkland Chapter 4, Chapter 8

Newcombe, N.S. (2002). The nativist-empiricist controversy in the context of recent research on spatial and quantitative development. *Psychological Science*, 13, 395-401.

Spelke, E.S. (2005). Sex differences in intrinsic aptitude for mathematics and science? A critical review. *American Psychologist*, 60, 950-958.

DeLoache, J.S., Pierroutsakos, S.L. & Uttal, D.H. (2003). The origins of pictorial competence. *Current Directions in Psychological Science*, 12, 113-118.

WEEK FIVE

Memory development

class meeting: 09/24/08

Bjorklund, Chapters 5, 10 and Chapter 6 (pp. 151-170)

Bruck, M., and Ceci, S. (2004). Forensic developmental psychology: Unveiling four common misconceptions. *Current Directions in Psychological Science*, 13, 229-232.

- Sincock, G., and Hayne, H. (2002). Breaking the Barrier? Children fail to translate their preverbal memories into language. *Psychological Science, 13*, 225-231.
- Brainerd, C.J., and Ryna, V.F. (2002). Fuzzy-trace theory and false memory. *Current Directions in Psychological Science, 11*, 279-293.

WEEK SIX

Conceptual development

class meeting: 10/01/08

- Bjorklund, Chapter 9 (pp. 257-262)
- Rosser, R. (1994). *Cognitive Development: Psychological and biological perspectives*. Boston, MA: Allyn & Bacon. Chaps. 4 & 5.
- Kuhn, D., and Pease, M. (2006). Do children and adults learn differently? *Journal of Cognition and Development, 7*, 279-293.
- Keil, F.C. (1999). Cognition, content, and development. In M. Bennett (Ed.) *Developmental psychology: Achievements and prospects* (pp. 165-184). Philadelphia: Psychology Press.

WEEK SEVEN

Conceptual development: Reading and number concepts

class meeting: 10/08/08

- Bjorklund, Chap. 14 (pp. 391-421) and Chap. 6 (pp.171-180)
- Geary, D.C. (1995). Reflections of evolution and culture in children's cognition: Implications for mathematical development and instruction. *American Psychologist, 50*, 24-37.
- Siegler, R.S. (2000). The rebirth of children's learning. *Child Development, 71*, 26-35.
- Treiman, R. (2000). The foundations of literacy. *Current Directions in Psychological Science, 9*, 89-92.
- Bjorklund, D.F., and Rosenblum, K.E. (2002). Context effects in children's selection and use of simple arithmetic strategies. *Journal of Cognition and Development, 3*, 225-242.
- *Wynn, K. (1998). Psychological foundations of number: Numerical competence in human infants. *Trends in Cognitive Sciences, 2*, 296-303.

WEEK EIGHT

Conceptual development: Naïve theories of psychology, biology and physics

class meeting: 10/15/08

- Bjorklund, Chap. 9 (pp. 233-256)
- Harris, P.L. (2006). Social cognition. In D. Kuhn and R.S. Siegler (Eds.), *Cognition, perception, and language, Vol. 2*. In W. Damon & R.M. Lerner (Gen. Eds.), *Handbook of child psychology (6th ed.)*. New York: Wiley. (pp. 811-858).
- Woolley, J.D., and Van Reet, J. (2006). Effects of context on judgments concerning the reality status of novel entries. *Child Development, 77*, 1778-1793.

WEEK NINE

Development of reasoning and problem solving

Class meeting: 10/22/08

Bjorklund, Chap. 12

Klahr, D., and Nigam, M. (2004). The equivalence of learning paths in early science instruction: Effects of direct instruction and discovery learning. *Psychological Science, 15*, 661-667.

Jacobs, J.J. and Klaczynski, P.A. (2002). The development of judgement and decision making during childhood and adolescence. *Current Directions in Psychological Science, 11*, 145-149.

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

Butler, R. (2005). Competence assessment, competence, and motivation between early and middle childhood. In A.J. Elliot and C.S. Dweck (Eds.), *Handbook of competence and motivation*. N.Y.: Guilford Press.

WEEK TEN

Origins, modification and stability of intellectual differences

Class meeting: 10/29/08

Bjorklund, Chaps. 15 and 16

Kanaya, T., Scullin, M.H., and Ceci, S.J. (2003). The Flynn effect and U.S. policies. *American Psychologist, 58*, 778-790.

Bornstein, M.H., Hahn, C.H., Bell, Clare, Haynes, O.M., Slater, A., Golding, J., Wolke, D., and the ALSPAC Study Team (2006). Stability in cognition across early childhood. *Psychological Science, 17*, 151-158.

Friedman, N.P., Miyake, A., Corley, R.P., Young, S.E., DeFries, J.C., and Hewitt, J.K. (2006). Not all executive functions are related to intelligence. *Psychological Science, 17*, 172-179.

WEEK ELEVEN

Language and thought

Class meeting: 11/5/08

Bjorklund, Chap. 11

Nelson, K. (1999, Winter). Making sense: Language and thought in development. *The Developmental Psychologist* (Newsletter for Division 7, APA, 1-10).

Hakuta, K., Bialystock, E., Wiley, E. (2003). Critical evidence: A test of the critical-period hypothesis for second-language acquisition. *Psychological Science, 14*, 31-38.

Goldin-Meadow, S. (2006). Talking and thinking with our hands. *Current Directions in Psychological Science, 15*, 34-39.

WEEK TWELVE

Culture, schooling and cognition; Vygotsky's theory

Class meeting: 11/12/08

Bjorklund, Chap. 3 and Chap. 14 (pp. 421-426)

Brooks-Gunn, J. (2003). Do you believe in magic?: What we can expect from

- early childhood intervention programs. *SCRD Social Policy Report, 27 (1)*.
- Jackson, L.A., von Eye, A., Biocca, F.A., Barbatsis, G., Zhao, Y., and Fitzgerald, H.E. (2006). Does home internet use influence the academic performance of low-income children. *Developmental Psychology, 42*, 429-435.
- Naito, M., and Miura, H. (2001). Japanese children's numerical competencies: Age- and schooling-related influences on the development of number concepts and addition skills. *Developmental Psychology, 37*, 217-230.
- *Cole, M. (2006). Culture and cognitive development in phylogenetic, historical, and ontogenetic perspective. In W. Damon & R.M. Lerner (Eds.) *Handbook of child psychology (6th Edition)*, pp. 636-683. Hoboken, NJ: John Wiley & Sons.

WEEK THIRTEEN

Conclusions about cognitive development

Class meeting: 11/19/08

Bjorklund, Epilogue.

- Diamond, A., and Kirkham, N. (2005). Not quite as grown-up as we like to think: Parallels between cognition in childhood and adulthood. *Psychological Science, 16*, 291-297.
- Spencer, J.P., Clearfield, M., Corbetta, D., Ulrich, B., Buchanan, P., and Schoner, G. (2006). Moving toward a grand theory of development: In memory of Esther Thelen. *Child Development, 77*, 1521-1538.

WEEK FOURTEEN

Thanksgiving Recess

Class meeting: no class

WEEK FIFTEEN

Wrap up & Final exam

Class meeting: 12/3/2008