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 Office Hours: Monday 1:00 – 2:00pm & by appointment

Psychology 666  
 Cognitive & Perceptual Development  
 Spring 2006

## COGNITIVE & PERCEPTUAL DEVELOPMENT COURSE SYLLABUS

### Goals of Course

Students will acquire knowledge about the development of cognition and perception in infants and children, learn skills for assessing that development in individual children, and gain an understanding of how this knowledge base can be used to help children reach their academic and social potential.

### Readings

Bjorklund, D. F. (2005). Children's thinking: Cognitive development and individual differences (4<sup>th</sup> ed.). Pacific Grove, CA: Brooks/Cole.

A set of required readings is on reserve in the Johnson Center Library. Some of them are on Electronic Reserve. Many of the readings are also available in the stacks of Fenwick Library.

### Assignments

Week 1 (1/25) Issues in Cognitive Development  
 Issues in the Assessment of Cognitive Development  
 Bjorklund, Chap. 1.  
 Flavell, J. H., Miller, P. H., & Miller, S. A. (1993). Cognitive development (3<sup>rd</sup> ed.). Englewood Cliffs, N. J.: Prentice-Hall. Pages 320-335 (Diagnosis).

Week 2 (2/1) Biological Bases of Cognitive Development  
 Bjorklund, Chap. 2.  
 Thomas, M. S. C. (2003). Limits on plasticity. Journal of Cognition and Development, 4, 99-125.

Week 3 (2/8) Development of Perception and Attention  
 Bjorklund, Chap. 7, Chap. 6 (pp. 160-163, 168).  
 Mezzacappa, E. (2004). Alerting, orienting, and executive attention: Developmental properties and sociodemographic correlates in an epidemiological sample of young, urban children. Child Development, 75, 1373-1386.  
 Jensen, P. S., Mrazek, D., Knapp, P. K., Steinberg, L., Pfeffer, C., Schowalter, J., & Shapiro, T. (1997). Evolution and revolution in child psychiatry: ADHD as a disorder of adaptation. Journal of the American Academy of Child and Adolescent Psychiatry, 36, 1672-1679.

Project: Is television viewing by young children harmful to the development of attention?

Week 4 (2/15) Development of Spatial Cognition  
 Piaget's Theory and the Neo-Piagetians  
 Bjorklund, Chaps. 4 & 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.

Project: How can teachers use two-dimensional maps to help children extend their ability

*to reason about space?*

- Week 5 (2/22) Memory Development  
Information Processing Theory and Newer Approaches

Bjorklund, Chaps. 5, 10, and Chap. 6 (pp. 151-170).  
Bruck, M., & Ceci, S. (2004). Forensic developmental psychology: Unveiling four common misconceptions. Current Directions in Psychological Science, 13, 229-232.  
Sincock, G., & Hayne, H. (2002). Breaking the barrier? Children fail to translate their preverbal memories into language. Psychological Science, 13, 225-231.

Project: *How can the testimony of children be made more reliable?*

- Week 6 (3/1) Conceptual Development  
Traditional Views: Classes, Categories, and Scales  
Alternative Views: Semantic and Ontological Knowledge

Bjorklund, Chap. 9 (pp. 257-262).  
Rosser, R. (1994). Cognitive development: Psychological and biological perspectives. Boston, MA: Allyn & Bacon. Chaps. 4 & 5.

Project: *How does cognitive development influence children's humor?*

- Week 7 (3/8) Conceptual Development: Reading and Number Concepts  
Academic Skills

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.

Project: *Does parental reading to young children influence literacy?*

- (3/15) Spring Break (no class)

- Week 8 (3/22) Conceptual Development: Naïve Theories of Psychology, Biology, and Physics

Bjorklund, Chap. 9 (pp. 233-256).  
Wellman, H. M., & Gelman, S. A. (1998). Knowledge acquisition in foundational domains. In D. Kuhn & R. S. Siegler (Eds.), Cognition, perception, and language, Vol. 2. In W. Damon (Gen. Ed.), Handbook of child psychology. New York: Wiley. (Read sections on psychological theories and biological theories.)

Project: *Do young children understand the distinction between fantasy and reality?*

- Week 9 (3/29) Development of Reasoning and Problem Solving  
Beliefs About Intelligence and Knowledge

Bjorklund, Chap. 12.

- 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. Mahwah, N. J.: Lawrence Erlbaum Associates.
- Klahr, D., & Nigam, M. (2004). The equivalence of learning paths in early science instruction: Effects of direct instruction and discovery learning. Psychological Science, *15*, 661-667.
- Pine, K. J., Lufkin, N., & Messer, D. (2004). More gestures than answers: Children's learning about balance. Developmental Psychology, *40*, 1059-1067.

Project: *Scientific reasoning biases: How do emotional and cognitive factors motivate people to preserve their personal theories?*

Week 10 (4/5) Origins, Modification, and Stability of Intellectual Differences

- Bjorklund, Chaps. 15 and 16.
- Kanaya, T., Scullin, M. H., & Ceci, S. J. (2003). The Flynn effect and U. S. policies. American Psychologist, *58*, 778-790.
- Robinson, N. M., Zigler, E., & Gallagher, J. J. (2000). Two tails of the normal curve: Similarities and differences in the study of mental retardation and giftedness. American Psychologist, *55*, 1413-1424.

Project: *How can creativity be fostered in children?*

Week 11 (4/12) Language and Thought

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

Project: *What are the cognitive advantages and disadvantages to growing up bilingual?*

Week 12 (4/19) Culture, Schooling, and Cognition  
Vygotsky's Theory

- Bjorklund, Chap. 3 and Chap. 14 (pp. 421-426).
- Stipek, D. (2002). At what age should children enter kindergarten? A question for policy makers and parents. SRCD Social Policy Report, *26*(2).
- Brooks-Gunn, J. (2003). Do you believe in magic?: What we can expect from early childhood intervention programs. SRCD Social Policy Report, *27*(1).

Project: *How does schooling in different cultures influence math and science achievement?*

Week 13 (4/26) Conclusions About Cognitive Development  
Issues Revisited

- Bjorklund, Epilogue.
- Bjorklund, D. F., & Green, B. L. (1992). The adaptive nature of cognitive immaturity. American Psychologist, *47*, 46-54.

Diamond, A., & 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.

Week 14 (5/4) Make-up

#### Determination of Final Grade

Your final grade will be based on four scores:

Take-home exam #1	30%	due 3/22 (by 4:30pm)
Take-home exam #2	30%	due 5/10 (by 5:00pm)
Classwork and discussion	20%	
Project presentation	20%	

Each class will consist of lecture and discussion. Students are expected to have read the material assigned for a designated week before coming to class. Additionally, each week all students are required to send three questions based on the week's topic and readings to the instructor and the student designated to collate the questions for class distribution. Student questions should be sent no later than noon on Monday of each week. The collator will be responsible for distributing a list of questions to class members no later than 8:00pm on Tuesday of each week.

To facilitate discussion of the material, each reading (excluding chapters from Bjorklund's text) will be assigned to a student who will have the responsibility of summarizing the main points of the article in class (a 5- to 10-minute presentation) and in a 1- to 2-page class handout.

Students will also be assigned to one of the projects. The project will involve reviewing relevant literature, presenting the findings to the class on the designated day, and preparing an annotated bibliography and a brief summary (no more than 5 pages) of conclusions for class distribution at the last class meeting of the semester.

#### Important Dates

Last day to drop with no tuition liability (February 7, 2006)

Last day to add classes (February 7, 2006)

Last day to drop (February 24, 2006)

If you are a student with a disability and you need academic accommodations, please see the instructor and contact the Disability Resource Center (DRC) at 703-993-2474. All academic accommodations must be arranged through that office.

**Honor Code:** You are expected to follow all aspects of the University Honor Code. Exams in this course must be your own work. Students are not to discuss their answers with other students.