

Development and cognition (PSYC 7215)

<http://psych.colorado.edu/~munakata/teaching/cogsem04/>
Th 2:00 - 4:30, Fall 2004, Muenzinger E411B

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Office Hours: Th 4:30-6:30, Muenzinger D241D

Goals: Why should anyone care about development? This course will explore this question as it pertains to the study of cognitive science and cognitive neuroscience. We will see how many fundamental issues and controversies in these fields have been (or could be) addressed through developmental research. The readings will span a range of domains (e.g., language, cognitive control, memory, face processing, and spatial processing), populations (e.g., typical adults, adults with acquired brain damage, children and adults with developmental disorders, and typically developing children), and methods (e.g., behavioral studies, neuroimaging studies, and computational models). The goal will be to come away from the course with a better sense of: 1) how to read the developmental literature for information relevant to cognitive theorizing, and 2) how to design developmental studies that can answer cognitive questions more definitively than standard methods.

Note that the course is not meant to suggest that developmental work is not important in its own right, that it is inappropriate to care about development per se, that relevance to cognition should be a measure of good science, etc.! Rather, from the starting place of cognitive questions, the goal is to understand how developmental work can speak to such questions.

Readings: Although there are numerous instances of developmental work informing the study of cognition, no textbook, reader, or review paper exists on this topic. (My hope is to remedy this, depending in part on how this course goes!) And very few primary source articles tackle this issue explicitly. We will thus draw from a range of sources for this course, starting with readings that cover a broad range of topics (e.g., mind/body issues, our appreciation of art, and what makes something disgusting) and/or readings that make broad claims about insights from developmental work (e.g., for understanding the basic components of the mature cognitive system, beyond what neuroimaging work might tell us for instance). We will then move on to more focused primary source articles, with topics to be determined by the class as a group. Course readings will be available at the class web site.

Evaluation: Your grade will consist of the following:

Class participation	35%
Reading reactions	20%
Discussion leading	10%
Final paper	35%

Class Participation: This seminar is discussion-oriented. Your preparation, participation, and cooperation as a group is essential for this format to work. You are expected to read the readings the week they are assigned and to come to class prepared to ask questions and actively participate in discussion. (You can also communicate about any course-related topics as a group by emailing cogsem04@grey.colorado.edu.) 50% of your participation grade will be a shared grade for the group, and 50% will be individual.

To support and encourage effective discussions, in the first class we will discuss “What makes a discussion bad (and what we can do about it).” Throughout the term, we will evaluate the effectiveness of our discussions, and I will welcome suggestions on how to improve them to help us get the most out of them.

Reading reactions: For each set of readings, you will be asked to email a few sentences with your reactions. These reactions should include comments on what you find most or least convincing about the relevance of development for understanding cognition. These reading reactions are designed to ensure that you are prepared for discussion, and have provided information about your perspective. Reading reactions should be emailed to cogsem04-lead@grey.colorado.edu, prior to the class meeting on the topic. This email will reach me and whoever is leading the class discussion.

Discussion leading: You will be asked to lead discussion in 1-2 class sessions. Such session leading may include very brief presentation of key points from the readings, posing of questions for discussion, moderating of discussion/debate, and presentation of information from additional readings.

Final Paper: The final paper (10-15 typed, double-spaced pages) requires a discussion of the following:

What are your burning questions and why? (20%) (Refer to the relevant literature in motivating your topic.)

How has developmental work informed the study of these questions? (40%) (Use at least 2 primary source articles in answering this question.)

How could developmental work inform the study of these questions? (40%) (Propose a specific study or set of studies as if for a grant proposal, possible patterns of results and their interpretations, and how this work would inform your questions of interest.)

This course will focus on these kinds of questions, so you should be in a good position to answer them for the final paper. This assignment will require careful preparation and thought, so I strongly recommend that you begin your research early. The following timeline is designed to ensure that you make progress on your paper (almost 4% of the paper points will come from simply making each of the 4 deadlines before the final due date) and that you receive feedback on it before turning in the final version.

Deadline	Assignment
Oct 7	Paper topic
Oct 14	Outline and references to at least two developmental articles
Oct 21	Paper proposal (2+ page summary of your question of interest, existing developmental work, and proposed developmental work)
Nov 18- Dec 2	Presentation of paper to class
Dec 9	Final paper

The final paper is due on the last day of classes. NOTE: For each day that the final paper is late, 5% will be deducted from your final paper grade.

Grading Policy: Grades are not curved; they are based on percentages:

97-100	A+	87-89	B+	77-79	C+	67-69	D+
93-96	A	83-86	B	73-76	C	63-66	D
90-92	A-	80-82	B-	70-72	C-	60-62	D-

Schedule

Wk	Date	Topic	Due	Reading
1	26 Aug 04	Introduction	Quiz	
2	2 Sep 04	Mind/body; Art	RR	Bloom 1, 3
3	9 Sep 04	Disgust; Death	RR	Bloom 6, 7
4	16 Sep 04	Core Knowledge, Imaging	RR	Spelke 2004, Spelke 2002
5	23 Sep 04	Disorders, Continuity	RR	Karmiloff-Smith 1998, Diamond & Kirkham, in press
6	30 Sep 04	<i>Fall Break, no class</i>		
7	7 Oct 04	Face processing, adults	RR, Topic	Gauthier et al. 2003, Grill-Spector et al. (2004)
8	14 Oct 04	Face processing, developmental	RR, Outline w/refs	Le Grand et al. (2003), de Haan et al. (2002)
9	21 Oct 04	Gender differences	RR, Proposal	Baron-Cohen 2002, Connellan et al. 2000, Lutchmaya et al. 2002
10	28 Oct 04	Number	RR	Feigenson & Carey (almost in press), vanMarle & Scholl (2003)
11	4 Nov 04	Memory	RR	Meltzoff (1995), Simcock & Hayne (2002) Newcombe et al. (2000)
12	11 Nov 04	Student Presentations Amy: Time perception & ADHD Michael: Exec dysfunc in child	RR	Smith et al. 2002, Brannon et al. 2004 Morton & Munakata 2002, Frank & O'Reilly in prep
13	18 Nov 04	Student Presentations Seth: Concept formation & lang Dusty: TOM in autism	RR	Hespos & Spelke 2004, Xu 2002 Aldridge et al. 2000, Dahlgren et al. 2003
14	23 Nov 04	Student Presentations Nicholas: Cognitive flexibility Daisy: Cog flex & depression	RR	Cepeda et al. 2001, Deak & Narasimham 2003 Fossati et al. 2001, Luu et al. 2000
15	2 Dec 04	Student Presentations Lisa: Dev of perceptual expertise Erica: Sex diffs in spatial ability	RR	Pascalis et al, Gauthier & Nelson 2001 Grimshaw et al 1995, Hespos & Rochat 1997
16	7 Dec 04 9 Dec 04	Grand Finale	Responses to Qs Final paper	