

Psychology 3HH3, Term 2, 2011-2012
Development during Infancy

Meetings: Tuesdays, 11:30-12:20, HH 104
Fridays, 11:30-1:20, HH 104
Tutorials, Mondays 12:30-1:20 in rooms to be assigned

Instructor: Dr. Daphne Maurer
Psychology 306
Phone: 905-525-9140, x 23030
Fax: 905-529-6225
maurer@mcmaster.ca
Office hours by appointment

Teaching assistants:

Mark Vida vidamd@univmail.cis.mcmaster.ca, x27011
Ana Bracovic bracova@mcmaster.ca, x27011

Readings: Courseware pack *Development during Infancy, Psychology 3HH3*

Objectives: Psychology 3HH3 concerns perceptual and cognitive development during infancy. It assumes that students have a good background in the basics of human development and that we can build on that background to understand the details of development during infancy. We will consider how biological constraints and environmental influences interact to shape the infant's brain and behavior. An additional emphasis will be to consider how development may differ between the WEIRD (western, educated, industrialized, rich, democratic) world where almost all of the research has been done and the rest of the world in which most of humanity lives.

Content objectives: that students

- (a) understand the nature of development during infancy and the mechanisms underlying developmental changes that make some changes universal and others culture-specific.
- (b) derive implications of the material for interventions with normal children and children with problems

Skills objectives: that students become (more) skilled at

- (a) Reading and critically evaluating published studies of infants
- (b) Synthesizing information and using it to present an argument both orally and in writing
- (c) Working effectively both individually and with a group.

Structure

Classes: About 2/3 of the time, classes will consist of traditional lectures, supplemented by demonstrations, discussions, and problems to be solved by the whole class. The purpose of the problems and discussion is to encourage you to become actively involved

in your learning. Class notes will be posted in advance on Avenue to Learn. The rest of the classes will be used for group presentations and for skills-building topics (e.g., how to read a paper; how to give a good oral presentation, etc.).

Learning groups: Each student will work in a learning group with 2-4 classmates coached by one of the teaching assistants. These groups will work together on the class presentation and may also choose to work together as a study group. Collaborating on these projects is meant to promote learning both about the course material and working effectively in a group. It's also meant to make the learning fun.

Group presentation. Each group will be asked to teach one of the topics in the course. In developing the presentation, the group should use the relevant articles in the course pack as a starting point and then find additional articles in the peer-reviewed literature using the reference sections from the required readings, Medline, Psycinfo, and other search tools. Your group is responsible for the lecture on your topic—make sure you find all the key articles, figure out what is known on the topic, and identify areas of uncertainty. In addition, you are expected to discuss whether there are likely to be differences between infants growing up in the WEIRD world and in the rest of the world, based on any evidence available on cross-cultural differences and your own reflective analysis.

The presentation *and discussion* should last not more than 45 minutes, with no more than 30 minutes devoted to the presentation. It should give an accurate summary of current knowledge and should allow time for thoughtful discussion about the implications of the findings. You should try to make the presentation engaging and get the class involved in the discussion. You may use visual aids, discussion questions, a skit—whatever helps you to present the material in an informative and engaging way. It should also be memorable—because students are responsible for knowing the material for the final exam.

You may decide to take different roles in the group presentation but each group member should participate in its preparation, in the discussion, and in answering questions. Oral presentations will be graded by the instructor, the teaching assistants, and the class based on the content, logical flow, clarity of presentation, and quality of discussion.

Each group is expected to show the slides it has prepared for the presentation in advance to the instructor in order to get feedback on how to improve the presentation. Your teaching assistant will also give you feedback. It's obviously wise to do the dress rehearsal enough in advance that you still have time to make changes.

After the presentation, each member of the group will be asked to hand in a written evaluation of the contributions of each group member. There will be a form posted on Avenue to Learn on which to do this. Typically, all group members will receive the same grade, but the instructor will factor-in evidence of unequal contributions as shown by the peer evaluations, teaching assistants' assessment, postings on Avenue to Learn, and role

in the discussion. When there is evidence that a student did not pull his or her weight, the instructor may adjust the presentation mark for that individual.

Tutorials: The scheduled tutorial hour on Mondays is set aside for groups to meet to work on their group presentation. Groups are expected to meet in their assigned spot during this time, so that the teaching assistants and the instructor can find them to monitor progress and offer advice. Groups are also expected to post their work in their folder on Avenue to Learn for the same reason. Failure to do so will be interpreted as evidence that the group is not working on the project. Especially if your presentation is early in the term, you will need to have additional meetings outside class time in order to be prepared to teach your class. After the group finishes the class presentation, it is welcome to continue to meet as a study group, but that is not required.

Participation. Students are expected to take part in class discussions. To help you prepare for these discussions, questions that will be raised in class will be posted in advance on Avenue to Learn. You will usually need to do the preparatory readings in order to answer the questions. 8% of your grade will be based on participating in class, with more marks given if your comments are more thoughtful.

Major essay related to group project. Each student is expected to write an individual essay related to the topic presented by the group. It can be on a sub-topic or even a tangent but must be somehow related to the group's topic. You may talk with classmates about your ideas, but should write the essay independently. Copying the wording of others, be it in another student's paper or a published article, will be considered plagiarism.

The essay should be 8-10 pages long, not including references, double-spaced. It should summarize the relevant papers and then go beyond them to provide an analysis and critique of what is known. Your analysis might include pointing out a weakness in the method used, discussing contradictory findings, describing methods to test some of the claims made, pointing out an alternative interpretation, noting weaknesses in the argument etc. Your paper should then relate the information to the overarching developmental questions about the nature of developmental change (e.g., innate constraints, core knowledge, experience-expectant, experience-dependent, neuroconstructivism) and comment on whether the development is likely to be universal or instead differ between infants growing up in the WEIRD and non-WEIRD worlds. The essay is due three weeks after your group presentation (not counting mid-term recess) or April 3rd, whichever is earlier.

The essay will be graded on content, logical flow, original thinking, and style.

Exams: There will be a 2-hour open-book midterm written in class on Friday, February 17. There will be a 3-hour open-book final exam during the scheduled examination period. The questions will require integration across the course material and its application to practical problems.

Avenue to Learn: We will use Avenue to Learn as a communication platform outside class time. Through Avenue to Learn you will be able to read announcements about the class, print out lecture notes, indicate what your group is doing so as to receive feedback from the teaching assistants and the instructor, ask for assistance, read and answer sample questions, see what other students are doing, and help each other to learn. In other words, it should allow students to be more in touch with the instructor and with fellow students.

Summary of Requirements

Marks will be determined as a weighted average calculated as follows:

Group presentation	See course schedule	20
Major essay	3 weeks after group presentation or April 3, if earlier	22
Participation in class		8
Midterm	February 17	20
Final exam	April Examination period	30

Grades will be assigned roughly as follows:

A+ 90-100; A 85-90; A- 80-84; B+ 77-79; B 73-76; B- 70-72
C+ 67-69; C 63-66; C- 60-62; D+ 57-59; D 53-56; D- 50-52; F 0-49

Late work

The major essay will be accepted without penalty until midnight on the day it is due. After that, the penalty for turning the major essay in late will be 2% per day (out of 100).

I reserve the right (a) to alter the course requirements or their weighting, depending on the course enrollment, availability of teaching assistants, or other practical considerations and (b) to adjust a student's final grade either up or down in light of special circumstances and/or the student's overall performance in the course.

“Attention is drawn to the Statement on Academic Ethics and the Senate Resolutions on Academic Dishonesty as found in the Senate Policy Statements distributed at registration and available in the Senate Office. Any student who infringes one of these resolutions will be treated according to the published policy.”

Psychology 3HH3 2012 Tentative Schedule

January 3	Introduction Description of group topics
January 6	How to find articles; how to read and critically evaluate an article; how to avoid plagiarism Fetal development, Part 1 Maurer, D. & Maurer, C. Chapter 2, The View from the Womb
January 7 9:00 A.M.	Deadline for indicating preferences for group topics by email to maurer@mcmaster.ca
January 9	Tutorial (and every Monday until your group presentation): Meet with your assigned group in assigned location (to be posted)
January 10	Fetal development (con't)
January 13	Fetal development (con't) Mechanisms of development, Part 1 Elman, J., Bates, E., Johnson, M., Karmiloff-Smith, A., Parisi, D., & Plunkett, K. (1996). <i>Rethinking Innateness</i> . Chapter 1. New perspectives on development. Spelke, E., & Kinzler, K. (2007). Core knowledge. <i>Developmental Science</i> , 10, 89-96. Roth, T., & Sweatt, J.D. (2011). Annual research review: Epigenetic mechanisms and environmental shaping of the brain during sensitive periods of development. <i>Journal of Child Psychology and Psychiatry</i> , 52, 398-408.
January 17	Mechanisms of development (con't)
January 20	Mechanisms of development (con't) Smell and taste, part 1 Maurer, D., & Maurer, C. Chapter 5, A Question of Taste.
January 24	Smell and taste (con't)

January 27	How to give an effective oral presentation; overcoming performance anxiety Vision, Part 1 Maurer, D., & Maurer, C. Chapter 6, Bright Sights.
January 31	Vision (con't)
February 3	Vision (con't) Touch, the vestibular system and motor development Maurer, D., & Maurer, C. Chapter 8, Activities of the day
February 7	Group presentation 1 Visual processing in infants: are face special at birth or do they become special during infancy? Leo, I., & Simion, F. (2009). Face processing at birth: a Thatcher illusion study. <i>Developmental Science</i> , 12, 492-498.
February 10	Group presentation 2 Influence of experience during the first year of life on face processing Liu, S., Quinn, P.C., Wheeler, A., Xiao, N., Ge, L., & Lee, K. (2011). Similarity and difference in the processing of same- and other-race faces as revealed by eye tracking in 4- to 9-month-olds <i>Journal of Experimental Child Psychology</i> , 108, 180-189.. Group presentation 3 Swaddling: how does it affect infants' development and what is the mechanism? Meyer, L.E., & Erler, T. (2011). Swaddline: a traditional care method rediscovered. <i>World Journal of Pediatrics</i> , 7, 155-160.
February 14	Review
February 17	Midterm exam
February 19-25	Midterm recess
February 28	Hearing and language, Part 1 Maurer, D., & Maurer, C., Chapter 7, Sounds of Life
March 2	Hearing and language (con't)
March 6	Hearing and language (con't)

- March 9
- Group presentation 4
Plasticity of language learning: Lessons from bilingualism during infancy
 Byers-Heinlein, K., Burns, T.C., & Werker, J.F. (2010). The roots of bilingualism in newborns. *Psychological Science*, *21*, 343-348.
- Group presentation 5
Plasticity of language learning during infancy: Lessons from sign language
 Krentz, U., & Corina, D. (2008). Preference for language in early infancy: the human language bias is not speech specific. *Developmental Science*, *11*, 1-9.
- March 13
- Group presentation 6
Auditory processing in infants: is music special?
 Perani, D., Saccuman, M., Scifo, P., Spada, S., Andreolli, G., Rovelli, R., et al. (2010). Functional specializations for music processing in the human newborn brain. *Proceedings of the National Academy of Science*, *107*, 4758-4763.
- March 16
- Development of Concepts
 Maurer, D., & Maurer, C. Chapter 10, Through the Looking Glass
- March 20
- Group presentation 7
Object concept: what do infants understand?
 Cuevas, K., & Bell, M.A. (2010). Developmental progression of looking and reaching performance on the A-not-B task. *Developmental Psychology*, *46*, 1363-1371.
- March 23
- Group presentation 8
Infant arithmetic: what do infants understand about addition and subtraction?
 Berger, A. (2011). Electrophysiological evidence for numerosity processing in infancy. *Developmental Neuropsychology*, *36*, 668-681.
- Group presentation 9
Emerging theory of mind: to what extent do infants understand the perspective of others during the first 12 months of life?
 Luo, Y. (2011). Do 10-month-old infants understand others' false beliefs? *Cognition*, *121*, 289-298.

March 26 (class during tutorial hr.)	Group presentation 10 Can babies learn from watching TV? If so, what do they learn? DeLoache, J.S., Chiong, C., Sherman, K., Islan, N., Vanderborgth, M., Troseth, G.L., Strouse, G.A., & O'Doherty, K. (2010). Do babies learn from baby media? <i>Psychological Science</i> , 21, 1570-1574.
March 27	Group presentation 11 Infantile amnesia: is it real and how can it be explained? Tustin, K., & Hayne, H. (2010). Defining the boundary: age-related changes in childhood amnesia. <i>Developmental Psychology</i> , 46, 1049-1061.
March 30	Review and wrap-up
April 3	No class
April Exam Period	Final examination

Group projects

- February 7 Group presentation 1
Visual processing in infants: are face special at birth or do they become special during infancy?
- February 10 Group presentation 2
Influence of experience during the first year of life on face processing
- Group presentation 3
Swaddling: how does it affect infants' development and what is the mechanism?
- March 9 Group presentation 4
Plasticity of language learning: Lessons from bilingualism during infancy
- Group presentation 5
Plasticity of language learning during infancy: Lessons from sign language
- March 13 Group presentation 6
Auditory processing in infants: is music special?
- March 20 Group presentation 7
Object concept: what do infants understand?
- March 23 Group presentation 8
Infant arithmetic: what do infants understand about addition and subtraction?
- Group presentation 9
Emerging theory of mind: to what extent do infants understand the perspective of others during the first 12 months of life?
- March 26 (class
during tutorial hr.) Group presentation 10
Can babies learn from watching TV? If so, what do they learn?
- March 27 Group presentation 11
Infantile amnesia: is it real and how can it be explained?