

PSYC 326: Theories of Knowledge Acquisition

Whitman College

Fall 2007

Meeting time: Tuesday 6-9 pm

Room: Maxey 302

Professor: Melissa Clearfield

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office hours: Tuesday 2-3, Thursday 2-3 *or by appointment*

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Course Outline

How do you go from being a newborn, unable to speak, walk, or even lift your own head, to who you are now, a speaking, thinking, moving adult? The central question in developmental psychology is the origins of new forms of behavior. The "nature-nurture" debate is still alive, albeit in theoretically sophisticated form, and is now centered on the nature of human cognition. In this seminar, we will read and discuss classic and contemporary theories of development, as well as empirical data and computer models of development. Our focus will be how successfully these theories address developmental change, and what developmental processes can tell us about cognition. Topics will include Piaget, nativism, ecological theory, connectionism and dynamic systems theory.

Course Requirements

Required Texts:

Blumberg, M. (2005). Basic Instinct: The genesis of behavior. Thunder's Mouth Press.

Luria, A.R. (1976). Cognitive Development: Its Cultural and Social Foundations. Cambridge: Harvard University Press.

Most of the readings are book chapters and/or papers that will be available on paper reserve at Penrose library. Any readings that are available on-line are marked with *** in the syllabus.

Weekly essays (45%) and participation in class discussions (20%)

The heart of the class is the readings and class discussion. It is everyone's responsibility to read the assigned materials closely and thoughtfully before each weekly meeting, and come to class prepared to ask questions, raise issues, and contribute to the discussion. The following page details my criteria for evaluating class participation. To facilitate, I will distribute a discussion question at each class meeting. You will then prepare a short essay on that question (500 words maximum, shorter is fine), which you will e-mail to me by 8am on Monday preceding the class discussion. I will not accept late papers, with no exceptions.

Assignments will be graded on a $\sqrt{}$, $\sqrt{+}$, $\sqrt{-}$ basis, based on the following criteria:

$\sqrt{+}$: A truly original, creative and awesome thought that really adds a unique insight to the issues

$\sqrt{-}$: A good essay that shows evidence of effort and serious thought, but one that communicates less original thought, or indicates difficulty in integrating concepts.

√-: An essay that reflects little genuine thought; may be based on a cliché, or simple regurgitation of classroom discussions or readings.

All √'s on every assignment will result in a B. Each √+ will boost your grade one notch (from a B to a B+) and each √- will lower your grade one notch (from a B to a B-). Thus, you only need 3 √+'s over the course of the semester to earn an A on the weekly writing assignments. Note that difficulty understanding the material does not preclude you from earning a √, as long as you show evidence of effort and thought in trying to work through the material.

Midterm Map (15%)

You will complete a midterm concept map, due **Friday October 12 by 4pm**, in which you will draw connections and distinctions among all the theories discussed to that point. More details will be given in class.

Final paper (20%)

You will write a final paper (approximately 10-12 pp in length) comparing 2 theories with respect to one issue in development not covered in class (e.g., language, categorization, social development). Papers are due **Wednesday December 12 by 4pm**. You will also give a brief, Informal presentation to the class on the last day of class. More details will be given later in the semester.

Criteria for Evaluating Class Participation

Unsatisfactory participation will be awarded D or F grades:

- Multiple absences
- No contributions
- Hostile verbally and/or nonverbally, Disruptive, negative attitude
- Inattentive, disengaged
- Not prepared; has not done the assigned reading
- Comments do not contribute to the collective learning
- Consistently or deliberately off-topic
- Intentionally domineering

Average participation (C) should meet the following standards:

- Moderate absences
- Occasional contributions, does not talk, but is engaged; good active listener
- Ambivalent; not engaged
- Comes prepared; some grasp of the material
- Reasonably respectful behavior
- Occasionally offers irrelevant comments that move away from topic
- Does the task for the day; follows directions
- Style leaves others out
- Responds when called on
- Makes meaningful comments in $\frac{1}{2}$ the classes
- Offers opinions without support

Above average participation (B) shows all positive characteristics of the foregoing plus:

- Few or no absences
- Thoughtful contributions
- Respectful behavior toward others; encourages others
- Demonstrates preparation and understanding of the material consistently
- Quiet but engaged (taking notes, listening carefully)
- Routinely makes a significant observation, comment, or point
- Generally stays on topic and moves the discussion forward
- Frequently refers to the text
- Occasionally makes comments that are not well supported
- Asks good questions
- Reacts to other students, not just the professor

Superior participation (A) shows all positive characteristics of the foregoing plus:

- Excellent attendance
- Does not dominate the discussion
- Extends discussion beyond the basic level
- Active listening evident by comments
- Comments are reflective, insightful, relevant
- Appreciate the multiple levels of the reading
- Capable of comparing, analyzing, synthesizing, evaluating
- Can synthesize multiple texts
- Works well with other's ideas
- Draws others into the discussion
- Takes intellectual risks
- Displays leadership
- Presents well-supported arguments

Date	Topic	Reading Due
8/28	Theory and Processes of Change: Goals for a Developmental Theory	
9/4	Piaget	<p>Piaget, J. (1970). Piaget's theory. In P. H. Mussen, (Ed.) <u>Carmichael's manual of child psychology, Third Edition.</u>, Volume I, pp. 703-732. New York: John Wiley.</p> <p>Piaget, J. (1954). <u>The Construction of reality in the child.</u> New York, Basic Books. (pp. 1-72: skim).</p>
9/11	Neo-Piagetians	<p>Lourenco, O., & Machado, A. (1996.) In defense of Piaget's theory: A reply to 10 common criticisms. <u>Psychological Review</u>, <u>103</u>, 143-164.</p> <p>Case, R. et al (1996). The role of central conceptual structures in the development of children's thought. <u>Monographs of the Society for Research in Child Development</u>. Chapter 1.</p>
9/18	Alternatives: socio-cultural theory	<p>Luria, A.R. (1976). <u>Cognitive Development: Its Cultural and Social Foundations.</u> Cambridge: Harvard University Press.</p>
9/25	Alternatives: Nativism and modules	<p>Spelke, E. S. & Newport, E. L. (1998) Nativism, empiricism, and the development of knowledge. In R. M. Lerner (Ed.) <u>Theoretical models of human development</u>. Volume 1 of the <u>Handbook of child psychology</u> (5th edition; pp.275-340). New York: Wiley.</p> <p>Wynn, K. (1998). Psychological foundations of number: numerical competence in human infants. <u>Trends in Cognitive Sciences</u>, <u>2(8)</u>, 296-303.</p>
10/2	Alternatives: Theory theory, aka Theory of Mind	<p>Wellman, H. M. & Gelman, S. A. (1992). Cognitive development: Foundational theories of core domains. <u>Annual Review of Psychology</u>, <u>43</u>, 337-75.</p> <p>Gopnick, A. (1996). The post-Piaget Era. <u>Psychological Science</u> <u>7</u>, 221-225.</p>
	FALL BREAK: NO CLASS	***Midterm due on Friday October 12***
10/16	The Mechanistic Critique	<p>Blumberg, M. (2005). <u>Basic Instinct: The genesis of behavior.</u> Yes, the whole book! It's a pop book for laypeople and you have 2 weeks!</p>
10/23	Mechanisms of change I. Selectionism	<p>Thelen, E., & Smith, L. B., (1994). <u>A dynamic systems approach to the development of cognition and action.</u> Cambridge MA: MIT Press. Chapters 5-7.</p>
10/30	Mechanisms of change II. Dynamic Systems	<p>Thelen, E., & Smith, L. B. (in press). Dynamic systems theories. In R. M. Lerner (Ed.) <u>Theoretical models of human development</u>. Volume 1 of the <u>Handbook of child psychology</u> (6th edition; pp. 258-312). New York: Wiley. ***</p>

11/6	Mechanisms of change III. Non-Cognitive factors	Thelen, E., & Smith, L. B., (1994). <u>A dynamic systems approach to the development of cognition and action</u> . Cambridge MA: MIT Press. Chapter 11 and epilogue (pp311-342). Barsalou, L. W., Breazeal, C. & Smith, L. B. (2006) Cognition as Coordinated Non-Cognition. <u>Cognitive Processing</u> ,1-28.
11/13	Connectionism	Elman, J. L., et al. (1996). <u>Rethinking innateness: A connectionist perspective on development</u> . Cambridge MA: MIT Press. Chapters 1-2 plus additional selections.
11/20	THANKSGIVING BREAK	
11/27	Theory in practice: The "object concept"	Thelen, E., Schöner, G., Scheier, C., & Smith, L. B. (2001). The dynamics of embodiment: A field theory of infant perseverative reaching. <u>Behavioral and Brain Sciences</u> , <u>24</u> , 1-34, plus a selection of comments*** Choose 1 paper from the following list.
12/4	Theory in practice: The "number concept" AND Class Presentations	Clearfield, M.W. (in press). A Dynamic Account of Infant Looking Behavior in Small and Large Number Tasks. In M.A. Vanchevsky (Ed.), <u>Focus on Cognitive Psychology Research</u> . Nova Science Publishers. ***

*** available on-line, either via Penrose library or author's website

New Object Concept papers (Note: these are subject to change):

Schutte, A.R. & Spencer, J.P. (2002). Generalizing the dynamic field theory of the A-not-B error beyond infancy: Three-year-olds' delay- and experience-dependent location memory biases. Child Development, 73, 377-404 ***

Clearfield, M. W., Smith, L.B., Diedrich, F. J. & Thelen, E. (2006). Young infants reach correctly on the A-not-B task: On the development of stability and perseveration. Infant Behavior and Development, 29, 435-444. ***