Neurobiology of Typical and Atypical Cognition and Language Development
Psychology 5470 (current topics)/5445/COGS 5140 Spring 2014
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The goal of the course is to survey and critique current research on language acquisition in developmentally delayed/pathological populations, including autism, Williams Syndrome, Down Syndrome, fragile X syndrome, maltreatment, Specific Language Impairment, dyslexia, and post-natal brain damage. We will examine what do the language delays & deficits reveal

- About each disorder? For example, is the language deficit central to the disorder? Do other deficits “follow” from the language one?
- About the processes of language acquisition? For example, which aspects of language development proceed similarly to the typical case? Are some aspects of language development delayed because of deficits in other aspects that need to be acquired first?
- About the representation & organization of language? For example, do the delays/deficits adhere to/follow the subcomponents of language? To what extent do the delays/deficits reveal how language relies on non-linguistic cognition?
- About the biology/neuropsychology/genetics of language? For example, What is the relationship between the timing of typical and atypical language development and different aspects of brain development? How can we tie together processes at the gene, neural, and behavioral levels?

All participants will be required to read the papers for each class. Students will lead/facilitate the discussions of the readings (1-2 per student) each week, beginning with Week 3. Class leadership and class participation each comprise 20% of your final grade. Class participation requires, at minimum, that you raise at least two questions during each class. Please send the questions to us via e-mail by 5pm each Thursday evening: letitia.naigles@uconn.edu, inge-marie.eigsti@uconn.edu.

Instructions for class leadership/presentations: Your job is to describe the issue of the day, and then describe and critique the evidence that ‘your’ article brings. Please bring a 1-2 page handout (already copied) to distribute to the class, which outlines the evidence. You are NOT to read from the articles as you present them, although you may refer to and quote specific passages and/or data.

Outreach project (15%): You will design/create a webpage /blog for our (under development) ‘Child Research at UCONN’ website, in which you present information on an issue concerning atypical language development to members of the wider community, such as parents, teachers, policy makers or professionals. This will be due mid-semester. Website design info for UCONN, and training, can be found at http://aurora.uconn.edu. For additional technical assistance, contact Professor Eigsti.

Group project (45%): Triads of students from different departments/divisions will team up to design a ‘Special Issue’ of a journal such as Journal of Child Language, Journal of Speech, Language, & Hearing Research, Journal of Autism and Developmental Disorders, that is focused on atypical language development. You choose the more specific area (e.g., brain and . . ./genes and . . ./phonology and . . ./semantics and . . ./etc.), select the papers from those already published (or in press), and then write the introduction. The intro should be more than a summary of the papers included; it should also provide a framework for organizing this subfield, critiques of methods/participants/findings as well as future directions for this specific area.

**Week 1: Introduction to the course, selection of presentation week, primer on language development**

Please read before the first class, if not already familiar with linguistics: Pinker, S. (1994) *The language instinct*. Chapters 1, 2, 3, 4, 5, 9
Week 2: Introduction to language pathologies


Week 3: Methods of studying developmental language pathologies


Week 4: Auditory and working memory processes


**Week 5: Social contributions to language acquisition**


**Week 6: Speech perception**


**Week 7: Word learning and lexical/semantic organization**


Week 8: Pragmatics and theory of mind


Week 9: Grammatical acquisition and representation


Week 10: Brain 1: Functional connectivity and language deficits


Optional:


Week 11: Brain 2: Neural underpinnings of language deficits


**Week 12: Motor processing and imitation**


**Week 13: Genetic influences**


Week 14: Computational modeling


One of these, TBD: