

Psychology 2651  
**Social Cognition from an Evolutionary and Developmental Perspective**  
Fall 2016

Instructor: Dr. Felix Warneken, Associate Professor  
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Where? William James Hall 1251

When? Thursdays 4-6pm

Office hours: By appointment (email); office: WJH 1320

### **Class Description**

The course addresses traditional questions about the role of social cognition in human development and evolution, integrating the newest findings from developmental and comparative psychology. The course is structured around three themes: cultural learning, cooperation, and competition. This corresponds to the three main theoretical approaches that have given rise to the study of social cognition from an evolutionary perspective and sparked much debate over what makes humans unique.

This course is discussion-based, with the goal of bringing new ideas (your ideas!) to bear on tricky questions that are still unresolved in the field. Emphasis is put on reading the original literature and preparation for our meetings by writing weekly response papers. Moreover, you will be able to write a final paper on a topic of your choice, in which you can address one of the problems raised in the literature and provide a comprehensive argument or a detailed outline for an empirical study.

The course is multidisciplinary in nature and particularly fun if students from different disciplines provide their unique perspectives. This includes students from Psychology, HEB, OEB, HGSE, Economics, Philosophy...

### **Enrollment**

This course is for graduate students and advanced undergraduate students (with permission from the instructor).

### **Grading**

You will be graded on your weekly response papers (40% of final grade), leading two discussions (2 x 10%), and a final paper (5% for outline, 35% for final version).

### **Written assignments**

All written assignments have to be uploaded to your course dropbox. No email attachments please. It's your responsibility to ensure that they are properly uploaded.

**Response papers.** Please summarize an argument or address a question based upon the readings for the class session. These response papers will be springboards for the discussion in class. Your response paper must be uploaded to your dropbox by **Tuesdays at 8pm** before the respective session. **Every day**

**your paper is late costs you 10% of your grade on that assignment, starting at 8.01pm that day.** Format: 2 pages, line spacing 1.5, 12 pt in Times New Roman or similar; please include your name, date, and session title in your header.

**Leading discussion.** You prepare a succinct presentation, perhaps including a classroom activity that frames and stimulates the discussion in class. The goal is NOT to summarize the readings by going through all the details of the studies, as it is expected that all class members have carefully read the papers themselves. The goal is rather to synthesize the readings and come up with a framework that highlights an ongoing debate or inconsistencies between empirical findings. This is also an opportunity for you to integrate additional information (e.g. a study or finding you think is illustrative, but was not covered in the readings). Depending on the class enrollment, discussions will be lead by a team of 1-3 students. In this case there will be one grade for the whole team (mutualism!). I will give you some guidance of how to prepare these discussions, but this requires that you send me a detailed outline of the discussion in advance (typically PowerPoint slides). Therefore, presenters are asked to have a brief meeting with me **one week before the respective session** (ideally right before or after class). The complete outline or PowerPoint slides are due the **Monday before the session** at 8pm. I'll provide feedback by Tuesday night.

Send me a list of at least four sessions in which you would like to be discussion leader. Please specify date and title and upload your list to your dropbox on when you submit your first response paper (**September 9**).

**Final paper.** By **November 1<sup>st</sup>** at the latest, please send me an email to schedule a meeting or send me a short description of your idea for a final paper. We'll discuss your ideas over email or in person. I'll give you feedback, and then you submit a comprehensive outline by **November 15<sup>th</sup>** at 8pm. You'll have the opportunity to give everyone a taste of your argument in our "essay blitz" in the last session. This is not graded, the applause from your peers should be enough of an incentive. Your final paper is due Thursday, **December 9** at 8pm. No late submissions please (see rule above)!

### Weekly deadlines

Day	Mo	Tue	Thur	Thur
Time	8pm	8pm	4pm	6pm
Item	Upload preliminary PowerPoint	Response paper	Show up in class. Bring your brain!	Ideas for presentation of following week
Who	Presenters	All	All	Presenters

### Semester deadlines

Day	Sep 7		Nov 1	Nov 15	Dec 9
Time	8pm		8pm	8pm	8pm
Item	4 potential sessions as discussion leader.	First response paper due	Ideas for final paper	Outline of final paper	Final paper

<b>Part I: The study of social cognition in children and chimpanzees</b>
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**1-Sep      Three hypotheses about the evolution of social cognition**

Introduction by instructor. No preparatory readings.

**8-Sep      The debate on theory of mind in chimpanzees**

**Classic paper which started this line of research**

Premack, D., & Woodruff, G. (1978). Does the chimpanzee have a theory of mind? *Behavioral & Brain Sciences*, 1(4), 515-526.

**A fierce debate**

Hare, B., Call, J., & Tomasello, M. (2001). Do chimpanzees know what conspecifics know? *Animal Behaviour*, 61, 139 - 151.

Povinelli, D., & Vonk, J. (2003). Chimpanzee minds: suspiciously human? *Trends in Cognitive Sciences*, 7(4), 157-160.

Tomasello, M., Call, J., & Hare, B. (2003). Chimpanzees understand psychological states - the question is which ones and to what extent. *Trends in Cognitive Science*, 7(4), 153-156.

**15-Sep      New experiments on theory of mind in chimpanzees**

**The most recent empirical evidence**

Kaminski, J., Call, J., & Tomasello, M. (2008). Chimpanzees know what others know, but not what they believe. *Cognition*, 109, 224-234.

Karg, K., Schmelz, M., Call, J., & Tomasello, M. (2015a). Chimpanzees strategically manipulate what others can see. *Animal cognition*, 18(5), 1069-1076.

Karg, K., Schmelz, M., Call, J., & Tomasello, M. (2015b). The goggles experiment: can chimpanzees use self-experience to infer what a competitor can see?. *Animal Behaviour*, 105, 211-221.

Martcorena, D. C., Ruiz, A. M., Mukerji, C., Goddu, A., & Santos, L. R. (2011). Monkeys represent others' knowledge but not their beliefs. *Developmental science*, 14(6), 1406-1416.

**Looking back at 30 years of research**

Rosati, A. G., Santos, L. R., & Hare, B. (2010). Primate social cognition: Thirty years after Premack and Woodruff. In M. L. Platt, A. A. Ghazanfar (Eds), *Primate Neuroethology*, (pp. 117-143). New York, NY US: Oxford University Press.

## **22-Sep      Do human infants have a theory of mind?**

### **The traditional view**

- Wimmer, H., & Perner, J. (1983). Beliefs about beliefs: Representation and constraining function of wrong beliefs in young children's understanding of deception. *Cognition*, 13, 103-128. *You can focus on Introduction, Experiment 1, Discussion.*
- Wellman, H. M., Cross, D., & Watson, J. (2001). Meta-analysis of theory-of-mind development: the truth about false belief. *Child development*, 72(3), 655-684.

### **Challenges to the traditional view**

- Onishi, K. H., & Baillargeon, R. (2005). Do 15-month-old infants understand false beliefs?. *Science*, 308(5719), 255-258.
- Southgate, V., Senju, A., & Csibra, G. (2007). Action anticipation through attribution of false belief by 2-year-olds. *Psychological Science*, 18(7), 587-592.
- Kovacs, A. M., Teglas, E., & Endress, A. D. (2010). The social sense: susceptibility to others' beliefs in human infants and adults. *Science*, 330(6012), 1830-1834.
- Baillargeon, R., Scott, R. M., & He, Z. (2010). False-belief understanding in infants. *Trends in Cognitive Sciences*, 14(3), 110-118.

## **29-Sep      New proposals to account for the old and the new**

### **Challenges to the challenges...**

#### **(1) Challenge to Kovacs et al. 2010**

- Phillips, J., Ong, D. C., Surtees, A. D., Xin, Y., Williams, S., Saxe, R., & Frank, M. C. (2015). A Second Look at Automatic Theory of Mind Reconsidering Kovács, Téglás, and Endress (2010). *Psychological Science*, 0956797614558717.

#### **(2) Challenge to Baillargeon et al. (including defense and counter-attack)**

- Heyes, C. (2014). False belief in infancy: a fresh look. *Developmental Science*, 17(5), 647-659.
- Scott, R. M., & Baillargeon, R. (2014). How fresh a look? A reply to Heyes. *Developmental Science*, 17(5), 660-664.
- Heyes, C. (2014). Rich interpretations of infant behaviour are popular, but are they valid? A reply to Scott and Baillargeon. *Developmental Science*, 17(5), 665-666.

### **... and attempts at a synthesis**

- Martin, A., & Santos, L. R. (2016). What cognitive representations support primate theory of mind?. *Trends in cognitive sciences*, 20(5), 375-382.
- Low, J., Apperly, I. A., Rakoczy, H., & Butterfill, S. A. (2016). Cognitive architecture of belief reasoning in children and adults: a two-systems account primer. *Child Development Perspectives*, 10(3), 184-189.

## Part II: Cultural learning

### 6-Oct Cultural learning in chimpanzees?

#### Early contenders

- Tomasello, M. (1999). *The Cultural Origins of Human Cognition*. Cambridge, MA: Harvard University Press. (**Chapters 1-2**)
- Whiten, A., Goodall, J., McGrew, W. C., Nishida, T., Reynolds, V., Sugiyama, Y., Tutin, C. E. G., Wrangham, R. W., & Boesch, C. (1999). Cultures in chimpanzees. *Nature*, 399, 682-685.

#### Empirical evidence

- Herrmann, E., Call, J., Hernandez-Lloreda, M.V., Hare, B. & Tomasello, M. (2007). Humans have evolved specialized skills of social cognition: The cultural intelligence hypothesis. *Science*, 317: 1360-1366.
- Reindl, E., Beck, S. R., Apperly, I. A., & Tennie, C. (2016). Young children spontaneously invent wild great apes' tool-use behaviours. *Proc. R. Soc. B*, Vol. 283, No. 1825, p. 20152402).
- Whiten, A., Horner, V., & de Waal, F. B. M. (2005). Conformity to cultural norms of tool use in chimpanzees. *Nature*, 437(29), 737-740.

### 13-Oct Cultural learning in children

- Gergely, G., Bekkering, H., & Kiraly, I. (2002). Rational imitation in preverbal infants. *Nature*, 415(6873), 755-755.
- Lyons, D. E., Young, A. G., & Keil, F. C. (2007). The hidden structure of overimitation. *Proceedings of the National Academy of Sciences of the United States of America*, 104(50), 19751-19756.
- Haun, D. B., & Tomasello, M. (2011). Conformity to peer pressure in preschool children. *Child Development*, 82(6), 1759-1767.
- Legare, C. H., Wen, N. J., Herrmann, P. A., & Whitehouse, H. (2015). Imitative flexibility and the development of cultural learning. *Cognition*, 142, 351-361.
- Legare, C. H., & Nielsen, M. (2015). Imitation and innovation: The dual engines of cultural learning. *Trends in cognitive sciences*, 19(11), 688-699. (**review article**)

### 20-Oct How children learn what to learn from whom

#### Framing the problem

- Harris, Paul L. *Trusting what you're told: How children learn from others*. Harvard University Press, 2012. **Please read Introduction, Chapter 1 & Chapter 11**
- Csibra, G., & Gergely, G. (2006). Social learning and social cognition: The case for pedagogy. In: Y. Munakata & M. H. Johnson (Eds.), *Processes of Change in Brain and Cognitive Development. Attention and Performance*, XXI. (pp. 249-274). Oxford: Oxford University Press, 2006.

### **Empirical evidence**

- Harris, P. L., & Koenig, M. A. (2006). Trust in Testimony: How children learn about science and religion. *Child Development*, 77(3), 505-524.
- Corriveau, K., Fusaro, M., & Harris, P. (2009). Going with the flow: Preschoolers prefer nondissenters as informants. *Psychological Science*, 20, 372-377.
- Koenig, M.A., Clement, F., & Harris, P.L. (2004) Trust in testimony: Children's use of true and false statements. *Psychological Science*, 15(10), 694-698.

<b>Part III: Cooperation</b>
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#### **27-Oct      Altruistic behavior in children and chimpanzees?**

##### **Children (in recommended order)**

- Warneken, F. (2016). Insights into the biological foundation of human altruistic sentiments. *Current Opinion in Psychology*, 7, 51-56.
- Hepach, R., Vaish, A., & Tomasello, M. (2012). Young children are intrinsically motivated to see others helped. *Psychological Science*, 23(9), 967-972.
- Hepach, R., Vaish, A., Grossmann, T., & Tomasello, M. (2015). Young children want to see others get the help they need. *Child Development*.

##### **Chimpanzees (in recommended order)**

- Silk, J., Brosnan, S., Vonk, J., Henrich, J., Povinelli, D., Richardson, A. S., et al. (2005). Chimpanzees are indifferent to the welfare of unrelated group members. *Nature*, 437, 1357 - 1359.
- Warneken, F., Hare, B., Melis, A. P., Hanus, D., & Tomasello, M. (2007). Spontaneous altruism by chimpanzees and young children. *PLoS Biology*, 5 (7), 1414 - 1420.
- Melis, A. P., Warneken, F., Jensen, K., Anna-Claire-Schneider, Call, J., & Tomasello, M. (2010). Chimpanzees help conspecifics obtain food and non-food items.

#### **3-Nov      Quid pro quo: Is cooperation based upon reciprocity?**

##### **Children**

- Cirelli, L. K., Einarson, K. M., & Trainor, L. J. (2014). Interpersonal synchrony increases prosocial behavior in infants. *Developmental Science*, 17(6), 1003-1011.
- Dunfield, K. A., & Kuhlmeier, V. A. (2010). Intention-mediated selective helping in infancy. *Psychological science*.
- Warneken, F., & Tomasello, M. (2013). The emergence of contingent reciprocity in young children. *Journal of Experimental Child Psychology*, 116(2), 338-350.

##### **Nonhuman primates**

- Brosnan, S. F., & De Waal, F. B. (2002). A proximate perspective on reciprocal altruism. *Human Nature*, 13(1), 129-152.

Melis, A. P., Grocke, P., Kalbitz, J., & Tomasello, M. (2016). One for You, One for Me Humans' Unique Turn-Taking Skills. *Psychological Science*, 0956797616644070.

Schino, G., & Aureli, F. (2016). Reciprocity in group-living animals: Partner control versus partner choice. *Biological Reviews*.

## **10-Nov Fairness in evolution and development**

### **New studies on the fairness development in human development**

#### ***Children***

Blake, P. R., & McAuliffe, K. (2011). "I had so much it didn't seem fair": Eight-year-olds reject two forms of inequity. *Cognition*, 120(2), 215-224.

Fehr, E., Bernhard, H., & Rockenbach, B. (2008). Egalitarianism in young children. *Nature*, 454, 1079-1083.

#### ***Infants***

Sloane, S., Baillargeon, R., & Premack, D. (2012). Do infants have a sense of fairness? *Psychological Science*, 23(2), 196 - 204.

Sommerville, J. A., Schmidt, M. F. H., Yun, J.-e., & Burns, M. (2012). The Development of Fairness Expectations and Prosocial Behavior in the Second Year of Life. *Infancy*, 1 - 27.

### **Fairness in nonhuman animals?**

#### ***Empirical study (with commentaries)***

Brosnan, S., & deWaal, F. (2004). Fair refusal by capuchin monkeys. *Nature*, 428, 140.

Henrich, J. (2004). Inequity aversion in capuchins? *Nature*, 428, 139.

Wynne, C. (2004). Fair refusal by capuchin monkeys. *Nature*, 428, 140.

#### ***Theoretical framework and counterarguments***

Brosnan, S. F., & de Waal, F. B. (2014). Evolution of responses to (un) fairness. *Science*, 346(6207), 1251776.

Jensen, K. (2010). Punishment and spite, the dark side of cooperation. *Philosophical Transactions of the Royal Society B*, 365, 2635-2650.

<b>Part IV: Competition</b>
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## **17-Nov Outsmarting others through deception and lying**

#### ***Children***

Ding, X. P., Wellman, H. M., Wang, Y., Fu, G., & Lee, K. (2015). Theory-of-mind training causes honest young children to lie. *Psychological Science*, 26(11), 1812-1821.

Evans, A. D., & Lee, K. (2013). Emergence of lying in very young children. *Developmental Psychology*, 49(10), 1958.

Sodian, B., Taylor, C., Harris, P. L., & Perner, J. (1991). Early deception and the child's theory of mind: False trails and genuine markers. *Child Development*, 468-483.

### **Nonhuman primates**

Melis, A. P., Call, J., & Tomasello, M. (2010). 36-month-olds conceal visual and auditory information from others. *Developmental Science*, 13(3), 479-489.

Le Roux, A., Snyder-Mackler, N., Roberts, E. K., Beehner, J. C., & Bergman, T. J. (2013). Evidence for tactical concealment in a wild primate. *Nature Communications*, 4, 1462.

## **1-Dec Us and them: Intergroup interaction in humans and primates**

### **Developmental studies**

Baron, A.S. & Banaji, M.R. (2006). The development of implicit attitudes: Evidence of race evaluations from ages 6 and 10 and adulthood. *Psychological Science*, 17(1), 53-58.

Dunham, Y., Baron, A. S., & Banaji, M. R. (2008). The development of implicit intergroup cognition. *Trends in Cognitive Sciences*, 12(7), 248-253.

Kinzler, K. D., Shutts, K., DeJesus, J., & Spelke, E. S. (2009). Accent trumps race in guiding children's social preferences. *Social Cognition*, 27(4), 623.

### **Comparative approaches**

Mitani, J.C., D. Watts, S. Amsler. 2010. Lethal intergroup aggression leads to territorial expansion in wild chimpanzees. *Current Biology* 20: R507-R508.

Wilson, M. L., Boesch, C., Fruth, B., Furuichi, T., Gilby, I. C., Hashimoto, C., ... & Lloyd, J. N. (2014). Lethal aggression in Pan is better explained by adaptive strategies than human impacts. *Nature*, 513(7518), 414-417.

Wrangham, R. W., & Glowacki, L. (2012). Intergroup Aggression in Chimpanzees and War in Nomadic Hunter-Gatherers. *Human Nature*, 23(1), 5-29.

*Papers may be added or substituted as the course (and our thinking) progresses.*

### **Recommended books**

Banaji & Gelman (2013) *Navigating the Social World*

Tomasello, M. (1999). *The cultural origins of human cognition*.

Any student needing academic adjustments or accommodations is requested to present their letter from the Accessible Education Office (AEO) and speak with the professor by the end of the second week of the term, (specific date). Failure to do so may result in the Course Head's inability to respond in a timely manner. All discussions will remain confidential, although AEO may be consulted to discuss appropriate implementation.

All written assignments must be your own work, unless otherwise specified. Any portion of your writing which draws on an outside source must be cited appropriately, following APA guidelines (6<sup>th</sup> edition). Failure to document your sources or acknowledge collaboration is an



ethical lapse that can have serious consequences. And remember, poor citation does not have to be intentional to be considered plagiarism.

For this course, the following paragraph from Harvard's "Guide to Using Sources" applies: "Collaboration permitted: Discussion and the exchange of ideas are essential to academic work. For assignments in this course, you are encouraged to consult with your classmates on the choice of paper topics and to share sources. You may find it useful to discuss your chosen topic with your peers, particularly if you are working on the same topic as a classmate. However, you should ensure that any written work you submit for evaluation is the result of your own research and writing and that it reflects your own approach to the topic. You must also adhere to standard citation practices in this discipline and properly cite any books, articles, websites, lectures, etc. that have helped you with your work. If you received any help with your writing (feedback on drafts, etc), you must also acknowledge this assistance." Please note that you are not permitted to share or divide up the work of reading and summarizing papers for your response papers or the final paper. Similarly, you are not permitted to collaborate on the planning, researching, or writing of your final paper. Your final paper must be for this course only, and not an extension or updated version of a paper you submitted for another class or curriculum requirement.