

# Conference Evolutionary Psychology & Primatology in the Low Countries

University of Amsterdam, April 16<sup>th</sup> and 17<sup>th</sup>, 2015

## Program



**CBEN** The Cognition, Behavior  
& Evolution Network

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## Acknowledgments

We like to thank our generous sponsors for making this conference possible.

We have received a grant from the Congresssubsidiefonds of the Koninklijke Nederlandse Akademie van Wetenschappen, and a ABC VIP Grant from the Amsterdam Brain & Cognition Center, which enabled us to invite our keynote speaker Prof. Tetsuro Matsuzawa from Japan and cover his expenses.

We are looking forward to the conference!

On behalf of the Organizing Committee,

*Mariska Kret*  
*Annemie Ploeger*

## Practical information

Admission is free. It includes coffee and tea during the whole conference, and lunch and drinks on Friday.

The conference will be on the Roeterseiland of the University of Amsterdam in the city center of Amsterdam, Building C, room C0.01 (on the ground floor). See link for a map (the best way to enter is via Building B):

<http://student.uva.nl/mcs/az/content2/roeterseilandcampus-services-and-facilities-for-students/campus-map/map.html>

We strongly recommend traveling by public transportation. Due to major renovation projects, there are very few parking spots available. In case you decide to come by car, you may use the address Valckenierstraat 65, Amsterdam, for your navigation equipment.

If you travel by public transportation, you can take any of the subway lines leaving from Amsterdam Central station, and get off at the stop Weesperplein. From there you take the Sarphatistraat eastwards, you cross the Roetersstraat, and turn left, after you've passed the supermarket Albert Heijn, on Pancrasstraat (a pedestrian street). Pretty soon you will see the entrance of Building B/C at your left hand.

### Program Thursday April 16<sup>th</sup>

15:00-15:25	Registration / Coffee & tea
15:25-15:30	Welcome by Annemie Ploeger, University of Amsterdam
15:30-16:00	Annemie Ploeger, University of Amsterdam <i>Psychopathology in humans and nonhuman primates – why do humans get depressed?</i>
16:00-16:20	Hans van de Braak, Erasmus University Rotterdam <i>The most cultural primate on earth</i>
16:20-16:40	Nicky Staes, Sonja Koski, Marcel Eens & Jeroen Stevens, University of Antwerp <i>Avpr1a: A candidate gene with large effects on sociability differences found in chimpanzees and bonobos</i>
16:40-17:00	Jeroen Stevens & Nicky Staes, University of Antwerp <i>Relationship value correlates with mating success and with reconciliation in captive bonobos</i>
17:00-17:45	Break with drinks
17:45-18:15	Liesbeth Sterck & Anne Overduin-de Vries, Utrecht University <i>Do monkeys know what others can see?</i>
18:15-18:45	Mariska Kret, University of Amsterdam <i>The perception of emotions in humans, chimpanzees and bonobos</i>

### Program Friday April 17<sup>th</sup>

9:00-9:30	Coffee & tea
9:30-9:50	Arcady Putilov, Research Institute for Molecular Biology and Biophysics, Novosibirsk, Russia <i>Towards an evolutionary psychological explanation of beneficial antidepressant action of non-pharmacological treatments for seasonal depression</i>
9:50-10:10	Leander van der Meij, VU University Amsterdam <i>Hormonal changes during speed dating</i>

10:10-10:30	Michiel van Elk, University of Amsterdam <i>Hyperactive agency detection and religion as by-product</i>
10:30-10:50	Joshua Tybur, VU University Amsterdam <i>Parasite stress, pathogen avoidance, and ideology</i>
10:50-11:10	Laura Harrison, California Institute of Technology, USA <i>The structure of human defensive responses to different types of threat: Comparisons to animals</i>
11:10-11:30	Anne Marijke Schel, Utrecht University <i>Intentional use of alarm calls by wild chimpanzees</i>
11:30-13:00	Lunch + poster session
13:00-13:30	Mark van Vugt, VU University Amsterdam <i>The evolutionary foundations of status hierarchies: From dominance to leadership</i>
13.30-14:00	Jorg Massen, University of Vienna <i>Feathered apes; third-party understanding and use in ravens</i>
14:00-14:45	Coffee & tea
14:45-15:15	Irene Godoy & Susan Perry, University of California, Los Angeles <i>Mechanisms of kin discrimination in Capuchin monkeys</i>
15:15-15:45	Karline Janmaat, Max Planck Institute for Evolutionary Anthropology, Leipzig <i>Fruits of Enlightenment: Foraging cognition in large-brained rainforest primates</i>
15:45-16:30	Coffee & tea
16:30-16:35	Introduction and closing words: Mariska Kret
16:35-17:30	Keynote: Tetsuro Matsuzawa, Kyoto University, Japan <i>The evolutionary origins of human cognitive development: Insights from research on chimpanzees</i>
17:30-18:30	Drinks

## Abstracts and contact information

**Time slot** 15:30-16:00 (April 16<sup>th</sup>)

**Author** Annemie Ploeger  
**University** University of Amsterdam  
**Email** [A.Ploeger@uva.nl](mailto:A.Ploeger@uva.nl)

**Title** *Psychopathology in humans and nonhuman primates – why do humans get depressed?*

**Abstract** Mental disorders appear to be unique for human beings, considering the difficulty in finding appropriate animal models for studying disorders. This seems to be consistent with ideas expressed by Jane Goodall, the famous primatologist. She argues that we should take the relaxed and mindful way of great apes' living as an example. However, several researchers have observed behavioral irregularities in animals, especially in captive great apes. The question is whether these irregularities are similar to symptoms of mental disorders in humans, and how we can explain their development. In my presentation, I explore these questions. I review evidence for symptoms of mental disorders in animals, in particular in great apes. In addition, I try to explain these symptoms from an evolutionary and ecologically point of view.

**Time slot** 16:00-16:20 (April 16<sup>th</sup>)

**Author** Hans van de Braak  
**University** Erasmus University Rotterdam  
**Email** [Vandebraak@fsw.eur.nl](mailto:Vandebraak@fsw.eur.nl)

**Title** *The most cultural primate on earth*

**Abstract** In my talk I will discuss three questions. First: we are primates but what makes us human? My focus is on the capacity for cumulative culture. Second: given the evolution of culture, what is the impact on genetic evolution? The answer includes a graphic sketch of co-evolving genes and culture. Third: the acquisition of culture requires literacy, or the ability to read and write. What is the impact of literacy on the brain? Given that reading is an extremely recent cultural capacity, there was no time for evolution to shape our genome and adapt our brain networks to the particularities of reading. How does the brain recognize letters? My focus is on the so-called recycling hypothesis.

<b>Time slot</b>	<b>16:20-16:40 (April 16<sup>th</sup>)</b>
Authors	Nicky Staes <sup>1,2</sup> , Sonja Koski <sup>3</sup> , Marcel Eens <sup>2</sup> & Jeroen Stevens <sup>1,2</sup>
University	<sup>1</sup> Centre for Research and Conservation, Royal Zoological Society of Antwerp <sup>2</sup> University of Antwerp <sup>3</sup> Helsinki University, Finland
Email	<a href="mailto:Nicky.Staes@kmda.org">Nicky.Staes@kmda.org</a>
Title	<i>Avpr1a: A candidate gene with large effects on sociability differences found in chimpanzees and bonobos</i>
Abstract	<p>Many studies have reported an important role of genes coding for neurotransmitter receptors in the brain on both behaviour and personality in a variety of species. In this study we focus on variation in the promoter region of the vasopressin receptor gene (Avpr1a). In humans, length differences in the promoter region of Avpr1a influence behavioural traits like prosociality and partner bonding. Interestingly, bonobos show more similarity to humans in this polymorphic region compared to chimpanzees, as chimpanzees are often missing a ~350bp region in the promoter region of the gene (called the DupB region), which is suggested to explain part of the behavioural differences found in these species. So far, no behavioural association studies for Avpr1a have been done in bonobos. We collected behavioural data and Avpr1a genotypes for 53 bonobos and 62 chimpanzees. In chimpanzees, males homozygous for having the DupB region (=DupB+/+), showed higher frequencies of grooming given compared to males with one or two alleles with the deletion of DupB. Interestingly, these DupB+/+ chimpanzee males show similar high levels of grooming given as found in bonobos. These results highlight the importance of candidate genes with large effects on behavioural variation, with variation in Avpr1a possibly lying at the base of both within and between species differences in sociability.</p>

<b>Time slot</b>	<b>16:40-17:00 (April 16<sup>th</sup>)</b>
Authors	Jeroen Stevens & Nicky Staes
University	Centre for Research and Conservation, Royal Zoological Society of Antwerp University of Antwerp
Email	<a href="mailto:Jeroen.Stevens@kmda.org">Jeroen.Stevens@kmda.org</a>
Title	<i>Relationship value correlates with mating success and with reconciliation in captive bonobos</i>
Abstract	<p>Recently we showed that in groups of captive bonobos, relationship quality can objectively be described by using Principal Component Analyses and Parallel Analyses. We found two components of relationship quality, Relationship Value, containing proximity, frequency and symmetry of grooming, support and peering behaviour and Relationship Compatibility, containing frequency and symmetry of aggression (Stevens et al., 2015). Here we investigate whether these components influence sexual and social patterns within the bonobo groups. First we looked at the influence of relationship value and compatibility on male mating success in the bonobo groups of Twycross and Apenheul. We found that male mating success with females in estrus correlated with relationship value, but not with compatibility. We also measured female proceptivity as a proxy for female preference and showed that preferred males had higher scores for relationship quality than eschewed males. This suggests that male mating success in bonobos is influenced by affiliative relationships between males and females with female mate choice as an important mechanism. Next we investigated reconciliation in the groups of Wuppertal and Planckendael. In general we found that conciliatory tendencies among bonobos were not higher than those reported for chimpanzees. Preliminary analyses of the effect of relationship value on reconciliation in the groups showed that conciliatory tendencies increased with relationship value but not compatibility. Our results show that the composite measure of relationship Value correlates with two factors that can influence individual fitness, as was originally proposed by Aureli &amp; Cords (2000).</p>

<b>Time slot</b>	<b>17:45-18:15 (April 16<sup>th</sup>)</b>
Authors	Liesbeth Sterck & Anne Overduin-de Vries
University	Utrecht University & Biomedical Primate Research Center, Rijswijk
Email	<a href="mailto:E.H.M.Sterck@uu.nl">E.H.M.Sterck@uu.nl</a>
Title	<i>Do monkeys know what others can see?</i>
Abstract	The evolution of the human capacity of Theory of Mind, the cognitive capacity to understand that others have knowledge and intentions, can be studied by looking for precursors in primates. Precursors to Theory of Mind are gaze following, understanding the target of attention and Visual Perspective Taking (VPT). Evidence shows their presence in apes, yet in particular evidence for VPT is inconclusive in monkeys. We investigated these precursors in monkeys. Macaques followed gaze, understood the target of attention and took visual information of their opponent into account when choosing between two food rewards. These studies indicate that precursors of Theory of Mind, including VPT, are present in monkeys. Since monkeys share these capacities with humans and apes, this renders the precursors, including VPT, evolutionary conserved and relatively old primate cognitive capacities.



<b>Time slot</b>	<b>18:15-18:45 (April 16<sup>th</sup>)</b>
Author	Mariska Kret
University	University of Amsterdam
Email	<a href="mailto:M.E.Kret@uva.nl">M.E.Kret@uva.nl</a>
Title	<i>The perception of emotions in humans, chimpanzees and bonobos</i>
Abstract	<p>Evolution prepared group-living species, (non)human primates included, to quickly recognize and adequately respond to conspecifics' emotional expressions. Different theories propose that mimicry of emotional expressions facilitates these swift adaptive reactions. When species unconsciously mimic their companions' expressions of emotion, they come to feel reflections of their emotions that influence emotional and empathic behavior. The majority of emotion research has focused on full-blown facial expressions of emotion in humans. However, facial muscles can sometimes be controlled; humans know when to smile, and when not to. Moreover, the fact that emotions are not just expressed by the face alone but by the whole body is often still ignored. In this talk, I therefore argue for a broader exploration of emotion signals from sources beyond the face that are more difficult to control. More specifically, I will argue that implicit sources including the whole body and very subtle autonomic responses including pupil-dilation are picked up by observers and influence subsequent behavior. Across different primate species, seeing a conspecific being emotional and expressing that in one way or another, immediately and automatically attracts attention, yields mimicry and triggers action tendencies in observers. In my research, I take a comparative approach and investigate similarities and differences in the perception of emotions between humans, chimpanzees, <i>Pan troglodytes</i> and bonobos, <i>Pan paniscus</i>. I will here discuss new, recently collected data and suggest avenues for future research that will hopefully eventually lead to a better comprehension of emotional expressions and how we come to understand each other's emotions.</p>

<b>Time slot</b>	<b>9:30-9:50 (April 17<sup>th</sup>)</b>
Author	Arcady Putilov
University	Research Institute for Molecular Biology and Biophysics, Novosibirsk, Russia
Email	<a href="mailto:Putilov@ngs.ru">Putilov@ngs.ru</a>
Title	<i>Towards an evolutionary psychological explanation of beneficial antidepressant action of non-pharmacological treatments for seasonal depression</i>
Abstract	<p>Some recent findings have aroused concern among researchers and the lay public about the efficacy of the conventional antidepressant medications. A number of clinical trials suggest that they act non-specifically and are not distinctly superior to placebo treatments. Moreover, the literature on affective disorders suggests that the specific feature of depression is that there is no other illness in which the placebo effect is so large. It was earlier suggested that the symptoms of seasonal depression might be alleviated by such non-pharmacological interventions, such as sleep deprivation, bright light exposure, physical exercise, etc. Earlier published reports indicated that some strategies of non-drug treatment for seasonal depression seem to be very effective, but the involvement of specific biological mechanisms in the observed beneficial response still remains to be clarified. The present presentation combines a brief summary of the results of author's research on antidepressant effects of several one-week non-drug treatments with a brief review of possible evolutionary psychological explanations of high efficacy of such treatments. Participants of the non-drug treatment trials were 268 female subjects with either winter depression or non-seasonal depression or without depression (n=118, 64 and 86, respectively). In agreement with the literature on affective disorders, the present results on the effects of natural antidepressants highlighted the possibility that the vast majority of non-drug treatments work as powerful placebos. It seems that, compared to the biology of depressives, their psychology is the most important mediator of clinical response. In particular, the nature of depression seems to be very sensitive to encouragement that comes from being involved in treatment. Since evolutionary thinking can provide an account of the origin and function of most important human traits, further research can be aimed on examination of predictions suggested by several evolutionary psychological explanations of depression and antidepressant responses to natural treatments.</p>

<b>Time slot</b>	<b>9:50-10:10 (April 17<sup>th</sup>)</b>
Author	Leander van der Meij
University	VU University, Amsterdam
Email	<a href="mailto:L.van.der.Meij@vu.nl">L.van.der.Meij@vu.nl</a>
Title	<i>Hormonal changes during speed dating</i>
Abstract	To be announced

<b>Time slot</b>	<b>10:10-10:30 (April 17<sup>th</sup>)</b>
Author	Michiel van Elk
University	University of Amsterdam
Email	<a href="mailto:M.vanElk@uva.nl">M.vanElk@uva.nl</a>
Title	<i>Hyperactive agency detection and religion as by-product</i>
Abstract	In this talk I will first present a critical assessment of the 'religion-as-byproduct' view, according to which belief in supernatural agents is the result of the false positives generated by a hyperactive agency detection device and mentalizing abilities. Across a series of empirical studies we found no evidence for the supposed relation between religious beliefs, threat and agency detection biases. Furthermore, in a large-scale study on autism and religion involving more than 100.000 participants, no evidence was found for the supposed relation between hyper-mentalizing and belief in God. These findings cast doubt on the notion that religion is a by-product of other cognitive capacities, but still it could well be that religious beliefs confer a strong adaptive value. In support of the latter view, I will discuss studies on the relation between morality, prosocial behavior, afterlife beliefs and supernatural monitoring.

<b>Time slot</b>	<b>10:30-10:50 (April 17<sup>th</sup>)</b>
Author	Joshua Tybur
University	VU University, Amsterdam
Email	<a href="mailto:jmtybur@gmail.com">jmtybur@gmail.com</a>
Title	<i>Parasite stress, pathogen avoidance, and ideology</i>
Abstract	<p>In the past decade, multiple researchers have proposed that traditional versus progressive ideologies develop in part to neutralize infectious disease. This idea has been tested by (a) examining how nation level infectious disease prevalence relates to ideology (or related variables), and (b) examining how individual differences in variables posited to measure pathogen avoidance relate to ideology. Here, I present the first data measuring pathogen avoidance at the individual across several countries with varied infectious disease prevalence (N = 11,547 across 29 nations). Results replicate past findings showing that individuals are more ideologically conservative in nations with greater infectious disease prevalence. Results also replicate past findings showing that individuals who are more pathogen avoidant are more ideologically conservative. However, individuals in higher pathogen load countries are no more pathogen avoidant than individuals in lower pathogen load countries. This suggests that any effect of exposure to pathogens on ideology is not mediated by pathogen avoidance, and that the two types of relationships between pathogens and ideology observed here might require different explanations.</p>

<b>Time slot</b>	<b>10:50-11:10 (April 17<sup>th</sup>)</b>
Author	Laura Harrison
University	California Institute of Technology, USA
Email	<a href="mailto:lauraharrison@caltech.edu">lauraharrison@caltech.edu</a>
Title	<i>The structure of human defensive responses to different types of threat: Comparisons to animals</i>
Abstract	<p>Background. How humans react to various threats is a topic of broad theoretical importance, relevant for understanding anxiety disorders. Darwin famously noted the striking phylogenetic continuity of emotional behaviors, including responses to threat. Defensive behaviors, ranging from flight to attack, have evolved to deal with environmental challenges that show a common structure across all animals: for example, the need to attack an aggressor, to flee a predator, or to hide from an inescapable threat. The hypothesis that many animal threat reactions exhibit a common structure is supported by findings that human evaluations of threat parallel rodent defensive behavior. Across species, defensive reactions depend upon specific situational factors, a feature long emphasized by psychological appraisal theories. Objectives. Our study had two aims. First, we sought to extend prior investigations of human judgments of threat to a broader set of threats, including natural disasters, threats from animals, and psychological (as opposed to physical) threats. Inclusion of these different threat categories underlay an attempt to bridge our understanding of basic approach-avoidance reactions to predators and other physical threats, on the one hand, with a characterization of defensive reactions to less physical but more psychological intra-species threats that relate to issues of social inclusion, social hierarchies, and social dominance, on the other hand. Socially modulated threat reactions have been observed across diverse phylogenetic classes, including fish, and mammals ranging from rodents to primates. Second, we constructed a decision tree characterizing how situational factors hierarchically determine human defensive behaviors. Methods. 85 healthy adult participants selected descriptions of defensive behaviors that indicated how they would react to 29 threatening scenarios. Scenarios differed with respect to ten factors that included perceived dangerousness and escapability. Across scenarios, we correlated these factor ratings with the proportion of participants endorsing each defensive behavior. A decision tree hierarchically organized these correlation patterns to successfully predict each scenario's most common reaction, both for the original group and a separate replication group (n=22). Results. Early in the decision tree, degree of dangerousness interacted with threat type (physical or psychological) to predict approach/avoidance behavior. Later branches contextually predicted specific defensive responses. Conclusions. Serving as a general model for the decision processes involved in human defensive behavior, our approach could also help to describe defensive behaviors in other species, as well as psychopathology of threat processing, and could be employed in future studies examining underlying neural mechanisms.</p>

<b>Time slot</b>	<b>11:10-11:30 (April 17<sup>th</sup>)</b>
Author	Anne Marijke Schel
University	Utrecht University
Email	<a href="mailto:A.M.Schel@uu.nl">A.M.Schel@uu.nl</a>
Title	<i>Intentional use of alarm calls by wild chimpanzees</i>
Abstract	<p>One hallmark feature of human language is its intentionality, which allows us to inform ignorant others about external events. Determining the evolutionary roots of this complex cognitive capacity, by studying its precursors in our primate relatives, is important for a profound understanding of the evolution of human language. Although intentional signalling has been claimed for great ape gestural signals, comparable evidence is lacking for their vocal signals. This lack of evidence for intentional vocal production has led to the proposition that language originated from a gestural rather than a vocal system. However, until now, no directly comparable test of intentionality in great ape vocal production had been conducted. This study addressed this problem and was the first to systematically test for first order intentionality in primate vocal production in a valid and directly comparable manner to gesture production. We presented wild chimpanzees with a python model and evaluated the behaviour of the chimpanzees against well-established markers of intentional signal production. We found that two of three alarm call types exhibited characteristics previously used to argue for intentionality in gestural communication. Our results demonstrate that certain chimpanzee vocalisations qualify as intentional signals, in a directly comparable way to many great ape gestures.</p>

<b>Time slot</b>	<b>11:30-13:00 (April 17<sup>th</sup>) – Poster 1</b>
Authors	Brenda de Groot & Annemie Ploeger
University	University of Amsterdam
Email	<a href="mailto:groot.de.brenda@gmail.com">groot.de.brenda@gmail.com</a>
Title	<i>Primate empathy: Review of the evidence in two taxa</i>
Abstract	<p>We reviewed the evidence of empathic capacities of monkeys and chimpanzees. The evidence is organized into three components of empathy: affective empathy, cognitive empathy and self-awareness. All components were found in both monkeys and chimpanzees. Regarding affective empathy, the different primate taxa showed emotion contagion and sympathy. In addition, both monkeys and chimpanzees possess a perceptual, informational and motivational Theory of Mind, but could not understand the concept of false beliefs. Lastly, self-awareness, which is needed to experience empathy beyond emotional contagion, was found in monkey species and chimpanzees. Nonetheless, individual and situational differences affected the demonstrability of self-awareness, which could be due to the artificiality of the applied method. More ecologically relevant designs are desirable in future research of primate empathy.</p>

Time slot	11:30-13:00 (April 17 <sup>th</sup> ) – Poster 2
Authors	Evy van Berlo <sup>1</sup> , Mariska Kret <sup>2</sup> & Jorg Massen <sup>2</sup>
University	<sup>1</sup> Utrecht University, <sup>2</sup> University of Amsterdam, <sup>3</sup> University of Vienna
Email	<a href="mailto:E.vanBerlo@uu.nl">E.vanBerlo@uu.nl</a>
Title	<i>Investigating the vigilance hypothesis in bonobos (Pan paniscus): yawning after post-conflict reconciliation and consolation</i>
Abstract	<p>Yawning is an evolutionarily old behaviour that is widespread among vertebrates. It frequently occurs during periods with lower arousal and it is highly contagious. Although much is known about how yawning can be induced, its biological significance remains a conundrum. There is growing empirical support that yawning serves a brain thermoregulatory function, i.e. by inhaling cool ambient air, the blood in the brain is cooled through convection. Furthermore, through this function, yawning can lead to maintaining vigilance when needed, and its contagiousness can serve to spread arousal and improve group vigilance. The aim of our study is to further investigate the vigilance hypothesis by disentangling effects of stress versus vigilance on yawning. To achieve this, we will observe post-conflict yawning in a group of captive bonobos (<i>Pan paniscus</i>) and assess the effect of reconciliations and consolations on yawning rates. We predict that yawning rates will increase directly after a conflict relative to baseline, because conflicts cause a lot of stress in the group and displacement behaviours such as yawning are reliable stress indicators. Furthermore, if yawning is purely stress-related, we expect that yawning rates will decrease after both reconciliation and consolation, because both have been shown to alleviate stress. However, if yawning serves to induce vigilance, we expect that its rate will only return to baseline after reconciliation, because reconciliation restores the damaged relationship between opponents and consolation does not, so the risk for further aggression is still present and it is therefore important to remain vigilant.</p>



<b>Time slot</b>	<b>11:30-13:00 (April 17<sup>th</sup>) – Poster 3</b>
Author	Zoi Manesi, Paul van Lange & Thomas Pollet
University	VU University Amsterdam
Email	<a href="mailto:Z.Manesi@vu.nl">Z.Manesi@vu.nl</a>
Title	<i>Eyes wide open: When “eyes” do and do not promote prosociality</i>
Abstract	Objective. Recent research in evolutionary psychology suggests that the mere presence of eye images can promote prosocial behavior, with the original study investigating payments for milk via an honesty box. Since then, the “eye-images effect” is the source of considerable debate because it remains unclear if what matters is an eye gaze, a face, or anything to do with humans. We suggest that one critical factor may be whether the eyes really need to be watching to effectively promote prosociality. Methods. In two experiments, involving 439 participants (Mage= 21.26 years), we investigated the impact of eye images on prosocial behavior assessed through a non-monetary task in a laboratory setting. Participants were randomly assigned to view an image of “watching eyes” (eyes with direct gaze), an image of “non-watching eyes” (i.e. eyes closed or eyes with averted gaze for Studies 1 and 2, respectively) or an image of flowers (control condition). Upon exposure to the stimuli, participants decided whether or not to help another participant by completing a dull, cognitive task. Results. Data showed that prosocial behavior was significantly greater when exposed to a direct gaze as compared to flowers; and when exposed to a direct gaze as compared to eyes closed or eyes with averted gaze. Conclusions. Our data suggest that eyes gazing at an individual, rather than any proxy to social presence (e.g. “just eyes”), serve as a reminder of reputation. It is the “feeling of being watched” that can “lift” the veil of anonymity and serves as a powerful facilitator of prosocial behavior.

<b>Time slot</b>	<b>13:00-13:30 (April 17<sup>th</sup>)</b>
Author	Mark van Vugt
University	VU University, Amsterdam
Email	<a href="mailto:M.van.Vugt@vu.nl">M.van.Vugt@vu.nl</a>
Title	<i>The evolutionary foundations of status hierarchies: From dominance to leadership</i>
Abstract	Social hierarchies are ubiquitous in humans and non-humans with tangible benefits for those in high status positions. Natural selection has likely favored psychological mechanisms specialized in navigating social hierarchies. This talk explores these mechanisms in several ways. First, I discuss the selection pressures that have favored a universal status striving tendency. I do this in part following the logic of game theory. Second I address the evidence for several evolved psychological status systems, enabling individuals to (a) assess their relative status, (b) make status gains, (c) manage status losses, and (d) convert status into reproductive opportunities. I also pay attention to sex differences in evolved status psychology. Finally, I will investigate the evolution from dominance to decision-making hierarchies in human primates by looking at the role of leadership.

<b>Time slot</b>	<b>13:30-14:00 (April 17<sup>th</sup>)</b>
Author	Jorg Massen
University	University of Vienna
Email	<a href="mailto:jorgmassen@gmail.com">jorgmassen@gmail.com</a>
Title	<i>Feathered apes; third-party understanding and use in ravens.</i>
Abstract	<p>The understanding of the relations of others may help individuals to navigate through a complex social environment, sometimes even in a Machiavellian way. Therefore, this capacity has been pinpointed as one of the important aspects of social cognition that may have lead to the evolution of intelligence. Unfortunately, so far only primates have been tested for this capacity in various paradigms, whereas little is known from other species with complex social lives and relative large brains. In this talk I will report on a recent experimental study we conducted on two groups of captive ravens, <i>Corvus corax</i>. Using an expectancy violation paradigm in which we used audio-playbacks to mimic rank reversals, we could show that just like several primate species, ravens are able to recognize the relations of others. In an additional study on wild ravens we examined how the ravens use such knowledge to their advantage. In particular, we investigated interventions in affiliative interactions of others in a group of 94 individually marked wild ravens. We show that the identities of both intervener and intervened pairs are not randomly distributed and do not follow rules based on risk assessment. Instead, we observed that ravens with already existing alliances initiate most interventions, and that ravens that are creating new alliances are more likely to be the target of such interventions. These data suggest that high-ranking individuals are using interventions to prevent others from forming alliances and consequently rising in rank. Although being described for the first time, we feel that that the examination of these intriguing social maneuvers has great potential in other social species, like primate, as well. In my talk, I will discuss the possible cognitive mechanisms behind the observed behaviors and their evolutionary background.</p>

<b>Time slot</b>	<b>14:45-15:15 (April 17<sup>th</sup>)</b>
Author	Irene Godoy
University	University of California, Los Angeles
Email	<a href="mailto:Godoy@ucla.edu">Godoy@ucla.edu</a>
Title	<i>Mechanisms of kin discrimination in Capuchin monkeys</i>
Abstract	<p>A large body of evidence exists for kin discrimination in primates (particularly maternal kin), but much less is known about the mechanisms that lead to such discrimination. High male reproductive skew and stable male dominance hierarchies typically lead to social systems where high-ranking males are related to infants and where many paternal sibling dyads co-reside. Capuchin monkeys (<i>Cebus capucinus</i>) have such a social system and exhibit father-daughter inbreeding avoidance, making them an excellent species in which to study the mechanisms of maternal and paternal kin discrimination. Here, we explore whether patterns of proximity during early development provide reliable cues about relatedness that females can later use in the context of mate choice. We also test the effectiveness of other possible cues to relatedness – adult male rank and age proximity – for identifying close genetic relatives.</p> <p>During their first year of life, females spent more time in proximity of alpha males than they did near subordinate adult males, and these alpha males were much more likely to be their fathers or grandfathers than were subordinate males. Infant females also spent more time near similarly aged peers than they did around older juvenile males in their groups. Although peers were more likely to be paternal half siblings than were non-peers, females did not discriminate between such paternal siblings and more distantly related male kin. Infant females appear to have available multiple, reliable cues for discriminating their direct paternal ancestors (fathers and grandfathers), but cues for detecting paternal half brothers appear to be less reliable in the population.</p>

<b>Time slot</b>	<b>15:15-15:45 (April 17<sup>th</sup>)</b>
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Title	<i>Fruits of Enlightenment: Foraging cognition in large-brained rainforest primates</i>
Abstract	<p>Despite appealing support for theories that argue that social complexity is the main force driving primate brain size evolution, it is still unclear how great apes, were able to afford the evolution of larger and more expensive brains than sympatric species (Byrne 1997). Recent studies suggest that the costs of evolutionary brain enlargement were overcome by a permanent increase in net energy intake, renewing interest in the role of ecological complexity in primate brain size evolution (Navarrete et al 2011). As relatively larger-brained primates, like great apes, show less seasonality in their net energy intake than smaller-brained species, larger brains are proposed to provide a “cognitive behavioral flexibility” that facilitates the consumption of nutritious foods during food scarce periods (cognitive buffer hypothesis; van Woerden et al. 2012). To date it remains unclear what this cognitive flexibility entails. In this presentation I will provide evidence for a variety of cognitive skills that larger-brained non-human primates can use to gain first access to newly ripened energy-rich fruit in a competitive and complex rain forest environment.</p>

<b>Time slot</b>	<b>16:35-17:30 (April 17<sup>th</sup>)</b>
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Title	<i>The evolutionary origins of human cognitive development: Insights from research on chimpanzees</i>
Abstract	<p>I compare cognitive development in humans with that of chimpanzees. Humans and chimpanzees are largely similar at early developmental stages, however, there remain several crucial differences. Chimpanzees lack social referencing ability and have been very rarely observed to engage in general imitation and active teaching. Young chimpanzees possess exceptional working memory capacities often superior to those of human adults. In contrast, their ability to learn the meaning of symbols is relatively poor. Human infants are typically raised by more than one adult, not only the mother, but also the father, siblings, grandparents, and the other members of the community. The human infant is characterized by the stable supine posture of the neonate that enables face-to-face communication via facial expressions, vocal exchange, manual gestures, and object manipulation because both hands are free. The stable supine posture helps to make us human. The development of social cognition in humans may be integrally linked to this mother-infant relationship and the species-specific way of rearing the children. In sum, based on the parallel effort of the fieldwork and the laboratory work of chimpanzees, I present possible evolutionary and ontogenetic explanations for aspects of cognition that are uniquely human.</p>