



HBES

Boise, Idaho 2017

HUMAN BEHAVIOR AND EVOLUTION SOCIETY

29th Annual Meeting
May 31 – June 3, 2017

Full Program



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Welcome to HBES 2017

Welcome to the 29th annual meeting of the Human Behavior and Evolution Society. The Department of Anthropology is excited to be hosting you this year at Boise State University. Following the format from the last few meetings, the conference begins with a plenary lecture on Wednesday afternoon and culminates with the Keynote Lecture on Saturday night. There are no Sunday sessions. There is a pre-conference, “Connecting Minds in Social Neuroendocrinology and Evolution” on Wednesday morning, and the 6th ISHE Summer Institute immediately follows HBES from Sunday to Tuesday.

To highlight the work of the best young HBES researchers, there are conference-wide New Investigator and Post-Doctoral Competition sessions on Friday afternoon. To support student mentorship, we are continuing the Graduate Student Luncheon, this year with five thematic sessions, including one for prospective graduate students. We received more than 150 sign-ups, demonstrating growing demand for mentorship. The Graduate Student Luncheon is being sponsored by the Dan Montgomery Northwest Evolution, Ecology, and Human Behavior (NWEHHB) Symposium Fund at the Boise State University Foundation. Dan set up an endowment for NWEHHB, our regional conference four years ago. Our NWEHHB symposium will resume in fall, 2018.

We hope you can get out and enjoy beautiful Boise while you are here. To that end, we scheduled the Wednesday Reception at the Boise Train Depot just south of campus on South Capital Blvd overlooking downtown Boise, and the BBQ on Friday night at Payette Brewery across and down the Boise River on the greenbelt approximately 1 mile by foot. The third annual gathering of the Women of HBES (WoHBES) will also occur on Friday evening immediately following the last afternoon session until 7:15pm (just before the start of the BBQ), also at Payette Brewery.

Throughout the conference, the Boise River Café (BRC) will be open for breakfast and lunch (including Sunday morning). The BRC is a cafeteria style, all-you-can-eat venue located in the first floor of the Student Union Building (the conference venue). Costs are \$7.18 for breakfast and \$9.60 for lunch (see map of the Student Union Building on page 17).

There are many people who helped to make this conference happen. We’d like to call out a few (see the next page for a full list). We are grateful to the Poster, New Investigator, and Post-Doctoral Award judges, who through their service are helping to highlight the accomplishments of young researchers. We thank the mentors facilitating the Graduate Student Luncheon sessions, helping a new generation of researchers with important guidance.

We’d like to give special thanks to our Graduate Assistant, Erica Jaeger, for helping to organize the event, and to Kathryn Delps who led the organizing committee until early March. We are grateful for all her early efforts. We thank our multitude of Student Volunteers who will be recognizable by their distinctive name tags. We received helpful advice and support from HBES members and officers. In particular, we’d like to thank Elizabeth Cashdan, Catherine Salmon, Lisa DeBruine, and Robert Kurzban for their help. And for advice from past meetings, we thank Laura Dane and Karthik Panchanathan.

Many people here at Boise State University helped us with the organization of this meeting. In particular, we’d like to thank Faith Brigham, Administrative Assistant in the Department of Anthropology, Emma Ballantyne from Conference Services, Mishae Fuselier and Lindsey Castle from Catering Services, and Vera Frolova in the Summer Housing Office.

And, we would like to thank our sponsors, in particular HBES, Dan Montgomery, Mark Rudin (Vice-President for Research and Economic Development at Boise State University), the journal Politics and Life Sciences, and Nature Human Behavior.

We hope you enjoy the conference, and find it as enjoyable as intellectually stimulating. If you have any questions or difficulties, please contact members of the Host Committee or Student Volunteers.

Kristin Snopkowski and John Ziker
Conference Organizers, on behalf of the HBES Host and Program Committees

Acknowledgements

Host Committee: John Ziker, Kristin Snopkowski, Kathryn Demps, Erica Jaeger

Program Committee: Laura Dane, Russell Jackson, Kristin Snopkowski, John Ziker

Poster Award Committee: Louis Calistro Alvarado, Steven Gangestad, Debra Lieberman

New Investigator Award Committee: Kermyt Anderson, Sarah Hill, Daniel Hruschka

Post-Doctoral Research Award Committee: Adrian Bell, Mary Shenk, Josh Tybur

Graduate (and Prospective Graduate) Student Lunch Mentors: Marco Del Giudice, Maryanne Fisher, Drew Gerkey, Ben Jones, Barry X. Kühle, Debra Lieberman, Sandeep Mishra, Karthik Panchanathan, Lars Penke, Gretchen Perry, David Puts, Tess Robertson, Mary Shenk, Katie Starkweather, Josh Tybur, Viviana Weekes-Shackelford

Graduate Student Lunch Organizer: Tessa Cappelle

Student Volunteers: Tessa Amend, Mattea Anderson, Ross Griffiths, Annemarie Hasnain, Katherine Kappelman, Peter Kappelman, Shelbie Labrum, Steve Lucas, Rebecca Magana, Kim Neagle, Danielle Schneider, Ollie Shannon, Sarah Takagi, Anne Vanwassenhove, Weston Wardle, Lauren Willows-Munro, Harper Wilson

Pre-conference Organizers: Jaime Palmer-Hague and Amanda Hahn

WoHBES (Women of HBES) Organizers: Gretchen Perry and Katie Starkweather

HBES Support: Elizabeth Cashdan, Catherine Salmon, Lisa DeBruine, Robert Kurzban

Book Exhibitors: Joella Morris (Library of Social Science) and Teresa Krauss (Springer)

Institutional Support and Sponsors: Faith Brigham (Boise State Department of Anthropology), Emma Ballantyne (Boise State Conference Services), Mishae Fuselier and Lindsey Castle (Boise State Catering Services), and Vera Frolova (Boise State Summer Housing Office), Mark Rudin (Vice President for Research and Economic Development at Boise State)

Other Sponsors: Dan Montgomery (Northwest Evolution, Ecology, and Human Behavior Symposium Fund), Politics and Life Sciences journal, Nature Human Behavior

HBES Officers

President Elect	Rob Kurzban
President	Elizabeth Cashdan
Past President	Mark Flinn
Treasurer	Catherine Salmon
Secretary / Archivist	Todd Shackelford
Student Representative	Tessa Cappelle
Council Member at Large (2017)	Clark Barrett
Council Member at Large (2017)	Lisa DeBruine
Council Member at Large (2019)	Steve Gaulin
Council Member at Large (2019)	Nancy Segal
Council Member at Large (2021)	Bernhard Fink
Council Member at Large (2021)	Maryanne Fisher

HBES Meetings

Publication Committee Meeting, Wednesday May 31 st	8:30 – 11am	Farnsworth
Executive Council Meeting, Wednesday May 31 st	11am – 2pm	Bergquist Lounge
Business Meeting, Friday June 2 nd	1 – 2:15pm	Jordan A/B/C

Registration

Wednesday, May 31 st	8:00 am – 6:00 pm in Student Union Building, Jordan Lobby
Wednesday, May 31 st	6:30 pm – 8:30 pm at <u>Welcome Reception, Boise Train Depot</u>
Thursday, June 1 st	8:00 am – 8:00 pm in Student Union Building, Jordan Lobby
Friday, June 2 nd	8:30 am – 6:00 pm in Student Union Building, Jordan Lobby
Saturday, June 3 rd	8:30 am – 6:00 pm in Student Union Building, Jordan Lobby

Boise River Café Hours

Breakfast:	7:30 am – 9:00 am	Wednesday - Sunday
Lunch:	1:00 pm – 2:30 pm	Wednesday – Saturday

Poster Set-Up

The Poster Session will be held in Jordan A/B/C from 6:00 – 8:00pm on Thursday, June 1st. Posters can be set up starting at 5:30pm on Thursday and need to be removed at the end of the poster session. If you are presenting a poster, please stand near your poster during the poster session. Appetizers will be provided.

Oral Presentation Sessions

All oral presentations will be 15 minutes in length with an additional 5 minutes for questions. If you are presenting, please have your talk downloaded to the laptop before your session begins. In non-symposium sessions, the last presenter will serve as the session chair.

Keynote Speaker



Michael Tomasello

Department of Developmental and Comparative
Psychology
Max Planck Institute for Evolutionary Anthropology

Human Collaboration

Saturday, June 3rd at HBES Banquet

For the past 20 years, my colleagues and I have been conducting comparative studies of great apes and human children. The early studies focused on social learning, the middle studies focused on “theory of mind”, and the most recent studies have focused on cooperation and communication. Throughout, our goal has been to determine what distinguishes humans from other great apes in terms of both their cognitive and their social capacities. Our current hypothesis is that whereas great apes are immensely intelligent and skillful as individuals, humans have found ways to amplify their cognitive and social skills by putting their heads together with others cooperatively in acts of shared intentionality.

Plenary Speakers

Peter B. Gray

Professor
Department of Anthropology
University of Las Vegas, Nevada



Sex, Babies, and Dogs: Evolutionary and Endocrine Aspects of Changing Human Families

Wednesday, May 31st 2:25 pm

Compared to great apes, several key features of human hunter-gatherer family life stand out: having more children at shorter inter-birth intervals, forming long-term reproductive partnerships, and investment by fathers and female relatives beyond their reproductive years. Behavioral reconstructions suggest derived features of human hunter-gatherer families evolved during the last several million years of *Homo*. As humans spread around the globe, a marvelous variety of human families has emerged and continues to change. Life history theory provides a functional approach, complemented by hormonal mechanisms, to structure how family members interact among themselves and with others. I discuss several key patterns intertwining human family change and hormones that differ from hunter-gatherer families. Almost all human children today are involved in formal education and many too in sports and school-based competitions organized by adults. How do adrenal hormones DHEA and androstenedione relate to children's learning and social competition? In great apes and hunter-gatherers, the bulk of female reproductive years are spent pregnant or in lactational amenorrhea. Yet fertility has plummeted in much of the world and inter-birth intervals differ from ancestral conditions. How do hormonal shifts across pregnancy and postpartum impact maternal care and partnership dynamics, including sex lives, of parents? Fathers play variable roles across human families. Male involvement in family life is often linked to lower testosterone, and also involves oxytocin and prolactin. In some societies, dogs are increasingly viewed as family members, with several studies indicating that interactions with a dog can increase human oxytocin levels. Lastly, I speculate about patterns of female and male reproductive senescence and underlying hormonal mechanisms in relation to partnership maintenance and grandparenting.



Rufus Johnstone

Professor
Department of Zoology,
University of Cambridge

The Evolution of Homosexual Mating Preferences

Wednesday, May 31st 6:30 p.m.

Explaining the widespread occurrence of homosexual mating preferences in humans represents a challenge to evolutionary biology, because these preferences are often correlated with reduced reproductive success. Numerous hypotheses have been proposed, suggesting possible adaptive benefits of homosexuality, or indirect selective effects that might explain its prevalence. We observe that, regardless of the validity of any particular hypothesis, local kin competition within social groups is predicted to influence the evolution and prevalence of homosexuality, through its influence on the fitness costs and benefits of reproduction or non-reproduction by males and females. We develop a general model of the evolution of homosexuality in a group-structured population, incorporating demographic factors such as sex-specific dispersal, as well as individual circumstances such as birth-order. We show that this kin-competition model explains several of the patterns observed in the distribution and prevalence of homosexuality, such as the effects of birth order and family size and sex ratio, as well as making testable predictions regarding cross-cultural variation, for which there is some support. Moreover, these predictions are robust to different assumptions about the genetic basis and adaptive benefits of homosexuality. Our results illustrate that in a highly social species such as our own, how selection acts on the reproductive decisions of one individual is closely tied to the decisions of others in the same social group. Consequently, we argue that demographically explicit models that incorporate local kinship dynamics and kin competition are essential to understand the evolution of behaviour and life history traits in humans and social animals more generally.

Valerie Curtis

Director of the Environmental Health Group,
London School of Hygiene & Tropical Medicine



Designing Human Behavior

Thursday, June 1st 9:00 a.m.

Our species exhibit a range of problematic behaviours that lead to poor health, social instability and environmental damage. A new breed of behavioural scientists offer to change our behaviour for the better via techniques such as priming and nudging. What can evolutionary biology bring to this nascent discipline? I argue that it brings three things: first it offers a means of analysing the causes of behavioural problems, (often mismatch or learning failure). Second, it explains the origins, purposes and structure of the motives that drive much of our behaviour. Third, in this diverse and competitive field an evolutionary perspective holds out the hope of disciplinary unity, (perhaps, one day). In this talk I show how tackling evolved motives has helped us to change key health-related behaviours in nutrition, hygiene, medical compliance and exercise, using an approach known as Behaviour Centred Design, and speculate as to how such evolutionary approaches could be applied to other behavioural ills.



Cristine Legare

Associate Professor
Department of Psychology,
University of Texas at Austin

The Evolution and Ontogeny of Ritual

Thursday, June 1st 2:15 p.m.

Convergent developments across social scientific disciplines provide evidence that ritual is a psychologically prepared, culturally inherited, behavioral trademark of our species. I will draw upon the anthropological and evolutionary science literatures to provide a psychological account of the social functions of ritual in group behavior. Solving the adaptive problems associated with group living requires psychological mechanisms for identifying group members, ensuring their commitment to the group, facilitating cooperation with their coalition, and maintaining group cohesion. I will examine evidence that the threat of social exclusion and loss of status motivates engagement in ritual throughout development and provide an account of the ontogeny of ritual cognition. The intersection of these lines of inquiry promises to provide new avenues for theory and research on the evolution and ontogeny of social group cognition.

Rebecca Sear

Reader

Department of Population Health,
London School of Hygiene & Tropical Medicine



Nothing in Evolution Makes Sense Except in the Light of Demography: Interdisciplinary Perspectives on the Family

Friday, June 2nd 9:00 a.m.

“God has chosen to give the easy problems to physicists” lamented two social scientists in 1975, referring to the challenges involved in understanding human behaviour. Despite significant progress since then in the study of human behaviour, one hurdle which still impedes progress is the existence of disciplinary boundaries which keep apart researchers studying similar behaviours. While the evolutionary behavioural sciences have a head start in this regard, in that they are already integrating some social and biological sciences, this talk will argue that they could go still further in integrating a greater range of disciplines into their research. This talk will particularly focus on how a better understanding of demography can help improve evolutionary analyses. It will then use the example of a research programme exploring how reproductive behaviour is influenced by the family, to illustrate the usefulness of such an interdisciplinary approach. This programme uses evolutionary theory as its framework, and tests one prediction from the hypothesis that humans are cooperative breeders: that reproductive behaviour will be influenced by the presence of family members. But it draws heavily on the methods of, and previous research from, demography. Cross-cultural data will be used to show that women and men are often sensitive to the presence of family members when making reproductive decisions, but how these influences play out is context-specific. Further, these analyses suggest both cooperative and competitive relationships within the family. Finally, the talk will consider the implications of this cooperative reproductive strategy. An understanding of the human family which incorporates relationships beyond the nuclear family may change our perspective on many topics of interest to evolutionary scientists, including parenting, mate choice, and the development of life history strategy.

Rebecca Bliege Bird

Professor
Department of Anthropology,
Penn State University



Landscapes of Gender: Social and Ecological Influences on the Division of Foraging Labor in Desert Australia.

Saturday, June 3rd 9:00 a.m.

Traditional perspectives on the gender division of labor focus on the evolved constraints of being a human female, including the requirements of child bearing and rearing. While these constraints are important, emphasizing them tends to produce overgeneralizations about the cross-cultural uniformity of the human gender division of labor, which leads to a lack of attention toward the social and ecological processes that pattern variability in how and why men and women work differently. Using data collected over a 16 year period in Western Australia, I explore how well some traditional expectations about the gender division of foraging labor explain sex differences in Martu foraging decisions, and how sharing, signaling, age, risk, and environmental variability influences the extent to which women and men forage differently.

Martie Haselton

Professor
Department of Psychology,
University of California, Los Angeles



The Hidden Intelligence of Hormones: How they Drive Desire, Shape Relationships, Influence Our Choices, and Make Us Wiser

Saturday, June 3rd 2:15 p.m.

Women's fertility is fleeting, spanning just a few days each month. Because sex can only lead to conception on these few fertile days, it is likely that important mating adaptations will be sensitive to information about a woman's location within the ovulatory cycle. A veritable explosion of recent work has tested this general notion, documenting many purported "cycle shifts" in women's behavior and men's responses to women. In this talk, I synthesize these findings, theoretically and using meta-analysis. The findings are set against the backdrop of several important controversies. First, biological scientists had argued that the extreme extent to which humans display extended sexuality (sex when conception is not possible) meant that humans had been "emancipated" from hormonal control. I argue that women do indeed possess an estrous-like state, though it has unique human features. Second, recent critics have asserted a false-positive problem in ovulation cycle findings. I present evidence that is somewhat mixed in this regard, but shows, overall, that ovulation cycle findings are generally robust and worthy of further discovery. Third, there is a long history of concerns that documenting links between women's hormones and their behavior will somehow undermine the endeavor to create equitable treatment of women and men. I argue that precisely the opposite is true and more focus in this research area, not less, will benefit women and inform crucial theoretical questions about the understudied nature of women's sexuality.

Schedule

Wednesday, May 31st

9am -12pm	Connecting Minds in Social Neuroendocrinology and Evolution Pre-conference – Hatch A/B				
Publication Committee Meeting 8:30am – 11am: Farnsworth			Executive Committee Meeting 11am – 2pm: Bergquist Lounge		
2:15 – 2:25pm	HBES Begins: Announcements, Introductions Jordan Ballroom D/E				
2:25 – 3:25pm	Peter Gray: Wednesday Afternoon Plenary Jordan Ballroom D/E Sex, Babies, and Dogs: Evolutionary and Endocrine Aspects of Changing Human Families				
3:25 – 3:45pm	Coffee Break Jordan Lobby				
Session Title	Advances in K-Factor Research	Cooperation, Conflict & Morality	Mating Preferences I	Hormones and Social Behavior	Mental Health
Room	Hatch A/B	Simplot A	Simplot C	Simplot B	Simplot D
3:45-4:05pm	Fast vs. Slow Values: A Life History Perspective on Schwartz Value Theory, Right Wing Authoritarianism, and Social Dominance Orientation Jeff Sinn	Which Setteth Fast the Mountains, Which Stilleth the Noise of the Seas: A Cross-Cultural Examination of Environmental Precarity, Religious Systems, and Cooperative Behavior Christina M. Carolus, Carol R. Ember, Ian A. Skoggard	Testing the facial homogamy hypothesis in a 3D sample of UK romantic partners Iris J. Holzleitner, Anthony J Lee, Vanessa Fasolt, Kieran J O'Shea, Benedict C Jones, Lisa M DeBruine	Men who recall more childhood gender nonconformity have higher salivary testosterone Kevin Rosenfield, Khytam Dawood, J. Michael Bailey, Talia Shirazi, Rodrigo Cardenas, S. Marc Breedlove, David Puts	The Social Causes of Suicidal Behavior in 53 Cultures Kristen Syme, Edward Hagen
4:05-4:25pm	Psychometrics and Human Life History Indicators George Richardson	“Moral Brain” vs. “Legal Brain”: a New fMRI Study of our Brain’s Different Response to the “Trolley Problem” as Moral & Legal Questions Mikihiko Wada, Ryo Oda	A bottom-up text analysis of a large sample of personal descriptions from online dating profiles Anthony J. Lee, Benedict C. Jones, Lisa M. DeBruine	Effects Of Psychosocial Stress On Financial And Social Decision-Making And Their Underlying Hormonal Mechanisms Dario Maestripieri, Nora Nickels	Empty
4:25-4:45pm	The K-SF-42: A New Short Form of the Arizona Life History Battery Aurelio José Figueredo	Social Networks, Demography, and Life History: Cooperative Production and Reproduction in Alaska Drew Gerkey	Personability as a Parenting Indicator and Attraction and Relationship Satisfaction Predictor Katherine A. Valentine, Norman P. Li, Andrea L. Meltzer, Ming-Hong Tsai	Neighborhood indices of socioeconomic disadvantage moderate associations between adrenarcheal hormones in middle childhood. Julian G. Simmons, Sarah L. Whittle, Lisa Mundy, Rachel Ellis, Louise Canterford, Nicholas Allen, George C. Patton	Do warriors in small scale societies suffer from combat stress? An ethnographic study with the Turkana of northwest Kenya. Matthew Zefferman, Sarah Mathew
4:45-5:05pm	Life History Strategy and Word Use in Free-Ranging College Students Joseph Manson	An Integrative and Comparative Analysis of Testosterone’s Functional Role in Competing Life History Models Louis Calistro Alvarado, Martin N. Muller, Melissa Emery Thompson, Magdalena Klimek, Ilona Nenko. Grazyna Jasienska	Sexual Dimorphism and Attractiveness in Asian and Caucasian Faces Ian Stephen, Darby L. H. Salter, Richard J. Stevenson	The role of synthetic copulins on men’s sexual behavior Megan Williams, Coren Apicella	Schizotypy and Sexual Intent Perception Danielle Wagstaff, George Van Doorn

Wednesday 5:05-5:15pm	Transition – Refill on coffee & snacks
5:15– 6:15pm	Rufus Johnstone: Wednesday Evening Plenary Jordan Ballroom D/E Kin conflict and the evolution of homosexual mating preferences
6:30-9:30pm	Welcome Reception – Train Depot 2603 W Eastover Terrace, Boise, ID 83706

Thursday, June 1st

Thursday 9:00 – 10:00am	Valerie Curtis: Thursday Morning Plenary Jordan Ballroom D/E Designing Human Behavior				
10:00-10:30am	Coffee Break Jordan Lobby				
Session Title	The Evolution of Punishment	Assessing Formidability and Dominance	Adaptive Health Behaviors	Mating Strategies	Life-History Tradeoffs
Room	Hatch A/B	Simplot A	Simplot C	Simplot B	Simplot D
10:30-10:50am	When good norms turn bad: Peer punishment used to enforce inefficient social norms <i>Toby Handfield, Klaus Abbink, Lata Gangadharan, John Thrasher</i>	Examining the Speed and Automaticity of Formidability Assessment Mechanisms <i>Patrick Durkee, Aaron Goetz, Aaron Lukaszewski</i>	The low prevalence of female smoking in the developing world: gender inequality or maternal adaptations for fetal protection? <i>Edward H. Hagen, Melissa J. Garfield, Roger J. Sullivan</i>	Marital Assortment by Wealth in Small-Scale Societies <i>David A. Nolin, Mary K. Shenk, Siobhán M. Mattison</i>	Functional coordination of human personality with socioecology and condition-dependent components of embodied capital <i>Kristine Joy Chua, Aaron W. Lukaszewski</i>
10:50-11:10am	No difference between second- and third-party punishment judgments <i>Kristopher Smith, Robert Kurzban</i>	Relationship between voice pitch and dominance ratings is mediated by inaccurate height perception <i>Marie M. Armstrong, David R. Feinberg</i>	The Psychology of Disease Avoidance: Situational and Physiological Antecedents of Social Bias <i>Anastasia Makhanova, E. Ashby Plant, Lisa Eckel, Larissa Nikonova, Joshua Ackerman, Jon Maner</i>	Do gay men and lesbians show sex differences in mate preferences? A meta-analysis <i>Angela Pirlott, Beata Czerwin, Shelby Olita</i>	Resource and Extrinsic Risk in Defining Fast Life Histories <i>Lei Chang, Hui Jing Lu</i>
11:10-11:30am	Reputation and deterrence: Rich inferences from third-party punishment <i>Rhea Howard, Max Krasnow</i>	Social Perception of Bodies and Faces <i>Danielle Morrison, Benedict C. Jones, Lisa M. DeBruine</i>	How pathogen cues shape impressions of foods: the omnivore's dilemma and functionally specialized conditioning <i>Joshua Tybur</i>	The female evolved inhibition hypothesis and gender differences in a go/no-go task <i>Espen Sjoberg, Geoff Cole</i>	Primes for mortality risk influence perceived life expectancy and some reproductive preferences in a large sample of US students and non-students <i>Lisa McAllister, Mary Shenk</i>
11:30-11:50am	Don't tread on me: third party punishment protests personal, potential mistreatment <i>Max Krasnow, Jinwon Lee, Rhea Howard, Andrew W. Delton</i>	Vocal signaling of physical strength in men <i>Greg Bryant, Katarzyna Pisanski</i>	Food Neophobia and Motion Sickness Susceptibility: Two Adaptations for Toxic 'Foods'? <i>Thomas Alley, Hannah Gilliam</i>	Do Humans Forage Optimally For Relationships? A Model Proposal <i>Samantha Cohen, Kristen Mark, Peter M. Todd</i>	Differential Resource Allocation: The Cost of Reproductive Effort <i>Tomás Cabeza de Baca, Clemens W. Janssen, Triin Janssen</i>

Thursday 11:50 – 12:00pm	Transition – Refill on coffee & snacks				
Session Title	Evolutionary Psychology: Biological Diversity & Genetics	Cognitive Mechanisms & Modularity	Research in Attractiveness	Perceiving Others	The Role of Risk in Decision-Making
Room	Hatch A/B	Simplot A	Simplot C	Simplot B	Simplot D
12:00-12:20pm	Human Biological and Psychological Diversity <i>Brian Boutwell, Bo Winegard, Benjamin Winegard</i>	Toward a Cognitive Evolutionary Account of Grief <i>Claire White, Daniel Fessler</i>	Women with the small waist sizes and low body mass indices judged attractive do not have better health and higher fertility. <i>William Lassek, Steven Gaulin</i>	The Effect of Methodology in Third-Party Kin Recognition Research <i>Vanessa Fasolt, Iris J Holzeitner, Anthony J Lee, Kieran J O'Shea, Benedict C Jones, Lisa M DeBruine</i>	Foraging in an uncertain world: An agent-based modeling approach to model food-sharing strategies in volatile environments <i>Marco Campenni, Lee Cronk, Athena Aktipis</i>
12:20-12:40pm	CANCELED	Evolved cognitive mechanisms reflect navigational injury. <i>Russell Jackson</i>	Own attractiveness and perceived relationship quality shape sensitivity in women's memory for other men on the attractiveness dimension <i>Christopher Watkins, Mike Nicholls, Carlota Batres, Dengke Xiao, Sean Talamas, David Perrett</i>	Biracial Cues of Intergroup Alliance: Effects on Snap Perception and Social Judgment <i>X.T. (Xiao-Tian) Wang, Jose Ramon Dominguez, Kennidy Asche</i>	Women's Occupations and Risk Among the Shodagor of Bangladesh <i>Katie Starkweather, Mary Shenk, Richard McElreath</i>
12:40 - 1:00pm	Genetic confounding of the relationship between father absence and age at menarche <i>Nicole Barbaro, Brian B. Boutwell, J.C. Barnes, Todd K. Shackelford</i>	Why evolutionary psychology should abandon modularity <i>David Pietraszewski, Annie E. Wertz</i>	Willingness to Share with YOU Matters: Why Generosity is Attractive in Romantic and Cooperative Partner Choice <i>Sakura Arai, Michael Barlev, Leda Cosmides, John Tooby</i>	Pairs Of Genetically Unrelated Look-Alikes: Further Tests Of Personality Resemblance And Social Affiliation <i>Nancy Segal, Brittney Hernandez, Jamie Graham, Ulrich Ettinger</i>	The Female Voice: Cyclical and Contextual Variation in Acoustics <i>Melanie Shoup-Knox, Grant Ostrander, Gabrielle Reimann, Nathan R. Pipitone</i>
1:00 – 2:15pm	Lunch – Graduate Student and Prospective Graduate Student Lunch Rooms will be assigned at registration				
2:15 - 3:15pm	Cristine Legare: Thursday Afternoon Plenary Jordan Ballroom D/E The evolution and ontogeny of ritual				
3:15 – 3:40pm	Coffee Break Jordan Lobby				

Thursday Session Title	Frontiers in Friendship and Fitness Interdependence: A Multi-Method Approach to Understanding Cooperative Relationships Part 1	Disgust	Sex Similarities, Sex Differences, and Sexual Antagonisms Part 1	Economic Games: Validity and Framing Effects	Leadership & Conflict
Room	Hatch A/B	Simplot A	Simplot C	Simplot B	Simplot D
3:40-4:00pm	Fitness interdependence and the study of cooperation: Toward a consensus <i>Athena Aktipis, Joe Alcock, Gerald Wilkinson, Oliver Scott Curry, Daniel Sullivan, Gilbert Roberts, Daniel Balliet, Daniel Sznycer, Andres Munoz, Pam Winfrey, Jessica Ayers, Helen Wasielewski, Amy Boddy, Jaimie Arona Krems Lee Cronk</i>	CANCELED	Sexual Conflict in Human Mating <i>David Buss</i>	Are offers in an ultimatum game a good measure of behavioral cooperation?: A case study from the Ecuadorian Amazon <i>James Zerbe, Mateo Penaherrera Aguirre, John Q. Patton</i>	Adaptive Followership and the Context of Politics: How Evaluations of Political Leaders Integrate Contextual Information and Trait-Specific Impressions <i>Lasse Laustsen, Michael Bang Petersen</i>
4:00 – 4:20pm	Fitness interdependence shapes helping decisions <i>Daniel Sznycer, Daniel Sullivan, Olmo van den Akker, Matt Gervais, Andres Munoz Castro, Lee Cronk, Athena Aktipis</i>	Why are injuries disgusting? <i>Tom Kupfer</i>	The Effects of Paternal Disengagement on Women's Perceptions of Male Mating Intent <i>Sarah Hill, Danielle J. DelPriore, Bruce J. Ellis, Randi P. Proffitt-Leyva</i>	Economic Games among the "Mean" Ik <i>Cathryn Townsend, Lee Cronk, Athena Aktipis</i>	Leadership among transitional hunter-gatherers in Southwest Ethiopia <i>Zachary Garfield, Edward Hagen</i>
4:20-4:40pm	Reciprocity creates interdependence, and vice versa; or why you should even help when anonymous <i>Pat Barclay</i>	The interplay of sexual arousal and disgust: Current research and future directions <i>Florian Zsok</i>	Academy Awards, Pulitzer Prizes, and Blockbuster Hits: Sex Differences and Similarities in Competitive Success <i>Douglas Kenrick, Jaimie Arona Krems, David Lundberg-Kenrick, Zachary Airington</i>	The impact of explicit culturally transmitted frames on economic decision making <i>Aaron Lightner, Edward Hagen, Pat Barclay</i>	Gendered Violence and Male Warriors: Public Reactions to Female Terrorism <i>Miriam Lindner, Lasse Lindekilde</i>
4:40-4:50pm	Transition – Refill on coffee & snacks				

Thursday Session Title	Frontiers in Friendship and Fitness Interdependence: A Multi-Method Approach to Understanding Cooperative Relationships Part 2	Future Discounting	Sex Similarities, Sex Differences, and Sexual Antagonisms Part 2	Sport as Inter-Group Competition	Politics & Political Frames
Room	Hatch A/B	Simplot A	Simplot C	Simplot B	Simplot D
4:50-5:10pm	Friends, allies, and companions: How modes of fitness interdependence shape social categories <i>Lee Cronk, Padmini Iyer, Dennis Sonkoi, Athena Aktipis</i>	Cross-cultural variation in children's risk and time preferences <i>Dorsa Amir, Matthew Jordan, Katherine McAuliffe, Claudia Valeggia, Lawrence G. Sugiyama, Richard G. Bribiescas, Yarrow Dunham</i>	Mating competition, mobility, and wayfinding: A comparison of three societies <i>Elizabeth Cashdan, Helen Davis, Karen Kramer, Layne Vashro</i>	Evolutionary perspectives on coalitional psychology: Insights from allegiance displays in university sports rivalries <i>Daniel Kruger</i>	Why Politics Makes Strange Bedfellows: The Alliance Theory of Political Ideology <i>David Pinsof, Martie Haselton, David Sears</i>
5:10-5:30pm	Friendship jealousy: A functional emotion for protecting valued cooperators? <i>Jaimie Arona Krems, Keelah E. G. Williams, Douglas T. Kenrick, Athena Aktipis</i>	Using Life History Theory to investigate the influence of environmental reliability on children's behaviour during the Marshmallow Test <i>Paz Fortier, Louis A. Schmidt</i>	Individual Differences in Intrasexual Competitiveness <i>Bram Buunk</i>	Coalition Formidability Assessment Via Intergroup Team Play Fighting <i>Michelle Scalise Sugiyama, Marcela Mendoza</i>	Coalitional identity theory <i>John Tooby, Leda Cosmides</i>
5:30-5:50pm	Discussant <i>Daniel Hruschka</i>	Collective action and the evolution of social norm internalization <i>Sergey Gavrillets, Peter J. Richerson</i>	Sex Differences in the Motivations for Intergroup Bias <i>Melissa McDonald, Mark van Vugt, Jim Sidanius, Carlos David Navarrete</i>	Trash-Talking and Trolling <i>Kevin Kniffin, Dylan Palacio</i>	Evolutionary Psychology and the Transmission of Political Frames in Social Networks: The Case of Episodic News Frames <i>Lene Aarøe, Michael Bang Petersen</i>
6:00 – 8:00pm	Evening Poster Session – Appetizers Jordan A/B/C				

Friday, June 2nd

9:00–10:00am	Rebecca Sear: Friday Morning Plenary Jordan Ballroom D/E Nothing in evolution makes sense except in the light of demography: interdisciplinary perspectives on the family				
10:00–10:30am	Coffee Break Jordan Lobby				
Friday Session Title	Kinship	Female Cooperation and Competition	Sexual Psychology	Morality I	The Endocrinology of Mating & Mate Preferences
Room	Hatch A/B	Simplot A	Simplot C	Simplot B	Simplot D
10:30-10:50am	Perceived resemblance is affected by both actual and perceived kinship <i>Lisa DeBruine, Vanessa Fasolt, Nikola Markova, Iris J. Holzleitner, Anthony J. Lee, Benedict C. Jones, Kieran J. O'Shea</i>	Intrasexual Competition with Women Who are Mothers <i>Maryanne Fisher</i>	The Multiple Orgasm Gaps: Gender, Sexual Orientation, and Sexual Practices Matter (Alot). <i>David Frederick, Justin Garcia, Elizabeth Lloyd</i>	Mapping Morality with a Compass: Testing the theory of 'morality as cooperation' with a new questionnaire <i>Oliver Scott Curry, Matthew Jones Chesters, Caspar J. Van Lissa</i>	Hormonal correlates of between-and within-women variation in sociosexuality <i>Talia Shirazi, Heather Self, Khytam Dawood, Kevin Rosenfield, Triana Ortiz, Justin Carre, David Puts</i>
10:50-11:10am	Cues to paternity: An evaluation of offspring resemblance, partner fidelity, and maternal perinatal association <i>Joseph Billingsley, Jan Antfolk, Pekka Santtila, Debra Lieberman</i>	The psychobiology of female friendships: How hormonal synchrony relates to friendship quality <i>Ashley Rankin, Jennifer Byrd-Craven</i>	Duration of Cunnilingus Predicts Estimated Ejaculate Volume in Humans <i>Todd Shackelford, Michael N. Pham, Austin John Jeffery, Yael Sela, Justin T. Lynn, Sara Trevino, Zachary Willockx, Adam Tratner, Paul Itchue, Bernhard Fink, Melissa M. McDonald</i>	What works on us? Conclusions drawn from five studies of implicit visual stimuli <i>Romana Žihlaviníková, Andrej Mentel, Ivan H. Tuf</i>	Conjugal Separation and Reunion: The Biology of a Religious Tradition <i>Rick Goldberg</i>
11:10-11:30am	Not just paternity uncertainty. A new model explaining the matrilineal bias in alloparental investment. <i>Gretchen Perry, Martin Daly</i>	Bless her heart!: Apparent concern is advantageous for women's reputational competition? <i>Tania Reynolds, Roy F. Baumeister</i>	Effects of Touch on Coupled Americans' Relationship and Sexual Satisfaction <i>Justin Garcia, Amanda N. Gesselman, Kristen P. Mark, David A. Frederick</i>	The evolution of non-consequentialist moral judgment <i>Tadeq Quillien, Leda Cosmides</i>	Women's preferences for facial masculinity are not related to their hormonal status <i>Benedict Jones, Amanda Hahn, Claire Fisher, Hongyi Wang, Michal Kandrik, Chengyang Han, Vanessa Fasolt, Anthony Lee, Iris Holzleitner, Craig Roberts, Anthony Little, Lisa DeBruine</i>
11:30-11:50am	Fertility, kinship and the evolution of mass ideologies <i>Tamas David-Barrett, Robin Dunbar</i>	Does gossip help initiate new social bonds? Moderating role of individual differences. <i>Konrad Rudnicki, Charlotte De Backer, Carolyn Declerck</i>	Sperm competition in marriage: Semen displacement, male rivals, and spousal discrepancy in sexual interest <i>Tara DeLecce, Michael N. Pham, Todd K. Shackelford</i>	Fear the Unseen: Supernatural Belief and Hyperactive Agency-Detection in Virtual Reality <i>Adam Tratner, Todd K. Shackelford, Virgil Zeigler-Hill, Jennifer Vonk</i>	Does the interaction between cortisol and testosterone predict men's facial attractiveness? <i>Michal Kandrik, Amanda Hahn, Chengyang Han, Joanna Wincenciak, Claire Fisher, Lisa DeBruine, Benedict Jones</i>

11:50-12:00pm	Transition – Refill on coffee & snacks				
Friday Session Title	Academic Careers in Evolutionary Psychology at Teaching Focused Institutions	Sex Differences	Music & Voice	Mating Preferences II	Pathogen-related Adaptations
Room	Hatch A/B	Simplot A	Simplot C	Simplot B	Simplot D
12:00-12:20pm	Honest Signaling? The Importance of Being a Good Teacher & a Good Citizen at a Small College <i>Francis T. McAndrew</i>	Sex differences in Social Status Attributes in a Small-Scale Amazonian Community <i>John Patton</i>	Universality of infant-directed music <i>Samuel Mehr, Manvir Singh, Nori Jacoby, Hunter York, Timothy O'Donnell, Max Krasnow, Luke Glowacki</i>	Do Women with Children Exploit Male Sexual Psychology? <i>Viviana Weekes-Shackelford, Nicole Barbaro, Justin Mogilski, Giovanni Randazzo</i>	Preliminary Evidence that <i>Ascaris lumbricoides</i> (Roundworm) Infection is Associated with Mood <i>Joshua Schrock, Theresa Gildner, Christopher Harrington, Melissa Liebert, Dorsa Amir, Samuel Urlacher, Josh Snodgrass, Lawrence Sugiyama</i>
12:20-12:40pm	Does size matter? Doing “it” at a small school. <i>Catherine Salmon</i>	Pain don't hurt: A life history theoretical explanation of sex differences in pain <i>Chance Strenth</i>	Evaluating the origins of music in individuals with imprinting disorders <i>Jennifer Kotler, Sam Mehr, Alena Egner, David Haig, Max Krasnow</i>	Female mating preferences and socio-economic status: A factorial survey design. <i>Livia Ridolfi, Maurizio Pisati</i>	Contemporary Parasite Stress Curvilinearly Correlates with Outgroup Trust: Cross-Country Evidence from 2005-2014 <i>Jinguang Zhang</i>
12:40-1:00pm	Popping your Small College’s Evolutionary Psychology Cherry: How to Propose, Promote, and Popularize the EP Course and Perspective at Colleges with Neither <i>Barry X. Kuhle</i>	Can an Evolutionary Analysis Dissolve the Paradox of Horror? A Quantitative Study of Individual Variables and Horror Media Use <i>Jens Kjeldgaard-Christiansen, Mathias Clasen, John A. Johnson</i>	None	Willingness to physically protect in romantic and cooperative partner choice <i>Michael Barlev, Sakura Arai, Leda Cosmides, John Tooby</i>	What does infectious disease look like in the mind? A reverse correlation approach <i>Nicholas Michalak, Joshua Ackerman</i>
1:00 – 2:15pm	Lunch – HBES Business Meeting Jordan A/B/C				
2:15 - 2:35pm	New Investigator Award Finalists Jordan Ballroom D/E	Oxytocin and vulnerable romantic relationships <i>Nicholas Grebe, Melissa Emery Thompson, Steven W. Gangestad</i>			
2:35 - 2:55pm		Seven Pillars of Sexual Morality: Development and Assessment of the Sexual Morality Inventory <i>Kelly Asao, David Buss</i>			
2:55 - 3:15pm		Religion, Confidence, and Warfare: Priming supernatural agency elevates group confidence in a combat simulation experiment <i>Jeremy Pollack</i>			
3:15 - 3:40pm	Coffee Break Jordan Lobby				

Friday 3:40 – 4:00pm	Post-Doctoral Research Award Finalists Jordan Ballroom D/E	The Behavioral Immune System is Designed to Avoid Infected Individuals, Not Outgroups <i>Florian van Leeuwen, Michael Bang Petersen</i>			
4:00 – 4:20pm		The Crowded Life Is a Slow Life: Population Density and Life History Strategy <i>Oliver Sng, Steven Neuberg, Michael E. W. Varnum, Douglas T. Kenrick</i>			
4:20 - 4:40pm		The Social Contagion of Overconfidence <i>Joey Cheng, Cameron Anderson, Elizabeth R. Tenney, Sebastien Brion, Don A. Moore, Jennifer M. Logg</i>			
Friday Session Title	Robust Patterns in Ovulation Research	Modeling Cooperation	Social Interaction	Mate Value	Environmental Cues & Responses
Room	Hatch A/B	Simplot A	Simplot C	Simplot B	Simplot D
4:50-5:10pm	New Tests of the Pair-Bond Theory of Extended Sexuality: Women's In-Pair and Extra-Pair Sexual Interests as a Function of Conception Risk and Relationship Satisfaction <i>Steven Gangestad, Tran Dinh, Martie Haselton</i>	Modeling the world or hacking the model? Assessing recent models of the evolution of generosity in one-shot encounters <i>Andrew W. Delton, Max M. Krasnow</i>	How to train your boyfriend: Integrating evolutionary psychology and behaviorist learning theory <i>Diana Fleischman</i>	"Weighting" to find the right person: Integrating traits to evaluate mate value <i>Jordann Brandner, Gary L. Brase</i>	To Eat Or Not To Eat?: An Unpredictability Schema, Body Awareness, And Eating In The Absence Of Hunger <i>Randi Proffitt Leyva, Sarah Hill</i>
5:10-5:30pm	Ovulatory cycle shifts in female extra- and in-pair sexual desire in two large pre-registered studies. <i>Ruben Arslan, Katharina Schilling, Tanja M. Gerlach, Lars Penke</i>	Aristophilia as the evolutionary engine that explains true altruism, altruistic punishment, cultural evolution and language in Humans <i>Juan Perote-Peña</i>	Does Fat = Fat? Does Fat = Negative? An Affordance- Management Approach to Understanding the Nuances of Fat Stigma <i>Steven Neuberg, Jaimie Arona Krems</i>	Euclidean Mate Preference Integration Across 45 Countries <i>Daniel Conroy-Beam</i>	Life History Evolution and How Humans Perceive (and Misperceive) Mortality Rates <i>Mary Shenk, Mary C. Towner, Amber Cox, Nurul Alam</i>
5:30-5:50pm	Menstrual cycle shifts in female mate preferences for male body masculinity: An estrus effect instead of good genes sexual selection? <i>Julia Jünger, Tobias Kordsmeyer, Lars Penke</i>	Sharing for Survival: Cultural Strategies for Mitigating Risk <i>Helen Wasielewski, Marco Campenni, Lee Cronk, Athena Aktipis</i>	People prefer those who value them over those who benefit them <i>Tess Robertson, Max Krasnow, Julian Lim</i>	CANCELED	Can an Unpredictable Childhood Environment Enhance Working Memory? Testing the Sensitized- Specialization Hypothesis <i>Ethan Young, Vladas Griskevicius, Jeffry Simpson, Theodore Waters, Chiraag Mittal</i>
6:00-7:15pm	WoHBES (Women of HBES) – Payette Brewing Company 733 S Pioneer St, Boise, ID 83702				
7:30pm -	Food Trucks at Payette Brewery – Starts at 7:30pm 733 S Pioneer St, Boise, ID 83702				

Saturday, June 3rd

9:00-10:00am	Rebecca Bliege Bird: Saturday Morning Plenary Jordan Ballroom D/E Landscapes of gender: social and ecological influences on the division of foraging labor in desert Australia				
10:00-10:30am	Coffee Break Jordan Lobby				
Saturday Session Title	Infidelity Threat & Jealousy	Life History & the Dark Triad	Improving our Science	Morality II	Fertility Outcomes
Room	Hatch A/B	Simplot A	Simplot C	Simplot B	Simplot D
10:30–10:50am	Are Sex-Typical Jealousy Responses Related to Degree of Heterosexual Orientation? A Comparison of Homosexual, Bisexual, Pansexual, Transsexual, and Heterosexual Adults <i>Mons Bendixen Ingrid G. Bergendahl, David P. Schmitt, Leif Edward Ottesen Kennair</i>	Using Multidimensional Measures of Mate Value Discrepancies to Understand the Dark Triad and Relationship Satisfaction <i>Cari Goetz, Kelsey Meyer</i>	Evolutionary Psychology and Replicability in the Behavioral Sciences <i>Gary Brase</i>	Ecology shapes moral judgments towards food-wasting behavior: Evidence from the Yali of West Papua, the Ngorongoro Maasai, and Poles <i>Michal Misiak, Marina Butovskaya, Piotr Sorokowski</i>	Are children more valuable at school or at home? Testing the assumptions underlying evolutionary models of the demographic transition in rural Tanzania <i>Sophie Hedges, Rebecca Sear, Jim Todd, Mark Urassa, David W. Lawson</i>
10:50-11:10am	CANCELED	Dark and Dirty: How disease cues influence mate preferences differentially across levels of the Dark Triad Traits. <i>Laura K Dane, Peter K Jonason, Hailea Williams, Caitlyn O'Neill</i>	Failure to Replicate can be a Scientific Opportunity <i>Elisabeth Oberzaucher</i>	A Room So Quiet and Empty It Hurts: Reassessing Suicide Risk Assessment <i>Andy Thomson</i>	Is fertility after the demographic transition maladaptive? <i>Rosemary Hopcroft</i>
11:10-11:30am	Sex differences in jealousy within monogamous and consensually non-monogamous romantic relationships <i>Justin Mogilski, Simon Reeve, Syllis Nicolas, Sarah Donaldson, Lisa Welling</i>	Life History Theory and Dark Triad Traits across Cultures: Do Men's and Women's Machiavellianism, Narcissism, and Psychopathy Adaptively Emerge in Different Ways across Ecological Conditions? <i>David Schmitt</i>	"Above all else show the data": visualising differences in visualisations across the behavioural sciences <i>Gert Stulp, Tim W. Fawcett, Louise Barrett, Thomas V. Pollet</i>	Social epistasis amplifies the fitness costs of deleterious mutations, engendering rapid fitness decline among modernized populations <i>Michael A. Woodley of Menie, Matthew A. Sarraf, Radomir N. Pestow, Heitor B. F. Fernandes</i>	Understanding fertility in light of forced dispersal: variation across American Indian women in early Oklahoma <i>Mary C. Towner, Kermyt G. Anderson, Mary K. Shenk</i>
11:30-11:50am	Cross cultural perceptions of jealousy <i>Sean Prall, Brooke Scelza</i>	Associations between personality traits and mating strategies <i>Rei Shimoda, Anne Campbell, Robert Barton</i>	The Natural Selection of Bad Science <i>Paul Smaldino, Richard McElreath</i>	CANCELED	Sexual Conflict and Resolution Among Indonesian Couples <i>James Nelson, Kristin Snopkowski</i>
11:50-12:00pm	Transition – Refill on coffee & snacks				

Saturday Session Title	Evolutionary Personality Psychology	Fairness & Cheater Detection	The Attractiveness of Facial Color	Cultural Evolution	Altruism & Competition in Games
Room	Hatch A/B	Simplot A	Simplot C	Simplot B	Simplot D
12:00–12:20pm	Effects of male testosterone and cortisol reactivity on self- and observer-rated personality states in a competitive mating context <i>Tobias Kordsmeyer, Lars Penke</i>	Fairness: What it is, isn't, and might be for <i>Alex Shaw</i>	Cross-cultural differences in facial attractiveness judgments: Evidence from White UK and Chinese participants' preferences for experimentally manipulated facial coloration <i>Chengyang Han, Hongyi Wang, Amanda Hahn, Claire Fisher, Michal Kandrik, Vanessa Fasolt, Danielle Morrison, Anthony Lee, Iris Holzleitner, Lisa DeBruine, Benedict Jones</i>	The Cultural Evolution of Economic Development <i>Adam Flitton, Thomas Currie</i>	Ontogeny and mechanisms of coalitional competition: Acute hormone responses among juvenile boy soccer players in Hong Kong <i>Tim McHale, Wai-chi Chee, Jonny Chan, David Zava, and Peter B. Gray</i>
12:20-12:40pm	An integrative study of facultative personality calibration <i>Christopher von Borell, Tobias Kordsmeyer, Tanja M. Gerlach, Lars Penke</i>	What is fairness? Evidence that fairness judgments reflect the demands of a biological market of long-term cooperative relationships <i>Adar Eisenbruch, James Roney</i>	Visual perception of British women's skin color distribution in two non-industrialized societies, the Maasai and the Tsimane <i>Bernhard Fink, Marina L. Butovskaya, Piotr Sorokowski, Paul J. Matts</i>	A test of competing hypotheses concerning the impact of demography on cultural evolution <i>Brea McCauley, Mark Collard</i>	Altruistic giving before and after a natural disaster <i>Tom Vardy, Quentin Atkinson</i>
12:40-1:00pm	Contribution of rare genetic variants to intelligence and personality revealed by genomic analysis of family data <i>Lars Penke, W. David Hill, Ruben C. Arslan, Charley Xia, Michelle Luciano, Carmen Amador, Pau Navarro, Caroline Hayward, Reka Nagy, David J. Porteous, Andrew McIntosh, Ian J. Deary, Chris S. Haley</i>	Stingy, Greedy, or Bad Lannister? Specialized Cheater Detection Mechanisms in Response to Different Selection Pressures <i>Andres Munoz, Daniel Sznycer, Lee Cronk, Athena Aktipis</i>	The carotenoid beta-carotene enhances facial color, attractiveness and perceived health, but not actual health, in humans <i>Yong Zhi Foo, Gillian Rhodes, Leigh W. Simmons</i>	Is the cultural boundary also the moral boundary? A cross-cultural test of cultural group selection <i>Carla Handley, Sarah Mathew</i>	The Psychology of Common Knowledge Explains the Appearance of Altruistic and Moral Motivation <i>William McAuliffe, Michael E. McCullough</i>
1:00-2:15pm	Lunch on own				
2:15-3:15pm	Martie Haselton: Saturday Afternoon Plenary Jordan Ballroom D/E The hidden intelligence of hormones: How they drive desire, shape relationships, influence our choices, and make us wiser				
3:15-3:40pm	Coffee Break Jordan Lobby				

Saturday Session Title	Primate Social Interactions	Parent-offspring Conflict	Evolution of Brains, Cognition, and Use of Fire	Sex Differences in Sex	Social Learning
Room	Hatch A/B	Simplot A	Simplot C	Simplot B	Simplot D
3:40-4:00pm	Complexity and play: resource availability changes social network structure of wild bonobos <i>Isabel Behncke, Jorge Alexis Castillo, Tamas David-Barret, Carlos Sickert-Rodriguez</i>	Filial Piety, Altruism, and Self-Interest in Confucian Heritage Culture <i>Ryan Nichols, Liqi Zhu, Mariann Howland, Huangfu Gang</i>	Evolving Pleistocene climates caused the evolution of human brains <i>Peter Richerson</i>	Sex and the perceived effectiveness of flirtation techniques <i>T Joel Wade, Andrea Feldman</i>	The seeds of social learning <i>Annie Wertz</i>
4:00-4:20pm	Male care and life history traits among primates: A comparative analysis <i>Kermyt Anderson, Alexandra Sheldon</i>	Parent-offspring conflict over mate choice: An experimental investigation using Chinese marriage markets <i>Jeanne Bovet, Eva Raiber, Weiwei Ren, Charlotte Wang, Paul Seabright</i>	Hypotheses of primate cognitive evolution compared: Phylogenetic analyses of ethological counts of behavior and neuroanatomical indicators with 69 species <i>Heitor B. F. Fernandes, Michael Woodley of Menie, Jan te Nijenhuis</i>	Sexual double standards and sexual hypocrisy: partner attractiveness as a function of sexual history <i>Leif Edward Ottesen Kennair, Mons Bendixen, David M. Buss</i>	Conditions for the evolution of punishment and cooperation without relying on cultural group selection. <i>Shuhei Tsuchida, Masanori Takezawa</i>
4:20-4:40pm	The Russians are coming...to evolutionary psychology (really they've been here awhile, but few people know) <i>Patrick Drumm, Irina Mironenko</i>	Parent-Offspring Conflict, Arranged Marriage, and Female Choice: A Case Study of the Shuar <i>Elizabeth G. Pillsworth, H. Clark Barrett</i>	Chimpanzees in fire- altered landscapes: investigating foundations for hominin fire use <i>Nicole M. Herzog, Jill D. Pruett, Kristen Hawkes</i>	Sexy Ads Make Hungry Men Financially Impatient <i>Tobias Otterbring, Yael Sela</i>	A Cross-Disciplinary Survey of Beliefs about Human Nature, Culture, and Science <i>Joseph Carroll, John Johnson, Catherine Salmon, Jens Kjeldgaard-Christiansen, Mathias Clasen, Emelie Jonsson</i>
4:40-4:50pm	Transition – Refill on coffee & snacks				

Saturday Session Title	Cooperative Behavior	Paternal Investment and Daughters' Sociosexuality: Examining Perceptual, Attitudinal, and Behavioral Mediators	Evolutionary Approaches to Forgiveness	Identity & Stereotypes	Economic Returns & Outreach
Room	Hatch A/B	Simplot A	Simplot C	Simplot B	Simplot D
4:50-5:10pm	The ladder of charity <i>Julian De Freitas, Peter DeScioli, Kyle Thomas, Steven Pinker</i>	Low Paternal Investment, Perceptions of Male Sexual Interest, and Women's Sociosexuality: Testing for Mediation <i>Danielle DelPriore, Randi P. Proffitt Leyva, Sarah E. Hill, Bruce J. Ellis</i>	From error costs to error probability: The case of forgiveness decisions <i>Jolene Tan, Shenghua Luan</i>	Ethnic Markers and the Evolution of Culture: From Theory to Ethnographic Applications <i>Adrian Bell</i>	Is the Free Market Fair? <i>Emily Stone</i>
5:10-5:30pm	Elevation: An emotion for adaptively recalibrating cooperativeness <i>Adam Sparks, Daniel M. T. Fessler, Colin Holbrook, Anne Pisor, Theo Samore, Leonid Tiokhin</i>	Intrasexual Competitiveness and Non-Verbal Seduction Strategies to Attract Males: A Study among Teenage Girls from Curaçao <i>Odette van Brummen-Girigori, Abraham P. Buunk</i>	Do People's Perceptions of a Transgressor's Relationship Value Cause Forgiveness? <i>Daniel Forster, Michael E. McCullough</i>	Adoption as a social marker: Innovation diffusion with outgroup aversion <i>Vicken Hillis, Paul Smaldino, Marco Janssen, Jenna Bednar</i>	Undergraduate Perceptions of Arguments Against Evolutionary Psychology <i>Jeffrey L. Niehaus</i>
5:30-5:50pm	Foundations of social decision making: The psychophysics of welfare tradeoffs <i>Jason Wilkes</i>	Impact of Fathers on Parental Monitoring of Daughters and their Affiliation with Sexually Promiscuous Peers: A Genetically and Environmentally Controlled Sibling Study <i>Bruce Ellis, Danielle J. DelPriore, Gabriel L. Schlomer</i>	Simply Saying 'Sorry' Is Insufficient to Communicate Conciliatory Intention: An fMRI Study of Forgiveness in Response to Apologies <i>Yohsuke Ohtsubo, Masahiro Matsunaga, Hiroki Tanaka, Kohta Suzuki, Fumio Kobayashi, Eiji Shibata, Reiko Hori, Tomohiro Umemura, Hideki Ohira</i>	Do Mexican immigrants work hard for low wages? When the same base stereotype leads to very different affordance stereotypes and prejudices <i>Cari Pick, Steven Neuberg</i>	'On the Origin of Art': Overview of a major museum exhibition that presented four competing theories about the adaptive functions of human visual arts <i>Geoffrey Miller</i>
6pm – 9pm	Banquet Presentation of Awards Michael Tomasello: Keynote Jordan A/B/C/D/E Human Collaboration				

Poster Presentations

*ordered alphabetically by first author

1. **CANCELED**
2. **YouTube: A Twenty-first Century Gurukul** Naga Shilpa Alamuri (Department of Psychology, Central Michigan University), Stephen M. Colarelli (Central Michigan University)
3. **Self-reported Health is Related to Mate Value in Undergraduate Men and Women** Graham Albert (Boston University), Steven Arnocky (Nipissing University)
4. **Who Should We Trust Sexually? Personality Traits as Predictors of Sexual Infidelity** Emma Altgelt (Florida State University), Melanie Reyes (Florida State University), Juliana E. French (Florida State University), Andrea L. Meltzer (Florida State University), James K. McNulty (Florida State University)
5. **The evolution of gendered toxin defense pathways: Smoking, ethnicity, and reproduction** Tiffany Alvarez (Washington State University)
6. **Why do friendships end? Investigating features of same-sex friendship dissolution** Jessica Ayers (Arizona State University), Jaimie Arona Kreams (Arizona State University), Athena Aktipis (Arizona State University)
7. **The Target of Male Mate Guarding is Predicted by the Initiator of Infidelity** Nicole Barbaro (Oakland University), Steven Ford (Oakland University), Todd K. Shackelford (Oakland University), Virgil Zeigler-Hill (Oakland University)
8. **Rational Moral Intuitions** María Teresa Barbato (Social Complexity Research Center (CICS), Chile), Leda Cosmides (Center for Evolutionary Psychology, University of California Santa Barbara), Danie Sznycer (Center for Evolutionary Psychology, University of California Santa Barbara) and Ricardo Guzmán (Social Complexity Research Center (CICS), Chile)
9. **Testing the Shared Self-Deception Hypothesis: Is There a Taboo Against Knowing Ourselves?** John Oakley Beahrs (Oregon Health and Science University)
10. **Effects of Exogenous Testosterone Administration and Time-Pressure on Cooperation in Healthy Young Men** Brian M. Bird (Simon Fraser University), Triana L. Ortiz (Nipissing University), Neil V. Watson (Simon Fraser University), & Justin M. Carré (Nipissing University)
11. **Men prefer women with high residual fertility** Jeanne Bovet (Institute for Advanced Study in Toulouse), Mélissa Barkat-Defradas (University of Montpellier), Valérie Durand (Institute of Evolutionary Sciences in Montpellier), Charlotte Faurie (Institute of Evolutionary Sciences in Montpellier), Michel Raymond (Institute of Evolutionary Sciences in Montpellier)
12. **Beggars Can't Be Choosers: Disgust Sensitivity Provides a Status Cue** Hannah Bradshaw (Texas Christian University), Sarah E. Hill (Texas Christian University)
13. **Mimicking desirable mates: Psychopathy as a sexual exploitation strategy to reproduce** Kristopher Brazil (Carleton University), Adelle Forth (Carleton University)
14. **Mating, Morality, and Models of Personality** Evelyn Brosius (DePauw University), Scott Ross (DePauw University), Kevin Moore (DePauw University)
15. **When walking away doesn't win the day: Reassessing the evolution of cooperation in space** Justin Brown (Department of Anthropology, Washington State University), Luke S. Premo (Department of Anthropology, Washington State University; Department of Human Evolution, Max Planck Institute for Evolutionary Anthropology)

16. **Evolutionarily relevant methods for testing the generalizability of virtual reality.** Eve Buck, Davis, R. N., Felton, W. M., Fulgueira, M. N., Lundholm K. R., McCormick, L. M., Onofre-Murillo, J., Pugliese, B. J., Ringer, K., Salinas, O. F. D., & Jackson R. E. (University of Idaho)
17. **Let's face it: How facial cues are associated with social dominance, health, and personality** Jennifer Byrd-Craven (Oklahoma State University), Amber Massey-Abernathy (Missouri State University), Brianna Newport (Bethel College), Ashley Rankin (Oklahoma State University)
18. **Her Body, Her Choice: A Cross-Cultural Investigation of Maternal Investment Behavior** Christina M. Carolus (Human Relations Area Files at Yale University), Eric J. Ringen (Human Relations Area Files at Yale University)
19. **Moral foundations theory and performance in a set of economic exchange games** Charles Clark (Wichita State University), Carly Bahner (Wichita State University), Elizabeth Ramirez (Wichita State University), Shivani Nagrecha (Wichita State University)
20. **Enactive Horror: An Evolutionary Analysis of Haunted Attractions** Mathias Clasen (Aarhus University)
21. **This Old Thing? Exploring Patterns of Modesty in Relation to Sex and Status** Jaime Cloud (Western Oregon University), Carin Perilloux (Southwestern University), Cody Welty (Western Oregon University)
22. **Infant Signaling Behaviors and Maternal, Paternal and Alloparental Caregiving** Jessica Collins (Washington State University), Courtney L. Meehan (Washington State University)
23. **Different Environmental Threats Differently Affect the Sexes' Support for Gender Equality** Katja Cunningham (Arizona State University), Michael Varnum (Arizona State University)
24. **Principled versus pragmatic punishment: Partner choice selection favours consequentialist reasons for punishing** Nathan Dhaliwal (University of British Columbia), Daniel Skarlicki (University of British Columbia), JoAndrea Hoegg (University of British Columbia)
25. **The effect of life history strategy on individual differences in sexual selection** Alena Egner (Harvard University), Max Krasnow (Harvard University)
26. **Influence of sex on snake detection in visual search in adult humans: reaction times to target matrices** Francisco J. Esmorís-Arranz (Universidad de Santiago de Compostela, Spain)
27. **Sensationalism in Electronic News : A Systematic Literature Review** William Evans (University of Alabama)
28. **Partner Physical Attractiveness Differentially Predicts Men's and Women's Relationship Satisfaction Among Maximizers but not Among Satisficers** Juliana French (Florida State University), Andrea Meltzer (Florida State University)
29. **Stress: The effects of social and solitary learning on salivary hormones** Karen Fulk (Boise State University), Ross Griffiths (Boise State University), Kimberly Neagle (Boise State University), Kathryn Demps (Boise State University), Tessa Amend (Boise State University), Kayla Downs (Boise State University), Michaela Eugster (Boise State University), Scott May (Boise State University), Shane Scaggs (Oregon State University), Kristin Snopkowski (Boise State University)
30. **Women's Food Sharing in Siberia: Frequency of Transfer versus Amounts Given** Karen Fulk (Boise State University), John P. Ziker (Boise State University)
31. **The Affective Roots of Culture and Cognition** Rami Gabriel (Columbia College Chicago), Dr. Stephen T. Asma (Columbia College Chicago)
32. **Interleukin-1 β Promotes Investment in Present Versus Future Outcomes** Jeffrey Gassen (TCU), Hill, Sarah (Texas Christian University), Proffitt Leyva, Randi (Texas Christian University), Prokosch, Marjorie (Texas Christian University), White, Jordon (Texas Christian University), Peterman, Julia (Texas Christian University) Eimerbrink, Micah (Texas Christian University), Boehm, Gary (Texas Christian University)

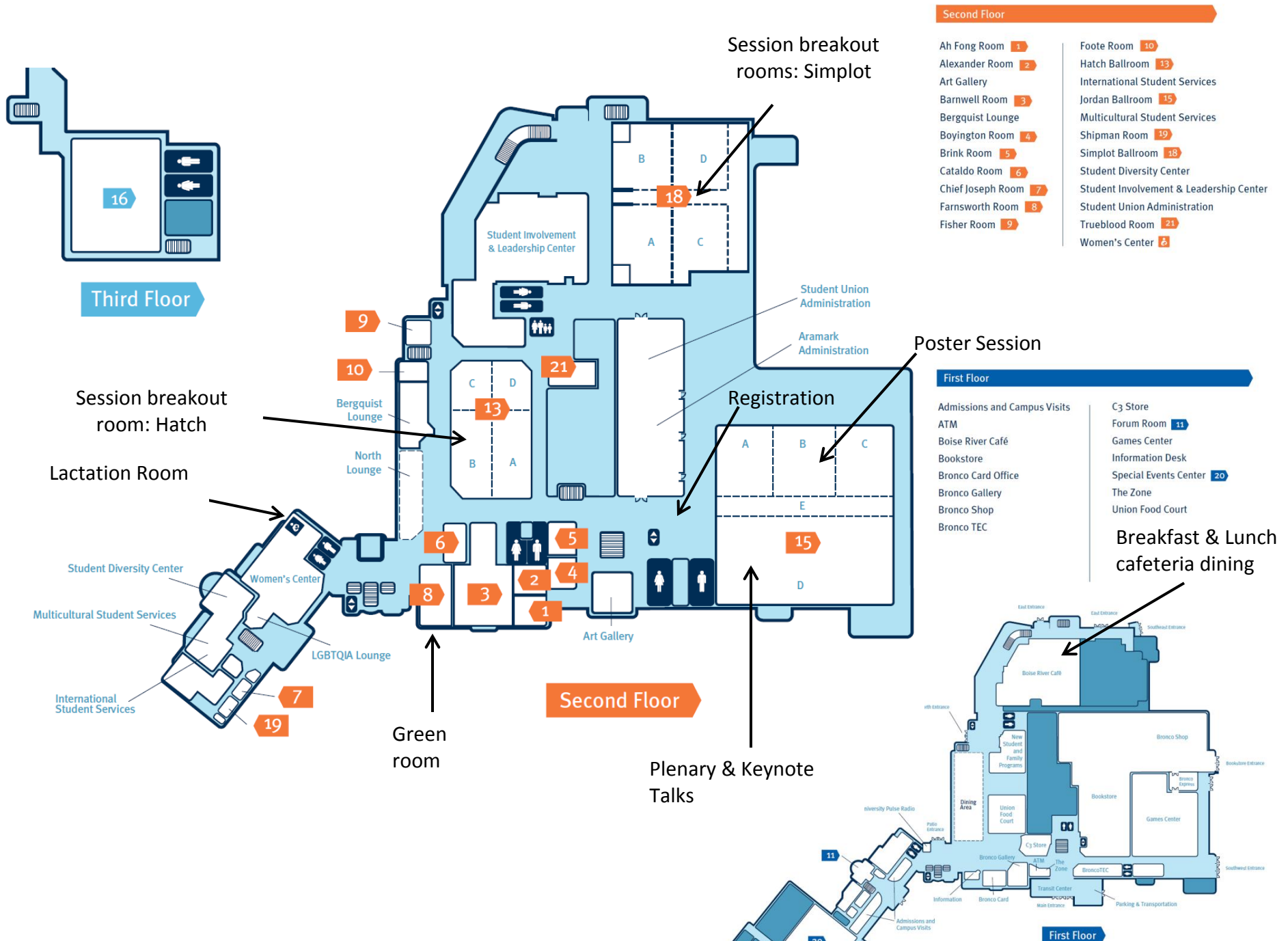
33. **Death Management Theory: An Alternative Explanation for Terror Management Phenomena?** Ben Gelbart (Arizona State University), Jaimie Krems (Arizona State University)
34. **Evaluating risk-taking in a cooperative context using a tower building task** Santiago Gracia Garrido (Universidad Nacional Autónoma de México (UNAM)), Robyn Hudson (Universidad Nacional Autónoma de México), Marcos Rosetti (Universidad Nacional Autónoma de México)
35. **The relative contribution of facial shape and surface information to the motivational salience of faces** Amanda Hahn (Humboldt State University), Claire Fisher (University of Glasgow), Lisa DeBruine (University of Glasgow), Benedict Jones (University of Glasgow)
36. **Casual Sex and Life History Strategy: Evolutionary Perspectives on the Impact of Father Absence** Jessica Hehman (University of Redlands), Catherine Salmon (University of Redlands)
37. **Affective Neuroscience and Feminism: Theorizing Biosocial Interactionist Models of Human Behavior** Leslie Heywood (Binghamton University), Justin R. Garcia (Indiana University)
38. **Mechanisms of sexual selection on men in a natural fertility population** Alex Hill (University of Washington), Alexander K. Hill (University of Washington), Jeremy Koster (University of Cincinnati), Jeffrey Winking (Texas A&M University), John Hunt (Western Sydney University), Robert P. Burriss (University of Basel), and David A. Puts (The Pennsylvania State University)
39. **Human Research Ethics Guidelines Revised: Important Changes for 2018** Elizabeth Hill (University of Detroit Mercy)
40. **Is the environmental vertical illusion responsible for the vertical-horizontal illusion?** Jessica Idoine (California State University, Fullerton), Aaron Goetz (California State University, Fullerton)
41. **Porn stars and the girl next door: How evolutionarily novel information influences men's perceptions of women's sexuality** Hilary R. Keil (California State University, Fullerton), Aaron T. Goetz (California State University, Fullerton), Gorge A. Romero (California State University, Fullerton), Cristian M. Acevedo (California State University, Fullerton)
42. **The "Deconstructive" Logic of Evolutionary Theory** A. Samuel Kimball (University of North Florida)
43. **Why do mating competitors increase religious beliefs?** Janae Koger (California State University San Bernardino), Dr. Cari D. Goetz (California State University San Bernardino)
44. **The age-gap and gender do matter! The effect of gender and age difference between siblings on educational achievements.** Radim Kuba (Charles University, National Institute of Mental Health, Czech Republic), Jaroslav Flegr (Charles University, National Institute of Mental Health, Czech Republic), Jan Havlíček (National Institute of Mental Health, Czech Republic, Charles University)
45. **Coalition Strength and the Regulation of Moral Self-Interest** John Kubinski (Michigan State University), Carlos David Navarrete (Michigan State University)
46. **CANCELED**
47. **Depression? Ask the Frontal Lobe! A Hypothesis on Human Personality Types : Frontal Lobe Dominance vs. Limbic System Dominance** Sung Hee Kwon
48. **The Role of Personality in Strategy Adaptation for Iterated Prisoner's Dilemma** Clay Langley (DePauw University), Scott Ross (DePauw University)
49. **Bilingual Family Communication and the Impact of Language Anxiety on Cortisol Reactivity** Hannah Legatzke (University of Notre Dame), Lee T. Gettler (University of Notre Dame)

50. **Cross-cultural preference for facial adiposity** Xue Lei (School of Psychology & Neuroscience, University of St Andrews), David Perrett (University of St Andrews)
51. **Biased Recall of Terrorist Violence: A Novel Test of the Male Warrior Hypothesis** Miriam Lindner (Aarhus University, Denmark), Lasse Lindekilde (Aarhus University)
52. **Life History Theory and the Tradeoff between Quantity and Quality of Friendships** Kennade Long (Oklahoma State University), Ashley Rankin (Oklahoma State University), Jennifer Byrd-Craven (Oklahoma State University)
53. **A Grandparental Investment Hypothesis Based on Differential Time-Graded Decays in Paternity Uncertainty** Aryaman Majumdar (The College of Wooster), John G. Neuhoff (The College of Wooster)
54. **Who gets mad and who feels bad? Using mate value discrepancies to predict anger and shame in relationships.** Nestor Maria (California State University, San Bernardino), Cari Goetz (California State University, San Bernardino)
55. **Nature Catches The Eye: Human Gaze Behavior As A Measure For Aesthetic Preference** Kathrin Masuch (University of Vienna, Austria; Urban Human), Carmen Schwarzl (University of Vienna, Austria), Karolin Eienkel (University of Vienna, Austria), Manuel Weninger (University of Vienna, Austria), Vsevolods Girsovics (University of Vienna, Austria), Elisabeth Oberzaucher (University of Vienna, Austria; Urban Human; University of Ulm, Germany)
56. **Searchers by Nature and Experience: Experience in Search Improves Searching Performance through Decision-Making** César Maya (Biomedical Research Institute, National Autonomous University of Mexico), Marcos F. Rosetti (Biomedical Research Institute, National Autonomous University of Mexico), Luis Pacheco-Cobos (Faculty of Biology, Veracruz University), Robyn Hudson (Biomedical Research Institute, National Autonomous University of Mexico)
57. **Autonomic Self-Directed Pain Theory: Mechanisms, Narratives, and Evolutionary Rationale** Kevin Meredith
58. **Adults' reasoning about the properties of God suggests intuitive inferences are not subject to belief revision** Spencer Mermelstein (University of California, Santa Barbara), Michael Barlev (University of California, Santa Barbara) and Tamsin C. German (University of California, Santa Barbara)
59. **CANCELED**
60. **The Dark Triad and Attraction to Sexual Exploitability Cues** Kelsey Meyer (California State University, San Bernardino), Cari D. Goetz (California State University, San Bernardino)
61. **I am big on Instagram: The effect of the number of followers on perceived status and mate attractiveness** Igor Miklousic (Institute of Social Sciences Ivo Pilar), Laith Al-Shawaf (Bilkent University), Tiffany Matej Hrkalic (University of Zagreb)
62. **Life history orientation and gambling** Sandeep Mishra (University of Regina), Tyler J. S. Meadows (University of Regina); Andrew Templeton (University of Regina)
63. **Are thieves adulterers and adulterers thieves? Exploring whether cheating in one fundamental social domain implies cheating in others** Jordan Moon (Arizona State University), Jaimie Arona Krems (Arizona State University), Douglas T. Kenrick (Arizona State University), Adam B. Cohen (Arizona State University)
64. **Sex and the perceived effectiveness of short-term mate poaching acts** James Moran (Bucknell University), T Joel Wade (Bucknell University)

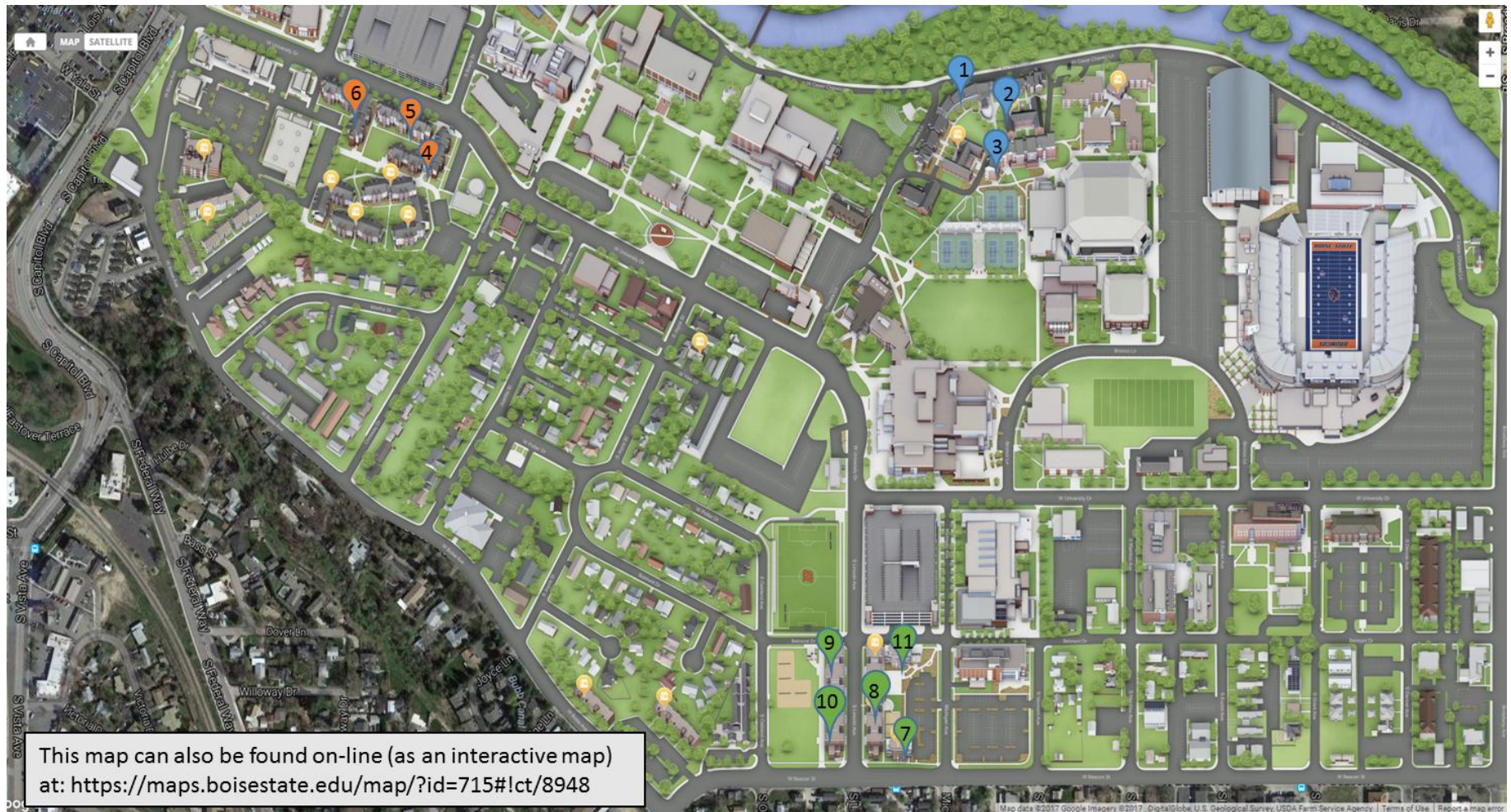
65. **Snapchat: An app for sexual access** James Moran (Bucknell University), Kelsey Salerno (Bucknell University), T. Joel Wade (Bucknell University)
66. **Hearing Sexual Dimorphism: Perception of Vocal Sex Ratios is Linked to Likelihood of Fertility** John Neuhoff (The College of Wooster)
67. **Collegiate Fencing: The Interplay between Team Dynamics and Hormonal Responsiveness** Eva Niklinska (University of Notre Dame), Lee T. Gettler (University of Notre Dame)
68. **Do Kinship cues influence prosocial behavior in the Ultimatum Game?** Kieran J. O'Shea (University of Glasgow), Iris J., Holzeitner (University of Glasgow), Vanessa Fasolt (University of Glasgow), Anthony J. Lee (University of Glasgow), Benedict C. Jones (University of Glasgow), Lisa M. DeBruine (University of Glasgow)
69. **Appetite for Destruction: Counterintuitive Effects of Attractive Faces on People's Food Choices** Tobias Otterbring (Karlstad University)
70. **Body Mass Index (BMI), Facial Width-to-Height Ratio (fWHR), Aggression, and Dominance in Female Undergraduates** Jaime Palmer-Hague (Trinity Western University), Alexandra Fuller (Trinity Western University)
71. **Total Fertility Rates and Parental Investment and Environmental Adversity: Putting Life History Theory and Parental Investment Theory to a Global Test** Brett Pelham (Montgomery College)
72. **General intelligence is a source of individual differences between species** Mateo Peñaherrera-Aguirre (University of New Brunswick), Heitor Barcellos Ferreira Fernandes (University of Arizona), Michael Anthony Woodley of Menie (Vrije Universiteit Brussel), Jan te Nijenhuis (University of Amsterdam), and Aurelio José Figueredo (University of Arizona)
73. **Feeling crowded? Get creative: Crowding cues lead to increases in creative thinking.** Marjorie Prokosch (Texas Christian University), Thomas Blue (Texas Christian University), Sarah E. Hill (Texas Christian University)
74. **Sexual and Emotional Fantasy and Same-sex Sexual Behavior in Heterosexual and Mostly Straight Women Relation to the Allomothering Hypothesis** Sarah Radtke (Ryerson University)
75. **Sexual and romantic preferences in written erotica** Giovanni Randazzo (Oakland University), Todd Shackelford (Oakland University)
76. **Smiling Faces Sometimes** Lawrence Reed (McLean Hospital/Harvard Medical School), Oliver Scott Curry (University of Oxford)
77. **Optimal Harvest Strategies for Central Asian Nomads: Pastoral Adaptation to Mixed Cash-Subsistence Economies** Adam Reynolds (Emory University), Paul Hooper (Santa Fe Institute), Stefani Crabtree (Pennsylvania State University), Julia Clark (American Center for Mongolian Studies)
78. **Age and gender differences in drug use among hunter-gatherers: social restriction or toxin avoidance?** Erik Ringen (Human Relations Area Files at Yale University), Casey J. Roulette (San Diego State University)
79. **Derogation of Known Versus Unknown Competitors in Female Intrasexual Competition** Nina Rodriguez (Texas State University), Judith A. Easton
80. **CANCELED**
81. **Individual differences in response to "watching eyes" and real cues of observation** Amanda Rotella (University of Guelph), Adam Sparks (UCLA), Sandeep Mishra (University of Regina), Pat Barclay (University of Guelph)
82. **A Measurement Model of Life History** Ruth Sarafin (University of New Mexico)
83. **Dynamic Change, Social Networks, and Ecological Claims: Current and Future Work on the Alaskan Peninsula** Shane Scaggs (Oregon State University), Drew Gerkey (Oregon State University)

84. **Transmission of Animal “Personality Profiles” Via Forager Oral Tradition** Michelle Scalise Sugiyama (University of Oregon)
85. **Contagious Yawning as an Affiliative Behavior: Ingroup Outgroup Bias in Contagious Yawning across Race and Gender** Espen Sjoberg (Oslo and Akershus University College of Applied Sciences), Thom Baguley (Nottingham Trent University), Geoff Cole (University of Essex)
86. **Gender differences in the Stroop Colour-Word Test: a meta-analysis** Espen Sjoberg (Oslo and Akershus University College of Applied Sciences), Thom Baguley (Nottingham Trent University), Geoff Cole (University of Essex)
87. **Impulsivity or optimal foraging: a review of delay discounting in an animal model of ADHD** Espen Sjoberg (Oslo and Akershus University College of Applied Sciences), Espen B. Johansen (Oslo and Akershus University College of Applied Sciences)
88. **Gender differences in a negative priming Stroop task** Espen Sjoberg (Oslo and Akershus University College of Applied Sciences), Antonia D'Souza (University of Essex), Geoff Cole (University of Essex)
89. **Anthropopsychiatry: The Fourth Revolution in Psychiatry and the Comprehensive Science of Human Behavior** William Skiba
90. **Work parties and manioc beer in an indigenous Trio village (Suriname)** Cole Tobin (University of Missouri-Columbia), Rob Walker (University of Missouri-Columbia)
91. **Do adult sex ratio and violent crime rates predict regional variation in facial dominance perceptions? Evidence from an analysis of US states** Jaimie Torrance (Institute of Neuroscience and Psychology, University of Glasgow), Michal Kandrik (UoG), Anthony Lee (UoG), Lisa DeBruine (UoG), Ben Jones (UoG)
92. **Selective memory and the sex ratio: Attractive women have better memory for how men look when men outnumber women** Christopher Watkins (Division of Psychology, Abertay University), David Perrett (University of St Andrews)

Map of the Student Union Building – Boise State University



Map of Boise State University Dormitories




1 – Taylor Hall*
 2 – Morrison Hall*
 3 – Keiser Hall*
 *Check in at Keiser Hall (3 on map)

University Suites
 4 – Clearwater Suites^
 5 – Payette Suites^
 6 – Selway Suites^
 ^ Check in at Clearwater (4 on map)

Lincoln Suites
 7 – Aspen+
 8 – Cedar+
 9 – Juniper+
 10 – Spruce+
 + Check in at Tamarack (11 on map)


Map of Boise

Events




Student Union Building

1
Conference venue



Train Depot


2
Wednesday evening
Welcome Reception



Payette Brewery


3
Friday evening BBQ

Accommodations




Hampton Inn

A




Townplace STE

B



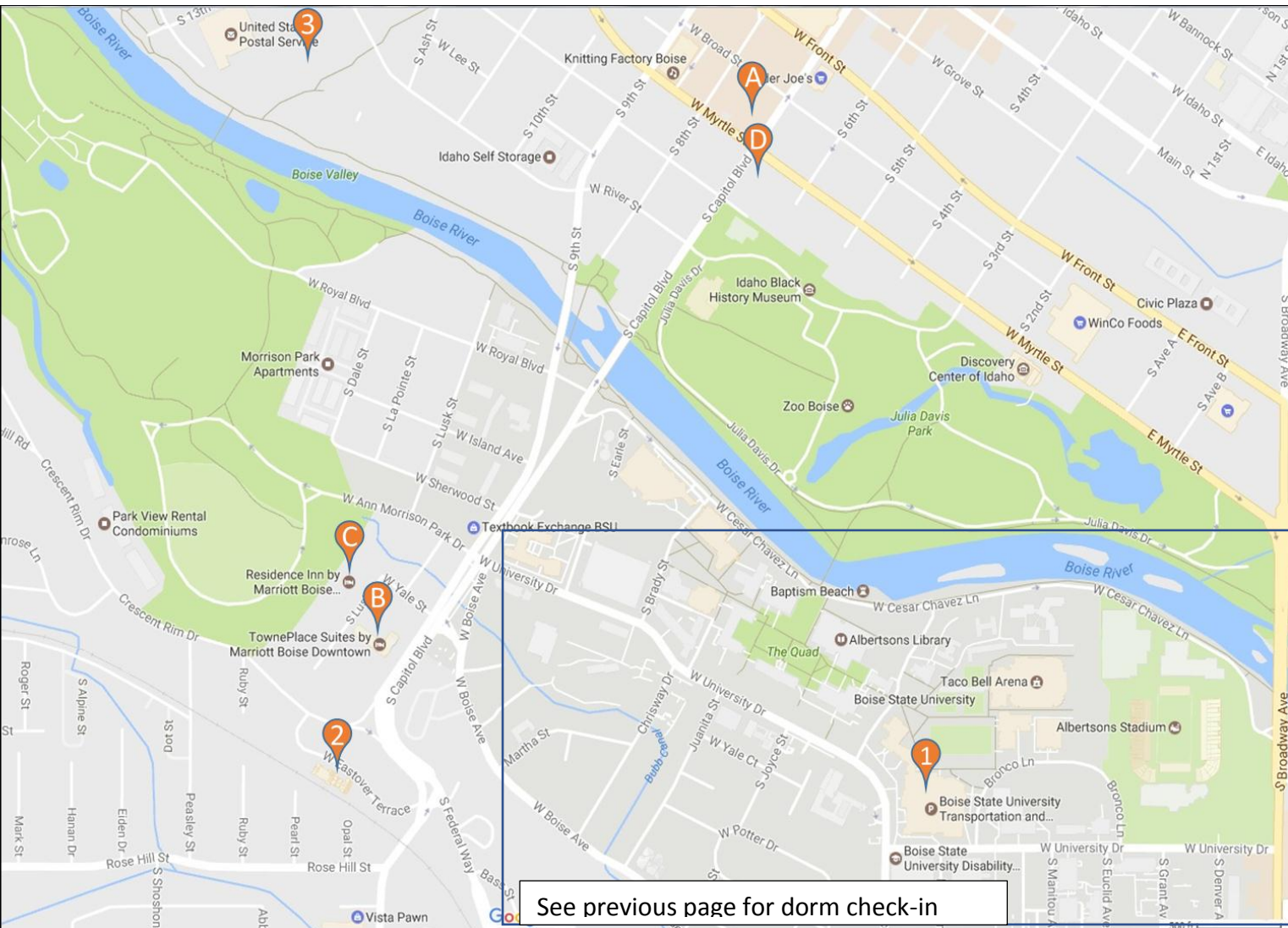
Residence Inn

C



Inn at 500

D



The map shows the Boise River and surrounding urban areas. Markers are placed as follows:

- Marker 1:** Student Union Building (near downtown)
- Marker 2:** Train Depot (near downtown)
- Marker 3:** Payette Brewery (near downtown)
- Marker A:** Hampton Inn (near downtown)
- Marker B:** Townplace STE (near downtown)
- Marker C:** Residence Inn (near downtown)
- Marker D:** Inn at 500 (near downtown)

Other landmarks visible include the Idaho Black History Museum, Zoo Boise, and Boise State University.

See previous page for dorm check-in

Oral Presentation Abstracts by Day

Wednesday May 31st, 2017

Session 1 (3:45 p.m. – 5:05 p.m.)

Session Title: Advances in K-Factor Research (Hatch Room A/B)

Fast vs. Slow Values: A Life History Perspective on Schwartz Value Theory, Right Wing Authoritarianism, and Social Dominance Orientation (3:45 – 4:05 p.m.)

Jeff Sinn (Winthrop University)

Life-History Theory offers a powerful framework for organizing disparate personality theories into an elegant evolutionary framework (Figueredo et al., 2006). The present study extends this effort to important new domains: basic values and ideology. As hypothesized, LH cleanly divides the 19-value Schwartz circumplex model. Self-transcendence/conservation correlates negatively with both overall LH speed and sexual restriction, while self-enhancement/openness does the opposite. For individual values, 16 reflect the predicted speed. Similarly, Right Wing Authoritarianism and Social Conservatism reflect slow tendencies while Social Dominance Orientation and Economic Conservatism reflect fast ones. Note however, that at the zero-order level, the RWA-SDO and Social-Economic Conservatism correlations are positive, suggesting that the conservative coalition (and conservative self-identity) contains distinct and contradictory impulses.

Psychometrics and Human Life History Indicators (4:05 – 4:25 p.m.)

George Richardson (University of Cincinnati)

Life history theory (LHT) has been applied to humans in distinct ways. Whereas researchers in biology and demography have tested for life history trade-offs (e.g., offspring quantity vs. quality) and developmental scientists have used LHT to formulate hypotheses about the associations between specific indicators such as parental care-giving, pubertal timing, and sexual debut; others have employed a psychometric approach and used a single latent variable—the K-factor—as an empirical proxy for human life history speed. Challenging this unidimensional view of human life history strategy, this presentation introduces evidence from several recent studies indicating that life history indicators are at least two-dimensional and linked to environment in more complex ways than previously thought. It then identifies important guidelines and future directions for psychometric studies, identifies alternatives to latent variable models that can also be used, and finally provides potential implications for public health and other social policy initiatives.

The K-SF-42: A New Short Form of the Arizona Life History Battery (4:25 – 4:45 p.m.)

Aurelio José Figueredo (University of Arizona)

An alternative short form for the 199-item Arizona Life History Battery (ALHB), called the K-SF-42, contains 42 items as compared with the 20 items of the Mini-K, the short form that has been in

greatest use for the past decade. These 42 items were selected from the ALHB, unlike those of the Mini-K, making direct comparisons of the relative psychometric performance of the two alternative short forms a valid and instructive exercise. Secondary data analyses were performed upon a recently completed five-nation cross-cultural survey, and data from the ALHB collected in all five cross-cultural replications were used. The objective of this secondary data analysis was producing the K-SF-42 such that it would perform optimally across all five cultures sampled. We introduce a novel method, based on the use of the Cross-Sample Geometric Mean (CSGM) as a criterion for item selection, for generating such cross-culturally valid short forms.

Life History Strategy and Word Use in Free-Ranging College Students (4:45 – 5:05 p.m.)

Joseph Manson (University of California Los Angeles)

Little is known about how human Life History Strategy (LHS) variation manifests itself in quotidian natural behavior. A published study has demonstrated 16 significant correlations between LHS (measured via the California Adult Q-Sort) and frequencies of word types (e.g. emotion words, swear words) used by college students during clinical-style interviews. I examined whether these results could be replicated using (1) speech recorded during periodic audio sampling of participants' (N = 88) daily lives, (2) rater-scored CAQ profiles based on these audio recordings and (3) the self-report Arizona Life History Battery (ALHB) as an additional measure of LHS. Associations of word type use with CAQ-based LHS were generally similar to those previously reported. However, frequencies of the word types associated with CAQ-based LHS were not consistently associated with ALHB-based LHS. These results suggest that the ALHB and the prototype Slow LHS CAQ profile tap different aspects of LHS.

Session Title: Cooperation, Conflict, and Morality (Simplot A)

Which Setteth Fast the Mountains, Which Stilleth the Noise of the Seas: A Cross-Cultural Examination of Environmental Precarity, Religious Systems, and Cooperative Behavior (3:45 – 4:05 p.m.)

Christina M. Carolus (Yale University), Carol R. Ember (Yale University), Ian A. Skoggard (Yale University)

According to Durkheim's model of mechanical solidarity, divine figures represent human sociality and sanction moral behavior as it relates to a given society's existential needs. Scholars have since postulated religion's role in the rise and extension of cooperative behavior both within and between human groups— specifically through mechanisms outlined in the supernatural punishment hypothesis (SPH), which asserts that a belief in punitive moralistic supernatural agents is especially effective in promoting cooperative behavior. In this paper, we explore possible relationships between religious systems, climate-related ecological disturbance, and strength of cooperative behavior. We synthesize a global sample of historical bioclimatic, ecological, and ethnographic data to test the supernatural punishment hypothesis through the lens of cross-cultural models of climatological phenomena. Contrary to our expectations, the strongest predictor of cooperative behavior is a collective belief in benevolent (rather than punitive) moralistic divine figures who effectuate beneficial weather as it relates to the food supply.

“Moral Brain” vs. “Legal Brain”: A New fMRI Study of our Brain's Different Response to the “Trolley Problem” as Moral & Legal Questions (4:05 – 4:25 p.m.)

Mikihiko Wada (Hosei University), Ryo Oda (Nagoya Institute of Technology)

"The "Trolley Problem" has been studied as a moral dilemma by philosophers and neuroscientists (Greene, Science, 2001). What difference does it make when it is posed as a legal question? We have made 2 studies with 450 participants to test if they give identical or different answers to moral and legal questions on 3 patterns of Trolley Problem ("Spur Track", "Footbridge", "Trap"), and let them state why. The results: 60% gave identical answers, while 40% came up with different responses, as to if they take action to save five lives and let one die. We then proceeded with the world's first fMRI experiment to prove if the "Moral Brain" (Greene 2001, inter alia) differs from "Legal Brain", testing the new participants with the same patterns of above-mentioned questions in fMRI. The results would show a significant difference of our brain's neural networks and connectivities for moral and legal questions."

Social Networks, Demography, and Life History: Cooperative Production and Reproduction in Alaska (4:25 – 4:45 p.m.)

Drew Gerkey (Oregon State University)

Throughout the Arctic, people utilize sources of monetary income and social relations to facilitate subsistence harvests, a pattern known as the mixed cash-subsistence economy. Cooperation within and between households is essential to success in mixed economies and takes many forms, including divisions of labor, food-sharing, risk-pooling, and inter-generational transfers. Because households are central to these forms of cooperation, it is difficult to understand the patterns that emerge without analyzing dynamics of both economic production and demographic reproduction. Drawing on evolutionary theories of cooperation and life history, I use data from subsistence networks in 8 villages in Alaska to: (1) investigate how economic and demographic characteristics affect a household's position within subsistence networks, (2) identify emergent patterns of social relations that extend beyond households to structure patterns of cooperation, and (3) explore how methods of social network analysis can help advance theoretical research on the evolution of cooperation and life history.

An Integrative and Comparative Analysis of Testosterone's Functional Role in Competing Life History Models (4:45 – 5:05 p.m.)

Louis Calistro Alvarado (State University of New York), Martin N. Muller (University of New Mexico), Melissa Emery Thompson (University of New Mexico), Magdalena Klimek (Jagiellonian University), Ilona Nenko (Jagiellonian University), Grazyna Jasienska (Jagiellonian University)

Across vertebrate species, the steroid hormone testosterone is fundamental to the expression of male life histories, modulating allocation of finite resources toward reproductive effort. Here, we examine posited functions of testosterone as put forward within competing models of men's life history. Although steroid physiology is generally conserved among vertebrates, we hypothesize that distinct features of the human life course will moderate putative effects of testosterone on men's musculoskeletal system. Life history, anthropometric, and hormonal data were collected from 122 rural Polish men (at the Mogielica Human Ecology Study Site) during the summer harvest and for 103 participants in winter. We find that fatherhood negatively predicted testosterone levels, but positively predicted workload, upper-body muscularity and strength. In seasonal contrasts, men had intensified work demands and exhibited suppressed testosterone during harvest, while showing concomitant increase in muscle mass and strength. Taken together, between and within individuals, men's provisioning and subsistence activities were robust predictors of muscular development and performance, whereas endogenous testosterone had no appreciable effect on skeletal muscle

phenotype. Special care is taken to situate these findings within the broader primate context, and conclude with pertinent preliminary analyses of testosterone and musculature among forager-horticulturalists and wild chimpanzees in comparative perspective.

Session Title: Mating Preferences I (Simplot C)

Testing the facial homogamy hypothesis in a 3D sample of UK romantic partners (3:45 – 4:05 p.m.)

Iris J. Holzleitner (University of Glasgow), Anthony J Lee (University of Glasgow), Vanessa Fasolt (University of Glasgow), Kieran J O'Shea (University of Glasgow), Benedict C Jones (University of Glasgow) & Lisa M DeBruine (University of Glasgow)

Previous research suggests that romantic couples show positive assortative mating for facial appearance. Here, we investigate whether romantic partners are indeed more similar in their facial morphology by measuring 3D shape (dis-)similarity in white UK couples of varying relationship length. We quantified 3D models in terms of their global surface, which captures more face shape information compared to univariate distances or landmark analysis, and tested whether romantic couples are closer in face space than randomly paired men and women. Preliminary analyses on 116 romantic partners aged 19-72 suggest that romantic partners indeed are more similar with regards to overall face shape than non-partners. In a next step, we will analyse similarity in locally specified facial areas, i.e. eyes, nose and mouth regions. Findings will be discussed in the context of inclusive fitness, optimal outbreeding theory and parental imprinting.

A bottom-up text analysis of a large sample of personal descriptions from online dating profiles (4:05 – 4:25 p.m.)

Anthony J. Lee (University of Glasgow), Benedict C. Jones (University of Glasgow), Lisa M. DeBruine (University of Glasgow)

When writing an online dating profile, individuals are highly motivated to describe themselves favourably to gain the interest of potential partners. Therefore, we could expect common themes to emerge amongst profiles where individuals advertise personality traits they believe to be attractive. By identifying these themes, we could reveal the underlying traits that are important when making mating decisions. We collected a large sample of written descriptions from publically available online dating profiles ($N > 7500$), and conducted cluster analyses to determine the common themes. These included concepts such as sociability (e.g., willingness to meet new people, outgoing), trustworthiness (e.g., caring, honest, loyal), agreeableness (e.g., laid back), and intellectual properties (e.g., funny, smart), amongst others. How these themes are consistent between different groups (e.g., sex, age) gives insight into which personality traits may be important in different mating contexts.

Personability as a Parenting Indicator and Attraction and Relationship Satisfaction Predictor (4:25 – 4:45 p.m.)

Katherine A. Valentine (Chapman University), Norman P. Li (Singapore Management University), Andrea L. Meltzer (Florida State University), Ming-Hong Tsai (Singapore Management University)

Despite the fact that mate preference research has clearly demonstrated that men and women desire personable (e.g., kind, considerate, responsive) partners, recent research has questioned whether stated mate preferences are predictive of actual mate choices and relationship satisfaction. The present studies are the first to address whether the preference for personability shows concordance

across stated mate preferences, actual romantic attraction, and satisfaction with mating decisions using appropriate samples. We find some support for a connection between stated preferences for personability and its importance in evaluations of actual potential mates in a live-interactive setting (Study 1). Moreover, we find strong evidence in a longitudinal study of newlywed couples that the relationship satisfaction of people who value personability is affected by partner personability, while that of people who do not value personability is not (Study 2). We argue that a preference for personability indicates a preference for good-parenting qualities.

Sexual Dimorphism and Attractiveness in Asian and Caucasian Faces (4:45 – 5:05 p.m.)

Ian Stephen (Macquarie University), Darby L. H. Salter (Macquarie University), Richard J. Stevenson (Macquarie University)

Marriages between Caucasian men and Asian women are over twice as frequent as those between Caucasian women and Asian men (Balaji & Worawongs, 2010; Qian & Lichter, 2007). Recent research has proposed that this imbalance may be explained by the finding that, on average, Caucasian men are perceived as more attractive than Asian men, and Asian women are perceived as more attractive than Caucasian women (Lewis, 2012). Here, we explore whether Asian faces are perceived as more feminine than Caucasian faces. Thirty-three Malaysian Chinese and 30 Australian Caucasian participants manipulated 100 face photographs (50 Asian; 50 Caucasian) on a masculinity/femininity axis to optimise attractive appearance. As predicted, Asian women's faces were increased more in femininity than Caucasian women's faces, and Caucasian men's faces were feminised more than Asian men's faces to optimise attractiveness. These findings suggest that Caucasian faces are perceived as more masculine than Asian faces.

Session Title: Hormones and Social Behavior (Simplot B)

Men who recall more childhood gender nonconformity have higher salivary testosterone (3:45 – 4:05 p.m.)

Kevin Rosenfield (Pennsylvania State University), Khytam Dawood, J. Michael Bailey, Talia Shirazi, Rodrigo Cardenas, S. Marc Breedlove, David Puts

Gender-typical childhood behavior (e.g. rough-and-tumble play in boys) and heterosexual orientation play key roles in adult mating success and may constitute parts of an adaptive suite of psychobehavioral traits. For example, childhood gender-nonconformity (CGN) predicts adult non-heterosexual orientation. Evidence also suggests that both are influenced by steroid hormones developmentally, but less is known about their relationships with steroids in adults. In two samples of approximately 150-200 men each, we investigated relationships between salivary testosterone and cortisol and both adult sexual orientation and recalled CGN. Greater recalled CGN predicted non-heterosexual attraction, as expected, but neither testosterone nor cortisol predicted sexual orientation in either sample. However, men who recalled greater CGN in childhood exhibited higher morning testosterone levels in both samples. We discuss possible explanations for this counterintuitive but replicable relationship.

Effects of psychosocial stress on financial and social decision-making and their underlying hormonal mechanisms (4:05 – 4:25 p.m.)

Dario Maestriperi (The University of Chicago), Nora Nickels (University of Chicago)

Life history theory predicts that stress should affect decision-making, that there should be sex differences in these effects, and that the effects should be mediated by hormonal mechanisms. 120 study participants were randomly assigned to either a psychosocial stress condition (TSST) or a control condition and then underwent two financial decision-making tests and three social decision-making tests. Three saliva samples were collected and assayed for cortisol and testosterone. The post-stress increase in cortisol was associated with an increased tendency to choose delayed monetary rewards in both males and females, while higher testosterone in males was associated with a greater tendency to make risky financial choices. In terms of social decision-making, stress made males more selfish and competitive ('flight or fight') while stressed females become more other-oriented, more generous, and more cooperative ('tend and befriend').

Neighborhood indices of socioeconomic disadvantage moderate associations between adrenarcheal hormones in middle childhood. (4:25 – 4:45 p.m.)

Julian G. Simmons (The University of Melbourne), Sarah L. Whittle (The University of Melbourne), Lisa Mundy (Murdoch Childrens Research Institute), Rachel Ellis (The University of Melbourne), Louise Canterford (Murdoch Childrens Research Institute), Nicholas Allen (University of Oregon), George C. Patton (Murdoch Childrens Research Institute, The Royal Children's Hospital, and The University of Melbourne)

Disadvantage during childhood affects adult outcomes across sociocultural, biological and health domains. Evolutionary hypotheses contend that disadvantage may lead to alterations in life history strategy (i.e., traits related to growth, reproduction and behavior that vary with environmental influence, potentially increasing fitness), with concomitant variations in health risks. Covariation in developmental hormones may be one way in which life history strategy is varied. This study examined relationships between neighborhood socioeconomic status (SES) and developmental hormones. Participants were 1221 children (661 females; M age=8.97 years, SD=0.36). Regression analyses demonstrated that dehydroepiandrosterone (DHEA) was positively associated with testosterone, but this was moderated by neighborhood, and after accounting for individual and family factors. Further analyses revealed that the associations became more positive as neighborhood SES increased, suggesting increased conversion of DHEA to testosterone proportional to neighborhood factors. These results suggest population level influences of neighborhood factors on development, potentially via differential conversion of hormones.

The role of synthetic copulins on men's sexual behavior (4:45 – 5:05 p.m.)

Megan Williams (University of Pennsylvania), Coren Apicella (University of Pennsylvania)

Chemosensory signaling plays an important role in the social interactions and mating behavior of diverse animal taxa; yet its role in humans remains equivocal. Using a randomized, placebo-controlled experiment involving 243 male participants, we test whether exposure to synthetic copulins – a mixture of volatile fatty acids secreted vaginally – increases 1) men's sexual motivation using an incentivized behavioral task, 2) self-reported willingness to take sexual risks and 3) perceptions of female attractiveness and 4) self-reported mate value. Because chemical receptors are found throughout the body, we also manipulate the location of copulin exposure (i.e. olfactory epithelium versus epidermal keratinocytes in the genital region). Finally, we examine whether prior sexual experience mediates these effects. Contrary to previous studies, the current study finds no significant effects of copulin exposure on men's sexual behaviors or perceptions of women's facial attractiveness.

Session Title: Mental Health (Simplot D)

The Social Causes of Suicidal Behavior in 53 Cultures (3:45 – 4:05 p.m.)

Kristen Syme (Washington State University), Edward Hagen (Washington State University)

Using data from the Human Relations Area Files, the investigators found support for three evolutionary models of suicidal behavior (SB). The bargaining model and the costly apology model frame non-lethal SB as a costly signal that functions to garner either support in the context of a social conflict or forgiveness following a severe transgression, respectively. The inclusive fitness model contends that suicide completions evolved to benefit genetic kin. Employing exploratory methods, we investigated the social causes of SB. A list of cause types was created based on the text records, which was modified as coding progressed. A second coder coded the texts using the finalized list. Inter-rater reliability was adequate and discrepancies were reconciled. The results indicated that mating conflicts were the most common precursors to SB followed by status conflicts and transgressions. The significance of these findings will be discussed in relation to the evolutionary models of SB.

Do warriors in small scale societies suffer from combat stress? An ethnographic study with the Turkana of northwest Kenya (4:25 – 4:45 p.m.)

Matthew Zefferman (Arizona State University), Sarah Mathew (Arizona State University)

PTSD is a psychological construct first applied to American Vietnam veterans and later to other members of industrialized societies. Scholars have debated whether PTSD is an evolved universal fear response or a collection of unique to industrial societies. Meanwhile, psychologists debate the extent to which diagnosed combat-related PTSD is actually "moral injury" resulting from violations of moral beliefs. Addressing these debates, I conducted the first ethnographic study of combat stress in a small-scale society with Turkana pastoralists of northwest Kenya. I found that the PTSD symptoms most related to threat avoidance are high in Turkana warriors, but, relative to western soldiers, they have much lower rates of symptoms that may be more related to moral injury. This suggests "PTSD" is a mix of a universal fear response and symptoms depending on a society's moral beliefs. Studying small-scale societies can give novel insights into the disorders associated with industrial societies.

Schizotypy and Sexual Intent Perception (4:45 – 5:05 p.m.)

Danielle Wagstaff (Federation University), George Van Doorn (Federation University)

Positive Schizotypy symptoms can lead to favourable mating outcomes in the absence of debilitating negative symptoms. This link has previously been explained by associated increases in creativity. However, given Schizotypy is characterised by distortions of perception, we explored whether over-perception of sexual intent could also explain number of sexual partners. In a sample of 183 participants, high Schizotypy scale scores were related to higher ratings of sexual intent of women wearing red dresses but not those wearing green. Secondly, path analysis showed that, in line with the hypothesis, positive symptoms (ideas of reference) increased sexual intent perception, whereas negative symptoms (suspiciousness and no close friends) decreased it. Since sexual intent perception was related to sociosexual orientation, and thereafter to increased number of sexual partners, over-perception could explain some variation in mating success for those individuals with Schizotypy.

Thursday June 1st, 2017

Session 1 (10:30 a.m. – 11:50 a.m.)

Session Title: Evolution of Punishment (Hatch A/B)

When good norms turn bad: Peer punishment used to enforce inefficient social norms (10:30 – 10:50 a.m.)

Toby Handfield (Monash University), Klaus Abbink (Monash University), Lata Gangadharan (Monash University), John Thrasher (Monash University)

When norms can be enforced by peer punishment, groups are able to resolve social dilemmas in prosocial, cooperative ways. Little effort has been made, however, to investigate the potential of punishment to promote anti-social or destructive norms. In this paper we show that punishment can easily encourage participation in behaviours that are harmful to group welfare, and that this phenomenon is mediated by a social norm. In a variation of a public goods game, in which the return to investment is negative for both group and contributor, we find that the opportunity to punish led to higher levels of contribution, thereby harming collective payoffs. A second experiment demonstrated that a significant majority of subjects regard non-contribution in this setting as socially inappropriate; thereby confirming that the effect is norm-driven.

No difference between second- and third-party punishment judgments (10:50 – 11:10 a.m.)

Kristopher Smith (University of Pennsylvania), Robert Kurzban (University of Pennsylvania)

Previous theory proposes that there is a functional distinction between punishment from a victim of a moral violation and third-party bystanders. If true, then second- and third-party punishment judgments should have different forms, showing systematic differences on a variety of features. In four different experiments, we test if second-party punishment has the same features as third-party punishment. Specifically, we investigate the complete/attempt, commission/omission, and means/side-effect effects, as well as the consideration of trade-offs in dilemmas. In all four experiments, we find no difference in these effects between second- and third-party punishment judgments. In addition, we do not find second- and third-parties experience different emotional reactions. In sum, these experiments find that second- and third-party punishment judgments have a similar form, suggesting a similar function for these judgments.

Reputation and deterrence: Rich inferences from third-party punishment (11:10 – 11:30 a.m.)

Rhea Howard (Harvard University), Max Krasnow (Harvard University)

Why do individuals pay costs to intervene in conflicts that do not affect them? In two studies using vignettes and economic games (N = 849), we explored the inferences that uninvolved fourth parties (observers) make about second and third-party punishers. As predicted by the deterrence model of third party punishment (Krasnow & Delton, 2016), observers were equally dissuaded from mistreating third-party punishers as they were second-party punishers. However, third party punishers also more effectively deterred mistreatment of their friends and allies and were viewed as kinder, friendlier, and more pro-social. Furthermore, observers were more likely to infer that individuals who third-party

punished would also second-party punish than they were to infer that individuals who second-party punished would also third-party punish. We discuss third-party punishment as an optimal strategy that simultaneously confers cooperative reputational benefits and acts as an inoculation against mistreatment of oneself and one's allies.

Don't tread on me: third party punishment protests personal, potential mistreatment (11:30 – 11:50 a.m.)

Max Krasnow (Harvard University), Jinwon Lee (Harvard University), Rhea Howard (Harvard University), Andrew W. Delton (Stony Brook University)

Third-party punishment (3PP)—when Alice punishes Betsy for what Betsy did to Charlotte—has been of intense interest throughout the social sciences, and is at the center of a controversy over human social evolution: did this punishment evolve to produce group-wide or personal benefits? We will describe the results of four studies suggesting the latter. Despite the decades old assumption that subjects in canonical 3PP games have no self-interested reason for punishing 'Betsy', we find those who find it personal punish the most. People punish more when they infer 'Betsy' would treat them poorly. Further, we find that this specific inference, not how 'Betsy' would continue to treat 'Charlotte', that regulates punishment. Moreover, severing this inference diminishes punishment; when subjects were manipulated to no longer infer personal mistreatment from the mistreatment of 'Charlotte', they punish much less. This punishment seems to result from a personal bargaining, not norm enforcing, psychology.

Session Title: Assessing Formidability and Dominance (Simplot A)

Examining the Speed and Automaticity of Formidability Assessment Mechanisms (10:30 – 10:50 a.m.)

Patrick Durkee (California State University), Aaron Goetz (CSU, Fullerton), Aaron Lukaszewski (California State University)

Information about formidability was likely crucial throughout evolutionary history. Accordingly, the human mind should possess mechanisms that can efficiently and accurately track formidability. Previous research has demonstrated that strength is accurately judged from minimal cues, however, the speed and automaticity (i.e., efficiency) of such assessments have not yet been documented. Thus, we designed a battery of tasks to further examine formidability assessment mechanisms. Results suggest that accurate assessments of formidability are automatic (i.e., do not need to be prompted) and fast (i.e., accurate with only 30 milliseconds of exposure). With a few interesting exceptions, multilevel modeling revealed that most traits of the raters ($N = 187$) and targets ($N = 64$) do not influence the accuracy of these assessments. Further, we present eye-tracking data to highlight the salience of upper-body musculature as a cue to strength. Taken together, our findings advance and extend existing evidence regarding formidability assessment mechanisms.

Relationship between voice pitch and dominance ratings is mediated by inaccurate height perception (10:50 – 11:10 a.m.)

Marie M. Armstrong (McMaster University), David R. Feinberg (McMaster University)

Human voice pitch has consistently been linked to judgments of people's size and dominance, but relationships between voice pitch to physical size and real-world physical dominance indicators are

more mixed. We tested the relationship between height and pitch by using voices from 180 individuals where physical height was known, and having participants rate the height of each individual. The relationship between voice pitch and the portion of variance in perceived height unrelated to physical height was stronger than that of voice pitch and physical height. Furthermore, part of voice pitch-based size judgments are based on a portion of the variance in perceived height that is unrelated to actual height. This “false” height perception is further shown to be a significant mediator of the relationship between voice pitch and physical dominance judgments (both male and female voices) and voice pitch and social dominance (female voices only).

Social Perception of Bodies and Faces (11:10 – 11:30 a.m.)

Danielle Morrison (University of Glasgow), Danielle K. Morrison (University of Glasgow), Benedict C. Jones (University of Glasgow), Lisa M. DeBruine (University of Glasgow)

Studies of face and voices consistently show that valence and dominance are the major axes on which social perception occurs, suggesting that these two attributions are fundamental to human social perception. To test this, 958 participants rated 50 male or 50 female faces or bodies on one of 13 social attributions used in previous research on faces and voices. We replicated the two-axis pattern of valence and dominance for faces, but not for bodies. For both male and female bodies, traits associated with both valence and dominance were highly correlated and loaded onto the first principal component, while the second principal component mainly correlated with the traits that had low inter-rater reliability and disappeared when these traits were removed from the analysis. Our findings provide evidence against the idea that the two-axis pattern is a fundamental aspect of social perception and suggest that face and body perception have distinct functions.

Vocal signaling of physical strength in men (11:30 – 11:50 a.m.)

Greg Bryant (University of California, Los Angeles), Katarzyna Pisanski (University of Sussex)

Research suggests that men’s upper-body strength is detectable in speaking voices across disparate cultures, and listeners’ assessments are independent from judgments of height and weight. However, acoustic correlates of either actual strength or people’s judgment of it are unclear. In 58 college-aged men, we measured upper-body strength (hand dynamometer and flexed bicep circumference) and recorded them speaking monophthong vowels, a single spoken sentence, and yelling a monosyllabic word (No), all subjected to acoustic analysis. In a 2AFC task, listeners were able to accurately identify the stronger speaker in loud yelling, but not in spoken sentences. When yelling, men raised their fundamental frequency significantly but also lowered their formants (and thus their apparent vocal tract length by an average of 4 cm) compared to speaking vowels. Acoustic correlates of upper-body strength and perception data suggest that loud yelling contains salient and evolutionarily relevant information about men’s physical strength and formidability.

Session Title: Adaptive Health Behaviors (Simplot C)

The low prevalence of female smoking in the developing world: gender inequality or maternal adaptations for fetal protection? (10:30 – 10:50 a.m.)

Edward H Hagen (Washington State University), Melissa J. Garfield (Washington State University), Roger J. Sullivan (California State University)

Female smoking prevalence is dramatically lower in developing countries (3.1%) than developed countries (17.2%), whereas male smoking is similar (32% vs. 30.1%). Low female smoking has been linked to high gender inequality. Alternatively, to protect their offspring from teratogenic substances, pregnant and lactating women might avoid toxic plant substances like nicotine. Higher total fertility rates (TFR) in developing countries could therefore explain their lower prevalence of female smoking. An analysis of smoking prevalence in 173 countries vs. TFR and four indices of gender inequality found that a one standard deviation increase in TFR was associated with a decrease in female smoking prevalence by factors of 0.58 – 0.77, adjusting for covariates. Increased gender equality was associated with increased female smoking prevalence. TFR was also a positive predictor of an increase in smoking prevalence among postmenopausal women. High TFR and gender inequality both predict reduced prevalence of female smoking across nations."

The Psychology of Disease Avoidance: Situational and Physiological Antecedents of Social Bias (10:50 – 11:10 a.m.)

Anastasia Makhanova (Florida State University), E. Ashby Plant (Florida State University), Lisa Eckel (Florida State University), Larissa Nikonova (Florida State University), Joshua Ackerman (University of Michigan), Jon Maner (Northwestern University)

Infectious disease has posed a pernicious threat to people throughout history. In response to this threat, people think and behave in ways that help them avoid contact with pathogens. When these processes become activated, people become socially avoidant of others who differ from their heuristic norm of a healthy person even if they are not actually contagious (e.g., people who are elderly, obese, have physical deformities). We examined whether a physiological measure of acute inflammation (the cytokine interleukin-6) might be linked with such cognitive biases. We found that both experimental manipulation of disease concern and changes in interleukin-6 during the experiment were associated with attentional avoidance of people with facial deformities and an implicit association between elderly and unpleasant. This study provides insight into the powerful connections between physiological and psychological processes aimed at promoting human health and well-being, and how these processes can affect even basic social cognition.

How pathogen cues shape impressions of foods: the omnivore's dilemma and functionally specialized conditioning (11:10 – 11:30 a.m.)

Joshua Tybur (VU Amsterdam)

When consumed, meats and plants have presented asymmetric threats to humans and their hominid ancestors for hundreds of thousands of years. Here, we test the hypothesis that human food learning mechanisms are functionally specialized to navigate these asymmetric threats. In each of three studies, participants who first viewed images of meats paired with cues to pathogens subsequently reported less desire to eat those meats relative to participants in a control condition. In contrast, participants

who first viewed plants paired with the same cues to pathogens did not report less desire to eat those plants. Further, a meta-analysis of effects across the three studies (total N = 398) indicated that pairings with cues to pathogens affected both desires to eat meats and anticipated tastes of meats, but not desires to eat plants or anticipated tastes of plants. These findings present novel evidence for functionally specialized, pathogen-based meat learning.

Food Neophobia and Motion Sickness Susceptibility: Two Adaptations for Toxic ‘Foods’? (11:30 – 11:50 a.m.)

Thomas Alley (Clemson University), Hannah Gilliam (Clemson University)

Food neophobia is a trait that produces a resistance to consuming unfamiliar foods. It is believed to be an adaptive trait that evolved to reduce the likelihood of ingesting harmful substances. It may seem unrelated to motion sickness, but the most widely accepted explanation of motion sickness is that it reflects a response to conflicting sensations of motion taken as symptoms of ingesting toxins. As Triesman (1977) noted, the conflicting sensory signals underlying motion sickness are similar to the sensory results of ingesting certain toxins, and both can produce bodily responses of sweating, nausea and vomiting. Thus, both traits may be seen as ways to reduce the chance of consuming toxic substance, and both show substantial individual differences. This study tested 263 young adults finding that self-reported susceptibility to motion sickness in childhood (MSSQ-child) was positively correlated ($r = .133$) with scores on a scale of food neophobia (FNS).

Session Title: Mating Strategies (Simplot B)

Marital Assortment by Wealth in Small-Scale Societies (10:30 – 10:50 a.m.)

David A. Nolin (University of Missouri), Mary K. Shenk (University of Missouri), Siobhán M. Mattison (University of New Mexico)

We present the results of a multi-site, cross-cultural study of marital assortment (homogamy) using over 100 wealth measures from twenty small-scale societies. Building on a previous study of the relationship between intergenerational transmission of wealth and wealth inequality, we examine the degree to which people match with spouses similar to themselves in material, somatic, relational (social capital, networks), and noetic wealth (knowledge and skills). We find stronger assortment for noetic and relational wealth than material wealth, and almost no assortment on somatic wealth. Assortment is stronger in monogamous societies than those that permit plural marriage, and stronger in unilineal descent societies than those with bilateral descent. As material wealth becomes more important to subsistence, the degree of assortment appears to increase. Overall the degree of marital assortment is correlated with the degree of inequality in a society, but we find considerable variation by wealth type. The implications for adaptive mate choice across different socio-ecological conditions will be discussed.

Do gay men and lesbians show sex differences in mate preferences? A meta-analysis (10:50 – 11:10 a.m.)

Angela Pirlott (Saint Xavier University), Beata Czerwin & Shelby Olita (Saint Xavier University)

Sex differences in mate preferences, such as women's greater valuation of resource contribution, relative to men, and men's greater valuation of fertility-related indicators, such as attractiveness, relative to women, emerge reliably as predicted by evolutionary theories of sex differences in

reproductive challenges. But what about gay men and lesbians? In some domains, gay men and lesbians show evidence of “gender inversion,” i.e., that their interests that correspond more similarly with those of the opposite-sex, yet in mating domains, evidence exists to suggest evolved sex differences in mating interests, despite their same-sex mating attraction. To examine whether gay men and lesbians show sex differences in mate preferences, we conducted a meta-analysis of the mate preference literature which compared gay men, lesbians, heterosexual women, and heterosexual men ($k = 25$). Gay men and lesbians’ mate preferences were less sex differentiated across numerous traits than heterosexual men and women’s mate preferences.

The female evolved inhibition hypothesis and gender differences in a go/no-go task (11:10 – 11:30 a.m.)

Espen Sjoberg (Oslo and Akershus University College of Applied Sciences), Geoff Cole (University of Essex)

Parental investment theory suggests that women, due to greater investment in child rearing, can be more choosy than men when considering a potential mate. A corollary to this is that women should possess greater inhibition abilities compared to men in contexts related to sex and reproduction. Here, we present and review the evidence for this hypothesis, which we call the female evolved inhibition hypothesis. This includes results from a go/no-go task where we controlled for social variables. We find that evidence for a female advantage in inhibition abilities is strongest when a sexual context is present, although the evidence is often indirect. In cognitive tasks, the evidence is generally weak for a female inhibition advantage, but in our go/no-go experiment we found a moderate female advantage on response inhibition to simple geometric objects, which cannot be explained in terms of a speed/accuracy tradeoff.

Do Humans Forage Optimally For Relationships? A Model Proposal (11:30 – 11:50 a.m.)

Samantha Cohen (Indiana University), Kristen Mark (University of Kentucky), Peter M. Todd (Indiana University)

Optimal foraging theory (OFT) indicates that individuals seeking patches of resources may be predisposed to use certain search strategies due to “rationality” or indirect evolutionary pressures. This theory has not been applied to human mate choice, although individuals clearly gain many resources from being in a relationship (e.g. sexual opportunity). We propose a new model, the relationship patch model, which treats mate search as a foraging problem, where the in-patch time is the duration of a romantic partnership, during which partners both gain resources such as satisfaction over time. We test whether humans use dyadic quality as a stopping criteria within a relationship, and whether these rules correspond with predicted “optimal” foraging times using the Marginal Value Theorem. Initial findings indicate individuals tend to leave relationships significantly earlier than expected based on satisfaction.

Session Title: Life History Trade-offs (Simplot D)

Functional coordination of human personality with socioecology and condition-dependent components of embodied capital (10:30 – 10:50 a.m.)

Kristine Joy Chua (Oklahoma State University), Aaron W. Lukaszewski (California State University, Fullerton)

Cross-cutting evolutionary perspectives make predictions regarding adaptively patterned coordination of personality with socioecological variables and phenotypic features. The present research provides empirical tests of integrative adaptationist models that link environmental harshness with condition-dependent components of embodied capital (e.g., attractiveness), and life-history (LH) related aspects of personality variation (e.g., trust; mating strategies). Additionally, we incorporate anthropometric (e.g., physical strength) and genetic (telomere length) measures that are hypothesized as objective indicators of LH calibration or phenotypic condition. Initial findings from this large college sample are sex-specific associations of (i) environmental harshness with telomere length and personality, and (ii) aspects of phenotypic condition with environmental harshness and personality. Although some evidence suggest that these relationships are mediated through phenotypic condition, many of the environmental, biological, and anthropometric predictors explained unique variance in personality variables. Overall, these findings provide initial support for multiple hypotheses regarding the functional coordination among basic dimensions of human variation.

Resource and Extrinsic Risk in Defining Fast Life Histories (10:50 – 11:10 a.m.)

Lei Chang (University of Macau), Hui Jing Lu (Polytechnic University of Hong Kong)

Food and safety are essential for survival. Their environmental constraints, levels and variations of resources and extrinsic risks shape life history (LH) tradeoffs to optimize energetic allocation. Based on a longitudinal sample of 206 rural Chinese adolescents, half of whom lived with relatives away from their migrant worker parents, this study examined how resources and extrinsic risks effect LH. Structural equation modeling and other results showed that the environmental constraints of safety and food were negatively associated with slow LH strategies, which were negatively associated with such behavioral outcomes as present orientation, impulsivity, risky and externalizing behavior, and academic underperformance. The puberty-inducing effects of paternal, maternal, and biparental absence were compared. The results support the LH theorizing that human development responds to environmental cues about resources and extrinsic risks in regulating LH and behavior.

Primes for mortality risk influence perceived life expectancy and some reproductive preferences in a large sample of US students and non-students (11:10 – 11:30 a.m.)

Lisa McAllister (University of Missouri), Mary Shenk (University of Missouri)

Life history theory posits that mortality risk influences reproductive timing and effort. However, the proximate mechanisms and underlying psychology by which cues of mortality affect reproduction remain poorly understood. We present a priming study exploring how mortality influences reproductive preferences among nulliparous 18-25-year-olds, including 3756 U.S. students from across 10 universities and 1681 non-students. Low and high mortality primes reliably manipulated subjects' self-predicted life expectancies ($\chi^2(1)=21.292$, $p<0.001$). We discuss the effects of these primes, and perceived mortality, on preferred reproductive timing and effort, interest in sexual risk taking and interest in parenthood. We also discuss how subjects' socioecological backgrounds may mediate the effects of mortality on reproductively relevant outcome variables. Overall, our findings suggest that mortality perceptions are malleable, and influence reproductive preferences. However, the directionality and strength of the effects vary based on subjects' socioecological backgrounds, including number of bereavements, childhood household income, and childhood food security.

Differential Resource Allocation: The Cost of Reproductive Effort (11:30 – 11:50 a.m.)

Tomás Cabeza de Baca (University of California, San Francisco),

Life history theory offers an evolutionary-developmental framework that predicts differential health outcomes through trade-offs between somatic effort (maintenance vs. growth) and reproductive effort (mating vs. parenting). Accordingly, due to finite resources, higher allocation toward reproduction will necessarily reduce availability of resources for health-maintenance. The present study utilized SEM to evaluate this trade-off hypothesis in the NHANES female population (N=2323). Specifically, we found that increased reproductive effort significantly predicted lower serum concentrations of nutrients and indicators of physical condition, each of which significantly contributed to inflammation and indirectly to higher levels of illness symptomology. These results indicate that investment toward reproduction detracts from health-maintaining behaviors, contributing to inflammation and subsequently to decreased mental and physical condition.

Session 2 (12:00 p.m. – 1:00 p.m.)

Session Title: Evolutionary Psychology: Biological Diversity and Genetics (Hatch A/B)

Human Biological and Psychological Diversity (12:00 – 12:20 p.m.)

Brian Boutwell (Saint Louis University), Bo Winegard (Florida State University), Benjamin Winegard (Carroll College)

Many evolutionary psychologists have asserted that there is a panhuman nature, a species typical psychological structure that is invariant across human populations. Although many social scientists dispute the basic assumptions of evolutionary psychology, they seem widely to agree with this hypothesis. Psychological differences among human populations (demes, ethnic groups, races) are almost always attributed to cultural and sociological forces in the relevant literatures. However, there are strong reasons to suspect that the hypothesis of a panhuman nature is, at least partly, incorrect. Humans migrated out of Africa at least 50,000 years ago and occupied many different ecological and climatological niches. Thus, it seems likely that humans also evolved slightly different psychological traits as a response to different selection pressures in different environments and niches. We explore these possibilities in the current paper.

Genetic confounding of the relationship between father absence and age at menarche (12:40 – 1:00 p.m.)

Nicole Barbaro (Oakland University), Brian B. Boutwell (Saint Louis University), J.C. Barnes (University of Cincinnati), Todd K. Shackelford (Oakland University)

Research on life history theory has yielded important insights into the developmental processes that underpin variation in behavioral outcomes across individuals. Yet, there are methodological concerns that limit the ability to draw causal inferences about human development and psychological functioning within a life history framework. The current study used a simulation-based modeling approach to estimate the degree of genetic confounding in tests of a well-researched life history hypothesis: that father absence is associated with earlier age at menarche. The results demonstrate that the genetic correlation between X and Y can confound the phenotypic association between the two variables, even if the genetic correlation is small—suggesting that failure to control for the genetic correlation between X and Y could produce a spurious phenotypic correlation. We discuss the implications of these results for research on life history, and highlight the utility of incorporating genetically se

Session Title: Cognitive Mechanisms and Modularity (Simplot A)

Toward a Cognitive Evolutionary Account of Grief (12:00 – 12:20 p.m.)

Claire White (California State University), Daniel Fessler (University of California, Los Angeles)

Despite over a century's worth of theoretical developments and research, there is little consensus on the evolutionary origins and functions of grief (e.g., Archer, 2001; Bonanno, 2001; Nesse, 2005). Existing accounts suffer from the weakness of assuming that grief is a singular phenomenon and has one function. We take the first steps towards providing a revised cognitive evolutionary account of grief by disaggregating it into meaningful subtypes based on the potential adaptive benefits of each. This account has generated testable predictions concerning input conditions and individual differences. We report a series of studies that we have conducted with bereaved individuals on the predominant cognitive reactions following bereavement which gives support to the claims resulting from this conceptualization of grief (White, Fessler & Gomez, 2016; White & Fessler, 2013). Finally, we outline the implications of this research for mainstream bereavement theories and practices.

Evolved cognitive mechanisms reflect navigational injury (12:20 – 12:40 p.m.)

Russell Jackson (University of Idaho)

Evolved Navigation Theory (ENT) identifies ways that cognitive mechanisms such as distance perception likely faced selection from navigational consequences such as falling. Indeed, researchers have discovered some of the largest and most common visual illusions under ENT's predictive framework. However, we have not yet explored how life events affect the long-term expression of these mechanisms. I tested ENT predictions over a ten-year period by measuring participants' environmental perception and obtaining self-reports of lifetime falling injuries. Data corresponded with unique ENT predictions that specific injuries influence environmental perception in specific ways. These results advance our understanding of a major selection factor in our species over our evolutionary history and in modern times

Why evolutionary psychology should abandon modularity (12:40 – 1:00 p.m.)

David Pietraszewski (Max Planck Institute for Human Development), Annie E. Wertz (Max Planck Institute for Human Development)

Appeals to modularity—the idea that cognitive processes are to some degree distinct and separable—have played an important role in arguing against unitary and domain-general views of the mind, views that hinder progress in the cognitive sciences and preempt the very relevance of evolutionary psychology. The first part of this talk pays homage to the essential historical role modularity played in this context. The second half will suggest, however, that the very thing that made modularity useful now makes it a hindrance to further progress. This is that the evidentiary standards of modularity invite a fundamental conceptual confusion. This confusion has not been previously identified, either within or outside of the evolutionary community. Consequently, even past of criticisms of modularity, particularly fodorian modularity, have been too charitable. Nothing will be lost by abandoning modularity for functional specification, aside from confusion, distraction, and ammunition for critics.

Session Title: Research in Attractiveness (Simplot C)

Women with the small waist sizes and low body mass indices judged attractive do not have better health and higher fertility (12:00 – 12:20 p.m.)

William Lassek (University of Pittsburgh), Steven Gaulin (University of California, Santa Barbara)

The widely accepted view that attractive women's low waist-hip ratios (WHRs) and low body mass indices (BMIs) are phenotypic markers of superior female health and fertility is probably incorrect. We review the existing literature (including heavily cited studies), and present six new analyses based on large US and international samples, considering hormone data, health measures, immune factors, live births, and pregnancy complications. Both the review and new analyses show either no relationship between WHR and BMI on the one hand and health and fertility on the other or, more commonly, a negative relationship such that low WHR and BMI are associated with worse health and fertility outcomes. These patterns contradict the widely assumed function of male mating preferences first suggested by (Singh 1993). We suggest they are more consistent with Symons (1979) earlier proposal that male preferences target female nubility.

Own attractiveness and perceived relationship quality shape sensitivity in women's memory for other men on the attractiveness dimension (12:20 – 12:40 p.m.)

Christopher Watkins (Division of Psychology, Abertay University), Mike Nicholls (Abertay University), Carlota Batres (University of St Andrews), Dengke Xiao (University of St Andrews), Sean Talamas (University of St Andrews), David Perrett (University of St Andrews)

Although memory for opposite-sex attractiveness appears to be weaker when in a relationship, romantic relationship quality varies over time. Here, we tested whether activating concerns about relationship quality strengthens memory for attractive faces, by exposing women to faces manipulated in attractiveness before priming positive or negative relationship quality. We examined the extent to which women could distinguish between seen versus unseen versions (more or less attractive than original) of studied identities (sensitivity in memory). Good relationship quality strengthened hit rate regardless of the sex or attractiveness of face. Women were sensitive to female attractiveness but had biased memories for male attractiveness (e.g. according to psychometric relationship quality). Moreover, attractive women were sensitive to male attractiveness, while their less-attractive peers were more likely to remember women as more attractive and men as less attractive than their original image.

Willingness to Share with YOU Matters: Why Generosity is Attractive in Romantic and Cooperative Partner Choice (12:40 – 1:00 p.m.)

Sakura Arai (University of California, Santa Barbara), Michael Barlev (University of California, Santa Barbara), Leda Cosmides (University of California, Santa Barbara), John Tooby (University of California, Santa Barbara)

Generosity is one of the most universally preferred traits in potential romantic and cooperative partners. But why, exactly, is it attractive? In a series of experiments we ask whether generosity is attractive because it indicates an individual's (1) ability to accrue resources, (2) willingness to invest in oneself, or (3) general willingness to help others (trait generosity). The results support the hypothesis that generosity is attractive when it indicates a potential partner's willingness to invest in you, regardless of how generous the partner is to other people or the partner's skill in acquiring the resource offered. This pattern held for both men and women, whether they were rating potential

mates or opposite-sex friends. Both sexes had higher standards for mates than for friends, and women had higher standards than men did, as predicted by parental investment theory.

Session Title: Perceiving Others (Simplot B)

The Effect of Methodology in Third-Party Kin Recognition Research (12:00 – 12:20 p.m.)

Vanessa Fasolt (University of Glasgow), Iris J Holzeitner (University of Glasgow), Anthony J Lee (University of Glasgow), Kieran J O'Shea (University of Glasgow), Benedict C Jones (University of Glasgow), Lisa M DeBruine (University of Glasgow)

Previous studies show that unrelated third parties can judge relatedness somewhat accurately based on facial appearance. Yet, findings differ in more nuanced aspects, such as the relevance of gender for kin recognition. This discrepancy could be the result of different methodologies used in prior studies. While some studies use a matching task in which participants match relatives' faces from a selection of pictures, others use a similarity-rating task, in which participants rate the similarity between pairs of faces; and yet others use a relatedness judgment task, in which participants judge whether pairs of faces are related or not. The current series of studies employs all three methodologies to determine whether and how methodology might influence kinship judgments. Our findings show that relatedness is the main factor driving relatedness judgments. Additionally, gender had an effect in so far as same-sex pairs are perceived to be related more often than opposite-sex pairs.

Biracial Cues of Intergroup Alliance: Effects on Snap Perception and Social Judgment (12:20 – 12:40 p.m.)

X.T. (Xiao-Tian) Wang (University of South Dakota), Jose Ramon Dominguez, Kennidy Asche (University of South Dakota)

We hypothesized that biracial cues reveal information about ancestral intergroup alliance between members of two races or ethnic groups. As a result, the perception of and social attitude towards a biracial target would be upregulated and become more positive. Participants viewed and rated images of pure and morphed composites of Caucasian and Asian faces. Accuracy scores of racial perception revealed a significant own-race bias so that biracial composites were perceived as more Caucasian looking than they actually were by Caucasian viewers. Rating scores of personal qualities showed a favoritism towards biracial images. Overall, compared to the mating-related measure of attractiveness, the coalition-related measure of trustworthiness was a better predictor of other measures of personal qualities (i.e., health, intelligence, and career potential). In sum, biracial cues indicate interracial alliance and thus would increase estimated cooperative potentials of a biracial protagonist.

Pairs of genetically unrelated look-alikes: Further tests of personality resemblance and social affiliation (12:40 – 1:00 p.m.)

Nancy Segal (CSU Fullerton), Brittney Hernandez (Colorado State University), Jamie Graham (University of Texas), Ulrich Ettinger (University of Bonn)

Relationships among physical resemblance, personality similarity and social affiliation have generated discussion among behavioral science researchers. A "twin-like" design (genetically unrelated look-alikes: U-LAs) explores associations among resemblance in appearance, big five personality traits and social attraction within an evolutionary framework. The Personality for Professionals Inventory and Rosenberg Self-Esteem Scale were completed by 37 and 41 U-LA pairs, respectively. Participants were

20 male pairs and 24 female pairs, $Mage=42.01$ years, ($SD=16.24$). The present study supports and extends earlier findings: U-LA correlations were negligible for all five personality factors and self-esteem ($-.00$ to $.18$), indicating no meaningful relationship between appearance and behavior. The criticism that monozygotic (MZ) twins are alike because their matched looks invite similar treatment is refuted in favor of a genetic component underlying twins' personality similarity. Moreover, fewer U-LAs expressed initial and current close social relationships (20.3%, 22.1%) than MZ reared-apart twins (79%, 80%), consistent with earlier findings.

Session Title: The Role of Risk in Decision-making (Simplot D)

Foraging in an uncertain world: An agent-based modeling approach to model food-sharing strategies in volatile environments (12:00 – 12:20 p.m.)

Marco Campenni (Arizona State University), Lee Cronck (Rutgers University), Athena Aktipis (Arizona State University)

Individuals living in volatile can use several different strategies for managing risk. Our project focuses on two specific resource sharing rules that can lead to the pooling of risk in small scale societies but that can be also generalized to many other social biological systems: (1) generalized food sharing based on need, which we refer to as need-based transfers (NBT), and (2) debt-based transfers (DBT) based on tracking of debt and credit. NBTs are common in small-scale societies and are also observed contemporary Western societies. DBT systems occur in both. We use an agent-based approach to model social foraging strategies in volatile environments with both NBT and DBT sharing rules. Our results suggest that when resources are uniformly distributed NBT strategies are highly effective, but only in the short term. However, when resources are patchy, NBT strategies are best in both the short-term and long-term.

Women's Occupations and Risk Among the Shodagor of Bangladesh (12:20 – 12:40 p.m.)

Katie Starkweather (Max Planck Institute for Evolutionary Anthropology), Mary Shenk (University of Missouri), Richard McElreath (Max Planck Institute)

Across cultures, men tend to choose occupations that require more economic risk and women's occupations are more compatible with childcare. Among the Shodagor, a boat-dwelling sub-culture in Bangladesh, men and women in some families flip these traditional gender roles for half of the year. Women produce high-variance returns by selling goods to non-Shodagor women, while men stay home as the primary caregiver of children. In other Shodagor families, women's roles are more similar to those found cross-culturally: they are the primary caregivers of children and either fish with their husbands or they stay home as housewives. Nearly all Shodagor men fish for a living. This paper seeks to understand the factors that lead some women to choose a risky occupation over the others by testing hypotheses derived from the Economy of Scale model. We find that a comparative advantage in an occupation, removal of constraints, and ecology allow women to pursue a gender atypical economic strategy.

The Female Voice: Cyclical and Contextual Variation in Acoustics (12:40 – 1:00 p.m.) Melanie Shoup-Knox (James Madison University), Grant Ostrander (James Madison University), Gabrielle Reimann (James Madison University), Nathan R. Pipitone (Adams State University)

Several studies have found that raters find female voices recorded at high fertility times of the menstrual cycle more attractive than those recorded at low fertility, however there is little consensus over the source of acoustic variations driving listeners' responses. The current study examines female vocal characteristics in a tightly controlled, within-subject data set. We also examined whether contextual information affects vocal acoustics differently across the menstrual cycle. Female participants were recorded making three separate statements: accepting a date, rejecting a date, and a neutral statement. Each female provided these recordings twice, once during ovulation (as confirmed by luteinizing hormone detection strips) and once during the late luteal phase of her menstrual cycle. Each recording was analyzed for fundamental frequency, formant dispersion, jitter, and shimmer, and differences were found across the menstrual cycle as well as between statements (accept vs. reject a date vs. neutral).

Session 3 (3:40 p.m. – 4:40 p.m.)

Symposium: Frontiers in Friendship and Fitness Interdependence: A multi-method approach to understanding cooperative relationships, Part I (Hatch A/B)

Chair: Jaimie Arona Krems (Arizona State University)

Symposium abstract: Cooperative relationships are central to human sociality. This symposium takes a multi-method approach to exploring interrelated ideas on cooperation, friendship, and fitness interdependence (FI). First talks present a novel conceptualization of FI generated from multidisciplinary workshop, showing that FI better predicts cooperation than traditional biological and social psychological measures. Next talks mathematically model how and why these cooperative relationships arise and persist, illustrate the ways that FI carves the social landscape into friend and friend-like categories across cultures, and present experimental findings suggesting an adaptation to protect our cooperative relationships. Discussant Daniel Hruschka offers thoughts on integrating these entwined phenomena

Fitness interdependence and the study of cooperation: Toward a consensus (3:40 – 4:00 p.m.)

Athena Aktipis (Arizona State University); Joe Alcock (University of New Mexico); Gerald Wilkinson (University of Maryland); Oliver Scott Curry (University of Oxford); Daniel Sullivan (University of Arizona); Gilbert Roberts (Newcastle University); Daniel Balliet (Vrije Universiteit Amsterdam); Daniel Sznycer (Arizona State University); Andres Munoz (Arizona State University); Pam Winfrey (Arizona State University); Jessica Ayers (Arizona State University); Helen Wasielewski (Arizona State University); Amy Boddy (Arizona State University); Jaimie Arona Krems (Arizona State University); Lee Cronk (Rutgers University)

Humans are intensely social animals. Our fitness outcomes are highly entwined with the fitness outcomes of those with whom we interact. Positive fitness interdependence can arise for many reasons, including genetic relatedness, risk pooling, shared fate, having shared goals, or benefits from division of labor or economies of scale. Despite its importance, fitness interdependence and its implications for the study of cooperation have not been systematically studied. A shared definition can help facilitate collaboration and dialogue across disciplines about the causes and consequences of fitness interdependence. Toward these ends, we propose the following definition of fitness interdependence: The degree to which an organism's ability to get its genes into future generations is positively or negatively influenced by the ability of another organism (or organisms) to get their genes into future generations. We discuss several ways to measure and model fitness interdependence, as well as opportunities and challenges for future research.

Fitness interdependence shapes helping decisions (4:00 – 4:20 p.m.)

Daniel Sznycer (Arizona State University), Joe Alcock (University of New Mexico), Gerald Wilkinson (University of Maryland), Oliver Scott Curry (University of Oxford), Daniel Sullivan (University of Arizona), Gilbert Roberts (Newcastle University), Daniel Balliet (Vrije Universiteit Amsterdam), Daniel Sznycer (Arizona State University); Andres Munoz (Arizona State University), Pam Winfrey (Arizona State University), Jessica Ayers (Arizona State University), Helen Wasieleski (Arizona State University), Amy Boddy (Arizona State University), Jaimie Arona Krems (Arizona State University), Lee Cronk (Rutgers University)

Previous work shows that genetic relatedness can favor the evolution of cooperation and that kinship is an important contributor to human helping decisions. But the evolution of kin-based altruism is just one case of a more general phenomenon of the evolution of altruism toward individuals with whom one has positive fitness interdependence. Humans are highly social, and our fitness is therefore influenced by the fitness of those with whom we interact. In this study we tested whether perceived fitness interdependence predicts hypothetical helping decisions. It does. Moreover, perceived fitness interdependence predicts helping decisions better than do (i) genetic relatedness and (ii) various measures of closeness. Further research is needed on how the mind represents fitness interdependence and how the latter influences decisions about whether to help others who are in need.

Reciprocity creates interdependence, and vice versa; or why you should even help when anonymous (4:20 – 4:40 p.m.)

Pat Barclay (University of Guelph)

Why help friends when unobserved? How does reciprocity invade defectors? These questions are linked by interdependence (pseudo-reciprocity): when one organism produces benefits for another—at cost or as a byproduct of its selfish actions (scroungeable food)—the recipient has a stake in keeping its benefactor alive. We present a mathematical Prisoners Dilemma model where help given and received affects survival. This model produces two interesting results. First, interdependence creates reciprocity: when partners benefit from each other's presence, it catalyzes reciprocity to invade defectors; cooperation persists after byproducts disappear. Second, reciprocity creates interdependence: those who help a cooperative partner—even when anonymous—outcompete those who defect, because they keep that cooperative partner alive. “Machiavellian” cooperators, who defect when anonymous, do worse as anonymity increases because their partners die. This work highlights the fact that reciprocity and interdependence are not separate evolutionary processes, but are inherently linked.

Session Title: Disgust (Simplot A)

Why are injuries disgusting? (4:00 – 4:20 p.m.)

Tom Kupfer (The University of Kent)

According to pathogen avoidance perspectives, injuries elicit disgust because they have infectious potential. Here an alternative explanation is proposed: People automatically simulate an observed injury, leading to unpleasant vicarious feelings and, for lack of a more accurate word, they describe these feelings as “disgust”. Factor analysis of disgust responses revealed injury items as a separate

factor from pathogen items. A behavioural avoidance experiment showed that injury stimuli were appraised as less contaminating than infection stimuli. Open ended responses showed that injury stimuli were predominantly associated with feelings of empathy and vicarious pain. Disgust towards injury images was predominantly predicted by perceived level of pain. Together these findings support the hypothesis that disgust reported towards injury stimuli describes an unpleasant vicarious experience based on empathy, which is not the same emotion as the prototypical disgust elicited by pathogen cues.

The interplay of sexual arousal and disgust: Current research and future directions (4:20 – 4:40 p.m.)
Florian Zsok (University of Zurich)

Sex is a double-edged sword. On one hand, it is the key to reproduction and fitness. On the other hand, it involves a large risk of pathogen transmission. Thus, sex-related stimuli can elicit both disgust and sexual arousal. Disgust has evolved to protect us from disease, while sexual arousal facilitates sexual interaction. The two seem to be incompatible, and research as well as theory suggest that they inhibit each other. But the few studies that have been conducted show seemingly inconclusive result. I will summarize the existing research on sexual arousal and disgust, including a study of my own, and explain results in light of theory. Based on these findings, I will suggest avenues for future research, and highlight implications for practice.

Symposium: Sex Similarities, Sex Differences, and Sexual Antagonisms Part I (Simplot C)

Chair: Douglas Kenrick (Arizona State University), Jaimie A. Krems (Arizona State University)

Symposium Abstract: Sexual selection has powerful effects on mating behaviors. Those effects influence not only relationships within and between the sexes, but also spatial cognition and popular culture. Here we address questions including: How do missing fathers make for promiscuous daughters? How are sex differences in mating linked to sex differences in mapping? How does competing with your own sex affect your relationships with the opposite sex? Why does sexual conflict pervade mating relationships from beginning to end? How do sex differences shape our prejudices? And why do sex differences show up in Academy Awards, but not Pulitzer Prizes?

Sexual Conflict in Human Mating (3:40 – 4:00 p.m.)

David Buss (University of Texas)

Despite interdependent reproductive fates that sometimes favor cooperation in mating, males and females exhibit many psychological and behavioral footprints of sexually antagonistic coevolution. These include strategies of sexual deception, sexual exploitation, and infidelity, as well as anti-exploitation defenses such as commitment skepticism and emotions such as sexual regret and jealousy. Sexual conflict pervades the mating arena throughout the temporal spectrum: prior to sexual intercourse, immediately following sexual orgasm, during the course of an ongoing mating relationship, and in the aftermath of a romantic breakup. It also permeates many other social relationships in forms such as daughter-guarding, conflict in opposite-sex friendships, workplace sexual harassment, and coalitional conflict. Sexual conflict constitutes not a narrow or occasional flashpoint, but rather persistent threads that run through our intensely group-living species.

The Effects of Paternal Disengagement on Women's Perceptions of Male Mating Intent (4:00 – 4:20 p.m.)

Sarah Hill (Texas Christian University), Danielle J. DelPriore (Texas Christian University) Bruce J. Ellis (University of Utah) Randi P. Proffitt-Leyva¹ (Texas Christian University)

Previous research demonstrates an association between paternal disengagement and daughters' precocious and risky sexual behavior. Much less is known about the proximate, psychological changes that encourage these patterns. We begin to redress this gap by testing for the effects of primed reminders of paternal disengagement on women's perceptions of male mating interest and flirting behavior. I present results of three studies demonstrating that women who described a time their father was absent (vs. a comparison state) perceived greater: sexual arousal in male, but not female, targets (Studies 1 and 2) and perceived greater mating interest communicated by a male confederate's actions in a behavioral interaction (Study 3). We also found evidence of greater flirting behavior on the part of women who first wrote about a time that their father was absent. These findings suggest paternal disengagement may change women's perceptions of men in ways that promote sexually opportunistic behavior.

Academy Awards, Pulitzer Prizes, and Blockbuster Hits: Sex Differences and Similarities in Competitive Success (4:20 – 4:40 p.m.)

Douglas Kenrick (Arizona State University), Jaimie Arona Krems (Arizona State University), David Lundberg-Kenrick (Arizona State University), Zachary Airington (Arizona State University)

In Hollywood, it pays to be young – especially for women, and this is often blamed on ageism and sexism within Hollywood itself. But is the problem actually caused by evolved mechanisms within the minds of movie-going audience members? We compared data from box office hits and Academy Award nominees to best-selling books and Pulitzer Prize winners. We find age-related mate preferences (for younger women and older men) are reflected on the screen but not off of it. This holds across cultures, and even when looking at nominees for Best Actor or Actress—an arena where accumulated skill might otherwise be expected to win out over looks. Sex differences are even larger in commercially successful movies, but not found for authors of commercially successful novels. Results are discussed in terms of evolved preferences and evolutionary life history versus cultural norms of sexism and ageism

Session Title: Economic Games: Validity and framing effects (Simplot B)

Are offers in an ultimatum game a good measure of behavioral cooperation?: A case study from the Ecuadorian Amazon (3:40 – 4:00 p.m.)

James Zerbe (California State University Fullerton), Mateo Penaherrera Aguirre (University of Arizona), John Q. Patton (California State University Fullerton)

Experimental economic games are methods designed to measure social preferences and pro-sociality and have become widely deployed in ethnographic settings to understand variability in pro-sociality across groups and individuals. Here I present a case study from the Ecuadorian Amazon examining the assumption of external validity between behavior within experiments and measures of naturalistic behavioral cooperation in ethnographic context. Ultimatum game (UG) data from Conambo, Ecuador is examined for correlating with reputations of generosity, food-sharing behaviors, and strength of cooperative alliance relationships. Analyses show that UG offers are not correlated with an individual's reputation as being generous. Likewise, UG offers do not correlate with meat-sharing or propa-
gule-

sharing behavior. Additionally, UG offers don't correlate with the strength of in-group, out-group, or total alliance relationships. This Analysis supports that UG offers don't provide a robust proxy measure of naturalistic behavioral cooperation, which agrees with some previous analyses but not others.

Economic Games among the "Mean" Ik (4:00 – 4:20 p.m.)

Cathryn Townsend (Rutgers University), Lee Cronck (Rutgers University), Athena Aktipis (Arizona State University)

"The Ik people of north-eastern Uganda have a reputation for meanness due to an ethnography that was written about them during the 1960s by the British anthropologist Colin Turnbull. Turnbull described the Ik as being "mean as people can be," but recent research among the Ik for the Human Generosity Project shows that Turnbull's observations should be understood strictly within the context of a famine. Economic games played by the Ik during 2016, including ultimatum games and dictator games, show that their decision-making on economic transfers is similar to that found in other societies around the world. Furthermore, culturally relevant framing produced more generous decisions in dictator games, specifically framing that referred to need-based giving and framing that referred to indigenous religious norms. Finally, the most generous decisions tend to be made by Ik individuals who have suffered extreme misfortune during their life histories.

The impact of explicit culturally transmitted frames on economic decision making (4:20 – 4:40 p.m.)

Aaron Lightner (Washington State University), Edward Hagen (Washington State University), Pat Barclay (University of Guelph)

Although studies have documented framing effects in the ultimatum game (UG), many used minimal framing cues, resulting in substantial ambiguity about offer expectations, and generally small effects relative to the unframed UG. We tested the hypothesis that in an UG explicitly framed as a familiar economic institution – foreign currency exchange – participants would make and accept offers conforming to that institution. Specifically, we predicted participants in a "customer" role would make small offers to participants in a "banker" role, and those in a banker role would make large offers to those in a customer role. Participants ($n = 294$) were randomly assigned to play a framed or unframed UG, and those in the treatment condition frequently allocated large amounts to customers (mean = 75.8%) and small amounts to bankers (mean = 24.2%), regardless of proposer/responder roles. These significantly diverged from offers in the standard UG (mean = 43.5%), supporting our hypothesis.

Session Title: Leadership and Conflict (Simplot D)

Adaptive Followership and the Context of Politics: How Evaluations of Political Leaders Integrate Contextual Information and Trait-Specific Impressions (3:40 – 4:00 p.m.)

Lasse Laustsen (Aarhus University), Michael Bang Petersen (Aarhus University)

Recent research demonstrates that dominant physical features are preferred more in leaders under contexts of intergroup conflict than under contexts of intergroup cooperation. This has been taken as evidence that an evolved followership psychology regulate leader preferences as a function of social conflict. Here we deepen existing evidence for such an adaptive and context-flexible followership psychology by utilizing a novel multi-wave survey experiment fielded among a large and representative sample of Danes. First, we show that patterns in preferences for physical cues of dominance in leaders are paralleled by patterns in preferences for dominant personality traits. Second, we provide the first

evidence of within-subject flexibility in evaluation of leaders as a function of contextual change. Finally, we show that conservative policy positions also serve as cues of dominance and, as consequence, that liberal voters under contexts of war are induced to prefer conservative (and dominant) to liberal (and non-dominant) leaders.

Leadership among transitional hunter-gatherers in Southwest Ethiopia (4:00 – 4:20 p.m.)

Zachary Garfield (Washington State University), Edward Hagen (Washington State University)

This study investigated two theoretical models of leadership among the Chabu of Ethiopia: the dominance-prestige model, and the intelligence and reproductive skew model. The Chabu are former hunter-gatherers who have adopted the state imposed Kebele administrative system. Under this system, local communities elect individuals to a variety of leadership roles including political positions, workgroup administration, and defense. Using self-report and peer ranking data we identified variation in the dimensions of two leadership models across types of Kebele leaders. We found that prestige and dominance were significantly correlated and those in major-elected leadership positions scored higher on dominance, prestige, intelligence, spouse quality, and strength. However, in an ordinal logistic regression model predicting leadership, dominance and sex were the only significant predictors. This study sheds light on the functioning of institutionalized leadership in an egalitarian society.

Gendered Violence and Male Warriors: Public Reactions to Female Terrorism (4:20 – 4:40 p.m.)

Miriam Lindner (Aarhus University), Lasse Lindekilde (Aarhus University)

While women have been involved in terrorism throughout modern history, empirical studies on differential reactions to female (vs. male) terrorist violence are scarce. Here, we suggest that terrorist attacks are shaped by our coalitional psychology and that, consistent with the male warrior hypothesis (MWH), people are likely to attribute threat to male rather than female outgroup members. Utilizing a nationally representative sample of 2000 U.S. citizens, we investigate how terror-suspect gender, in interaction with other fitness-relevant coalitional cues, affects perceived agency and motivations of the suspect; and retributive responses including support for torture. Consistent with the MWH, participants - and, in particular, males - are likely to view female terror suspects as less culpable. Further, support for torture increases when threatened by male (vs. female) outgroup coalitions, an effect driven exclusively by male respondents. The findings demonstrate how human intuitions about modern phenomena, such as terrorism, are structured by our coalitional psychology, and that they have implications in the domains of policy making and law.

Session 4 (4:50 p.m. – 5:50 p.m.)

Symposium: Frontiers in Friendship and Fitness Interdependence: A multi-method approach to understanding cooperative relationships, Part II (Hatch A/B)

Chair: Jaimie Arona Krems (Arizona State University)

Friends, allies, and companions: How modes of fitness interdependence shape social categories (4:50 – 5:10 p.m.)

Lee Cronk (Rutgers University), Padmini Iyer (Save the Children – Australia), Dennis Sonkoi (Rutgers University), Athena Aktipis (Arizona State University)

The term “friend” can be used to describe a wide variety of social relationships. This is reflected in the fact that languages other than English often distinguish between very different kinds of “friends.” For example, Maasai distinguishes between isotuatin (risk-pooling partners) and ilcoreta (companions). Karimojong distinguishes between ekone a etau (“friends of the heart,” or close friends) and ekone a ngakipi (“friends of water,” or good acquaintances). These and other distinctions may be better understood through an examination of different modes of fitness interdependence and the kinds of mutual aid and property transfers that typify each one. In this presentation we focus on three types of transfers – need-based, debt-based, and bond-based – and examine how each one informs different friend and friend-like concepts.

Friendship jealousy: A functional emotion for protecting valued cooperators? (5:10 – 5:30 p.m.)

Jaimie Arona Krems (Arizona State University), Keelah E. G. Williams, (Arizona State University), Douglas T. Kenrick (Arizona State University), & Athena Aktipis (Arizona State University)

Friendship are central, fitness-promoting human relationships. So how do people react when their friendships are threatened? We demonstrate that people report “friendship jealousy” (versus other emotions) at being potentially displaced in same-sex friendships, this jealousy is specific to being displaced by new friends (but not new mates), and it motivates behavioral intentions to counter displacement threats (“friend guarding”). Reported fitness interdependence with friends (but not, e.g., closeness, trust), predicts jealousy across a range of friendships. Finally, given sex differences in friendship functions and structures, we predicted—and found—that women typically report greater friendship jealousy than men do. But, whereas women report more jealousy at losing friends to rival people, men report more jealousy at losing friends to rival networks (i.e., teams). Findings suggest that “friendship jealousy” may function to protect these fitness-interdependent bonds.

Discussant (5:30 – 5:50 p.m.)

Daniel Hruschka
(Arizona State University)

Session Title: Future Discounting (Simplot A)

Cross-cultural variation in children’s risk and time preferences (4:50 – 5:10 p.m.)

Dorsa Amir (Yale University), Dorsa Amir (Yale University), Matthew Jordan (Yale University), Katherine McAuliffe (Boston College), Claudia Valeggia (Yale University), Lawrence G. Sugiyama (University of Oregon), Richard G. Bribiescas (Yale University), Yarrow Dunham (Yale University)

We investigated cross-cultural variability in risk and time preferences among children. Using two novel tasks — a risky gamble task to elicit risk preferences (N = 299) and a delay discounting task for time preferences (N = 281) — we collected data from children ages 4-18 from four diverse populations in Ecuador, Argentina, India, and the U.S. We find that children in all populations show sensitivity to stakes in both risk and time tasks. However, we also find striking cross-cultural differences in behavior between subjects: children in India, the U.S., and Argentina are more risk-seeking and future-oriented, while indigenous Ecuadorean children are more risk-averse and exhibit a different pattern in time preferences, equally preferring to consolidate resources for today or for tomorrow. These findings are the first to highlight that cross-cultural differences in risk aversion and temporal discounting can be traced into childhood.

Using Life History Theory to investigate the influence of environmental reliability on children's behaviour during the Marshmallow Test (5:10 – 5:30 p.m.)

Paz Fortier (McMaster University), Louis A. Schmidt (McMaster University)

This on-going study uses Life History Theory to investigate the influence of experimenter behaviour on children's future discounting during a delayed gratification task (the Marshmallow Test). Four-year-old children (estimated $n=70$) worked with an experimenter randomly assigned to be (a) reliably-dependable, (b) reliably-undependable, (c) sometimes-dependable (i.e., unpredictable) or (d) neutral (i.e., control). The same experimenter then administered children the Marshmallow Test: One marshmallow now, or two later. Greater future discounting in the reliably-undependable group and greater delay of gratification in the reliably-dependable group is hypothesized and would suggest that children are calibrating their behaviour in the Marshmallow Test to the laboratory environment based on experimenter behaviour. Further, outcome variability in the sometimes-dependable group is hypothesized, and we predict that children rely on cues from real-world environments and their temperament when novel environments fail to provide consistent cues. Findings may help inform how and why cues of environmental reliability shape children's behaviour.

Collective action and the evolution of social norm internalization (5:30 – 5:50 p.m.)

Sergey Gavrilets (National Institute for Mathematical and Biological Synthesis), University of Tennessee), Peter J. Richerson (University of California)

People often ignore material costs they incur when following existing social norms. Some individuals are willing to pay extremely high costs to enact, defend, or promulgate specific norms they consider important. Such behaviors decreasing biological fitness represent an evolutionary puzzle. We model the evolutionary origins of human capacity to internalize norms. We focus on two general types of collective actions: cooperation to overcome nature's challenges and conflicts with neighboring groups. In our models, individuals can choose to participate in collective actions and punish free-riders. In making their decisions, individuals attempt to maximize a utility function in which normative values are initially irrelevant but play an increasingly important role if the ability to internalize norms emerges. We show that norm internalization evolves under a wide range of conditions simplifying cooperation to a level when it becomes "instinctive". We make a number of testable predictions.

Symposium: Sex Similarities, Sex Differences, and Sexual Antagonisms Part II (Simplot C)

Chair: Douglas Kenrick (Arizona State University), Jaimie A. Krems (Arizona State University)

Mating competition, mobility, and wayfinding: A comparison of three societies (4:50 – 5:10 p.m.)

Elizabeth Cashdan (University of Utah), Helen Davis (University of Utah), Karen Kramer (University of Utah), and Layne Vashro (University of Utah)

Sex differences in range size and spatial ability are found in a wide range of non-monogamous species, where large ranges confer a mating advantage to males, and select for cognitive abilities that would favor larger ranges. Does the same apply to humans, and, if so, can it explain sex differences in navigational strategy and ability? In this study, we evaluate sex differences in mobility across age in three populations (Maya, Tsimane, and Twe), and show that sex differences in range size reflect the intensity and timing of mating competition. Sex differences in spatial ability appear to reflect

wayfinding experience, habitat differences, and possibly wayfinding anxiety, which is greater for females in all populations.

Individual Differences in Intrasexual Competitiveness (5:10 – 5:30 p.m.)

Bram Buunk (University of Groningen, University of Curaçao)

Among humans, intrasexual competition is quite prevalent in men as well as in women. However, there are considerable individual differences in the degree of intrasexual competitiveness (ISC; Buunk & Fisher, 2009). The correlates of ISC have been examined in The Netherlands, Argentina, Canada, Spain, Uruguay and Nicaragua. For instance, ISC is among men correlated with extraversion and among women with a lack of agreeableness. Adolescents from the higher socio-economic levels, especially women, are higher in ISC, as are women who grew up without a father. Among young women ISC is positively related to a variety of non-verbal seductive tactics to attract men. Among both men and women intimate partner violence is higher among those high in ISC. Finally, ISC is related to height, and tends to decrease with age. The adaptive functions of ISC are discussed in relation to life history and frequency dependent selection

Sex Differences in the Motivations for Intergroup Bias (5:30 – 5:50 p.m.)

Melissa McDonald (Oakland University), Mark van Vugt (VU University), Jim Sidanius (Harvard University) Carlos David Navarrete (Michigan State University)

Extensive research has demonstrated that men report more intergroup bias than women across cultures and throughout history. These findings can be interpreted as the output of a Male-Warrior Psychology functioning to increase reproductive success through the protection of ingroup resources, and the acquisition of resources belonging to outgroups. Yet women display a unique pattern of intergroup bias as well, such that bias exceeds that of men in domains of intimacy. These findings can be interpreted as the output of a threat-management system that evolved in response to an evolutionary history in which women were often the victims of intergroup rape and capture during intergroup conflict. Predictors of intergroup bias reflect this sex-specific functionality, including men's desire to establish and maintain group-based social-hierarchy and their propensity for physical aggression, and women's vulnerability to sexual coercion as well as the reproductive cost of rape.

Session Title: Sport as Intergroup Competition (Simplot B)

Evolutionary perspectives on coalitional psychology: Insights from allegiance displays in university sports rivalries (4:50 – 5:10 p.m.)

Daniel Kruger (University of Michigan)

Inter-group competition was a strong selection pressure during hominid evolution. Professional and collegiate team sports are a venue for the manifestation of in-group loyalty and inter-group competition influenced by our evolved coalitional psychology. Three observational studies provide insights on displays of allegiance in a prominent university sports rivalry. The first study validated conventional wisdom that team loyalties are divided among local residents in city intermediate between two rival universities. The second study provided evidence for a social norm that one can only have true allegiance with one group in a set of competitors. A research confederate wearing a display of mixed loyalty drew more attention than when he displayed matching loyalty to either team in the

intermediate city. The third study provided evidence that the value of social allegiance expressions vary as a function of the territorial context, i.e., in home, contested, and rival territories.

Coalition Formidability Assessment Via Intergroup Team Play Fighting (5:10 – 5:30 p.m.)

Michelle Scalise Sugiyama (University of Oregon), Marcela Mendoza (University of Oregon)

Coalitional intergroup aggression requires assessment of relative formidability of one's own, allied, and enemy coalitions. Among foragers, this is complicated by the fluidity of coalition membership, which requires regular reassessment of coalition formidability. Research shows that team contact sports predictably include motor patterns used in forager lethal raiding. We thus hypothesize that team play fighting is used to assess coalition formidability: by signaling ability to act synchronously and execute complex maneuvers under conditions simulating combat, inter-village play would enable participants/observers to assess their coalition's effectiveness relative to neighboring coalitions. This predicts that team contact games are played by foragers and played between teams representing discrete polities. Of the 100 forager culture clusters in Murdock's Ethnographic Atlas, we found evidence of team game play for 46, 26 of which referenced intergroup matches.

Trash-Talking and Trolling (5:30 – 5:50 p.m.)

Kevin Kniffin (Cornell University), Dylan Palacio (Cornell University)

To examine the nature of "trash talk," we present the results of a study of 337 Varsity athletes who compete in the top Division among US universities. Based on a preliminary review of trash-talk topics among student-athletes, we asked participants to indicate the frequency with which they have communicated or heard others talk in-competition about opposing players' athletic ability, boyfriends, brothers, girlfriends, home institution, parents, physical appearance, playing ability, sexual behaviors, and sisters. Our two main findings are: (1) Men appear to trash-talk significantly more than women and consistently across topics and (2) People whose sports require them to wear face-masked helmets (Football, Ice Hockey, Lacrosse) tend to trash-talk significantly more than other Varsity athletes. While the second finding fits with an interpretation that the anonymity of wearing face-masked helmets invites more trash-talking, the relatively high frequency of "trash talk" that is mating- and kin-related also warrants closer investigation.

Session Title: Politics and Political Frames (Simplot D)

Why Politics Makes Strange Bedfellows: The Alliance Theory of Political Ideology (4:50 – 5:10 p.m.)

David Pinsof (University of California, Los Angeles), Martie Haselton (University of California, Los Angeles), David Sears (University of California, Los Angeles)

Democracy is new, but politics is older than the human species. Here, we propose a novel theory of political ideology—the Alliance Theory—that unites research from social, political, and evolutionary psychology under a common framework. We propose that humans possess a sophisticated alliance psychology, including adaptations for choosing allies and detecting others' allegiances. We review evidence that humans apply propagandistic biases to their allies to defend them in conflicts, including perpetrator biases (e.g. justifying their transgressions), victim biases (e.g. exaggerating their grievances), and attributional biases (e.g. attributing their advantages to internal dispositions). When individuals apply these biases to their political allies—i.e. the demographic groups associated with their

political party—they generate biased narratives that form the contents of ideologies. The Alliance Theory can explain a variety of empirical findings that other theories struggle to accommodate, including the many double standards exhibited on both sides of the political aisle.

Coalitional identity theory (5:10 – 5:30 p.m.)

John Tooby (University of California, Santa Barbara), Leda Cosmides (University of California, Santa Barbra)

It will come as no surprise to evolutionary scientists that valuable portions of social identity theory and its relatives in social psychology can be separated from less valuable portions (e.g., self-esteem), and reassembled with novel elements into a somewhat different theory, here called coalitional identity theory. This theoretical approach, which has been producing empirical discoveries in evolutionary psychology over several decades, derives from adaptationist analyses of coalitions as cognitively constructed vehicles of fitness promotion in ancestral social ecologies. Adaptations such as programs for alliance detection, optimal factionalization and tactical social cleavage, monitoring of cues that functionally differentiate conditions predicting different degrees and kinds of recurrent fitness interdependence (e.g., cues of positive sum unification, cues of potential domination and zero-sum division), interpreting the behavior of individuals in terms of a theory of group mind, etc. together can provide a causally grounded framework for evolutionary political science and evolutionary social psychology.

Evolutionary Psychology and the Transmission of Political Frames in Social Networks: The Case of Episodic News Frames (5:30 – 5:50 p.m.)

Lene Aarøe (Aarhus University), Michael Bang Petersen (Aarhus University)

Why are some political frames strongly transmitted and impact opinions in public debate while others perish? Integrating theories from evolutionary psychology and political communication, we outline a model for understanding the transmission of political frames and their effects on opinions in social networks in modern mass-democracies. We argue that frames resonating with evolved psychological mechanisms will be transmitted more and have stronger opinion-effects when individuals recollect elite frames in their social networks. Focusing on the case of episodic and thematic frames, we test this model. Episodic news frames carry vivid social information. For most of human evolutionary history, our ancestors lived in small groups suggesting that humans evolved to make decisions on the basis of vivid, intimate information available in small-scale social environments. Based on this, vivid episodic news frames should be transmitted more than abstract thematic frames and shape opinions more. We test and support these predictions implementing the chain-transmission-design in large nationally representative online web-surveys.

Friday June 2nd, 2017

Session 1 (10:30 a.m. – 11:50 a.m.)

Session Title: Kinship (Hatch A/B)

Perceived resemblance is affected by both actual and perceived kinship (10:30 – 10:50 a.m.)

Lisa DeBruine (University of Glasgow), Vanessa Fasolt, Nikola Markova, Iris J. Holzleitner, Anthony J. Lee, Benedict C. Jones, Kieran J. O'Shea (University of Glasgow)

Previous research suggests that beliefs in genetic relatedness influence perceived facial similarity between parent and offspring to a greater extent than actual relatedness. Participants (N = 101) rated the similarity between the faces of 57 parent-offspring pairs and 57 age- and sex-matched unrelated adult-child pairs. Half of the related and half of the unrelated pairs were labelled as parent-child, while the other half were labelled as unrelated (counterbalanced between participants). Both actual and labelled kinship influenced similarity judgments, although actual relatedness had a substantially larger effect than labelled kinship. Female raters were more influenced by label than were male raters. We did not replicate the finding that men perceive especially high similarity between putative father-child pairs. The results will be discussed in the context of theoretical accounts of whether offspring benefit from hiding their paternity and whether fathers benefit from skepticism about paternity.

Cues to paternity: An evaluation of offspring resemblance, partner fidelity, and maternal perinatal association (10:50 – 11:10 a.m.)

Joseph Billingsley (University of Miami), Jan Antfolk (Åbo Akademi University), Pekka Santtila (Åbo Akademi University), Debra Lieberman (University of Miami)

Leading theories of kinship estimation argue that valid cues should influence both altruistic and sexual motivation toward putative kin, but prior work with paternity assessment has evaluated candidate cues primarily by demonstrating associations with altruism. Using an online Mechanical Turk sample (N = 744), we tested multiple proposed cues to paternity, including the previously researched cues of resemblance to offspring and perceived partner fidelity, by using the more stringent criteria suggested by theory: whether the proposed cue is associated with both altruistic and sexual motivation simultaneously. Results most strongly supported perceived partner fidelity as a cue to paternity. In addition, we tested but found no evidence for a novel candidate cue: the interactive effect of perceived partner fidelity and observations of maternal perinatal association. Finally, we found mixed evidence regarding whether the effects of candidate cues are mediated by self-reported certainty.

Not just paternity uncertainty. A new model explaining the matrilineal bias in alloparental investment (11:10 – 11:30 a.m.)

Gretchen Perry (Brock University), Martin Daly (McMaster University)

Maternal relatives invest more in childcare than their paternal counterparts. This matrilineal bias is large where the expression of preferences is unconstrained by residence practices and lineage norms, and is detectable even where marriage removes women from their natal families. We argue that the standard evolutionary explanation, paternity uncertainty, is incomplete, and propose an expanded model incorporating effects of alloparents on mothers as well as on their children. Childrearing assistance increases a mother's "residual nepotistic value": her expected future fitness from all avenues, including children sired by her current partner, former partners, future partners, and cuckolders, as well as investment in her siblings, nieces, nephews, and other natal kin. The mother's relatives derive fitness benefits from all these actions, whereas her in-laws gain only from the first and would thus be expected to help less even if paternity were certain.

Fertility, kinship and the evolution of mass ideologies (11:30 – 11:50 a.m.)

Tamas David-Barrett (University of Oxford), Jorge Alexis Castillo (Universidad Desarrollo), Tamas David-Barret (Oxford University), Carlos Sickert-Rodriguez (Universidad Desarrollo)

Traditional human societies are organised around kinship, and use kinship networks to generate large scale community projects. This is made possible by a combination of linguistic kin recognition, a uniquely human trait, which is mediated by the reliability of kin as collaborators. When effective fertility falls, this results in two simultaneous effects on social networks: there are fewer kin that can be relied on, and the limiting effect of the local kin-clustering becomes stronger. To capture this phenomenon, we used a model of kinship lineages to build populations with a range of fertility levels combined with a behavioural synchrony model to measure the efficiency of collective action generated on kin networks within populations. Our findings suggest that, whenever effective cooperation depends on kinship, falling fertility creates a crisis when it results in too few kin to join the community project. We conclude that, when societies transition to small effective kin networks, due to falling fertility, increased relative distance to kin due to urbanisation or high mortality due to war or epidemics, they will be able to remain socially cohesive only if they replace disappearing kin networks with quasi-kin alternatives based on membership of guilds or clubs.

Session Title: Female Cooperation and Competition (Simplot A)

Intrasexual Competition with Women Who are Mothers (10:30 – 10:50 a.m.)

Maryanne Fisher (Saint Mary's University)

Despite the surge of research into women's intrasexual competition for mates, there has been little attention paid toward women with children. I propose women with no children compete with mothers for mates, given that mothers have proof of their reproductive success. Further, some men may be drawn to mothers given the inarguable evidence of their fecundity. If so, then there should be intrasexual competition among women who are not mothers with those who are mothers. I explore this possibility first in a study on "mommy judging" using a variety of characteristics related to the mother or the status of her children. Results show that women without children have a less tolerant view of mothers, than mothers themselves do. I then directly investigate women's views of single mothers as mating rivals via survey. The preliminary data suggest that women without children do view single mothers as formidable mating competitors.

The psychobiology of female friendships: How hormonal synchrony relates to friendship quality (10:50 – 11:10 a.m.)

Ashley Rankin (Oklahoma State University), Jennifer Byrd-Craven (Oklahoma State University)

Synchronization of behavior and physiology is well documented in family and romantic relationships. This study examined 37 female dyadic friendships and roles of co-rumination and the synchrony of the hypothalamic-pituitary-adrenal (HPA) axis. Findings suggest female friends demonstrated HPA axis synchrony prior to the tasks, the level of synchronization prior to the task predicted the negative affect focus component of co-rumination, and negative affect focus predicted adrenocortical synchronization after the problem discussion. These findings suggest that bidirectional responding of HPA activity may serve a bonding function within the relationship. The potential adaptive benefits of cortisol synchrony will be discussed.

Bless her heart: Apparent concern is advantageous for women's reputational competition? (11:10 – 11:30 a.m.)

Tania Reynolds (Florida State University), Roy F. Baumeister (Florida State University)

Women report that other women are competing with them, yet they are not competing themselves. Women deny they spread gossip and rumors despite behavioral and victimization data suggesting otherwise. We forward a solution to this puzzle. Women's denial of their competitive and malicious motivations are functional. That is, women believe they are gossiping out of concern and this concern grants them a social advantage: they appear likable and trustworthy while harming their targets' reputations. This hypothesis was tested across three studies. In study 1, participants reported their past gossip behavior. Women reported more concern motivations for gossiping than men. In study 2, participants viewed gossip scenarios framed either with concern, with malice, or neutrally. Participants punished gossipers who framed their gossip maliciously, but not with concern. In Study 3, a female confederate gossiped to lab participants. Participants punished the gossipers when she framed her gossip meanly, but not nicely.

Does gossip help initiate new social bonds? Moderating role of individual differences (11:30 – 11:50 a.m.)

Konrad Rudnicki (University of Antwerp), Charlotte De Backer (University of Antwerp), Carolyn Declerck (University of Antwerp)

It is known that gossip functions to maintain trust and cohesion within existing groups, and is favored by prosocially oriented people, but we do not yet know if gossip also facilitates the initiation of new social bonds in modern (mediated) societies. A 2x2 experiment was performed (gossip vs. non-social talk and face-to-face vs. computer-mediated to control for the effects of visual cues) with 60 dyads of unrelated women interacting for 20min. A pre-experimental survey included personality inventories (Social Value Orientation, Tendency to Gossip). The post-experimental survey measured social cohesion (IOS, Rapport) whereas trust was measured with an investment-trust-game. Results of the experiment revealed that gossip made prosocials trust their interlocutor more and pro-selfs trust less, as compared to non-social talk. Gossiping face-to-face also induced significantly higher social cohesion than non-social talk face-to-face. In sum, gossip facilitates trust but only for prosocials.

Session Title: Sexual Psychology (Simplot C)

The Multiple Orgasm Gaps: Gender, Sexual Orientation, and Sexual Practices Matter (Alot) (10:30 – 10:50 a.m.)

David Frederick (Chapman University), Justin Garcia (Indiana University and Kinsey Institute), Elizabeth Lloyd (Indiana University and Kinsey Institute)

We examined how over 30 different traits or behaviors were associated with frequency of orgasm during the past month in a large U.S. sample of adults (N = 52,588). Additionally, we looked at how both gender and sexual orientation related to orgasm frequency. Women who orgasmed more frequently were more likely to: date other women, receive more oral sex, have longer duration of last sex, be more satisfied with their relationship, ask for what they want in bed, praise their partner for something they did in bed, call/email to tease about doing something sexual, wear sexy lingerie, try new sexual positions, anal stimulation, act out fantasies, incorporate sexy talk, and express love during

sex. Women were more likely to orgasm if their last sexual encounter included deep kissing, manual genital stimulation, and/or oral sex in addition to vaginal intercourse. We consider sociocultural and evolutionary explanations for these orgasm gaps.

Duration of Cunnilingus Predicts Estimated Ejaculate Volume in Humans (10:50 – 11:10 a.m.)

Todd Shackelford (Oakland University), Michael N. Pham (Oakland University), Austin John Jeffery (Oakland University), Yael Sela (Oakland University), Justin T. Lynn (California State University, Fullerton), Sara Trevino (California State University, Fullerton), Zachary Willockx (Oakland University), Adam Tratner (Oakland University), Paul Itchue (Oakland University), Bernhard Fink (University of Göttingen), Melissa M. McDonald (Oakland University)

Humans perform copulatory behaviors that do not contribute directly to reproduction. We conducted a content analysis of pornography to investigate whether such behaviors might contribute indirectly to reproduction by influencing ejaculate volume—an indicator of ejaculate quality. We coded 100 pornography scenes depicting the same male actor with 100 different females. Coders estimated ejaculate volume and recorded the time the actor spent engaged in cunnilingus. We found support for the hypothesis that a man who spends more time performing cunnilingus produces an ejaculate with greater estimated volume, even after controlling for the age and attractiveness of the actress, and time spent in physical contact with his partner. This research is the first to use content analysis to document that pre-ejaculatory copulatory behavior predicts estimated ejaculate volume and also is the first to document a relationship between the time spent performing cunnilingus and ejaculate quality.

Effects of Touch on Coupled Americans' Relationship and Sexual Satisfaction (11:10 – 11:30 a.m.)

Justin Garcia (Indiana University), Amanda N. Gesselman (Indiana University), Kristen P. Mark (University of Kentucky), David A. Frederick (Chapman University)

Human touch can have profound effects on behavior and health. People who experience partnered touch have increased oxytocin levels, lower heart rates and blood pressure, buffered neurological stress responses, and increased positive affect and psychological well-being. Using a national sample of coupled Americans (N=1000), we investigated the benefits of touch with one's partner (i.e., hand holding, caressing, massaging, cuddling, spooning, kissing) in the context of intimate relationship outcomes. In two linear regressions controlling for age, gender, relationship length, and parental status, we found that frequency of touch significantly positively impacted both relationship and sexual satisfaction with moderate-to-large effect sizes ($rps = .42-.45$). Further, while the majority of the sample (92%) reported that they liked to be touched, over one-third (34.4%) reported that they were not touched enough. We argue that intimate touch is adaptive, likely deriving from coalitionary affiliative and grooming behaviors, that serve important social and pair-bonding functions.

Sperm competition in marriage: Semen displacement, male rivals, and spousal discrepancy in sexual interest (11:30 – 11:50 a.m.)

Tara DeLecce (Wayne State University), Michael N. Pham (Oakland University), Todd K. Shackelford (Oakland University)

Non-human males attend to the presence of potential sexual rivals in the local environment to assess sperm competition risk, and adjust accordingly the deployment of sperm competition tactics (e.g., performing semen displacing copulatory behaviors). We extend this research to humans using data from 45 married couples who completed questionnaires in a laboratory. We found that husbands whose wife spent more time with

her male coworkers and male friends (i.e., potential sexual rivals) performed more semen-displacing copulatory behaviors at the couple's most recent copulation. We also found that performance of semen-displacing copulatory behaviors correlated with a novel cue to sperm competition risk: the discrepancy between the husband's sexual interest in his wife and her sexual interest in him. We also tested and refuted an alternative hypothesis that men adjust their copulatory thrusting to facilitate their partner's orgasm. Discussion highlights the novel contributions of the current research and notes limitations that can be addressed by future research.

Session Title: Morality I (Simplot B)

Mapping Morality with a Compass: Testing the theory of 'morality as cooperation' with a new questionnaire (10:20 – 10:50 a.m.)

Oliver Scott Curry (University of Oxford), Matthew Jones Chesters (University of East London), Caspar J. Van Lissa (Erasmus University Rotterdam)

What explains the content and structure of human morality? The theory of Morality-as-Cooperation (MAC) argues that morality is a collection of biological and cultural solutions to the problems of cooperation recurrent in human social life. Using evolutionary biology and game theory, MAC identifies seven distinct types of cooperation, and predicts that each will be considered morally relevant, and each will give rise to a distinct moral domain. Here we test MAC's predictions by developing a new self-report measure of moral values, the Morality-as-Cooperation Questionnaire (MAC-Q) and comparing its psychometric properties to those of the widely-used Moral Foundations Questionnaire (MFQ). The results support MAC's seven-factor model of morality, but not MFQ's five-factor model. Thus the MAC-Q emerges as the best available map of morality; and MAC emerges as the best available compass to guide further exploration of the moral landscape.

What works on us? Conclusions drawn from five studies of implicit visual stimuli (10:50 – 11:10 a.m.)

Romana Žihlavičková (Palacky University), Andrej Mentel (Comenius University), Ivan H. Tuf (Palacky University)

Reputation management affects social behaviour. It is manifested nonconsciously and can be elicited using solely visual cues. Numerous studies have confirmed that an image of eyes or a mirror has the effect of reducing transgression. Both stimuli can be used as a cue for "being watched", leading to people behaving as if they are not alone. Which stimulus has the strongest impact? Does the effect work on children in the same way as adults? Are the results in accordance with neurological salience? As part of five studies (Ntotal=553), we tested five visual stimuli in three age groups in three cities. The strongest stimuli were the images of the pair of eyes and the mirror (compliance OR=3.65 for eyes and 2.53 for the mirror), which partially supports neurological results. Although children were initially highly compliant, the effect of the stimuli was still observed. Possible explanations for these findings will be discussed.

The evolution of non-consequentialist moral judgment (11:10 – 11:30 a.m.)

Tadeg Quillien (University of California, Santa Barbara), Leda Cosmides (University of California, Santa Barbara)

Human moral judgment is sometimes based on the moral value of acts in themselves, rather than their consequences. This has been taken to mean that either 1) our moral judgment is fundamentally flawed, or 2) the proper domain of moral cognition is not cooperation. We propose an alternative: because humans have to navigate a social world where the interests of agents are not perfectly aligned, purely utilitarian social norms are likely to be met with resistance even when they maximize global welfare. People can be better off settling for a social contract that is less efficient but respects the autonomy of every individual, because it is more likely to be successfully implemented. Using agent-based simulations, we show how such dynamics can promote the evolution of a morality that is based on harm aversion rather than utility maximization, and relies on both consequentialist and non-consequentialist decision criteria.

Fear the Unseen: Supernatural Belief and Hyperactive Agency-Detection in Virtual Reality (11:30 – 11:50 a.m.)

Adam Tratner (Oakland University), Todd K. Shackelford (Oakland University), Virgil Zeigler-Hill (Oakland University), Jennifer Vonk (Oakland University)

Belief in supernatural agents is found across societies, and expressed in religion, folklore, and cultural transmission (Atran & Norenzayan, 2004). Researchers have posited that belief in supernatural agents involves activation of cognitive mechanisms that produce theory of mind and the perception of agency (Boyer, 2000), and a few studies have investigated whether belief in the supernatural is related to agency-detection mechanisms (e.g., van Elk, 2013). Using a virtual reality (VR) paradigm, we investigated whether belief in supernatural agents is related to false detection of agency in a naturalistic, outdoor VR environment ($n = 97$). Results indicated that agency-detection was not related to belief in supernatural agents, but was instead related to other dimensions of supernatural belief. Discussion considers the role of compensatory control on supernatural belief, the role of cultural transmission in supernatural belief, and applications of VR as a methodological tool in research.

Session Title: The Endocrinology of Mating and Mate Preferences (Simplot D)

Hormonal correlates of between-and within-women variation in sociosexuality (10:30 – 10:50 a.m.)

Talia Shirazi (Pennsylvania State University), Heather Self (Pennsylvania State University), Khytam Dawood (Pennsylvania State University), Kevin Rosenfield (Pennsylvania State University), Triana Ortiz (Nipissing University), Justin Carre (Nipissing University), David Puts (Pennsylvania State University)

Although exogenous hormones have been prescribed to treat low sexual desire in women for almost 80 years, the hormonal modulation of within-woman and between-women sexual desire remains poorly understood. We recruited 359 naturally-cycling women (98 of whom returned for a follow-up session 1-3 months later) and examined the relationships between salivary steroids (cortisol, estradiol, progesterone, and testosterone) and self-reported sexual desire and sociosexuality. Preliminary results suggest that progesterone and estradiol positively predict between-subjects differences in attitudes towards uncommitted sexual behavior; no other between-subjects associations were significant. Within-subjects changes in progesterone positively predicted changes across sessions in dyadic sexual desire, and changes in estradiol and testosterone positively predicted changes in desire for uncommitted sexual behavior; when all hormones were entered simultaneously in a general linear model, changes in estradiol (but not testosterone), predicted changes in desire for uncommitted sexual behavior. Results are discussed in the context of women's mating strategies.

Conjugal Separation and Reunion: The Biology of a Religious Tradition (10:50 – 11:10 a.m.)

Rick Goldberg (Binah Yitzrit Foundation)

Religions have historically regulated marital relations. Jewish law prescribes the duties of conjugal partners--when a wife first sees her menstrual blood she becomes sexually unavailable to her husband. This period of abstinence continues until she witnesses seven consecutive days without seeing blood, at which time sexual relations may resume. An empirical study was designed to test the degree of hormonal entrainment of men's testosterone to their partners' menstrual cycling. Within the religious sample, we predicted that during abstinence men's testosterone would be suppressed below monthly averages. Alternately, when abstention ended and conjugal relations resumed, we predicted men's testosterone would rise above monthly averages. Within the control sample, we predicted men's testosterone would remain stable, relatively unaffected by the women's cycling. Results of the study confirm the hypotheses. By following these religious strictures, wives have become empowered to manipulate the hormone-based sexual desire of their husbands.

Women's preferences for facial masculinity are not related to their hormonal status (11:10 – 11:30 a.m.)

Benedict Jones (University of Glasgow), Benedict Jones, Amanda Hahn (Humboldt State University), Claire Fisher (University of Glasgow), Hongyi Wang (University of Glasgow), Michal Kandrik (University of Glasgow), Chengyang Han (University of Glasgow), Vanessa Fasolt (University of Glasgow), Anthony Lee (University of Glasgow), Iris Holzleitner (University of Glasgow), Craig Roberts (University of Stirling), Anthony Little (University of Bath) & Lisa DeBruine (University of Glasgow)

Evidence that preferences for masculine characteristics in men's faces are related to women's hormonal status is equivocal and controversial. Consequently, we conducted a large-scale (N=575) longitudinal study of women's preferences for facial masculinity. Women generally preferred masculinized over feminized versions of men's faces, particularly when assessing men's attractiveness for short-term, rather than long-term, relationships. However, within-subject analyses showed no evidence that these preferences were related to women's steroid hormone levels (measured from saliva samples) or oral contraceptive use. Our results do not support the hypothesized link between women's preferences for facial masculinity and their hormonal status.

Does the interaction between cortisol and testosterone predict men's facial attractiveness? (11:30 – 11:50 a.m.)

Michal Kandrik (University of Glasgow), Amanda C Hahn (Humboldt State University), Chengyang Han (University of Glasgow), Joanna Wincenciak (University of Newcastle), Claire I Fisher (University of Glasgow), Lisa M DeBruine (University of Glasgow), Benedict C Jones (University of Glasgow)

Although some researchers have suggested that the interaction between cortisol (C) and testosterone (T) predicts ratings of men's facial attractiveness, evidence for this pattern of results is equivocal. Consequently, the current study tested for a correlation between men's facial attractiveness and the interaction between their C and T levels. We also tested for corresponding relationships between the interaction between C and T and ratings of men's facial health and dominance. We found no evidence that ratings of either facial attractiveness or health were correlated with the interaction between C and T. Some analyses suggested that the interaction between C and T levels may predict ratings of men's facial dominance, however, with T being more closely related to facial dominance ratings among men with higher C. Our results suggest that the relationship between men's facial attractiveness and the interaction between C and T is not robust.

Session 2 (12:00 p.m. – 1:00 p.m.)

Symposium: Academic Careers in Evolutionary Psychology at Teaching Focused Institutions (Hatch A/B)

Chair: Francis T. McAndrew (Knox College)

Newly minted PhDs from R1 universities often have little experience with institutions that are primarily focused on teaching and can be naive about how to market themselves for academic jobs in this sector. This symposium will explore careers at teaching institutions and explain how teaching, research, and service requirements at such places are different from what is to be found at research universities. Extremely rewarding professional careers are to be found for evolutionary psychologists and anthropologists at small colleges and universities, and these opportunities should not be overlooked in our highly competitive job market.

Honest Signaling? The Importance of Being a Good Teacher & a Good Citizen at a Small College (12:00 – 12:20 p.m.)

Francis T. McAndrew (Knox College)

As a faculty member at a teaching focused college or university, you will be engaged with the life of the institution in a much more intimate and intense manner than is typical for faculty at R1 places. Many of your students will want to establish a relationship with you, and new faculty can be caught off guard by the accessibility that undergraduates expect to have to their professors. You will wear a lot of different hats and spend a good bit of time serving the institution in ways that are not directly connected with your teaching and research; you will also get to know your colleagues in other departments quite well. This talk will examine the rewards and the downsides of being a professor in this type of environment.

Does size matter? Doing “it” at a small school (12:20 – 12:40 p.m.)

Catherine Salmon (University of Redlands)

Can you do research at a liberal arts school?” and “how do you manage it?” are two questions that many of us that are at small schools hear all the time. The reality is that there are positives and negatives to conducting research in this type of institution. The downsides are easy to imagine, the demands of teaching and service, no graduate students, a smaller research participant pool. But there are also substantial positives to consider including interdisciplinary collaborations and less pressure to do programmatic research, which translates into more opportunities to conduct more eclectic research projects in innovative ways.

Popping your Small College’s Evolutionary Psychology Cherry: How to Propose, Promote, and Popularize the EP Course and Perspective at Colleges with Neither (12:40 – 1:00 p.m.)

Barry X. Kuhle (University of Scranton)

Navigating the educational environment of small liberal arts colleges, especially those without an evolutionary psychology (EP) footprint, can be challenging for newly minted EP PhD’s. Maintaining your EP identity and developing one at a small college is no easy feat. I’ll begin by discussing how to structure a job application cover letter to emphasize your EP teaching, how it complements your scholarship, and how it can significantly benefit undergraduates in the classroom and lab. I’ll then

outline steps to get the EP course 'on the books' and then part of the general education, psychology major, and women's studies major curricula. I'll close by suggesting strategies to promote and popularize the EP perspective on campus through Darwin Day activities, museum field trips, talks to student groups, library book requisitions, faculty reading groups, and course advertisement and promotion.

Session Title: Sex Differences (Simplot A)

Sex differences in Social Status Attributes in a Small-Scale Amazonian Community (12:00 – 12:20 p.m.)

John Patton (California State University, Fullerton)

This paper compares men and women in terms of the attributes associated with achieving high status in a community of horticultural foragers living in the Ecuadorian Amazon. Men were ranked according to their: social status, intelligence, strength, health, generosity, attractiveness, sense of humor, and warriorship. Women were ranked by the same attributes with the exception of warriorship. A stepwise regression of the attributes produces a viable model that accounts for 88.8% of men's status using the attributes of warriorship and generosity alone. With women the only viable model contained a single attribute, sense of humor, predicting over 70% of status differences. This paper explores the implication of these sex difference in status attributes and what they imply about sex differences in status acquisition strategies in this small-scale tribal community.

Pain don't hurt: A life history theoretical explanation of sex differences in pain (12:20 – 12:40 p.m.)

Chance Strenth (University of New Mexico)

Sex differences in pain tolerance and sensitivity have been consistently found in the clinical and experimental literatures for almost half a century. Despite these findings, evolutionary explanations have been limited. Life history theory may offer an understanding of the evolution of sex differences in pain. Pain sensitivity serves to protect and maintain the soma, but entails opportunity costs. For males, especially ones seeking to compete for and seek mates, opportunity costs may be particularly great. This trade-off may select for higher pain tolerance and lower pain sensitivity. Testosterone may modulate pain in males in ways similar to other investments in somatic effort (e.g., immune system functioning). Variation of testosterone through the life course of males and through social, competitive, and pair-bond status can elucidate sex differences in pain. Finally, future directions will be proposed on the relationship between testosterone and pain.

Can an Evolutionary Analysis Dissolve the Paradox of Horror? A Quantitative Study of Individual Variables and Horror Media Use (12:40 – 1:00 p.m.)

Jens Kjeldgaard-Christiansen (Aarhus University), Mathias Clasen (Aarhus University), John A. Johnson (Pennsylvania State University)

The paradox of horror" is the problem of why so many people are motivated to experience the negative emotions induced by horror media. In this talk, we argue that an evolutionary analysis may dissolve the paradox of horror. From an evolutionary perspective, horror may be analyzed as a simulation technology that allows users to attain adaptive experience with perceived threat and negative emotion in a safe environment. The argument is supported by results from a comprehensive MTurk survey of American users of horror media (n=1,071). Results include findings on the personal

details (e.g., sex), supernatural beliefs (e.g., paranormal beliefs), personality traits (e.g., Big Five), horror genre preferences (e.g., supernatural versus natural horror), and horror-induced emotional responses of users of horror media. The strongest individual predictors of horror media enjoyment are sex (male preference), sensation seeking, and the personality characteristic Intellect/Imagination.

Session Title: Music and Voice (Simplot C)

Universality of infant-directed music (12:00 – 12:20 p.m.)

Samuel Mehr (Harvard University), Manvir Singh (Harvard University), Nori Jacoby (Columbia University), Hunter York (Harvard University), Timothy O'Donnell (McGill University), Max Krasnow (Harvard University), Luke Glowacki (IAS Toulouse)

Evolutionary accounts of the origins of music predict that it should share a variety of universal behavioral and musical features across human cultures, particularly in the context of parent-infant interaction (e.g., Mehr & Krasnow, 2017, EHB). We report tests of this prediction using new data from the Natural History of Song project, a pair of datasets built with ethnographic text and audio recordings gathered from over 100 human societies. Three lines of evidence support the universality of infant-directed music. First, listeners recruited online from several cultures reliably distinguish infant-directed songs from other music, despite their unfamiliarity with the cultures from which the songs are drawn. Second, ethnographic text describing "infant care" appears more frequently alongside music than other, non-musical topics in a 40-million word database. Third, a variety of features associated with infant-directed song and documented in both datasets show consistency across cultures.

Evaluating the origins of music in individuals with imprinting disorders (12:20 – 12:40 p.m.)

Jennifer Kotler (Harvard University), Sam Mehr (Harvard University), Alena Egner (Harvard University), David Haig (Harvard University), Max Krasnow (Harvard University)

While music is widely considered to be an integral part of human culture, the evolution of music in human societies has not been well understood. We sought to evaluate a new theory (Mehr & Krasnow, 2017) which posits that the use of music has evolved in humans via the well-accepted parent-offspring conflict model of human genetics. We examined a group of individuals with Angelman syndrome (AS, an imprinting disorder of chromosome 15q11-13) and compared their physiological and behavioural responses to music with groups of individuals with Prader-Willi syndrome (PWS) and Down syndrome (DS). Preliminary results indicate that both individuals with AS and DS respond to music differently than the previously studied PWS population. Evolutionary and clinical implications are explored.

Session Title: Mating Preferences II (Simplot B)

Do Women with Children Exploit Male Sexual Psychology? (12:00 – 12:20 p.m.)

Viviana Weekes-Shackelford (Oakland University), Nicole Barbaro, Justin Mogilski, Giovanni Randazzo

A woman with a reproductive-aged daughter might be more attractive to a prospective mate than a woman with a much younger daughter or a woman with a son. We investigated men's perceptions of the attractiveness of a woman with a child as a function of the sex and age of that child. In Study 1, men rated a woman's attractiveness and their interest in a relationship with her. In Study 2, women reported how interested they would be to introduce their child to a new partner who was not the

genetic father of the child. In study 3, we used conjoint analysis to examine the relative importance of a woman's age, her child's sex and age, and father's involvement on the woman's desirability as a partner. This research suggests that women with children face a different set of adaptive problems of sex and mating than women without children.

Female mating preferences and socio-economic status: A factorial survey design (12:20 – 12:40 p.m.)

Livia Ridolfi (University Milano – Bicocca), Maurizio Pisati (University Milano-Bicocca)

An extensive evolutionary literature shows that heterosexual mating preferences have universal dimensions. When selecting partners for long-term relationship, women generally prioritize social status and resources while men prioritize attractiveness and youth. It is not clear yet if social constraints and resources act on the formation of preferences within one sex. This study investigates whether female mating preferences for a set of biological (age, height, attractiveness), socio-economic (family background, educational level, occupation level), cultural (religion values, political values) and psychological (kindness, dominance, past relationships) traits vary with female socio-economic status, measured by educational level. A factorial survey design was created and 100 female respondents amongst University students and High School graduates were tasked to evaluate 12 random male profiles each. Multilevel analysis results show that female preferences do not change significantly between the two groups, but the average effect of occupational level on mating desirability is stronger for High School graduates.

Willingness to physically protect in romantic and cooperative partner choice (12:40 – 1:00 p.m.)

Michael Barlev (University of California, Santa Barbara), Sakura Arai (University of California, Santa Barbara), Leda Cosmides (University of California, Santa Barbara), John Tooby (University of California, Santa Barbara)

In the environments in which our ancestors evolved, one of the most survival critical resources men could provide women was physical protection. Surprisingly, however, existing findings have not unambiguously distinguished female preferences for male partners who are able to provide physical protection from those willing to do so. We show that in women, partner choice primarily depends on willingness, rather than ability, to provide physical protection (Study 1). This preference for willingness is similarly, though to a lesser extent, part of same-sex cooperative partner choice in men. Further, preferences for male cooperative partners in women and men primarily depend on whether these partners are willing to protect them, and only slightly if at all on whether they are willing to protect others, when information about both is available (Study 2).

Session Title: Pathogen Related Adaptations (Simplot D)

Preliminary Evidence that *Ascaris lumbricoides* (Roundworm) Infection is Associated with Mood (12:00 - 12:20 p.m.)

Joshua Schrock (University of Oregon), Theresa Gildner (University of Oregon), Christopher Harrington (University of Oregon), Melissa Liebert (University of Oregon), Dorsa Amir (Yale University), Samuel Urlacher (Harvard University), Josh Snodgrass (University of Oregon), Lawrence Sugiyama (University of Oregon)

Life history theory posits tradeoffs in energy allocation to somatic functions. Viral and bacterial infections induce low arousal and unpleasant moods, which motivate reductions in physical activity,

thereby reserving energy for immune function. Despite their high prevalence and long co-evolutionary histories with humans, it is unknown whether parasitic worm infections are associated with mood. Though these infections are energetically costly, evidence suggests that *Ascaris lumbricoides* (roundworm) infection suppresses the inflammatory response that induces low mood during viral and bacterial infections. We developed a mood questionnaire in a sample of Shuar forager-horticulturalists in the Ecuadorian Amazon (n=50, ages 15-69) and conducted a pilot study of *Ascaris* infection and mood in a subset of individuals (n=23, ages 15-64). Controlling for sex and age, we found that infection with *Ascaris* was associated with lower arousal, less pleasant mood ($\beta=0.366$, $SE=0.161$, $P=0.035$). We discuss the implications of our findings for understanding mood and immunity.

Contemporary Parasite Stress Curvilinearly Correlates with Outgroup Trust: Cross-Country Evidence from 2005-2014 (12:20 – 12:40 p.m.)

Jinguang Zhang (University of Hawaii)

Past research suggests that xenophobia linearly increases with local parasite stress. However, behavioral immunity loses its effectiveness when parasite stress becomes very high and a “care-independent” risk. When this occurs, the benefits of outgroup contact (e.g., learning innovative disease cures) increase relative to costs, resulting in strengthened outgroup sociality. Indeed, data from World Value Surveys (Waves 5 and 6; $N = 117,370$) show that contemporary non-sexually-transmitted-diseases (non-STD) stress curvilinearly correlates with trust in outgroup members (e.g., foreigners), multilevel $b(\text{quadratic}) = 0.65$, $t(74.0) = 6.24$, $p < .001$. A two-line test with aggregate data ($N = 74$ countries) confirmed that the effect of non-STD stress on outgroup trust is negative when low, $b = -0.52$, $t(70) = -6.81$, but positive when high, $b = 0.32$, $t = 3.49$, p 's $< .001$. No similar effects were found with ingroup- and general trust or with other country-level predictors (e.g., teenage birth-rates, government effectiveness).

What does infectious disease look like in the mind? A reverse correlation approach (12:40 – 1:00 p.m.)

Nicholas Michalak (University of Michigan), Joshua Ackerman (University of Michigan)

What does an infected person look like in the mind? Behavioral Immune System (BIS) research suggests that, when threatened by infectious disease, perceivers tend to respond to people with atypical features (e.g. facial disfigurement, obesity) as if these features indicate infectious disease. However, there is no direct evidence that perceivers' mental images of infected persons possess these features. In two pre-registered studies ($N = 1070$), participants completed a reverse correlation task which allowed us to generate mental images of a 'germy' person, and then separate samples of participants rated features of these images. Across studies, germy mental images were rated as more germy, disfigured, nauseous, heavy, and old, all features previously linked to BIS responses. Moreover, trait-level pathogen concern of image-generators forecasted higher ratings for these features. These data suggest that mental images of infected persons possess features that serve as heuristic indicators to disease threats.

New Investigator Award Finalists (2:15 p.m. – 3:15 p.m.) (Jordan D/E)

Oxytocin and vulnerable romantic relationships (2:15 – 2:35 p.m.)

Nicholas Grebe (Duke University), Melissa Emery Thompson (University of New Mexico), Steven W. Gangestad (University of New Mexico)

Oxytocin (OT) has been implicated in the formation and maintenance of various social relationships, including human romantic relationships. Competing models predict, alternatively, positive or negative associations between naturally-occurring OT levels and romantic relationship quality. Empirical tests of these models have been equivocal. We propose a novel hypothesis ('Identify and Invest') that frames OT as an allocator of psychological investment toward valued, vulnerable relationships, and test this proposal in two studies. In one sample of 75 couples, and a second sample of 148 romantically involved individuals, we assess facets of relationships predicting changes in OT across a thought-writing task regarding one's partner. In both studies, participants' OT change across the task corresponded positively with multiple dimensions of high relationship involvement. However, increases in participants' OT also corresponded to their partners reporting lower relationship involvement. OT increases, then, reflected discrepancies between assessments of self and partner relationship involvement. These findings are robust in a combined analysis of both studies, and do not significantly differ between samples. Collectively, our findings support the 'Identify and Invest' hypothesis in romantic couples, and we argue for its relevance across other types of social bonds.

Seven Pillars of Sexual Morality: Development and Assessment of the Sexual Morality Inventory (2:35 – 2:55 p.m.)

Kelly Asao (The University of Texas at Austin), David Buss (The University of Texas at Austin)

Despite the dramatic increase in scholarly attention to morality over the past decade, most theories have ignored an exceptionally important domain—sexual morality. The current research was designed to fill this gap. A preliminary study (N = 161) used a nomination procedure that identified 70 distinct acts in the sexual morality domain. Study 1 (N = 923) identified seven core factors of sexual morality—Unfaithful Sex, Short-Term Sex, Coercive Sex, Outgroup Sex, Romantic Sex, Homosexual Sex, and Atypical Sex. Study 2 (N = 543) replicated this seven-factor solution. Analyses revealed some factors are consensually moralized, while others show large individual differences in moralization. We use the highest loading items on each factor to develop the Sexual Morality Inventory, which shows excellent factor replicability and high internal reliability across both studies. Study 3 (N = 312) explored the links between the Seven Pillars of Sexual Morality and Moral Foundations Theory.

Religion, Confidence, and Warfare: Priming supernatural agency elevates group confidence in a combat simulation experiment (2:55 – 3:15 p.m.)

Jeremy Pollack (California State University, Fullerton)

Some researchers have proposed that religion is an evolutionary adaption for the capacity to participate in warfare, in part due to its ability to enhance confidence during intergroup violence. Though previous literature has presented compelling theories to support this notion, no previous research has addressed this hypothesis in an empirical, experimental setting. This study aimed to test whether supernatural salience would in fact increase confidence in performance prior to and after intergroup combat. In the context of paintball wars, experimentally manipulated state perceptions of supernatural agency, primed via a pre-battle visualization, induced greater confidence prior to battle and enhanced confidence and perceptions of performance after the battle, in subjects primed with supernatural cognition than in subjects in a neutral condition. Implications for evolutionary mechanisms activated by supernatural cognition for the purposes of intergroup competition are discussed.

Post Doctoral Research Award Finalists (3:40 p.m. – 4:40 p.m.) (Jordan D/E)

The Behavioral Immune System is Designed to Avoid Infected Individuals, Not Outgroups (3:40 – 4:00 p.m.)

Florian van Leeuwen (Aarhus University), Michael Bang Petersen (Aarhus University)

What is the adapted structure of the behavioral immune system (BIS)? By definition, the BIS motivates avoidance of pathogens. A prominent suggestion is that the BIS also contains a component that generates motivations to avoid individuals from unfamiliar outgroups. However, the evolvability of this component has recently been questioned and it has been noted that all supportive evidence stems from WEIRD samples. In this paper, we conducted between-subjects experiments in large samples of adult residents of the USA (N=1615) and India (N=1969). In the experiment, we measured comfort with physical contact with a depicted individual. The individual was either from an ethnic ingroup or outgroup and either showed a pathogen cue or not. Results were inconsistent with the view that the BIS motivates avoidance of individuals of unfamiliar outgroups. Instead, the results strongly supported that the system simply motivates avoidance of any infected individual regardless of their group membership.

The Crowded Life Is a Slow Life: Population Density and Life History Strategy (4:00 – 4:20 p.m.)

Oliver Sng (University of Michigan), Steven Neuberg (Arizona State University), Michael E. W. Varnum (Arizona State University), Douglas T. Kenrick (Arizona State University)

The world population has doubled over the last half century. Yet, research on the psychological effects of human population density, once a popular topic, has decreased over the past few decades. Applying a fresh perspective to an old topic, we draw upon life history theory to examine the effects of population density. Across nations and across the U.S. states (Studies 1 and 2), we find that dense populations exhibit behaviors corresponding to a slower life history strategy, including greater future-orientation, greater investment in education, more long-term mating orientation, later marriage age, lower fertility, and greater parental investment. In Studies 3 and 4, experimentally manipulating perceptions of high density led individuals to become more future-oriented. Finally, in Studies 5 and 6, experimentally manipulating perceptions of high density seemed to lead to life-stage-specific slower strategies, with college students preferring to invest in fewer rather than more relationship partners, and an older MTurk sample preferring to invest in fewer rather than more children. This research sheds new insight on the effects of density and its implications for human cultural variation and society at large.

The Social Contagion of Overconfidence (4:20 – 4:40 p.m.)

Joey Cheng (University of Illinois at Urbana-Champaign), Cameron Anderson (University of California, Berkeley), Elizabeth R. Tenney (University of Utah), Sebastien Brion (University of Navarra), Don A. Moore (University of California, Berkeley), Jennifer M. Logg (Harvard University)

Why do individuals consistently hold faulty, overly positive beliefs about their capacities? Such a pervasive bias towards overconfidence is puzzling. Prior work addressing this question has focused on its fitness-relevant advantages (e.g., competitiveness, social status). Here we explore the possibility that this bias may also derive from cultural transmission. We present evidence from five studies showing that overconfidence partially arises through social transmission, such that a person's overconfidence is readily influenced by that of others. Using field data, Study 1 demonstrates that

individuals socially connected to each other show greater convergence in overconfidence. Study 2 shows that interactions in the laboratory between strangers assigned to collaborate lead to convergence in overconfidence. Using experimental designs, Studies 3-5 replicate these findings by demonstrating that exposure to overconfident others causally increases not just confidence but also overconfidence. These results indicate that cultural transmission processes partially explain the roots of this cognitive bias.

Session 3 (4:50 p.m. – 5:50 p.m.)

Symposium: Robust Patterns in Ovulation Research (Hatch A/B)

Chair: Ruben Arslan (University of Goettingen)

Unlike our closest primate relatives, human females exhibit no sexual swellings when conceptive and are sexually receptive throughout the entire ovulatory cycle. Nonetheless, some psychological features appear to change across the cycle. Different evolutionary theories aim to explain these shifts. Some see them as vestigial, while others argue for adaptive function. At the same time, controversy characterizes this area, as the empirical robustness of purported change patterns has been questioned. This controversy, until resolved, stymies theoretical progress. This symposium features studies that use high statistical power, pre-registration and/or improved estimation of conception risk to evaluate the robustness of specific patterns.

New Tests of the Pair-Bond Theory of Extended Sexuality: Women's In-Pair and Extra-Pair Sexual Interests as a Function of Conception Risk and Relationship Satisfaction (4:50 – 5:10 p.m.)

Steven Gangestad (University of New Mexico), Tran Dinh (University of New Mexico), Martie Haselton (University of California, Los Angeles)

Most studies examining shifts in women's sexual interests across the cycle test predictions concerning the function of women's conceptive phase. Yet women's sexuality during non-conceptive phases (extended sexuality) likely was shaped by benefits too. The pair-bond theory proposes that women's extended sexuality functions (in part) to solidify partner investment (Thornhill & Gangestad, 2008). Accordingly, women who are invested in their relationships should preferentially direct sexual interests toward primary partners when non-conceptive in their cycles. We tested this prediction in an online sample of 1,004 normally ovulating women in exclusive relationships. As expected, when conception risk (assessed through counting methods) was low, relative to high, women's relationship satisfaction more positively predicted sexual initiation and attraction to primary partners, and more negatively predicted extra-pair attraction. Theoretical implications will be discussed.

Ovulatory cycle shifts in female extra- and in-pair sexual desire in two large pre-registered studies (5:10 – 5:30 p.m.)

Ruben Arslan (University of Goettingen), Katharina Schilling (University of Goettingen), Tanja M. Gerlach (University of Goettingen), Lars Penke (University of Goettingen)

Past research has reported ovulatory shifts consistent with theories of adaptive mate choice, most prominently that women with sexually unattractive partners pursue extra-pair mating when fertile. The robustness of this research has been called into question in the wake of the replication crisis in psychology. To address this, we pre-registered our study designs and hypotheses and exhaustively tested our results' robustness. In our first study, 879 women (345 naturally cycling) in committed relationships filled out an online diary for up to 35 days. We used the 534 women on hormonal

contraception as a quasi-control group. In our second study, 1345 women (558 naturally cycling) completed a diary for up to 70 days. We found robust ovulatory increases in extra- and in-pair sexual desire and perceived own desirability. These shifts seem to be moderated by relationship satisfaction. However, we do not replicate all previously reported shifts and moderators.

Menstrual cycle shifts in female mate preferences for male body masculinity: An estrus effect instead of good genes sexual selection? (5:30 – 5:50 p.m.)

Julia Jünger (University of Goettingen), Tobias Kordsmeyer (University of Goettingen), Lars Penke (University of Goettingen)

There is evidence that naturally cycling women in their fertile window, compared to their luteal phase, evaluate masculine stimuli as more attractive for short-term relationships. However, recent research casts doubt on these findings. We addressed this debate in a large, pre-registered within-subject study including salivary and luteinizing hormone measures. 157 female participants rated 80 natural 3D scans of male bodies on sexual and long-term attractiveness. Multilevel intra-individual comparisons across two menstrual cycles showed that when fertile, women's ratings of male bodies increased for sexual as well as for long-term attractiveness. Contrary to other findings in the literature, males' masculine traits did not interact with these cycle shifts. Effects were stronger for women in relationships than for singles. Hormonal influences and the implications for estrus theories will be discussed.

Session Title: Modeling Cooperation (Simplot A)

Modeling the world or hacking the model? Assessing recent models of the evolution of generosity in one-shot encounters (4:50 – 5:10 p.m.)

Andrew W. Delton (Stony Brook University), Max M. Krasnow (Harvard University)

People regularly cooperate or are generous in one-shot interactions. This is surprising because many interpretations of canonical game theory models predict no one-shot generosity. One view argues that, despite canonical interpretations, one-shot generosity is a straightforward by-product of the evolution of reciprocity—so long as the nature of the proximate psychology of cooperation is considered. This view is supported by simulation and modeling studies. Another view argues that one-shot generosity is indeed mysterious on canonical accounts and newer mechanisms, like cultural group selection or gene–culture co-evolution, are needed to explain it. Newer simulation and modeling studies suggest that the previous models were wrong or incomplete and that one-shot cooperation cannot robustly evolve based on reciprocity alone. In our talk, we assess these more recent models and conclude that their results are weakened by design choices in the models. Reciprocity is still a likely explanation for one-shot cooperation.

"Aristophilia" as the evolutionary engine that explains true altruism, altruistic punishment, cultural evolution and language in Humans (5:10 – 5:30 p.m.)

Juan Perote-Peña (University of Zaragoza)

In this paper I propose a model to explain the evolution of cooperation, altruistic punishment (strong reciprocity), the emergence of cultural learning and language in Humans, each step following closely the former one. Competing models in this multidisciplinary field have a number of drawbacks that make them not fully appealing. "Aristophilia", the altruistic strategy that emerges in our model, consists in "helping the just" (donating to some agent who did the same in the previous period).

Provided that agents have some memory of past interactions, altruism will spread whenever it is beneficial for the group although it can be detrimental to the altruist herself. The key is that the winner strategy is a behavioral “green beard” effect. Aristophilia can also explain the puzzle of the evolution of a costless signal implied by any protolanguage in Humans and the emergence of sexual labor specialization.

Sharing for Survival: Cultural Strategies for Mitigating Risk (5:30 – 5:50 p.m.)

Helen Wasielewski (Arizona State University), Marco Campenni (Arizona State University), Lee Cronk (Rutgers University), Athena Aktipis (Arizona State University)

In many human societies, cultural rules for the distribution of resources enhance individual survival during periods of resource scarcity. These systems are characterized by allocation of resources to those in need, rather than to genetic kin (kin selection) or with an expectation of repayment (reciprocity). In a lab-based experimental game study, we compare the performance of dyadic groups under different social relationship primes. Participants were provided with allotments of virtual cattle that could be given to their partners or requested from their partners voluntarily. The total number of cattle in each herd fluctuated over time because of semi-random birth and death events. Our preliminary results suggest that need-based transfers are employed in a variety of circumstances, and that, as documented in our field research and agent-based modeling work, this practice increases individual survival over time relative to alternative strategies.

Session Title: Social interactions (Simplot C)

How to train your boyfriend: Integrating evolutionary psychology and behaviorist learning theory (4:50 – 5:10 p.m.)

Diana Fleischman (University of Portsmouth)

Evolution endowed us with the ability to shape the behavior of others to facilitate enacting our adaptive strategies and preventing interference; I call this the “evolved trainer”. Women have been strongly selected to train others for a variety of reasons including shaping preverbal offspring and the inability to often use force, or the threat of force, to gain compliance. Women’s social sensitivity, facial expressiveness and memory for social and personal details facilitates creating punishing and reinforcing contexts specific to individuals. Borderline personality disorder, much more common in women, is exemplified by sensitivity to cues of intimacy (resource endowment) as well as lability of affect. BPD represents an amplification of the evolved trainer, especially towards romantic partners. Training is not simply inflicted on others, evolved countermeasures including sensitivity to manipulation, defiance and desensitization. This arms race means the evolved trainer operates mostly unconsciously, encapsulated away from modules that communicate about motivation to others.

Does Fat = Fat? Does Fat = Negative? An Affordance-Management Approach to Understanding the Nuances of Fat Stigma (5:10 – 5:30 p.m.)

Steven Neuberg (Arizona State University), Jaimie Arona Krems (Arizona State University)

Traditional social science holds that fat is “bad” and that people stigmatize those who are fat. From an evolutionary, affordance-management perspective, however, this view is insufficiently nuanced. Fat is

a cue to the opportunities and threats afforded by others, and its cue-value likely depends on the target's sex, age, and ecology, the perceiver's current needs and desires, and—given that different fats serve different functions—where on the body the fat is stored (e.g., abdominal versus gluteofemoral). Fat is thus likely perceived neither monolithically nor as inherently 'good' or 'bad.' Rather, fat heuristically implies whether an individual would be, for example, an (un)acceptable mate, a (in)capable parent, or a (un)generous friend. Findings from several studies, employing community samples and a newly-created stimulus set systematically varying fat amount and deposition, lend strong support to this approach. For social perceivers, all fat isn't the same and fat isn't necessarily negative.

People prefer those who value them over those who benefit them (5:30 – 5:50 p.m.)

Tess Robertson (Stony Brook University), Max Krasnow (Harvard University), Julian Lim (University of California, Santa Barbara)

One way to choose long term reciprocity partners is to focus on the benefits they provide now. Being able to provide large benefits now probably predicts having that ability in the future. However, you might better predict that a person will specifically shunt benefits to you across time by assessing whether they are doing that now; that is, whether they demonstrate that they value you. To test this, we had participants interact with and choose between multiple partners who varied in both how much they valued the participant and how much they had benefitted the participant. Benefit size was ostensibly set for the study duration by performance on a task. People generally preferred partners who delivered larger benefits. But—crucially—when pitting a partner who delivered large benefits, but did not value them, against a partner who highly valued them but delivered small benefits, people overwhelmingly preferred the latter.

Session Title: Mate Value (Simplot B)

“Weighting” to find the right person: Integrating traits to evaluate mate value (4:50 – 5:10 p.m.)

Jordann Brandner (Kansas State University), Gary L. Brase (Kansas State University)

Prior research has focused on various traits which contribute to assessments of potential mates, however there is no consensus as to how these traits are integrated into overall mate value. This study assessed three cue-integration models as potential decision strategies people use when evaluating potential partners. Using an established prior methodology (Pachur and Marinello, 2013), 55 participants completed a 45-item decision task indicating which of two profiles were most attractive, as well as tasks which evaluated the relative importance of the 8 traits which were systematically varied in those profiles. Predicted decisions were generated for compensatory strategies (i.e. equal-weight and weighted additive) and a noncompensatory strategy (i.e. take-the-best) using participants' individual cue weights and rankings. Accuracies of the predicted decisions were compared using three multilevel logistic regressions, which showed that a weighted-additive strategy better described actual decisions than either equal-weight or take-the-best strategies.

Euclidean Mate Preference Integration Across 45 Countries (5:10 – 5:30 p.m.)

Daniel Conroy-Beam (University of California, Santa Barbara)

Humans possess an array of mate preferences that are thought to guide mate choice. But precisely how we apply these preferences to evaluate and select mates remains unclear. Emerging evidence

suggests that human mating psychology integrates mate preferences using a Euclidean algorithm that calculates mate value as the distance between preferences and potential mates through a multidimensional preference space. I will report the results of a cross-cultural test of this hypothesis using data from $n = 14,405$ people from 45 different countries. Findings reveal that people across cultures strongly fulfill their mate preferences but that individual differences in Euclidean mate value have power to predict mating outcomes including mate preference fulfillment, assortative mating, and the calibration of ideal standards. These findings contribute to validating a Euclidean model of mate preference psychology for understanding how human psychology translates mate preferences into mating outcomes.

Session Title: Environmental Cues and Responses (Simplot D)

To Eat or Not to Eat?: An unpredictability schema, body awareness, and eating in the absence of hunger (4:50 – 5:10 p.m.)

Randi Proffitt Leyva (Texas Christian University), Sarah Hill (Texas Christian University)

Life History Theory predicts that growing up in harsh and unpredictable environments should promote the development of adult phenotypes that can survive such environments. Guided by these insights, researchers have recently proposed that growing up poor should promote eating strategies that promote survivability in resource scarce environments. Here, I build on this research, examining the role that body awareness plays in regulating patterns of eating behavior observed among those from unpredictable environments. Across three studies, I found that individuals' exposure to unpredictable environments predicted lower body awareness, which predicted eating in the absence of hunger. Results suggest that body awareness may be a critical mediator of behavioral strategies that promote survival in unpredictable environments, including eating in the absence of hunger.

Life History Evolution and How Humans Perceive (and Misperceive) Mortality Rates (5:10 – 5:30 p.m.)

Mary Shenk (University of Missouri), Mary C. Towner (Oklahoma State University), Amber Cox, Nurul Alam (International Centre for Diarrhoeal Disease Research, Bangladesh)

Mortality risk is a key driver of life history evolution, yet few studies have assessed what cues humans use to evaluate these risks. Using data on over 800 women from Matlab, Bangladesh, we examine a phenomenon in which people experiencing rapid economic development perceive adult mortality rates to be rising when in fact they are falling. We use a model selection approach to test whether inaccurate (as compared to accurate) perceptions of mortality risk are better explained by (a) difficulty in estimating mortality rates due to demographic and ecological factors affecting the 'visual diet', (b) risk factors that render mortality less controllable (more extrinsic and less intrinsic), or (c) early life experiences of loss or resource stress. Results to date suggest stronger support for the visual diet and extrinsic/intrinsic risk models. We also discuss contrasting data on perceptions of child mortality, which is usually accurately perceived to be falling.

Can an Unpredictable Childhood Environment Enhance Working Memory? Testing the Sensitized-Specialization Hypothesis (5:30 – 5:50 p.m.)

Ethan Young (University of Minnesota), Vladas Griskevicius (University of Minnesota), Jeffrey Simpson (University of Minnesota), Theodore Waters (New York University Abu Dhabi), Chiraag Mittal (Texas A&M University)

Although growing up in an adverse environment normally impairs cognition, the sensitized-specialization hypothesis posits that the childhood environment should specialize the mind for solving problems particular to the rearing environment. In addition, these specialized abilities should be sensitized to emerge in currently uncertain contexts. We conducted experimental tests of this hypothesis in the domain of working memory, examining how unpredictable and predictable childhood environments affect different aspects of working memory. Although growing up in an unpredictable environment typically impairs working memory, it has positive effects on those aspects of working memory that are useful in rapidly-changing environments. We also show that growing up in predictable environments enhances those aspects of working memory that are useful in stable environments. Both of these effects emerged only when the current context was uncertain. These theoretically-derived findings suggest that childhood environments shape, rather than uniformly impair, cognitive functions.

Saturday June 3rd, 2017

Session 1 (10:30 a.m. – 11:50 a.m.)

Session Title: Infidelity Threat and Jealousy (Hatch A/B)

Are Sex-Typical Jealousy Responses Related to Degree of Heterosexual Orientation? A comparison of Homosexual, Bisexual, Pansexual, Transsexual, and Heterosexual Adults (10:30 – 10:50 a.m.)

Mons Bendixen (NTNU – Norwegian University of Science and Technology), Ingrid G. Bergendahl (NTNU – Norwegian University of Science and Technology), David P. Schmitt (Bradley University), & Leif Edward Ottesen Kennair (NTNU – Norwegian University of Science and Technology)

Studies of sexual minorities' mating psychology suggest that these are complex and represent neither a continuation of heterosexual evolved mating psychology nor a complete gender-role reversal. In a large internet based study (N=4545) covering one sample of sexual minorities and one of the general population, we wanted to examine the extent forced choice jealousy responses were determined by the sex of the respondent, relationship status, the sex of the current partner, or the level of attraction to same-sex or opposite-sex individuals. We predicted that relative to heterosexual men, heterosexual women and all subgroups of sexual minorities would be significantly less upset by the sexual aspect of the infidelity. This was strongly supported. Being single or partnered did not influence jealousy responses, nor did the sex whom bisexual respondents were attracted to/coupled with. Degree of sexual attraction to men versus women was nonlinearly associated with sexual jealousy for both sexes.

Sex differences in jealousy within monogamous and consensually non-monogamous romantic relationships (11:10 – 11:30 a.m.)

Justin Mogilski (Oakland University), Simon Reeve (Oakland University), Sylis Nicolas, Sarah Donaldson (University of Oregon), Lisa Welling (Oakland University)

Consensually non-monogamous (CNM) relationships comprise individuals who explicitly consent to their romantic partner(s) having extra-dyadic sexual or emotional relationships. The present study expands recent evolutionary research on CNM relationships (Mogilski, Memering, Welling, & Shackelford, 2017) by examining whether well-documented differences in men's and women's reactions to sexual and emotional infidelity replicate within a CNM sample. Furthermore, we examined sex differences in compersion (i.e., feeling pleasure in response to a partner's extra-dyadic sexual or emotional involvement). Participants in monogamous (n = 596) and CNM (n = 161) relationships responded to modified forced-choice infidelity risk scenarios and completed measures of romantic jealousy. Our findings replicated sex differences within monogamous but not CNM relationships and were moderated by whether participants consented to their partner's infidelity. Discussion focuses on how relatively unique features of CNM relationships (e.g., explicit consent) may alter how individuals react to and reason about partner infidelity.

Cross cultural perceptions of jealousy (11:30 – 11:50 a.m.)

Sean Prall (University of California, Los Angeles), Brooke Scelza

Sex differences in jealous responses largely support evolutionary psychology predictions, but the large majority of this evidence comes from industrialized populations and student samples. These samples are unlikely to represent the diversity of contemporary cultural systems, and suffer from homogeneity in relevant variables, including adult sex ratio (ASR), integration with the market and western value systems, and the role of fathers. To better understand this variation, more cross-cultural comparison is necessary. Here we report the results of a cross-cultural study of 12 groups, including 5 small-scale societies, examining the propensity for sexual versus emotional jealousy in men and women, and the perceived severity of infidelity. Results show an overall sex difference in jealous response, but also show significant variation across cultures. In addition to sex and culture, we also explore the effects of paternal investment, ASR and contraceptive use on jealous response.

Session Title: Life History and the Dark Triad (Simplot A)

Using Multidimensional Measures of Mate Value Discrepancies to Understand the Dark Triad and Relationship Satisfaction (10:30 – 10:50 a.m.)

Cari Goetz (California State University, San Bernardino), Kelsey Meyer (California State University, San Bernardino)

The Dark Triad traits are positively associated with short-term mating, however the traits' associations with long-term mating strategies are less clear. We hypothesized that the Dark Triad traits would be negatively associated with relationship satisfaction, and that this association would be mediated by mate value discrepancies. Participants were in long-term, committed relationships and completed self, partner, and ideal mate trait ratings along with an assessment of Dark Triad traits and relationship satisfaction. We found an indirect, negative association between the Dark Triad traits and relationship satisfaction, mediated by mate value discrepancy. The higher on the Dark Triad traits, the more alternative partners there were that were closer to the participant's ideal mate preferences than their current partner, which was associated with decreased relationship satisfaction. This study highlights the utility of employing multidimensional measures of mate value discrepancies for understanding relationship outcomes.

Dark and Dirty: How disease cues influence mate preferences differentially across levels of the Dark Triad Traits (10:50 – 11:10 a.m.)

Laura K. Dane (Douglas College), Peter K Jonason (Western Sydney University), Hailea Williams (Douglas College), Caitlyn O'Neill (Douglas College)

Across cultures, pathogen prevalence is associated with sexual restrictiveness, and, experimentally, individuals (particularly women) primed with disease cues show decreased interest in short-term mating (STM). In high pathogen environments costs associated with STM are higher and we expect to see increased sexual restrictiveness; however, individuals pursuing an opportunistic/exploitative mating strategy (high Dark Triad - DT) may discount these costs and continue with a more permissive mating style. We present three multi-method, experimental studies (N = 805) investigating whether the effect of disease salience on preferences for STM is moderated by DT traits. When disease is primed, individuals low in DT traits report decreased interest in STM, while those high in DT traits do not. In addition, women (and some men) higher in DT traits worry less about obtaining sexually

transmitted infections (STI's), feel it is less important to communicate about STI's and report using condoms less with ST partners.

Life History Theory and Dark Triad Traits across Cultures: Do Men's and Women's Machiavellianism, Narcissism, and Psychopathy Adaptively Emerge in Different Ways across Ecological Conditions? (11:10 – 11:30 a.m.)

David Schmitt (Bradley University and Brunel University London)

The Dark Triad personality traits of Machiavellianism, Narcissism, and psychopathy are thought to be sex-linked (with men scoring higher) and to be associated with increased pursuit of fast life history strategies (including more short-term mate poaching, unrestricted sociosexuality, and marital infidelity). In the current study, findings from a cross-cultural survey of over 35,000 people across 58 nations demonstrated those scoring higher on Dark Triad dimensions generally do engage in more short-term mating. However, only sex differences in psychopathy were culturally universal. Among nations with high levels of ecological stress (e.g., high pathogen load, low resource availability), sex differences in Machiavellianism and Narcissism were largely attenuated, primarily because women's life history strategies appeared more accelerated than men's in response to stress. Discussion focuses on why women's life history strategies may be more sensitive to ecological stress than men's.

Associations between personality traits and mating strategies (11:30 – 11:50 a.m.)

Rei Shimoda (Durham University), Anne Campbell (Durham University), Robert Barton (Durham University)

Differential K theory proposes that a single life-history continuum can be used to describe individual differences in life history strategies. Compared to individuals at the 'fast' end of the spectrum, 'slower' individuals are predicted to allocate relatively more time and energy to parental effort rather than to mating effort. It was argued that various personality traits can be subsumed under a single higher-order trait and that this trait is associated with individual differences in life history strategy. Previous studies showed that General factor of personality (GFP) and Dark Triad (DT) correspond respectively to the slower and faster ends of the single life history continuum. Using a large British sample, the present study examined associations between relationship variables (in-pair and extra-pair sexual desire, romantic love and adult attachment) and personality traits (GFP and DT), and whether these associations differed as a function of respondents' sex in ways predicted by life history theory.

Session Title: Improving our Science (Simplot C)

Evolutionary Psychology and Replicability in the Behavioral Sciences (10:30 – 10:50 a.m.)

Gary Brase (Kansas State University)

Given the ongoing "replicability crisis" in the behavioral sciences, does an evolutionary approach help or hinder the reliability of research results? Valid scientific phenomena can be characterized as having multiple, independent, and converging lines of evidence, and validity tends to promote reliability. Therefore, it can be argued that an approach which integrates evidence from psychology, evolutionary biology, anthropology, and other fields should produce more robust research. Using a sample of published articles with known replicability results, introductions were coded for if and how cross-disciplinary citations were used. The overall metric of how well converging lines of evidence were used

to support research results correlated with replication results. This relationship was about the same strength as the previously documented best correlate with replicability: effect size of the original finding. Furthermore, these two predictors appear to be independent of one another.

Failure to Replicate can be a Scientific Opportunity (10:50 – 11:10 a.m.)

Elisabeth Oberzaucher (University of Vienna, University of Ulm, Urban Human)

In the age of reproducibility crisis the trust people place in science is shaken. Contradictory findings of studies generate a feeling that science is producing a string of fake news and does not contribute to a better understanding of the world. In this talk I argue that the reproducibility crisis remains such only as long as we do not learn the lessons each failure to replicate can teach. It is an invitation to take a closer look at how studies differ, and to think of additional intervening variables. I will demonstrate the unique potential to use the critical analysis of study design as a source of scientific insight. I will cite two lines of research where contradictory results generated scientific advancement. This will make a case against rushing to publish each and every surprising and new result, but to take the time to critically evaluate the weight of each finding.

“Above all else show the data”: visualising differences in visualisations across the behavioural sciences (11:10 – 11:30 a.m.)

Gert Stulp (University of Groningen), Tim W. Fawcett (University of Exeter), Louise Barrett (University of Lethbridge), Thomas V. Pollet (Leiden University)

The so-called “replication crisis” has subjected behavioural science, particularly social psychology, to severe criticism. Our interest in this debate led us to investigate the use of visualizations in social psychology, since we noticed differences in the graphical presentation of results compared to evolutionary approaches. Given that inappropriate data presentation may contribute to poor studies going undetected, we decided to examine this systematically. We coded over 2000 graphs from five social psychological journals (JPSP, PSPB, JESP, SPPS, and PS) plus “Evolution and Human Behavior” (EHB) for 2015. Clear differences were observed in both the frequency of use and the type of visualization presented across the different journals, and suboptimal use of graphs is widespread. EHB stands out by publishing the highest average number of graphs per page. We end the talk by showcasing the best visualizations from Evolution and Human Behavior in 2015.

The Natural Selection of Bad Science (11:30 – 11:50 a.m.)

Paul Smaldino (University of California, Merced), Paul Smaldino (University of California, Merced), Marco Janssen (Arizona State University), Jenna Bednar (University of Michigan)

Poor research design and data analysis encourage false-positive findings. Poor methods persist despite perennial calls for improvement, suggesting that they result from something more than just misunderstanding. We argue that the persistence of poor methods results partly from incentives that favor them through a process of cultural evolution. This dynamic requires no conscious strategizing by scientists, only that publication is a principal factor for career advancement. This argument is supported with empirical evidence and computational modeling. A dynamic model of scientific communities is presented in which competing laboratories investigate novel or previously published hypotheses. As in the real world, successful labs produce more “progeny”—their methods are more often copied and their students are more likely to start their own labs. Selection for high output leads to poorer methods and higher false discovery rates. Replication, while important, is unlikely to stop this process, is unlikely to stop this process.

Session Title: Mortality II (Simplot B)

Ecology shapes moral judgments towards food-wasting behavior: Evidence from the Yali of West Papua, the Ngorongoro Maasai, and Poles (10:30 – 10:50 a.m.)

Michał Misiak (University of Wrocław), Marina Butovskaya (Russian Academy of Sciences and Russian State University of Humanities), Piotr Sorokowski (University of Wrocław)

Wasting food is judged as an immoral behavior. Although moral concerns vary widely between cultures, moral judgments towards food-wasting behaviors have been investigated only among rich and industrialized cultures to date. This study reports the first evidence of cultural variability on moral judgments towards wasting food between modern and traditional cultures. We conducted our study among the Maasai pastoralists of Ngorongoro, the Yali horticulturalists of West Papua, and Polish citizens. The results show that the Maasai judge food-wasting behavior as more immoral compared with the Yali and Poles. In addition, the Yali judge food-wasting behavior more harshly than do Poles. These results suggest cultural differences in moral judgments towards wasting food. These differences might reflect the impact of an unstable ecology on the food economy of a given society. We hypothesize that those harsh moral judgments concerning food waste may serve as a cultural adaptation for food insecurity.

A Room So Quiet and Empty It Hurts: Reassessing Suicide Risk Assessment (10:50 – 11:10 a.m.)

Andy Thomson (University of Virginia)

Over a million people in the world will die by suicide this year, more than war and homicide combined. Ten to twenty times that number will make non-lethal attempts. Suicide is the leading cause of death in four year colleges and universities. Suicide risk assessment is a central feature of psychological and psychiatric evaluations. Risk assessments often determine treatment, allocation of health care resources, and involuntary hospitalization with its significant legal consequences. Yet a recent meta-analysis of fifty years of research on suicide risk assessment found that we do little better than chance (Large et al, 2016). No reliable method exists. Fortunately, there are theoretically sound and empirically supported evolutionary hypotheses on suicide. These can form the basis of a revised protocol for suicide risk assessment in clinic and in-patient settings and renewed research to find reliable methods. This revised approach to suicide risk assessment will be presented.

Social epistasis amplifies the fitness costs of deleterious mutations, engendering rapid fitness decline among modernized populations (11:10 – 11:30 a.m.)

Michael A. Woodley of Menie (Vrije Universiteit Brussel), Matthew A. Sarraf, Radomir N. Pestow, Heitor B. F. Fernandes

Deleterious mutations are typically understood exclusively in terms of their harmful effects on carrier organisms. But there are convincing reasons to think that such adverse effects are not confined to the individual level. We argue that in social species, interorganismal gene-gene interactions, which in previous literatures have been termed social epistasis, allow genomes carrying deleterious mutations to reduce via group-level pleiotropy the fitness of others, including noncarriers. This fitness reduction occurs by way of degradation of group-level processes that optimize the reproductive ecology of a population for intergroup competition through, among other mechanisms, suppression of free-riding.

Such damage to group regulatory processes suggests a hidden role for the accumulation of behavior-altering "spiteful" mutations in the dynamics of the demographic transition—these mutations may have contributed to the maladaptive outcomes of this process, such as widespread subreplacement fertility. A structured population model is presented describing aspects of this social epistasis amplification model. This phenomenon is also considered as a potential explanation for the results of Calhoun's mouse utopia experiments, which provide an opportunity to directly test a major prediction stemming from the model.

Session Title: Fertility Outcomes (Simplot D)

Are children more valuable at school or at home? Testing the assumptions underlying evolutionary models of the demographic transition in rural Tanzania (10:30 – 10:50 a.m.)

Sophie Hedges (London School of Hygiene and Tropical Medicine), Rebecca Sear (London School of Hygiene and Tropical Medicine), Jim Todd (London School of Hygiene and Tropical Medicine; National Institute for Medical Research, Mwanza, Tanzania), Mark Urassa (National Institute for Medical Research, Mwanza, Tanzania), David W. Lawson (University of California, Santa Barbara)

Evolutionary anthropologists have argued that economic modernisation leads to fertility transitions because parents perceive increased benefits to education, and fewer benefits to children's work. However, few studies have investigated children's time allocation in modernising economies where formal education is increasingly important, but children's work remains valuable. Using time allocation data from 1,278 children in northwest Tanzania, we test the prediction that parents in business livelihoods will value education more and children's work less than parents engaged in agropastoralism. Contrary to predictions, business livelihoods were not associated with more education. For girls, business livelihoods were associated with less education, and more household chores. For boys, agropastoralism was associated with increased work time, but reduced leisure rather than education. These findings question some of the assumptions underlying evolutionary models of the demographic transition.

Is fertility after the demographic transition maladaptive? (10:50 – 11:10 a.m.)

Rosemary Hopcroft (University of North Carolina at Charlotte)

Even in very low fertility societies, individual fitness as measured by the share of genes in subsequent generations may still be maximized. When male fertility is measured separately, high status men (as measured by their wealth and personal income) have higher fertility than low status men even in very low fertility societies, so individual males appear to be maximizing their fitness. Thus male fertility cannot be considered maladaptive. When female fertility is measured separately, in both very high and very low fertility societies there is not much variance across women of different statuses in completed fertility. Only in societies currently modernizing (with falling fertility rates) do we see a somewhat high variance across women of different statuses in completed fertility. This is always a temporary phase. Rather than maladaptive, I suggest modern female fertility is a continuation of the evolved female reproductive strategy in a modern social and material setting.

Understanding fertility in light of forced dispersal: variation across American Indian women in early Oklahoma (11:10 – 11:30 a.m.)

Mary C. Towner (Oklahoma State University), Kermyt G. Anderson (University of Oklahoma), Mary K. Shenk (University of Missouri)

Human behavioral ecologists and evolutionary demographers know little about the reproductive consequences of dispersal, particularly under adverse conditions. Between 1828 and 1887, tens of thousands of American Indians were relocated to Indian Territory (present-day Oklahoma) under US Government removal policies. The demographic costs—particularly high mortality rates and drastic reductions in population size—incurred by American Indians during this time are well-known. Still largely unexplored, however, is how women's fertility varied with social and ecological conditions during and following this tumultuous period. We use data from the 1910 US Federal Census to examine fertility variation across women from tribes with different relocation histories. We find preliminary evidence for substantial fertility variation by tribe, as well as by individual characteristics, and discuss the theoretical implications of this variation.

Sexual Conflict and Resolution Among Indonesian Couples (11:30 – 11:50 a.m.)

James Nelson (Boise State University), Kristin Snopkowski (Boise State University)

Previous research demonstrates that couples tend to have more children when living patrilocally compared to other post-marital residence patterns. This has been interpreted as coercion by males (and their kin) to exploit higher fertility than women desire. To test this, we examined family size preferences for males and females in Indonesia to determine whether (within a couple) men or women prefer more future children and who is able to achieve their preference within a decade. Results demonstrate that within couples 81% have the same preference for future children, but when differences occur, men are slightly more likely to prefer additional children (10.7% vs. 8.3%). In couples where men and women disagreed about future reproduction, women were able to achieve their desired fertility more frequently than men (and this did not vary by post-marital residence pattern). These results suggest that exploitation of female fertility cannot explain higher family size in patrilocal contexts.

Session 2 (12:00 p.m. – 1:00 p.m.)

Symposium: Evolutionary Personality Psychology (Hatch A/B)

Chair: Lars Penke (University of Goettingen, Germany)

Why humans consistently differ in their cognitive, affective and behavioral tendencies is among the less well understood questions in evolutionary psychology. This symposium will present new data on three different approaches to explain human personality: Tobias Kordsmeyer takes a social endocrinology perspective and shows how personality states in men change with hormonal reactions to a competitive mating context. Christoph von Borell presents a comprehensive test of the facultative calibration hypothesis, according to which social personality traits reflect physical attractiveness and formidability. Lars Penke takes an evolutionary genetic perspective and shows how molecular genomic analyses of extended families can reveal hitherto hidden influences of rare genetic variants on intelligence and some personality traits, which are informative of the evolutionary selection pressures that maintain heritable variance in these traits.

Effects of male testosterone and cortisol reactivity on self- and observer-rated personality states in a competitive mating context (12:00 – 12:20 p.m.)

Tobias Kordsmeyer (University of Goettingen), Lars Penke (University of Goettingen)

Increased human male testosterone (T) levels have been found after intrasexual competitions and exposure to females, facilitating courtship behaviors. How exactly T reactivity, also under buffering effects of Cortisol (C), relates to personality state changes is unclear. In a preregistered study, we aimed at inducing T increases in men (N=165, Mage=24.3±3.2 years) through exposure to a potential mate and dyadic intrasexual competitions (e.g. arm wrestling). We investigated self- and video-based observer-rated personality state changes, as captured by the Interpersonal Circumplex, in relation to hormonal levels. Results revealed increases in self-rated competitiveness and observer-rated dominance, moderated by T reactivity and partly by TxC interactions. Thus, male T-reactivity in a competitive mating context increased competitiveness/dominance, but did not decrease nurturance, providing further insights into how hormonal and personality responses to challenges are intertwined in men.

An integrative study of facultative personality calibration (12:20 – 12:40 p.m.)

Christoph von Borell (University of Goettingen), Tobias Kordsmeyer (University of Goettingen), Tanja M. Gerlach (University of Goettingen), Lars Penke (University of Goettingen)

The theory of facultative calibration, which explains personality differences as a reaction to variation in non-behavioral traits, received mixed support so far. While correlations between personality and self-perceptions of non-behavioral traits are empirically well supported, it still needs to be settled whether personality is also adjusted to objective differences in body condition (formidability). In two studies (N1=119 men, 124 women, N2=165 men) we included various personality measures from previous studies in the same samples (e.g. proneness to anger, extraversion, neuroticism, narcissism, shyness, vengeance, sociosexuality). Formidability measures included self- and other-rated attractiveness, physical strength, and various anthropometric measures from 3D body scans. We replicated correlations with self-perceived, but other-rated, attractiveness across outcomes. Measures of strength and masculinity were only related to extraversion and, inconsistently, sociosexuality in men.

Contribution of rare genetic variants to intelligence and personality revealed by genomic analysis of family data (12:40 – 1:00 p.m.)

Lars Penke (University of Goettingen), W. David Hill (University of Edinburgh), Ruben C. Arslan (University of Goettingen), Charley Xia (University of Edinburgh), Michelle Luciano (University of Edinburgh), Carmen Amador (University of Edinburgh), Pau Navarro (University of Edinburgh), Caroline Hayward (University of Edinburgh), Reka Nagy (University of Edinburgh), David J. Porteous (University of Edinburgh), Andrew McIntosh (University of Edinburgh), Ian J. Deary (University of Edinburgh), Chris S. Haley (University of Edinburgh)

Heritability in intelligence and personality persist despite links to fitness, an ostensible evolutionary genetic paradox. Pedigree-based heritability for both intelligence and personality are much higher than molecular genetic estimates, possibly because rare genetic variants are missed. Using ~20,000 individuals in the genotyped Generation Scotland family cohort, we exploit high levels of linkage disequilibrium (LD) within families to quantify the effect of genetic variants not tagged in earlier studies. We control for environmental influences by modelling shared family, sibling, and couple effects. In our models, genetic variants in low LD with genotyped SNPs explain over half of the genetic variance in intelligence and neuroticism, thus closely approximate heritability estimates from twin studies for intelligence, but not neuroticism and extraversion. A substantial contribution of rare genetic variants to intelligence and neuroticism suggests mutation-selection balance.

Session Title: Fairness and Cheater Detection (Simplot A)

Fairness: What it is, isn't, and might be for (12:00 – 12:20 p.m.)

Alex Shaw (University of Chicago)

Children and adults respond negatively to inequity. Traditional accounts of inequity aversion suggest that as children mature into adults they become less likely to endorse all forms of inequity. I challenge the idea that children have a unified concern with inequity that simply becomes stronger with age. Instead, I argue that the developmental trajectory of inequity aversion depends on whether the inequity is seen as partial or impartial. In three studies (N = 501), older children (7- to 8-year-olds) were more likely than younger children (4- to 6-year-olds) to create inequity that disadvantaged themselves—an impartial type of inequity. I further argue that people are fair to avoid being judged for being partial and, in line with this account, demonstrate that children make inferences about alliances based on the partiality of resource distribution. I discuss an evolutionary and developmental account of this partiality aversion.

What is fairness? Evidence that fairness judgments reflect the demands of a biological market of long-term cooperative relationships (12:20 – 12:40 p.m.)

Adar Eisenbruch (University of California, Santa Barbara), James Roney (University of California, Santa Barbara)

Humans are cooperative, but how should the spoils of cooperation be divided? Biological market theory suggests individuals will bid for relationships with the best available cooperative partners, such that more valuable partners are entitled to more favorable resource allocations. We conducted a series of experiments in which subjects cooperated with partners who varied in generosity and productivity; the partners divided the resulting resource; and subjects judged how fair the partners had been. More productive partners were judged fairer for any given level of generosity, supporting biological market theory. The effect of productivity was stronger for men and stronger when productivity indicated stable skills rather than luck, suggesting that fairness intuitions are tuned to ancestral cues of partner value, not merely monetary payoffs or the partner's contribution to the resource. These results suggest that fairness intuitions are the product of evolution in a biological marketplace.

Stingy, Greedy, or Bad Lannister? Specialized Cheater Detection Mechanisms in Response to Different Selection Pressures (12:40 – 1:00 p.m.)

Andres Munoz (Arizona State University), Daniel Sznycer (Arizona State University), Lee Cronk (Rutgers University), Athena Aktipis (Arizona State University)

Humans have an evolutionary history of transacting for mutual benefit. One type of transaction, trade, involves the exchange of one resource for another. Research suggests that people have cognitive mechanisms for detecting debt not paid, which is essential for trade to yield net benefits. However, people also engage in transactions based on the recipient's need. Transfers based on need are susceptible to two kinds of cheating. First, a person can be greedy by asking when not in need. Second, a person with a surplus of resources can be stingy by not giving to someone in need. We used the Wason selection task, as well as a new cheater-detection task, to study stinginess-detection and greediness-detection. Performance on the Wason selection task was just as high when it was framed in terms of detecting stinginess and greediness as it was when it was framed in terms of detecting debt not paid.

Session Title: The Attractiveness of Facial Color (Simplot C)

Cross-cultural differences in facial attractiveness judgments: Evidence from White UK and Chinese participants' preferences for experimentally manipulated facial coloration (12:00 -12:20 p.m.)

Chengyang Han (University of Glasgow), Hongyi Wang (University of Glasgow), Amanda Hahn (Humboldt State University), Claire Fisher (University of Glasgow), Michal Kandrik (University of Glasgow), Vanessa Fasolt (University of Glasgow), Danielle Morrison (University of Glasgow), Anthony Lee (University of Glasgow), Iris Holzleitner (University of Glasgow), Lisa DeBruine (University of Glasgow), & Benedict Jones (University of Glasgow)

Similar effects of facial coloration when White UK and Black African participants judge own-ethnicity facial attractiveness has been interpreted as evidence for cross-cultural similarity in the effects of facial coloration on attractiveness. The current study investigated cross-cultural similarity in the effects of facial coloration on Chinese (N=95) and White UK (N=101) participants' facial attractiveness judgments. Chinese participants showed stronger preferences for lightness, but weaker preferences for redness, than did White UK participants. Strikingly, yellowness had a positive effect on White UK participants' facial attractiveness judgments, but had a negative effect on Chinese participants' facial attractiveness judgments. These patterns generally held true regardless of the ethnicity of the stimulus faces. Together, our results demonstrate cross-cultural differences in facial attractiveness judgments and demonstrate that preferences for facial coloration are not universal.

Visual perception of British women's skin color distribution in two non-industrialized societies, the Maasai and the Tsimane (12:20 – 12:40 p.m.)

Bernhard Fink (University of Goettingen), Marina L. Butovskaya (Russian Academy of Sciences), Piotr Sorokowski (University of Wroclaw), Paul J. Matts (The Procter & Gamble Company)

Female facial skin color homogeneity decreases with age leading to a decrease in perceived health and attractiveness. Perception of female skin may be influenced by continuous exposure to, and thus familiarity with, age-related skin changes in a given society. Here, we show that members of two pre-industrialized societies (the Maasai and the Tsimane) judge the age, health and attractiveness of British women's facial skin in a way similar to that reported for participants from industrialized societies. Skin images from the cheeks of younger women (homogeneous skin color), were judged to be younger and healthier, and received a stronger preference than corresponding images from older women (heterogeneous skin color). Thus, the human sensitivity for quality-related information from facial skin color distribution may be universal and independent of any known age-dependent variation in skin in a given population, and skin discoloration is universally associated with less positive judgement.

The carotenoid beta-carotene enhances facial color, attractiveness and perceived health, but not actual health, in humans (12:40 – 1:00 p.m.)

Yong Zhi Foo (University of Western Australia), Gillian Rhodes (University of Western Australia), Leigh W. Simmons (University of Western Australia)

Carotenoid-based colouration plays an important role in mate choice in many animal species. It is argued to be an honest signal of health because carotenoids function as antioxidants and only healthy individuals can afford to use available carotenoids for signalling. Here, we tested the effect of dietary supplementation of the carotenoid beta-carotene on facial appearance and health in human males.

Beta-carotene supplementation altered skin colour to increase facial attractiveness and perceived health. However, we found no effect of beta-carotene on measures of actual health, including oxidative stress, innate immune function, and semen quality. We conclude that although carotenoid-based skin colour may be sexually selected in human males, it may not be an honest signal of health.

Session Title: Cultural Evolution (Simplot B)

The Cultural Evolution of Economic Development (12:00 – 12:20 p.m.)

Adam Flitton (University of Exeter), Thomas Currie (University of Exeter)

A huge number of hypotheses have been put forward to explain the substantial diversity in economic development. There is growing appreciation that cultural evolutionary processes may have played an important role. Historical factors such as how long societies have had experience with centralized political governance, or how long they have employed agricultural subsistence strategies have been argued to contribute to present-day economic performance. However, it is not clear whether ancestral statehood and agriculture exert direct effects, or whether they influence modern economies indirectly by shaping the evolution of norms or formal institutions. Here we use structural equation modelling to test between hypotheses involving a range of direct and indirect pathways. We show that ancestral statehood and agriculture affect economic development only indirectly through their effects on institutions. These results support the idea that cultural evolutionary processes have been important in creating effective institutions in present-day societies, and enabling large-scale cooperation.

A test of competing hypotheses concerning the impact of demography on cultural evolution (12:20 – 12:40 p.m.)

Brea McCauley (Simon Fraser University), Mark Collard (Simon Fraser University)

Recently there has been a surge of interest in the possibility that demography affects cultural evolution. Some authors have proposed that population size affects the appearance and retention of innovations and therefore influences the complexity of a population's cultural repertoire. Others have averred that it is not population size that drives cultural complexity but rather population pressure. Still others have argued that population size may only have an indirect impact on cultural complexity through an increase in task specialization. Here, we report a study designed to test among these hypotheses. We obtained from the literature data on technological complexity for a sample of small-scale societies. These data were combined with data for a number of independent and control variables. Subsequently, we used partial regression analysis and multiple regression to test the predictions of the three hypotheses. Our results do not support the hypotheses equally well.

Is the cultural boundary also the moral boundary? A cross-cultural test of cultural group selection (12:40 – 1:00 p.m.)

Carla Handley (Arizona State University), Sarah Mathew (Arizona State University)

Theoretical work indicates that large-scale cooperation in humans may have evolved via cultural group selection (CGS), but there are few direct empirical tests of this hypothesis using cross-cultural data. We test two key predictions of CGS: that between-group variation in cultural traits is sufficiently large for selection to operate at the level of cultural groups; and the scale of cultural variation will determine the scale of cooperation. Using questionnaires and vignette experiments, we gathered data on the cultural traits and social scale of cooperation from 750 adults, from nine clans, spanning four pastoral

ethnolinguistic groups in Kenya: the Turkana, Samburu, Borana and Rendille. We find that cultural FST is considerably higher than genetic FST estimates in the literature and that the social boundary of cooperation is also the boundary at which cultural variation is maintained. These findings provide strong support for CGS's role in shaping the scale of human cooperation.

Session Title: Altruism and Cooperation in Games (Simplot D)

Ontogeny and mechanisms of coalitional competition: Acute hormone responses among juvenile boy soccer players in Hong Kong (12:00 – 12:20 p.m.)

Timothy McHale (University of Nevada, Las Vegas), Wai-chi Chee (University of Hong Kong), Jonny Chan (University of Hong Kong), David Zava (ZRT Lab), and Peter B. Gray (University of Nevada, Las Vegas)

Humans have an extended juvenile life history stage that offers children the opportunity to hone their socio-competitive abilities before adulthood. Despite a large body of research linking testosterone and cortisol to male-male competition and aggression across taxa, little work has explored children's acute hormone responses to physical competition. Here, we investigated adrenal steroid hormone responses to male-male coalitional competition (soccer) among Hong Kongese boys, aged 8 – 11 years. Saliva samples from 102 individuals were collected before and after two experimental conditions--soccer matches and scrimmages--to evaluate changes in testosterone, dehydroepiandrosterone (DHEA), androstenedione, and cortisol. Testosterone was only detectable in 7 participants, contrasting with typical findings from adult studies. Preliminary analysis suggests boys' acute hormone responses of DHEA, androstenedione, and cortisol are associated with age and condition differences.

Altruistic giving before and after a natural disaster (12:20 – 12:40 p.m.)

Tom Vardy (University of Auckland), Quentin Atkinson (University of Auckland & Max Planck Institute for the Science of Human History)

Most of what we know about human altruism comes from studies carried out in the context of relative resource abundance. However, the cooperative stakes and attendant selection pressures are likely greater in environments under resource stress; community cohesion may become more important, whilst competition for essential resources is likely to increase. Natural disasters can provide important insights into how such changes shape our altruistic drives. We examine the effect of a natural disaster on altruistic behaviour using a series of dictator games conducted with the same participants before and after Cyclone Pam, on Tanna Island, Vanuatu. While people became less altruistic after the cyclone, those who indicated increased exposure to the suffering of others were more likely to increase their offers. Conversely, personal and material loss was associated with an increased likelihood of reduced offers. This research points to key drivers of human altruistic behaviour under conditions of resource stress.

The Psychology of Common Knowledge Explains the Appearance of Altruistic and Moral Motivation (12:40 – 1:00 p.m.)

William McAuliffe (University of Miami), Michael E. McCullough (University of Miami)

Experiments testing the empathy-altruism hypothesis appear to confirm the existence of altruistic motivation, while results from the dictator game provide evidence of moral motivation. However, both experimental paradigms make the opportunity to behave prosocially common knowledge, and

therefore confound unselfishness with a self-interested desire to avoid social censure. Here, we present an experiment (N= 334) in which we recreated both the empathy-altruism and dictator game paradigms and manipulated whether the opportunity to benefit another person was common knowledge. Making the opportunity behave prosocially merely private knowledge eliminated giving in the dictator game paradigm entirely, while giving in the empathy-altruism paradigm was attenuated and uncorrelated with empathy. Our results undercut evidence that altruistic and moral considerations motivate prosocial behavior, and suggest that empathy tracks perceived social censure from failing to help needy persons.

Session 3 (3:40 p.m. – 4:40 p.m.)

Session Title: Primate Social Interactions (Hatch A/B)

Complexity and play: resource availability changes social network structure of wild bonobos (3:40 – 4:00 p.m.)

Isabel Behncke (Oxford University), Jorge Alexis Castillo (Universidad Desarrollo), Tamas David-Barret (Oxford University), Carlos Sickert-Rodriguez (Universidad Desarrollo)

How does social complexity change in response to ecological context? Here we present changes in social network configuration according to changes in resource (fruit) availability in a group of wild bonobos (Wamba, DRC). We looked at differences in relation to how the diversity of social partners that an animal chooses to groom or play with changes. Interactional heterogeneity is a crucial factor in complexification, hence looking beyond than just differences in frequency of behaviour. We found that diversity of social partners was higher in the age group for which a given behaviour has more adaptive relevance. Thus, for (a) grooming: social diversity increased with increasing age and for (b) play: social diversity increased with decreasing age.

Male care and life history traits among primates: A comparative analysis (4:00 – 4:20 p.m.)

Kermyt Anderson (University of Oklahoma), Alexandra Sheldon (Central Washington University)

Male care for dependent offspring occurs in all human populations, but its patterning is less well understood in non-human primates. Previous studies have examined the relationship between allocare and life history traits using a comparative sample of primates, but none has focused specifically on male care (which can reflect paternity, mating effort, or kinship) as the main predictor variable. The present study uses data from 239 primate species (wild populations only) to test predicted relationships between male care and both life history and socioecological traits. Analyses used multilevel mixed-effects generalized linear models to control for phylogeny. Controlling for arboreality, diurnality, and maternal weight, we found that male care was associated with earlier age at first female reproduction, shorter lifespan, smaller litter weight, and with both social and reproductive monogamy. Male care was unrelated to interbirth interval, gestation length, lactation length, infant mortality, sexual swellings, territoriality, or group size. As a general rule, to complexify a system requires energy. Consistently we found that when resources are high, the complexity of social interactions is increased. For bonobos, that happens through play behaviour.

The Russians are coming...to evolutionary psychology (really they've been here awhile, but few people know) (4:20 – 4:40 p.m.)

Patrick Drumm (Ohio University Lancaster), Irina Mironenko (Saint Petersburg State University)

Darwin's influence on Russian science predates the Bolshevik revolution, and researchers there charted courses unexplored by Western evolutionists. Political tensions undoubtedly impeded scientific dissemination between East and West. Years elapsed before Western scholars learned of important work. A full translation of Ladygina-Kohts's cross-fostering study of an ape only appeared after decades during which a mere summary existed in English. In 1970 Nina Tikh published *The Prehistory of Society* which remains untranslated after nearly half a century. Tikh began studying monkeys and apes living under quasi-natural conditions at the Sukhumi Apery in 1936. Her analysis of primate social interactions, tool use, and communication supports a feminine perspective on the emergence of human society at a time when men dominated primatology. Her evolutionary synthesis strongly influenced late 20th century Russian psychology. Informing others about this heretofore neglected work is our goal.

Session Title: Parent-Offspring Conflict (Simplot A)

Filial Piety, Altruism, and Self-Interest in Confucian Heritage Culture (3:40 – 4:00 p.m.)

Ryan Nichols (California State University, Fullerton), Centre for Human Evolution, Cognition & Culture (University of British Columbia), Liqi Zhu (Chinese Academy of Sciences), Mariann Howland (University of California, Irvine), Huangfu Gang (Beihang University)

'Filial Piety' refers to behavior, emotion and cognition describing resource-sacrifice from offspring toward parents. A virtue in Confucian Heritage Culture, cross-cultural psychologists' dominant model says FP is motivated by altruism and selflessness (Ma, 1997) because adult children would be more fit if they allocated proportionally more resources to offspring than ancestors. Our review revealed this model's dependence on self-reports and work with children. We hypothesize instead that FP expresses but enlightened self-interest, and that this would reveal itself in moral emotion responses and in a separation of FP attitudes from FP behaviors. We implement a vignette study with adult Chinese (N=486) and Americans (N=364), inspired by Analects 13.18, that pits children's material and reputational interests against parents'. Hypothesis-testing results are discussed in light of the fascinating modulation of self-interest to kin by Confucian Heritage cultural history and transmission.

Parent-offspring conflict over mate choice: An experimental investigation using Chinese marriage markets (4:00 – 4:20p.m.)

Jeanne Bovet (Institute for Advanced Study in Toulouse), Eva Raiber (Toulouse School of Economics), Weiwei Ren (Yunnan Normal University), Charlotte Wang (Ipag Business School), Paul Seabright (Institute for Advanced Study in Toulouse)

The theory of parent-offspring conflict predicts that preferences for potential mates may differ between parents and their offspring, especially with respect to the importance of material resources and physical attractiveness of potential mates. We tested this hypothesis in China using naturalistic "marriage markets" arranged by parents actively searching for marital partners for their children. These markets consist of parents advertising the characteristics of their adult children looking for a potential son or daughter-in-law. To experimentally investigate parent-offspring conflict in mating preferences, we presented 800 parents and young adults with hypothetical mating candidates. Consistent with parent-offspring conflict theory, we found significant differences between preferences of adult children and parents with children evaluating physical attractiveness as more important. We

also found a strong effect of the sex of the mating candidate on preferences, as physical attractiveness was deemed more valuable in a female potential mate or in-law.

Parent-Offspring Conflict, Arranged Marriage, and Female Choice: A Case Study of the Shuar (4:20 – 4:40 p.m.)

Elizabeth G. Pillsworth (California State University, Fullerton), H. Clark Barrett (University of California, Los Angeles)

Parental influence in offspring reproductive decisions – particularly those of daughters – is widespread: in only about 6% of cultures do women typically have autonomous mate choice. Additionally, parent and offspring preferences appear to diverge predictably, with parents emphasizing a mate's social quality and daughters emphasizing inherent (genetic) quality. Among the Shuar, arranged marriage and polygyny have been the norms until very recently, thus providing an instructive test population. Informed by Parent-Offspring Conflict Theory, we utilize qualitative data (norms, experiences, and preferences) obtained over a ten-year span from more than 180 Shuar women and men in combination with complete marital and reproductive histories from a subset of 30 Shuar women (ages 19-78) to investigate the ways in which asymmetries of interests, power, and information predict the reproductive choices of women and their parents, and the ways in which women use counternormative behaviors to subvert the wishes of their parents.

Session Title: Evolution of Brains, Cognition, and Use of Fire (Simplot C)

Evolving Pleistocene climates caused the evolution of human brains (3:40 – 4:00 p.m.)

Peter Richerson (University of California, Davis)

Large brains are energetically costly. In theory, large brains can pay their overhead costs in spatially and temporally variable environments by using them to adapt to variation using learning and social learning. Social learning (culture) is adaptive over a range of time scales ranging from a fraction of a generation to several tens of generations. At sufficiently long time scales, genetic evolution can track variation well enough and at sufficiently short ones social information is mostly outdated and individual learning is more adaptive than social learning. We have known for some time that the last glacial was characterized by a huge amount of variation at millennial and submillennial time scales. A few high resolution cores going back as far as 8 glacial cycles now exist. They suggest that the amount of millennial and submillennial variation increased during each successive glacial. Brain size and cultural complexity have increased in parallel.

Hypotheses of primate cognitive evolution compared: Phylogenetic analyses of ethological counts of behavior and neuroanatomical indicators with 69 species (4:00 – 4:20 p.m.)

Heitor B. F. Fernandes (University of Arizona), Michael Woodley of Menie (Vrije Universiteit Brussel), Jan te Nijenhuis (University of Amsterdam)

Previous studies have identified a general cognitive ability factor within and among many species. However, it is still unknown if the main locus of selection pressures shaping cognition has been general cognition or specialized abilities. Using published ethological counts of behaviors from five categories of cognitive abilities for 69 primate species, phylogenetic comparative methods indicated that abilities that are more central on a general cognition factor exhibit bigger interspecies differences, faster rates

of evolution, and less phylogenetic inertia than more specialized abilities. These effects were especially prominent among apes and Old World monkeys. These results suggest that general cognition was a principal locus of selection. Furthermore, evolutionary rates were four to twelve times higher for the general cognition factor than for the volume of neuroanatomical measures (using published data on total brain, neocortex, hippocampus). This suggests that variables other than brain mass increments are importantly behind general cognitive ability.

Chimpanzees in fire-altered landscapes: investigating foundations for hominin fire use (4:20 – 4:40 p.m.)

Nicole M. Herzog (University of Utah), Jill D. Pruett (Iowa State University), Kristen Hawkes (University of Utah)

The use of fire by humans has profoundly shaped the evolution of our genus. However, our ancestors' reliance on cooking was likely preceded by a long familiarity with the benefits of fire such as increased search efficiency, lower resource handling costs, and reduced predation. We suggest that capitalizing on these benefits fundamentally changed energetic acquisition rates for early Homo, resulting in a distinctive dependence on fire that set members of our genus apart from other large-bodied hominins. Here, we provide preliminary data on the foraging and ranging patterns of a population of savanna chimpanzees (*Pan troglodytes verus*) regularly exposed to fire. We use these data as a referent for past behavior in order to contextualize some of the earliest uses of fire in our own lineage.

Session Title: Sex Differences in Sex (Simplot B)

Sex and the perceived effectiveness of flirtation techniques (3:40 – 4:00 p.m.)

T Joel Wade (Bucknell University), Andrea Feldman (Bucknell University)

Three studies were implemented in order to ascertain how men and women flirt with potential partners, and whether or not there are sex differences in which flirtatious actions are considered most effective. Study 1 and Study 2 sought to discover the actions that men and women, respectively, engage in to indicate romantic interest to a partner. Study 3 sought to determine which flirtatious acts from women and men are perceived as most effective. Men were expected to rate women's flirtations that suggest sexual access as most effective and women were expected to rate men's flirtatious actions that suggest emotional commitment and exclusivity as most effective. The results were consistent with the hypotheses and are discussed in terms of prior research.

Sexual double standards and sexual hypocrisy: partner attractiveness as a function of sexual history (4:00 – 4:20 p.m.)

Leif Edward Ottesen Kennair (NTNU - Norwegian University of Science and Technology), Mons Bendixen (NTNU - Norwegian University of Science and Technology), David M. Buss (University of Texas at Austin)

Sexual double standards are social norms that permit greater sexual freedom, or impose greater social opprobrium, for men than for women. Does attractiveness vary as a function of the prospective's sexual history? Whom would people recommend their friends or pursue themselves? Participants (N=957, 63% women) were randomly assigned to either long-term or short-term contexts, and asked to evaluate how much different prior sexual conduct would influence their own likelihood of having sex

or entering a relationship. They were also asked whether sexual history influences recommendations to male and female friends. Relative to ratings of men, women's promiscuity were rated less negative in a short-term mating context. For a history of sexual self-stimulation, women were rated more positively than men, particularly in short-term contexts and by men. Overall, men more than women are more positive about women's self-stimulation. Effects of religiosity, disgust, and sociosexuality are considered

Sexy Ads Make Hungry Men Financially Impatient (4:20 – 4:40 p.m.)

Tobias Otterbring (Karlstad University), Yael Sela (Oakland University)

People's financial decision making is influenced by sexy (versus neutral) stimuli, and exposure to such stimuli makes men, more than women, eager to spend money immediately, buy status-signaling products, and "show off" their wealth. Hunger (versus satiation) also affects financial decisions, and makes individuals more likely to choose smaller-sooner (versus larger-later) monetary rewards. In the present study (N = 265; 51% female), we examine the moderating roles of hunger and gender in the association between sex cues and financial impatience. Results indicate that exposure to sexy (versus neutral or no) ads makes men more financially impatient than women, thus resulting in monetary choices of smaller-sooner over larger-later rewards. Hunger further moderates this effect, such that monetary choices do not differ across ad conditions for satiated individuals, whereas hungry men (women) become more present-oriented (future-oriented) in their monetary choices after viewing sexy ads.

Session Title: Social Learning (Simplot D)

The seeds of social learning (3:40 – 4:00 p.m.)

Annie Wertz (Max Planck Institute for Human Development)

This talk presents new evidence that aspects of the human mind are designed around the ancestrally recurrent problems humans faced with respect to plants. Humans rely on benefits extracted from plants (food resources, raw materials for artifact construction) but are vulnerable to the dangers plants pose. All plants produce toxic chemical defenses against herbivores and some have physical defenses as well (e.g., thorns), making trial-and-error learning a costly proposition. I will present evidence from a series of studies with 8- to 18-month-olds demonstrating that human infants (i) avoid touching plants with and without visibly-detectable defenses (i.e., thorns), and (ii) exhibit more social looks towards adults when confronted with plants compared to other types of entities. This combination of behavioral avoidance and social information seeking strategies allows infants to safely learn about plants from more knowledgeable others over the course of ontogeny.

Collective action and the evolution of social norm internalization (4:00 – 4:20 p.m.)

Sergey Gavrilets (National Institute for Mathematical and Biological Synthesis), University of Tennessee), Peter J. Richerson (University of California)

People often ignore material costs they incur when following existing social norms. Some individuals are willing to pay extremely high costs to enact, defend, or promulgate specific norms they consider important. Such behaviors decreasing biological fitness represent an evolutionary puzzle. We model the evolutionary origins of human capacity to internalize norms. We focus on two general types of collective actions: cooperation to overcome nature's challenges and conflicts with neighboring groups.

In our models, individuals can choose to participate in collective actions and punish free-riders. In making their decisions, individuals attempt to maximize a utility function in which normative values are initially irrelevant but play an increasingly important role if the ability to internalize norms emerges. We show that norm internalization evolves under a wide range of conditions simplifying cooperation to a level when it becomes “instinctive”. We make a number of testable predictions.

A Cross-Disciplinary Survey of Beliefs about Human Nature, Culture, and Science (4:20 – 4:40 p.m.)

Joseph Carroll (University of Missouri), John Johnson (Penn State), Catherine Salmon (University of Redlands), Jens Kjeldgaard-Christiansen (Aarhus University), Mathias Clasen (Aarhus University), Emelie Jonsson (University of Gothenburg)

To what extent have evolutionary ideas penetrated into the social sciences and humanities? To answer this question, contributors to top journals in 22 disciplines were surveyed on their beliefs about human nature, culture, and science. Over 600 respondents completed the survey. Scoring patterns divided into two main sets of disciplines. Genetic influences were emphasized in the evolutionary social sciences and humanities, psychology, philosophy, economics, and political science. Environmental influences were emphasized in most of the humanities disciplines and in anthropology, sociology, education, and women’s or gender studies. Confidence in scientific explanation correlated positively with emphasizing genetic influences on behavior and negatively with emphasizing environmental influences. Knowing the current actual landscape of belief should help scholars avoid sterile debates and ease the way toward fruitful collaborations with neighboring disciplines.

Session 4 (4:50 p.m. – 5:50 p.m.)

Session Title: Cooperative Behavior (Hatch A/B)

The ladder of charity (4:50 – 5:10 p.m.)

Julian De Freitas (Harvard University), Peter DeScioli (Stony Brook University), Kyle Thomas (Harvard University), Steven Pinker (Harvard University)

Why do people admire anonymous gifts of charity? We begin with the observation that people do not only distinguish public from anonymous gifts, but also make finer distinctions, as illustrated by the philosopher Maimonides’ ladder of charity. We combine this philosophy with evolutionary theories of cooperation to propose an analogous theory about how people judge charitable gifts. Across ten experiments, we find evidence that people’s judgments largely follow the four rungs of the ladder hypothesis, with one key exception. Namely, participants judge that a donor who reveals only their own identity is no more generous than a donor who both reveals himself and has the recipient revealed to him. Taken together, the results point to three key factors in judgments of a donor’s charity: 1) reputation motive, 2) motive to befriend the recipient, and 3) presumed status relative to the recipient. We discuss implications for soliciting gifts to charitable organizations.

Elevation: An emotion for adaptively recalibrating cooperativeness (5:10 – 5:30 p.m.)

Adam Sparks (University of California, Los Angeles), Daniel M. T. Fessler (University of California, Los Angeles), Colin Holbrook (University of California, Los Angeles), Anne Pisor (Max Planck Institute for Evolutionary Anthropology), Theo Samore (University of California, Los Angeles), Leonid Tiokhin (Arizona State University)

Witnesses to acts of extreme kindness often feel warmth, inspiration, and a desire to behave cooperatively; in recent social psychology research this phenomenon is called “elevation.” Why do people experience elevation? We posit that this constellation of symptoms describes an emotional mechanism that adaptively recalibrates cooperative decision-making. We investigated this general hypothesis in a series of online studies on Amazon Mechanical Turk and field studies in a small-scale society and a large American city. Our data suggest that elevation causes prosocial behavior, that baseline expectations about prosociality explain individual differences in the acute experience of the elevation emotion, and that people in very different cultures have similar elevation experiences.

Foundations of social decision making: The psychophysics of welfare tradeoffs (5:30 – 5:50 p.m.)

Jason Wilkes (University of California, Santa Barbara)

All biological systems create externalities, but for members of social species, managing those externalities becomes an important adaptive problem. Our decisions routinely impact multiple parties' welfare in an inversely-signed manner: an increase in A's welfare often decreases B's, though the net change need not be zero-sum. These inversely-signed interactions are what we commonly call "helping" behavior. To date, the dominant theoretical approach within evolutionary psychology to studying these phenomena surrounds the concept of a "Welfare Tradeoff Ratio" (WTR). However, empirically measured WTRs vary with the amount at stake, and thus all existing data on WTRs has been interpreted within an internally inconsistent framework, equivalent to using Hamilton's rule after finding that measured kinship-indices seem to vary with the size of each pie. This talk outlines the ongoing project to reconcile the large body of existing data on welfare tradeoffs with a more robust theoretical approach to the logic of helping.

Symposium: Paternal Investment and Daughters' Sociosexuality: Examining Perceptual, Attitudinal, and Behavioral Mediators (Simplot A)

Chair: Danielle DelPriore (University of Utah)

A rich developmental literature demonstrates relationships between low paternal investment (including biological father absence and low quality fathering) and daughters' increased engagement in early and unrestricted sexual behaviors. However, the perceptual, attitudinal, and behavioral factors underlying these relationships remain largely unknown. We discuss the roles of: perceptions of male sexual interest; intrasexual competitive attitudes and behaviors; and parental monitoring and affiliation with promiscuous peers in promoting unrestricted sociosexual behavior among daughters in the context of low paternal investment.

Low Paternal Investment, Perceptions of Male Sexual Interest, and Women's Sociosexuality: Testing for Mediation (4:50 – 5:10 p.m.)

Danielle DelPriore (University of Utah), Randi P. Proffitt Leyva (Texas Christian University), Sarah E. Hill (Texas Christian University), Bruce J. Ellis (University of Utah)

Daughters who receive low paternal investment demonstrate more unrestricted sexual behavior. We examine the role of perceptions of male sexual interest in promoting this behavior. Specifically, we test for relationships between women's: developmental history and primed reminders of low paternal investment; perceptions of male mating interest; and unrestricted sociosexuality. In Study 1 (N=75), women primed with reminders of father absence (vs. presence) perceived greater mating interest in men's described actions. In Study 2 (N=117), women exposed to more harsh-deviant paternal behavior during development perceived greater sexual interest in men's described actions, and these

perceptions predicted increases in unrestricted sociosexual attitudes and behavior. The results suggest that low paternal investment (including primed paternal disengagement and harsh-deviant fathering) causes changes in daughters' perceptions of men that may influence their sexual behavior in adulthood.

Intrasexual Competitiveness and Non-Verbal Seduction Strategies to Attract Males: A Study among Teenage Girls from Curaçao (5:10 – 5:30 p.m.)

Odette van Brummen – Girigori (University of Curaçao), Abraham P. Buunk (University of Groningen, University of Curaçao)

We hypothesized that father absence teenage girls from the Caribbean island of Curaçao would be more intrasexually competitive than father presence teenage girls, and would therefore more often use non-verbal seduction strategies to attract males. In Study 1, conducted among 105 teenage girls ($M_{age} = 16.29$), reliable scales were developed reflecting various non-verbal seduction strategies. Study 2 was conducted among 123 teenage girls ($M_{age} = 18.73$). The results showed that father absence teenage girls reported overall more intrasexual competitiveness and more non-verbal seduction strategies, including direct flirtation, peacock behavior, the use of hairstyles with waves, the use of facial make-up, the use of conspicuous nail-care, and active and restless behavior in the presence of males. Intrasexual competitiveness was associated with most strategies, and was a significant mediator between father absence and the expression of most non-verbal seduction strategies.

Impact of Fathers on Parental Monitoring of Daughters and their Affiliation with Sexually Promiscuous Peers: A Genetically and Environmentally Controlled Sibling Study (5:30 – 5:50 p.m.)

Bruce Ellis (University of Utah), Danielle J. DelPriore (University of Utah), Gabriel L. Schlomer (University at Albany, SUNY)

Girls who receive higher quality fathering engage in less risky sexual behavior (RSB) than their peers. The current study uses a genetically- and environmentally-controlled differential sibling-exposure design ($N=101$ sister pairs) to test parental monitoring and affiliation with deviant peers as potential mediators of this effect. Differences between older and younger sisters in the effects of fathering quality on parental monitoring and peer RSB were greatest in biologically disrupted families when there was a large age gap between the sisters, with greater exposure within families to higher quality fathering increasing parental monitoring and reducing affiliation with sexually promiscuous peers. No such differences were found between older and younger sisters in families with little or no differential exposure to fathers. In sum, higher quality fathering may decrease daughters' engagement in RSB by increasing received parental monitoring and decreasing affiliation with risky peers.

Session Title: Evolutionary Approaches to Forgiveness (Simplot C)

From error costs to error probability: The case of forgiveness decisions (4:50 – 5:10 p.m.)

Jolene Tan (Max Planck Institute for Human Development), Shenghua Luan (Max Planck Institute for Human Development)

According to error management theory, biases are adaptations that promote good decisions under uncertainty. Most research has focused on demonstrating how the costs of errors influences bias, often overlooking the probability of errors (i.e., base rate). In forgiveness decisions, error costs can be indicated by the harmdoer's relationship value and exploitation risk, while error probability may be

reflected in the belief about whether others are generally benevolent (i.e., social trust). I will present a study where each participant's bias in forgiveness decisions was estimated with cognitive modeling tools. Regression analyses showed that error-cost and error-probability separately and jointly predicted the decision bias adopted. This demonstrates how cognitive models enable fine-grained error management predictions to be tested. Furthermore, by going beyond cost to study probability, the study hopes to build a fuller picture of cognitive adaptations for managing errors.

Do People's Perceptions of a Transgressor's Relationship Value Cause Forgiveness? (5:10 – 5:30 p.m.)

Daniel Forster (University of Miami), Michael E. McCullough (University of Miami)

Many studies have shown that people are more forgiving of transgressors whom they perceive to retain value as relationship partners and whom they perceive to present low risk for future exploitation, but no one has tested whether experimentally induced changes in these constructs consequently promote forgiveness. Here, we sought to experimentally manipulate relationship value to determine its causal influence on forgiveness. Some theorists believe interpersonal closeness is a psychological representation of relationship value, so we sought to manipulate relationship value via the Relationship Closeness Induction Task (RCIT, an established experimental manipulation of relationship closeness). Over 1,000 subjects completed the RCIT with a stranger, and then proceeded to be insulted either by the same stranger or a different stranger. We will present tests of whether the RCIT increased relationship value and, by doing so, whether relationship value causally facilitated forgiveness.

Simply Saying 'Sorry' Is Insufficient to Communicate Conciliatory Intention: An fMRI Study of Forgiveness in Response to Apologies (5:30 – 5:50 p.m.)

Yohsuke Ohtsubo (Kobe University), Masahiro Matsunaga (Aichi Medical University), Hiroki Tanaka (Kobe University), Kohta Suzuki (Aichi Medical University), Fumio Kobayashi (Aichi Medical University), Eiji Shibata (Aichi Medical University), Reiko Hori (Aichi Medical University), Tomohiro Umemura (Aichi Medical University), Hideki Ohira (Nagoya University)

Reconciliation is an integral part of our social lives. Nevertheless, if a victim perceives the risk of further exploitation by his or her transgressor as being non-negligible, the victim may well have difficulty forgiving the transgressor. Therefore, a key ingredient of reconciliation is a transgressor's sincere apology. Based on previous costly apology research, we hypothesized that costly apologies, compared to non-costly apologies (simply saying "sorry"), effectively communicate transgressors' conciliatory intention. In an fMRI study, participants were asked to imagine that one of their friends committed a mild interpersonal transgression (e.g. he/she stood up the participant) and then apologized in a costly fashion, apologized in a non-costly fashion, or did not apologize at all. Compared to non-costly apologies and non-apologies, costly apologies more strongly activated the theory-of-mind network (i.e. bilateral TPJ, precuneus, MPFC). These results underscore the importance of costly signals in human communications, and human peace-making in particular.

Session Title: Identity and Stereotypes (Simplot B)

Ethnic Markers and the Evolution of Culture: From Theory to Ethnographic Applications (4:50 – 5:10 p.m.)

Adrian Bell (University of Utah)

Human population dynamics have consistently pressed the boundaries between differentiated ethnic groups. As groups interact, empirical work and evolutionary models corroborate the evolution of arbitrary symbols co-varying with behavior, holding promise in explaining a wide variety of cultural attributes along ethnic boundaries. However, the expression of ethnic markers appears particularly sensitive to migration flows, a demographic parameter that ethnographically varies widely. Hence there is no clear use of ethnic marker theory in ethnographic contexts until the effects of varying migration flows is made explicit. Here I build on previous ethnic marker models to explore the expected extent of ethnic markers in migrant communities of different migration flows. I relate this expanded theory to ethnographic examples and ongoing homeland-diaspora ethnographic work I conduct among the Tongan people.

Adoption as a social marker: Innovation diffusion with outgroup aversion (5:10 – 5:30 p.m.)

Vicken Hillis (Boise State University), Paul Smaldino (University of California, Merced), Marco Janssen (Arizona State University), Jenna Bednar (University of Michigan)

Social identity is known to influence behavior in the adoption of innovations. Yet the population-level consequences of identity signaling on the diffusion of innovations are largely unknown. We use analytical and agent-based modeling to consider the spread of a beneficial innovation in a structured population in which there exist two groups who are averse to being mistaken for each other. We investigate the dynamics of adoption and consider the role of factors such as demographic skew and communication scale on population-level outcomes. We find that outgroup aversion can lead to adoption being delayed or suppressed in one group, and that population-wide underadoption is common. Further, we find that patterns of polarization in adoption at different scales depend on the details of demographic organization and communication. This research has relevance for beneficial but identity-relevant products, such as green technologies, where overall levels of adoption determine the positive benefits accruing to society.

Do Mexican immigrants work hard for low wages? When the same base stereotype leads to very different affordance stereotypes and prejudices (5:30 – 5:50 p.m.)

Cari Pick (Arizona State University), Steven Neuberg (Arizona State University)

“I resent Mexican immigrants! They take our jobs,” says the day laborer. “I appreciate Mexican immigrants! They provide useful services,” says the wealthy home owner. Interestingly, these opposing reactions are grounded in the same stereotype—“Mexican immigrants work hard for low wages”—a finding at odds with traditional theoretical approaches to studying prejudice. Taking an evolutionary, affordance-management perspective, we distinguish between “base” stereotypes—relatively factual, stable, and affectively-neutral beliefs about groups (e.g., “Mexican immigrants are willing to work hard for low wages”)—and “affordance” stereotypes—vulnerability-shaped beliefs about the threats and opportunities groups pose (e.g., “Mexicans are an economic threat”). Consistent with our approach, several studies show that (1) people holding identical base stereotypes can hold opposing affordance stereotypes, (2) affordance stereotypes (but not base stereotypes) are shaped by people’s felt vulnerabilities and desires, and (3) prejudices and discriminatory inclinations are driven primarily by affordance stereotypes and not base stereotypes.

Session Title: Economic Returns and Outreach (Simplot D)

Is the Free Market Fair? (4:50 – 5:10 p.m.)

Emily Stone (University of Texas at San Antonio)

“You reap what you sow” is an aphorism that literally described the relationship between economic effort and reward in past agricultural societies. It still applies in some small-scale, subsistence societies today. This study examines the psychological consequences of valuing economic effort—labor—on a market. A lack of contingency, or a low correlation between behavior and consequence, has important effects for mental health: it’s associated with increased stress, depression, and lower economic productivity. Because the value of labor in a market depends on factors beyond direct behavioral control—like supply and demand, rather than effort—the primary behavior predicting value is the decision regarding occupational specialization. That is, the greatest predictor of returns to economic effort in a market economy is not the amount of effort, but the kind. I present preliminary results on normative expectations for economic rewards and its consequences for health.

Undergraduate Perceptions of Arguments Against Evolutionary Psychology (5:10 – 5:30 p.m.)

Jeffrey L. Niehaus (Christopher Newport University)

Undergraduate students enrolled in three sections of an introductory evolutionary psychology course (N = 83) were asked to evaluate the plausibility of critique from Slate magazine's Amanda Hess, who was responding to Galpern, Haselton, Frederick, Poore, von Hippel, Buss, and Gonzaga's 2013 article "Sexual Regret: Evidence for Evolved Sex Differences", in Archives of Sexual Behavior. Student responses revealed that they came to the class with the idea that modern behavior's connection to the past was the product of cultural transmission (as opposed to considering biological transmission), and that the study of a sample of modern humans is not revelatory of ancestral cognitive design. These students were additionally given Andrew Stuhlman's pre- and post- test on natural selection, which showed considerable improvement, over the course of the semester, on basic principles of natural selection.

‘On the Origin of Art’: Overview of a major museum exhibition that presented four competing theories about the adaptive functions of human visual arts (5:30 – 5:50 p.m.)

Geoffrey Miller (University of New Mexico)

The Museum of Old and New Art (MONA) in Australia hosted the world’s largest Darwinian-themed art exhibition, ‘On the origin of art’, from November 2016 through April 2017. It included 234 art works from 35 countries, and attracted hundreds of thousands of visitors and international press coverage. Four guest curators – Steve Pinker, Brian Boyd, Mark Changizi, and me – worked with the museum’s curators for three years to borrow and commission art works, write exhibition catalog essays, and record audio commentaries on each art work for museum visitors. We presented our competing theories about the evolutionary origins and adaptive functions of the visual arts, with lots of iterative mutual feedback. This talk will give an overview of the exhibition’s art, ideas, logistics, and impact, as an example of a new strategy for public scientific outreach through adversarial collaboration in the context of major museum exhibitions.

Poster Presentation Abstracts

YouTube: A Twenty-first Century

Gurukul Naga Shilpa Alamuri (Department of Psychology, Central Michigan University), Stephen M. Colarelli (Central Michigan University)

Gurukul is a system of learning in ancient India where the pupils sought out masters and learned from them. It is typical of learning practices in early societies, involving communities of learning and master-apprentice relationships. We argue that both YouTube and the Gurukul tap into evolved learning mechanisms. YouTube is similar to the Gurukul system in providing a community of learning and allowing people to seek and learn from masters. With the advent of mass education, people moved away from community and apprenticeship-based learning to learning en masse in classrooms and universities. We suggest that the popularity of YouTube represents a return to such age-old learning practices. Using Illeris' (2007) model of learning, we show that, for certain types of knowledge and skills, YouTube can provide a better environment for learning than classrooms. YouTube, like the apprentice models, is richer in content, incentives and "interaction" than mass-education models.

Self-reported Health is Related to Mate Value in Undergraduate Men and Women

Graham Albert (Boston University), Steven Arnocky (Nipissing University)

Unhealthy mates are detrimental to an individual's fitness. They are less able to provide reproductively important resources, and more likely to transmit communicable disease. An individual's health is an important factor for mate choice decisions. Little research has investigated the relationship between people's health and their mate value. As part of a larger study on mating, 208 (108 males, 100 females) undergraduates completed measures of health, disease vulnerability, and mate value. Participants reported their number of romantic partners, and life-time sex partners. Participants with poorer reported general health reported lower self-perceived mate value $r = .23$, $p = .001$. Those participants who reported being more avoidant of germs had fewer life-time romantic partners $r = -.14$, $p = .04$ and fewer life-time sex partners $r = -.21$, $p = .01$. Results suggest that unhealthy individuals have lower mate value and experience lower reproductive success.

Who Should We Trust Sexually? Personality Traits as Predictors of Sexual Infidelity

Emma Altgelt (Florida State University), Melanie Reyes (Florida State University), Juliana E. French (Florida State University), Andrea L. Meltzer (Florida State University), James K. McNulty (Florida State University)

One notable threat to long-term relationships and thus reproductive success is sexual infidelity. Although prior research has linked individual personality traits (specifically, the Big Five personality traits and narcissism) to incidences of sexual infidelity, the current study explores the extent to which both intimates' traits uniquely predict (prospectively) sexual infidelity. Two longitudinal studies of newlywed couples demonstrated that relatively more open and relatively less extraverted husbands are more likely to engage in sexual infidelity; husbands with relatively more neurotic wives, more extraverted wives, more narcissistic wives, or less open wives are more likely to be sexually unfaithful. In contrast, relatively less neurotic and relatively more extraverted wives are more likely to engage in sexual infidelity; wives with relatively more neurotic, more conscientious, or more extraverted husbands are more likely to be sexually unfaithful. These findings highlight the importance of adopting a dyadic perspective to better understand sexual infidelity in marriage.

The evolution of gendered toxin defense pathways: Smoking, ethnicity, and reproduction

Tiffany Alvarez (Washington State University)

In a cross-national study of smoking prevalence, Hagen et al., (2015) found that total fertility rate was a negative predictor of female smoking prevalence even when controlling for country income and gender inequality in social, political and economic domains. Using the national health and nutrition examination survey (NHANES), we explore the relationship fertility measures have on female smoking prevalence, while controlling for demographic features and considering ethnic differences as main effects. Smoker status was determined via serum cotinine and was analyzed in tandem with questionnaire data spanning the 1999-2010 survey years. Our results suggest fertility characteristics are important factors in female smoking decisions, specifically the interaction of parity and partnership, and highlight the influence of drug toxicity on age and sex patterned tobacco use. Overall, these findings suggest that smoking vulnerabilities intersect with sex and socio-cultural variables in an additive manner and open the door to future areas of research.

Why do friendships end? Investigating features of same-sex friendship dissolution

Jessica Ayers (Arizona State University), Jaimie Arona Krems (Arizona State University), and Athena Aktipis (Arizona State University)

Have you ever ended a friendship? Our preliminary data suggests that men and women answer this question differently. Despite the extensive work that has been done on the formation of same-sex friendships, much less is known about why friendships end. Based on recurrent opportunities and challenges characteristic of male versus female friendship, we predicted that males were more likely to tolerate conflict in friendships and that females were less likely to tolerate conflict. In study 1 (N = 359) we found that women were more upset and resentful than men, men were more likely to “react out of anger”, and women’s decisions to ignore their friend’s negative behavior or confront their friend was moderated by conflict intensity. Study 2 explored sex differences in the frequency of friendship dissolution and the conditions under which friendship dissolution occurs. Our ongoing work suggests that there are sex differences in the psychology of friendship dissolution that may serve sex-specific adaptive functions.

The Target of Male Mate Guarding is Predicted by the Initiator of Infidelity

Nicole Barbaro (Oakland University), Steven Ford (Oakland University), Todd K. Shackelford (Oakland University), & Virgil Zeigler-Hill (Oakland University)

Men judiciously deploy mate guarding behaviors to guard their paternity. How the target of mate guarding behavior is determined—their partner vs. rival male—during an infidelity situation is unclear. The current study investigated whether the initiator of infidelity is a cue for determining the target of mate guarding behavior. Men (n=83) were presented with hypothetical infidelity scenarios, varying the initiator of infidelity (i.e., female, rival, ambiguous; within-subjects), and then reported their likelihood of directing mate guarding behaviors toward their partner or the rival male. It was hypothesized that men would be more likely to direct mate guarding behaviors toward the person who initiated the infidelity behavior (i.e., his partner or the rival). Results support the study hypothesis, in that men report being more likely to target their mate guarding behavior toward the initiator of infidelity behavior. These findings improve our understanding of men’s evolved psychology to

Rational Moral Intuitions

María Teresa Barbato (Social Complexity Research Center (CICS), Chile), Leda Cosmides (Center for Evolutionary Psychology, University of California Santa Barbara), Danie Sznycer (Center for Evolutionary Psychology, University of California Santa Barbara) and Ricardo Guzmán (Social Complexity Research Center (CICS), Chile)

The human cognitive architecture should contain many domains of human social interaction: (consider, e.g, kin altruism, cooperative foraging, warfare). These different types of social interaction require different concepts, inferences, sentiments, and judgments to regulate behavior adaptively. Therefore, the different domains require specialized subsystems of moral cognition that takes into account many moral considerations that are often contradictory. If we consider that the selection produced adaptations designed to weight conflicting moral sentiments to produce judgments the subjects choosing which option they “feel is morally right” will produce judgments that are internally consistent. We experimentally explored the design of the integrative psychological process that weighs the different moral considerations to produce all-things-considered moral judgements. Specifically, we wanted to know whether the subjects produced rational moral judgments in the sense of GARP (general axiom of revealed preferences), and whether they responded to relevant moral categories (such as motivations) in a consistent way. Using three moral dilemmas involving warfare, Judgments were highly consistent. Bootstrapped choices would violated aprox GARP 50 times, yet there were no GARP violations for 49% and 64% of subjects (unwilling conscripts vs. willing warriors). Of the >250 who sacrificed some, but not all, civilians, 55% and 62% made 3 or fewer GARP violations.

Testing the Shared Self-Deception Hypothesis: Is There a Taboo Against Knowing Ourselves?

John Oakley Beahrs (Oregon Health and Science University)

Human-specific “minds” evolved by colluding for extra self-interest, hiding behind deceptive self-idealizations, and punishing traitors -- a “shared self-deception hypothesis” (SSDH) offered to account for many otherwise anomalous data. Formidable problems impede scientific testing, itemized here to invite constructive input: (1) Aversion to owning us humans’ underside imposes a “taboo against knowing ourselves.” (2) Circularity defies rigorous falsifiability, and arises from (a) data antedating theory and (b) chameleon-like changeability of mental-cultural realities. (3) Polarized thinking suppresses “other sides” of social issues, thereby suppressing pursuit of the “whole truth.” Other methodologies can be employed: explanatory competition, computer modeling, and measuring by utility criteria. The SSDH also extends beyond human evolution. As mental-cultural theory, it clarifies otherwise paradoxical destabilizing processes and potential correctives. As theory of knowing, it asks how minds and brains select, filter and distort all reality perception. New questions enter unexplored territory.

Effects of Exogenous Testosterone Administration and Time-Pressure on Cooperation in Healthy Young Men

Brian M. Bird (Simon Fraser University), Triana L. Ortiz (Nipissing University), Neil V. Watson (Simon Fraser University), & Justin M. Carré (Nipissing University)

Recent evidence suggests that under time-pressure, humans are more likely to make cooperative decisions that benefit the public good; in contrast, when forced to deliberate on their decisions, humans make more selfish decisions. Such findings have led researchers to speculate that humans have evolved intuitively cooperative impulses. Interestingly, testosterone has also been shown to predict intuitive and impulsive behaviour, such as risk-taking, aggression, and cooperation. However, the effects of testosterone on cooperation have generally been studied in correlational frameworks, or in exclusively

female samples. Moreover, the combined effects of testosterone and time pressure remain unexamined. Here, we present preliminary results from the largest testosterone administration study ever conducted in men (placebo-controlled, between-subjects, $N > 300$) examining the effects of testosterone and time pressure on contributions to a public goods game. Preliminary results suggest that time pressure leads to more cooperative decisions, but that administering testosterone leads to more selfish behavior.

Men prefer women with high residual fertility

Jeanne Bovet (Institute for Advanced Study in Toulouse), Mélissa Barkat-Defradas (University of Montpellier), Valérie Durand (Institute of Evolutionary Sciences in Montpellier), Charlotte Faurie (Institute of Evolutionary Sciences in Montpellier), Michel Raymond (Institute of Evolutionary Sciences in Montpellier)

Multiple studies have demonstrated that features linked to short-term fertility explain much of the variance in men's judgments of female attractiveness. Evolutionary theory predicts that for short-term relationships, men should prefer females of the age at which their fertility peaks. For long-term relationships, a high residual fertility (expected future reproductive output influenced by age at menopause) is also relevant. Accordingly, being near peak fertility and having a late expected age at menopause is hypothesized to be preferred by men. Here, we show that expected age at menopause (estimated using mothers' age at menopause) influences judgments of facial attractiveness of young women. We found that men judged faces of women with a later expected age at menopause as more attractive than those of women with an earlier expected age at menopause, even when controlling for age and other correlates of attractiveness.

Beggars Can't Be Choosers: Disgust Sensitivity Provides a Status Cue

Hannah Bradshaw (Texas Christian University), Sarah E. Hill (Texas Christian University)

The emotion of disgust serves to protect individuals from interacting with various aspects of their environment that pose a contamination risk. However, because the behavioral management of pathogens is a luxury available only to those who are able to avoid them, portraying disgust may also provide others with cues about their social status. We test this possibility across two experiments. First, we find that high status others are perceived to experience more disgust than low status others in response to potential environmental contaminants (e.g., a sewer rat). Secondly, we find that individuals who are described as portraying disgust in various scenarios (e.g., dropping a sandwich) are rated as having higher status than individuals who respond without disgust. Our findings indicate that portraying disgust may serve as a cue to one's social status.

Mimicking desirable mates: Psychopathy as a sexual exploitation strategy to reproduce

Kristopher Brazil (Carleton University), Adelle Forth (Carleton University)

Psychopathic personality traits—e.g., being conning/manipulative, lying, reduced empathy, shallow affect—though socially disruptive (Hare, 2003), may represent an alternative reproductive strategy (Mealey, 1995). The hypothesis is tested that in men the function of psychopathic traits is to mimic the characteristics of a desirable mate (e.g., charm, holding resources), having the effect of inducing sexual interest in women. University men ($n=45$) assessed for psychopathy had two-minute dating profiles video-recorded. The videos are being shown to women (anticipated $n=80$), who provide ratings that indicate their impressions of and sexual interest in these men. Women also provide audio-recordings of scripted voicemail messages directed at the men they saw, allowing for the analysis of voice pitch

(Fraccaro et al., 2011). Higher ratings and raised voice pitch directed at men higher in psychopathic traits (while controlling for independently-rated male attractiveness) would provide evidence that psychopathic traits in men induce sexual interest in women.

Mating, Morality, and Models of Personality

Evelyn Brosius (DePauw University), Scott Ross (DePauw University), Kevin Moore (DePauw University)

The Dark Triad (D3) of personality, comprised of the traits of narcissism, Machiavellianism, and psychopathy, has a significant effect on moral and ethical behavior, and in turn has implications regarding everyday interactions and decisions. Among these decisions are those related to other human beings, especially regarding sexual behavior. The Dark Triad has been consistently linked to the application of short-term mating strategies (Jonason, Li, Webster, & Schmitt, 2009) and attractiveness ratings (Qureshi, Harris, & Atkinson, 2016). Using a sample of over 300 Mechanical Turksters, this study further elaborated information regarding the D3 and sexual behavior by assessing intentions towards infidelity (Intentions Towards Infidelity Scale; Jones, Olderbak, & Figueredo, 2011) and sociosexual orientation (Sociosexual Orientation Inventory; Penke & Asendorpf, 2008) in relation to moral behavior and personality. The results suggest that an evolutionary approach to the Dark Triad provides insight into its effect on mating success and moral judgment and behavior.

When walking away doesn't win the day: Reassessing the evolution of cooperation in space

Justin Brown (Department of Anthropology, Washington State University), Luke S. Premo (Department of Anthropology, Washington State University; Department of Human Evolution, Max Planck Institute for Evolutionary Anthropology)

In a spatially-explicit iterated prisoner's dilemma players might "Walk Away" from defecting partners to avoid future exploitation. Atkipis (2004) shows this movement strategy allows cooperators to outcompete defectors of both the Walk Away and "Naïve" (move only when without a partner) type as well as more behaviorally complex, contingent cooperators. Here, we systematically assess competition among Walk Away and Naïve cooperators and defectors to understand why we could not replicate Atkipis's main result. When starting at equal frequencies, Walk Away cooperators dominate in two- and three-way play with both defector types. Walk Away cooperators "shield" Naïve cooperators from defectors in three- and four-way play, but then sacrifice future cooperation by "overreacting" to accidental defections in the subsequent cooperation-dominated environment. Naïve cooperators outcompete Walk Away cooperators in two-way play, yielding a population that is extremely vulnerable to rapid invasion by defectors. In the end, walking away doesn't win the day.

Evolutionarily relevant methods for testing the generalizability of virtual reality.

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Virtual reality is a rapidly expanding method of studying real-world behavior, in part because it provides researchers unrivaled experimental control. However, we have little ability to measure the extent to which virtual reality studies generalize to real behavior. One limitation in current virtual reality research is the absence of evolutionarily relevant methods. The present study describes an evolutionary method derived from Evolved Navigation Theory for testing the generalizability of virtual reality findings. Twenty-two participants estimated distances in functionally identical real-world and virtual environments using an evolutionarily relevant distance matching procedure. The results of the study indicate that this method performs superior to nonevolutionary methods and provides greater precision

in calculating the extent to which virtual findings generalize to real-world behavior. We recommend that future virtual reality experiments include a concise version of this task

Let's face it: How facial cues are associated with social dominance, health, and personality

Jennifer Byrd-Craven (Oklahoma State University), Amber Massey-Abernathy (Missouri State University), Brianna Newport (Bethel College), Ashley Rankin (Oklahoma State University)

Facial characteristics provide a number of important cues relevant to social exchanges, such as attractiveness, health, and cues to personality. Less well-known is whether facial cues provide other types of social information such as leadership potential and potential deception. In the first phase of the study, participants completed a variety of personality, health, empathy and social dominance questionnaires and had skin conductance levels assessed while watching distressing videos. In the second phase, participants viewed photographs of participants in phase one and rated them on social dominance, health, and personality characteristics. Participants were accurate in assessing dominance ($r = .21, p = .02$), health ($r = .19, p = .04$), and extroversion ($r = .34, p < .001$). Additionally, self-rated neuroticism was negatively related ($r = -.21, p = .02$), and self-rated extroversion was positively related ($r = .31, p = .001$) to other-rated health, respectively. Findings related to deceptive personality characteristics are also discussed.

Her Body, Her Choice: A Cross-Cultural Investigation of Maternal Investment Behavior

Christina M. Carolus (Human Relations Area Files at Yale University), Eric J. Ringen (Human Relations Area Files at Yale University)

More than 1 in 3 women pursue an abortion in their lifetime, and recent estimates suggest that 1 in 4 pregnancies ends in abortion. Infanticide, though less widespread, is most often perpetrated by mothers. These behaviors evoke a question: why should a mother terminate her own offspring and thereby reduce her chances of reproductive success? Life history theory suggests that reduction of maternal investment in current offspring can sometimes enhance lifetime reproductive success. Data from modern industrialized nations are congruent with the predictions of these evolutionary models; termination behaviors are intimately tied to social and economic circumstances. In this study, we synthesize cross-cultural data on termination of maternal investment in a global sample of preindustrial societies. Results generally support a life history approach; maternal motivations for terminating investment are found to be similar across time and space, emphasizing resource scarcity and cross-cultural variation in female reproductive agency.

Moral foundations theory and performance in a set of economic exchange games

Charles Clark (Wichita State University), Carly Bahner (Wichita State University), Elizabeth Ramirez (Wichita State University), Shivani Nagrecha (Wichita State University)

Moral Foundations Theory has proven to be a useful means of categorizing moral beliefs and values. There are two categories of foundations within this theory, the individualizing foundations and the binding foundations. This study sought to determine if Progressivism, the degree to which individuals endorse the individualizing foundations over the binding foundations could predict performance in a set of economic exchange games (i.e., Prisoner's Dilemma, Trust Game, & Thieves' Game). In three separate linear regressions controlling for demographics and Big-5 personality traits Progressivism was associated with more frequent cooperation in the Prisoner's Dilemma, and a higher level of investment and return of one's partner's investment in the Trust Game. These data suggest that moral foundations are indeed

related to performance in economic exchange games and that a greater endorsement of Progressivism is associated with prosocial behavior when playing with strangers.

Enactive Horror: An Evolutionary Analysis of Haunted Attractions

Mathias Clasen (Aarhus University)

Threat simulations in the form of horror stories have existed for thousands of years because they satisfy an evolved appetite for vicarious experience with danger and negative emotion. Now, haunted attractions, or haunts, are becoming a multi-million dollar industry in North America and abroad. In such attractions, paying costumers confront frightening set pieces and scare actors. This study analyzes the structure of one major Danish haunt from an evolutionary perspective, suggesting that successful haunts are designed to facilitate immersion and the elicitation of negative emotions ranging from disgust to fear in costumers. In contrast to observational horror (e.g. in literature and film), which situates audiences as passive observers, haunts position visitors as active participants in live-action horror scenarios. Haunts thus potentially fulfill the function of providing consumers with threat simulations more effectively than does observational horror.

This Old Thing? Exploring Patterns of Modesty in Relation to Sex and Status

Jaime Cloud (Western Oregon University), Carin Perilloux (Southwestern University), Cody Welty (Western Oregon University)

Two studies explored the contexts in which men and women show modesty. In Study 1, participants read three vignettes in which they received a compliment and chose the type of reaction they would most likely give. Results revealed that women chose the modest response option significantly more often than men did. In Study 2, participants were randomly assigned to one of three hypothetical scenarios in which they received a compliment from someone of either (1) higher status than them, (2) lower status than them, or (3) equal status to them, and indicated their most likely response in an open-ended format. Preliminary analyses showed that women demonstrated greater modesty after receiving a compliment from a relatively low-status versus high-status member of the same sex, whereas men did not show this effect. This was consistent with our prediction that women use modesty to manage intrasexual hierarchies.

Infant Signaling Behaviors and Maternal, Paternal and Alloparental Caregiving

Jessica Collins (Washington State University), Courtney L. Meehan (Washington State University)

Humans are cooperative breeders—infants receive care and provisioning from non-maternal caregivers. Research on allomaternal care centers on why caregivers invest (i.e., Kin Selection, Reciprocal Altruism, and Learning to Mother), but tends to examine investment irrespective of infant behavior. Minimal work has centered on whether infants are active agents in soliciting care from allomothers. If infants solicit and encourage care, such behavior could translate into fitness benefits. Here, we aim to explore the relationship between infant signaling behaviors (i.e., distress and non-distress vocalizations and smiling and laughing) and the care infants receive from mothers, fathers, and alloparents. The research was conducted among the Sidama agro-pastoralists in Ethiopia. Forty-seven infants and their caregivers were naturally observed across multiple days. No significant relationships between Sidama infant signaling behaviors and the frequency of care exist. However, results indicate that signaling behaviors were positively associated with the size of infants' alloparental network.

Different Environmental Threats Differently Affect the Sexes' Support for Gender Equality

Katja Cunningham (Arizona State University), Michael Varnum (Arizona State University)

This study aimed to examine how the salience of various environmental threats (i.e. resource scarcity, war, pathogen prevalence, and dense population) affects support for gender equality. 482 participants completed a word analogy task in which they were randomly assigned to one of the five threat conditions or a control condition. Participants then completed scales and surveys to measure different aspects of support for gender equality: an essentialism and immutability scale, a policy measure, and the Modern Sexism Scale. When the threat of intergroup warfare was made salient, males expressed significantly less belief in negative stereotypes about women. When exposed to a resource scarcity condition, females expressed significantly more belief in negative stereotypes about women.

Principled versus pragmatic punishment: Partner choice selection favours consequentialist reasons for punishing

Nathan Dhaliwal (University of British Columbia), Daniel Skarlicki (University of British Columbia), JoAndrea Hoegg (University of British Columbia)

People resemble deontologists when punishing, but when asked as to why a violator should be punished, people instead provide consequentialist justifications to support their decision. Thus, there seems to be a discrepancy between people's words and actions in this context. Why is this the case? Given the multiple adaptive benefits that follow from having a deontological response, what would be the adaptive benefit of instead expressing consequentialist reasons for punishing? With this research we test a hypothesis based on partner choice selection, arguing that those who provide more consequentialist reasons for punishing tend to be seen as more trustworthy, cooperative social partners. This would then explain the phenomenon of people punishing deontologically yet justifying their decision on consequentialist grounds. If those who provide more consequentialist reasons for punishing tend to be selected more often, they will as a result reap the fitness enhancing benefits of such social connection.

The effect of life history strategy on individual differences in sexual selection

Alena Egner (Harvard University), Max Krasnow (Harvard University)

A significant amount of research has been devoted to understanding sex differences in intrasexual competitiveness and intersexual choosiness in human mating. Parental investment theory predicts that women will generally be choosier and men more competitive (although both sexes exhibit some level of both traits), and while previous research has largely confirmed these predictions, relatively little is known about individual differences within each sex. What contributes to some men being highly selective, or some women being more competitive than others? The present study tested life history strategy as a potential factor in these individual differences. We predicted that within sexes, a faster life history strategy would be correlated with increased competitiveness, while a slower strategy would be correlated with increased choosiness. Preliminary results from a large online sample support the predictions, indicating that life history may be an important moderating factor in evolved mechanisms for sexual selection, contributing to individual differences.

Influence of sex on snake detection in visual search in adult humans: reaction times to target matrices

Francisco J. Esmoris-Arranz (Universidad de Santiago de Compostela, Spain), Single author

This report focuses on sex-differences in the attentional component of the antipredator defensive-behavior system. A visual search task was run where participants were exposed to 2 x 2 and 3 x 3 matrices, containing color photographs of snakes and flowers. Matrices were either homogeneous (e.g.,

all flowers) or heterogeneous (e.g., a snake among flowers). Participants were instructed to judge if each matrix was homogenous or not. Both men and women were faster to detect snakes among flowers than viceversa, regardless of matrix size. When exposed to 2 x 2 matrices, snake-targets were detected faster by women than men, but no sex-difference was found for flower-targets. For the 3 x 3 matrices, snake-targets were detected, again, faster by women than men. However, in this case, women also detected flower-targets more quickly. Overall, the results support the idea of women showing a more efficient attentional process than men when dealing with predators.

Sensationalism in Electronic News : A Systematic Literature Review

William Evans (University of Alabama)

Sensationalism is a concept with a long history in media research and in public discourse about media. Media researchers and media pundits frequently employ the concept, usually in decrying a perceived decline in news quality and a concomitant decline in public interest in high-quality news. Unfortunately, researchers tend to use the term sensationalism too casually, as a catch-all pejorative label for any feature of news that seems salient but also uninformative. An emerging, interdisciplinary body of research looks at sensationalism in its bio-cultural context. This study examines 95 articles on sensationalism published since 2001 to determine the extent to which the findings reported in this research can be deemed evidence of a bio-cultural function for electronic news. This study also identifies potential points of contact between media theory and cognitive and psychological theories concerned with human attention processes.

Partner Physical Attractiveness Differentially Predicts Men's and Women's Relationship Satisfaction Among Maximizers but not Among Satisficers

Juliana French (Florida State University), Andrea Meltzer (Florida State University)

Evolutionary perspectives and some empirical evidence suggest that partner physical attractiveness more strongly impacts men's (compared to women's) long-term relationship outcomes. Other research, however, suggests that partner attractiveness equally impacts men's and women's long-term relationships. Considering individual differences—e.g., maximization tendencies (or the extent to which people consider all options before making a decision)—may help to reconcile this controversy. Indeed, two longitudinal studies of newlywed couples (N = 233) demonstrated that sex-differentiated implications of partner attractiveness depended on spouses' maximization tendencies. Whereas partner attractiveness was equally associated with satisficing men's and women's marital satisfaction, it was differentially associated with maximizing men's and women's marital satisfaction—maximizing husbands were more satisfied (compared to maximizing wives) at the start of marriage and remained more satisfied over time to the extent that they had physically attractive partners. This finding highlights the importance of considering individual-difference variables to reconcile inconsistencies in the literature.

Stress: The effects of social and solitary learning on salivary hormones

Karen Fulk (Boise State University), Ross Griffiths (Boise State University), Kimberly Neagle (Boise State University), Kathryn Demps (Boise State University), Tessa Amend (Boise State University), Kayla Downs (Boise State University), Michaela Eugster (Boise State University), Scott May (Boise State University), Shane Scaggs (Boise State University), Kristin Snopkowski (Boise State University)

Cortisol and testosterone have been implicated in human stress responses to environmental and emotional stimuli. These hormones also may be tied to learning—both individually and socially. The goal of this study was to determine the physiological impact that different teaching modalities have on

college students' stress levels within the classroom setting. Subjects provided saliva samples to establish: a) pre-instructional hormonal baselines, b) cortisol and testosterone levels following a traditional lecture, and c) subsequent changes after participating in a structured small-group learning activity. Additional samples were collected to evaluate subjects' post-learning hormonal variations (i.e. exam-recall stress) following the d) multiple choice and e) essay sections of a mid-term exam. Research findings indicate students have lower salivary cortisol after small-group learning activities, as compared to traditional lectures. These results suggest that structured small-group activities may be beneficial for reducing stress and improving student learning outcomes.

Women's Food Sharing in Siberia: Frequency of Transfer versus Amounts Given

Karen Fulk (Boise State University), John P. Ziker (Boise State University)

This paper considers informal household networks by which tundra foods are distributed in Ust'-Avam, Taimyr Region, Russia. The majority of families in Ust'-Avam rely upon subsistence hunting, fishing, and trapping for their livelihood. Variation in hunting ability and interest in hunting create inequalities in local food production. Interhousehold food sharing is widespread and helps buffer consumption risk in particularly vulnerable households. This paper will compare results of analysis of previously unpublished data on the interhousehold food sharing by a sample of women in the community. The food transfers involved are portions of meat and fish transferred to the women from producers or intermediaries. This analysis will compare the results of social network analysis of frequencies of transfers versus amounts of food transferred, providing another opportunity to examine the effects of variables that relate back to the widely debated explanatory hypotheses of food sharing.

The Affective Roots of Culture and Cognition

Rami Gabriel (Columbia College Chicago), Dr. Stephen T. Asma (Columbia College Chicago)

Our book, *Evolution of Mind: The Affective Roots of Culture and Cognition* (Harvard University Press, 2018) makes an argument for the centrality of emotional systems in understanding the evolution of the human mind as well as those of our primate cousins by triangulating insights and data from philosophy, biology and psychology to shape a new research program. Upon the foundation of affective neuroscience, we follow the evolution of mind from primary to secondary and tertiary levels by a philosophical analysis that makes overarching connections of insights gained through empirical work. We argue that humans evolved in an emotional niche, having homologous affective features with other primates, but also unique affective capacities. We want to provide a key ingredient to the socio-cognitive niche, namely affective or emotional modernity. While impressive research has been emerging in disparate fields, no one has yet characterized an affective paradigm that draws together these data.

Interleukin-1 β Promotes Investment in Present Versus Future Outcomes

Jeffrey Gassen (TCU), Hill, Sarah (Texas Christian University), Proffitt Leyva, Randi (Texas Christian University), Prokosch, Marjorie (Texas Christian University), White, Jordon (Texas Christian University), Peterman, Julia (Texas Christian University), Eimerbrink, Micah (Texas Christian University), Boehm, Gary (Texas Christian University)

Life history theory predicts that exposure to environments dense in extrinsic threats will lead to a faster life history strategy characterized by preference for current over future rewards. In addition to external threats, such as conspecific violence, one's internal condition also determines probability of survival. Furthermore, one pathway through which external threats may impact life history characteristics is

through internal damage, such as occurs with stress and chronic inflammation. With this in mind, we predicted that activity of the proinflammatory cytokine IL-1 β may represent a marker of somatic damage and predict preference for present over future outcomes. Higher serum IL-1 β levels were associated with greater self-reported impulsivity, inability to delay gratification, and present-focus. Preliminary analyses of in-vitro IL-1 β activity in response to mitogen stimulation supported these results, suggesting that IL-1 β plays a role in promoting investment in the present.

Death Management Theory: An Alternative Explanation for Terror Management Phenomena

Ben Gelbart (Arizona State University), Jaimie Krems (Arizona State University)

Mortality salience primes have been shown to produce a wide variety of effects, ranging from heightened disgust sensitivity to strengthened attitudes toward those who share our perceptions and beliefs. Terror Management Theory (TMT) interprets these effects as forms of worldview defense (e.g., Goldenberg et al., 2001). We suggest that typical mortality salience primes are ambiguous threat primes, activating mechanisms for managing whichever lethal threats are most accessible. Our Death Management Theory (DMT) takes an evolutionary, affordance-management perspective, asserting that qualitatively different threats (e.g., physical safety, disease, exile) evoke qualitatively different reactions, which function to mitigate those specific threats. Some traditional TMT moderators (e.g., self-esteem) may thus “work” by conveying information regarding one's vulnerability to certain threats (e.g., the likelihood of death by exile). We derive specific predictions from DMT and pit them against predictions from TMT. DMT may help to account for individual and cultural differences in TMT findings.

Evaluating risk-taking in a cooperative context using a tower building task

Santiago Gracia Garrido (Universidad Nacional Autónoma de México (UNAM)), Robyn Hudson (Universidad Nacional Autónoma de México), Marcos Rosetti (Universidad Nacional Autónoma de México)

Risk-taking behavior has been extensively studied in humans in a large variety of situations. Observations and experimental research have shown that men tend to get involved more frequently in risky situations, while women tend to prefer more predictable outcomes. However, risk-taking behavior has been much less studied in cooperative contexts. What happens when groups of humans cooperate in tasks that involve risks? Is there any modulation effect in mixed gender teams? What effect does age have in the adoption of risky behaviors? The present study attempts to evaluate risk-taking behavior in male, female and mixed gender dyads of age-paired children (6 and 12 yrs old) and college students using a tower building task (TBT). On the TBT, subjects must pool their assigned wood pieces in order to build a tower as tall as possible. Subjects can keep building towers until time is up or stop at any moment if satisfied with their results. We analyzed the association between the number of times the structure collapsed and the cumulative height achieved during the construction process. Preliminary findings show that older male dyads produce taller towers, while younger dyads engage in producing short, repetitive structures.

The relative contribution of facial shape and surface information to the motivational salience of faces

Amanda Hahn (Humboldt State University), Claire Fisher (University of Glasgow), Lisa DeBruine (University of Glasgow), Benedict Jones (University of Glasgow)

Several studies have demonstrated that facial attractiveness has motivational salience. These studies, however, have focused on attractiveness generally and have not explored the relative contribution of

shape and surface information. Here, we investigated the relationships between the motivational salience of adult faces and versions of these faces in which either surface information was standardized or shape information was standardized using a key-press task to assess motivational salience. Participants were randomly allocated to one condition in which they viewed either the original versions of male or female faces, the shape-only versions of male or female faces, or the surface-only versions of male or female faces. For both male and female faces, key-press scores of the shape-only and surface-only versions independently predicted key-press scores of the original images. These results indicate that both shape and surface information contribute to the motivational salience of faces

Casual Sex and Life History Strategy: Evolutionary Perspectives on the Impact of Father Absence

Jessica Hehman (University of Redlands), Catherine Salmon (University of Redlands)

Much recent attention has been focused on understanding casual sexual behavior. The current study uses an adaptationist approach to investigate sex differences in casual sex behavior, life history strategy, and the effect of father absence. Psychosocial acceleration theory predicts stressful childhood environments result in accelerated puberty and increased adult promiscuity. This study replicates previous findings that (1) males had significantly more casual sex than females; and (2) males and females who grew up in father absent homes were more likely to engage in casual sexual behavior. This study also extends those findings to life history strategy finding that (1) males have a significantly faster life history strategy than females; and (2) father absence predicts faster life history strategy. These results, as well as effects of temperament on casual sex behavior and life history strategy, will be discussed in light of sexual strategies theory.

Affective Neuroscience and Feminism: Theorizing Biosocial Interactionist Models of Human Behavior

Leslie Heywood (Binghamton University), Justin R. Garcia (Indiana University)

In recent years the interchange between feminist and evolutionary theorists have moved to more integrative discussions, that enact the kind of "biosocial interactionist" model called for by Eagly and Wood (2013), among others. Drawing on evolutionary biology, affective neuroscience can be combined with feminist analysis in productive ways. The affective neuroscientific concepts of "threat" and "safety", which universally triggers specific neurophysiological responses in people, when combined with principles from behavioral ecology and feminist psychology, is particularly useful in examining the contemporary cultural context of pervasive social media use, the "culture of confidence" (Gill and Orgad, 2015) and the "pornification of everyday life" (Orenstein, 2016; Sales, 2016) as environmental catalysts for neurophysiological responses that may lead to increased rates of depression in adolescent girls (Steiner-Adair, 2013; Mojtabai et al, 2016). We present a theoretical model with implications for evolutionary behavioral sciences, health sciences, and feminist psychology.

Mechanisms of sexual selection on men in a natural fertility population

Alex Hill (University of Washington), Alexander K. Hill (University of Washington), Jeremy Koster (University of Cincinnati), Jeffrey Winking (Texas A&M University), John Hunt (Western Sydney University), Robert P. Burriss (University of Basel), and David A. Puts (The Pennsylvania State University)

Men's secondary sexual characteristics predict attractiveness, dominance, and mating success. Although intrasexual rivalry and intersexual choice may have differed in relative strength across men's traits ancestrally, recent research suggests that contest competition may generally have influenced the male phenotype more than have female preferences. However, few available data link men's putative sexually selected traits to success under mate choice and contests, and to mating and reproductive success, in

natural fertility populations. We therefore explore the relative degrees to which these mechanisms of sexual selection mediate relationships between male traits and fitness in a natural fertility population. We measure men's putative sexually selected traits, success under male contests and female choice, mating success, and reproductive success. We then use multiple regression and canonical analysis to estimate linear, quadratic, and correlational selection gradients on men's traits.

Human Research Ethics Guidelines Revised: Important Changes for 2018

Elizabeth Hill (University of Detroit Mercy)

New federal guidelines for human research ethics have been issued, to take effect in January, 2018. Recently published in the Federal Register, the proposed changes have been available for public comment since 2011. These regulations affect the way Institutional Review Boards operate. Several of the changes reflect a consensus that social-behavioral research is frequently less risky than is biomedical research. There is a new exemption category for "benign behavioral interventions," which puts some behavioral studies into the same review path as has been used for most surveys and pedagogical studies. A new view of biological specimens requires the use of a broad consent form when specimens are collected, to enable use of the samples in archives and further analysis. Other revisions affect how consent forms are written. It is important for all researchers to be aware these revisions, which will streamline the way IRBs review applications, in many cases.

Is the environmental vertical illusion responsible for the vertical-horizontal illusion?

Jessica Idoine (California State University, Fullerton), Aaron Goetz (California State University, Fullerton)

The vertical-horizontal illusion (VHI) is the overestimation of a vertical line compared to a horizontal line of the same length (\perp). Jackson and Cormack (2007) proposed that the VHI is a byproduct of the mechanisms that generate the environmental vertical illusion (EVI), which is the tendency to overestimate vertical distances (i.e., heights) relative to horizontal distances the same length. Our participants stood atop a 61-foot (18.6-meter) parking garage and estimated the vertical distance of the garage and the horizontal distance of a target 61-feet away. Participants completed a VHI task by drawing a horizontal line below a 3.6 inch (9.1 cm) vertical line. We correlated vertical distance estimates with vertical line estimates to test Jackson and Cormack's byproduct hypothesis. Additionally, to test whether the EVI is robust and impervious to explicit awareness, we told a random half of our participants to be mindful that people overestimate heights.

Porn stars and the girl next door: How evolutionarily novel information influences men's perceptions of women's sexuality

Hilary R. Keil (California State University, Fullerton), Aaron T. Goetz (California State University, Fullerton), Gorge A. Romero (California State University, Fullerton), Cristian M. Acevedo (California State University, Fullerton)

Pornography consumption has become a societal norm. The evolutionarily novel ability to satiate evolved mechanisms associated with sexual desire through pornography may have important consequences for men's mating psychology. Because men's understanding of women's sexuality is dependent on environmental inputs, it is possible that pornography consumption (which typically portrays women's sexuality as uninhibited) may influence men's perceptions of women's sexuality. Alternatively, given the asymmetrical input coming from the environment (i.e., more portrayals of women as not sexually uninhibited versus fewer portrayals of women as sexually uninhibited), it is possible that there is no relationship between pornography consumption and perceptions of women's

sexuality. In this study, we asked a larger group of participants to complete a survey which assessed their pornography consumption, perceptions of women's sexuality, socio-sexual orientation, and social desirability. Results could have important implications for understanding men's mating psychology and how we process evolutionarily novel information.

The "Deconstructive" Logic of Evolutionary Theory

Samuel Kimball (University of North Florida)

The purpose of this presentation is to demonstrate how contemporary evolutionary theory is not antithetical to but accords with the notorious "deconstructions" of the late twentieth-century French philosopher Jacques Derrida. I intend to show that, despite their seemingly incompatible frames of reference, Derrida's deconstructions and evolutionary theory offer converging analyses of the assumptions that throughout western intellectual history have programmed the concept of life. Reviewing key evolutionary phenomena (for example, reproductive success, parental investment, mutation, extinction, the problem of human susceptibility to false belief—all in relation to the "economy" of evolution), I propose to explain the pertinence of Derrida's deconstructive thinking to Neo-Darwinian evolutionary theory, which I claim is implicitly deconstructive. In short, I propose to make the deconstructive implications of evolutionary theory explicit and thus to highlight their affinities.

Why do mating competitors increase religious beliefs?

Janae Koger (California State University San Bernardino), Dr. Cari D. Goetz (california state university san bernardino)

Previous research has demonstrated that viewing attractive same-sex profiles increases religiosity compared to viewing attractive opposite-sex profiles. However, the specific mechanism of this competitor effect remains unclear. In the present study, we 1) attempted to replicate the effect of exposure to competitors on religiosity and 2) tested the hypothesis that increased religiosity in this context functions to ensure mate fidelity. We predicted that relationship status and perceived infidelity risk in the relationship would mediate the effect of profile-type on religiosity. Participants viewed either attractive same-sex or opposite-sex profiles and answered questions about their relationship status, perceived likelihood of infidelity if they were in a relationship, and religiosity. Results provide a test of one potential mechanism for an existing finding in the literature and expand our understanding of how mating motivations relate to religiosity.

The age-gap and gender do matter! The effect of gender and age difference between siblings on educational achievements.

Radim Kuba (Charles University, National Institute of Mental Health, Czech Republic), Jaroslav Flegr (Charles University, National Institute of Mental Health, Czech Republic), Jan Havlíček (National Institute of Mental Health, Czech Republic, Charles University)

The effects of birth order on human personality have been extensively studied. Here, we focused on the effect of siblings' gender and their age-gap on educational achievements. We collected birth order data from university students using a questionnaire and computed the proportions of firstborns in two-child families (N=1110) considering age-gaps and gender composition. We found a significantly higher proportion of firstborns comparing Czech general population. The firstborn proportion was strongly dependent on age-gap between siblings and their gender. If the siblings were of the same sex, the highest firstborn proportion was if the age-gaps were small or big and lowest if the age-gaps were medium. If the dyads were consisted of opposite-sex siblings, the trend was reversed. Our results

highlight the importance of controlling for gender and age-gap among siblings. We further suggest to employ the above reported approach for testing the effects of birth order on other characteristics.

Coalition Strength and the Regulation of Moral Self-Interest

John Kubinski (Michigan State University), Carlos David Navarrete (Michigan State University)

Moral judgment can be biased by self-interest. While the core function of this phenomenon is straightforward, complex regulation of the self-interest bias is necessary for the bias to be adaptive. In an experimental study, we focused on one crucial social variable that should regulate the expression of moral self-interest: coalition strength. Using a group economic game, we assigned participants to one of two coalitions with competing interests regarding the distribution of a reward. We manipulated coalition strength by varying the number of votes belonging to each coalition during a voting procedure to determine the distribution of the reward. With fairness judgments as the dependent variable, the results showed that people become more morally self-interested as a function of coalition strength and that this pattern is stronger among individuals high on the trait of Machiavellianism.

Depression? Ask the Frontal Lobe! A Hypothesis on Human Personality Types : Frontal Lobe Dominance vs. Limbic System Dominance

Sung Hee Kwon (None or Law Office of Sung Hee Kwon)

Since the advent of mammals, the prosperity of living creatures has been a dual process of reproducing and nurturing. The limbic system enables emotions such as love and sympathy, which are necessary for nurturing. The coexistence of life resulted in complex problems that could not be solved by emotions. As the frontal lobe, responsible for cognition, has developed, there has been a corresponding qualitative improvement of life. The frontal lobe has developed radically due to specific characteristics of the human brain. In addition, the development of the limbic system has been in conjunction with the rapid growth of the frontal lobe. Since the beginning of group life, some human groups made predominant use of the frontal lobe, which other human groups have stressed their limbic system in support of human groups. In this way, the frontal lobe dominant and limbic system dominant types of people were formed.

The Role of Personality in Strategy Adaptation for Iterated Prisoner's Dilemma

Clay Langley (DePauw University), Scott Ross (DePauw University)

The ability to cooperate with others to accomplish mutually beneficial goals is a cornerstone for the evolution and survival of social groups, but be too willing to cooperate and one risks being taken advantage of. This study examines the effect of personality on how people adapt their cooperativeness over repeated interactions with others. Participants completed the Big Five Aspect Scales (BFAS) and Risk Taking Index (RTI). Participants then engaged in an Iterated Prisoner's Dilemma (IPD) tournament against five Artificial Intelligence (AI) players with varying levels of cooperativeness and complexity. Analyses of participants' rates of cooperation and defection against each strategy, and how these rates changed as participants played more games and learned more about each opponent, suggest that individual differences in personality and risk aversion predict not only one's general willingness to cooperate, but also one's ability to successfully identify and adapt to the behavior of their opponent.

Bilingual Family Communication and the Impact of Language Anxiety on Cortisol Reactivity

Hannah Legatzke (University of Notre Dame), Lee T. Gettler (University of Notre Dame)

Language shapes how humans balance in-group identity while engaging with out-group cultural norms as a result of processes like migration. While public performance and family interactions can affect cortisol production, less is known about whether psychosocial stress about language use has physiological manifestations. Here, among individuals from bilingual (Spanish and English) families ($n=35$), we found that higher anxiety predicted individuals' language use during conversations with family members in English ($p<0.01$). We did not find that subjects' cortisol reactivity to a potentially charged family conversation varied based on language anxiety after conversations in that language (both $p>0.3$). We predicted that age would moderate relationships between language anxiety and cortisol reactivity. We found that younger subjects with elevated English language anxiety had heightened cortisol responses to familial interaction ($p = 0.046$), which contrasted with the pattern we hypothesized would occur. Young people potentially face more identity-challenging acculturation pressure, explaining this pattern.

Cross-cultural preference for facial adiposity

Xue Lei (School of Psychology & Neuroscience, University of St Andrews), David Perrett (University of St Andrews)

Perceived facial adiposity is a predictor for facial attractiveness and perceived health in Caucasian participants but different ethnicities might have different preferences. Furthermore, perception may differ for own and other ethnicity faces. We asked 51 Caucasians and 66 East Asians (age 18-56) to adjust the shape of own and other ethnicity faces to optimize attractiveness. Face images were transformed to simulate shape changes associated with raised or lowered Body Mass Index (BMI). We found that participants preferred a lower level of facial adiposity for East Asian compared to Caucasian females (BMI=16.2 vs 18.4) but showed no difference for male faces (BMI=20.4 vs 20.6). Additionally, participant ethnicity had no effect on preferences. These findings indicate cross-cultural similarity of preference for facial adiposity and that preference depends on face ethnicity and sex.

Biased Recall of Terrorist Violence: A Novel Test of the Male Warrior Hypothesis

Miriam Lindner (Aarhus University, Denmark), Lasse Lindekilde (Aarhus University)

The male warrior hypothesis (MWH) suggests that coalitional aggression between groups of men has selected for sex-specific differences in the way fitness-relevant threats are processed. Here, we argue that these differences are observable today in the context of terrorist violence. Employing a survey experiment on a nationally representative survey of 2000 U.S. citizens, we exposed participants to a number of vignettes including subtle coalitional threat cues. Our results demonstrate that male outgroup coalitions are associated with more accurate recall, a finding driven by male respondents. Biased recall is associated with female terror suspects, ingroup suspects, and individual perpetrators; specifically, such features of terrorist attacks are less likely to be recalled correctly. These findings suggest that our coalitional psychology factors into intuitions about terrorism today, and that it might drive down the attention that threats from female suspects, lone wolves, and ingroup attackers receive at the level of public debate.

Life History Theory and the Tradeoff between Quantity and Quality of Friendships

Kennade Long (Oklahoma State University), Ashley Rankin (Oklahoma State University), Jennifer Byrd-Craven (Oklahoma State University)

According to the Life History Theory (LHT), in a fast life history strategy, resources are scarce therefore individuals allocate their energy budget towards a larger quantity over quality of mates compared to a

slow life history strategy where resources were more easily accessible therefore individuals allocate their energy budget towards a higher quality mate over quantity. LHT may also be applied to how individuals allocate their energy budget to quantity versus quality of friendship. The present study determined the allocation of resources using a friendship budget paradigm. Findings suggest no matter the life history, close friends were treated as necessities; for luxuries, those in a fast life history invested in lower quality friends (e.g., friends, acquaintances, etc.) over quality compared to those in a slow life history who invested in higher quality (e.g., close friends) over quantity. Therefore LHT can be applied towards investment in friendship in addition to mates.

A Grandparental Investment Hypothesis Based on Differential Time-Graded Decays in Paternity Uncertainty

Aryaman Majumdar (The College of Wooster), John G. Neuhoff (The College of Wooster)

Investment by grandparents in grandchildren varies with paternity uncertainty. Paternal grandfathers have two levels of uncertainty and invest in their grandchildren the least. Maternal grandmothers have no uncertainty and invest the most. Some studies have observed an investment disparity between the two intermediate grandparent types (maternal grandfathers and paternal grandmothers). The studies discovered that maternal grandfathers invest more than paternal grandmothers, suggesting that the disparity is due to paternal grandmothers' reallocation of investment to alternative grandchildren. Here, we present a complementary hypothesis to investment reallocation. We propose that the investment disparity is influenced by a time-graded decrease in paternity uncertainty in maternal grandfathers that surpasses that of paternal grandmothers. Demonstrating 1) the existence of time-graded uncertainty decrease in fathers since births of their children and 2) the existence of investment disparity regardless of alternative grandchildren would provide evidence for differential grandparent investment due to a time-graded decrease in paternity uncertainty.

Who gets mad and who feels bad? Using mate value discrepancies to predict anger and shame in relationships.

Nestor Maria (California State University, San Bernardino), Cari Goetz (California State University, San Bernardino)

We investigated how mate value discrepancies predict anger and shame in response to transgressions within a romantic relationship. We predicted that mate value discrepancies (higher discrepancy values indicated the participant's mate was higher in mate value) would be positively associated with shame when a person was either a perpetrator or victim of a relational transgression and negatively associated with anger when a person was the victim of a relational transgression. Participants currently in romantic relationships provided ratings of themselves, their mate, and their ideal mate. Participants were randomly assigned to a "perpetrator" or "victim" condition where they rated the degree of shame and anger they would feel in response to hypothetical relationship transgressions. Results expand our understanding of the functions of emotions and how mate value discrepancies related to relationship functioning and outcomes.

Nature Catches The Eye: Human Gaze Behavior As A Measure For Aesthetic Preference

Kathrin Masuch (Faculty of Life Sciences, University of Vienna, Austria; Urban Human, Vienna, Austria), Carmen Schwarzl (Faculty of Life Sciences, University of Vienna, Austria), Karolin Eienkel (Faculty of Life Sciences, University of Vienna, Austria), Manuel Weninger (Faculty of Life Sciences, University of Vienna, Austria), Vsevolods Girsovc (Faculty of Life Sciences, University of Vienna, Austria), Elisabeth

Oberzaucher (Faculty of Life Sciences, University of Vienna, Austria; Urban Human, Vienna, Austria; Department for Artificial Intelligence, University of Ulm, Germany)

Featuring wide and open spaces, scattered high trees and a sufficient amount of water, the African savanna provided the optimal setting for early humans to develop bipedal locomotion and to increase the size of both brain and social groups.

Based on the well-known Savanna hypothesis, studies showed that in comparison to a modern, man-made environment, natural ones are preferred. By using an electrooculogram, we surveyed whether this preference also manifests in gaze behavior in a laboratory study setting. Participants were confronted with twenty pairs of pictures, each consisting of one of a man-made stimulus and one of a natural stimulus. We tested 48 participants and results show that even when the stimuli were presented for just 2 seconds, the natural one was looked at longer than the artificial one ($n=48$, $p<0,01$). These results remain stable, when controlled for sex, age and environmental preferences ($n=48$, $p>0,05$).

Searchers by Nature and Experience: Experience in Search Improves Searching Performance through Decision-Making

César Maya (Biomedical Research Institute, National Autonomous University of Mexico), Marcos F. Rosetti (Biomedical Research Institute, National Autonomous University of Mexico), Luis Pacheco-Cobos (Faculty of Biology, Veracruz University), Robyn Hudson (Biomedical Research Institute, National Autonomous University of Mexico)

The decisions made when searching for resources (e.g. food, mates or refuge) are of the utmost importance to mobile organisms since they are closely tied to survival and reproduction. Hence, adaptive responses to the environment are expected in searching behavior, either inborn or through learning. In this study, we evaluated the role of experience in decision-making during searching behavior under the hypothesis of human universalities. We designed an open-field search task that simulates a patchy environment where we evaluated the effect of three factors in search decision-making and performance, namely time available, motivation and prior information. To date, we have found that only information improves performance by modifying the decision of what to look for within and when to leave a patch. To test this further, we are evaluating the effect of real-life foraging experience on the decision-making processes involved in searching.

Autonomic Self-Directed Pain Theory: Mechanisms, Narratives, and Evolutionary Rationale

Kevin Meredith

The human mind bristles with inwardly-directed, apparently excessive pain infliction mechanisms. Are they examples of mismatch, incidental by-products, or aspects of fitness? This poster proposes the third, that autonomic self-directed pain, particularly in response to excessive happiness, helps maintain the balanced emotional state necessary to our evolved, ongoing reward/punishment regime.

Adults' reasoning about the properties of God suggests intuitive inferences are not subject to belief revision

Spencer Mermelstein (University of California, Santa Barbara), Michael Barlev (University of California, Santa Barbara) and Tamsin C. German (University of California, Santa Barbara)

Boyer (2001) suggested that representations of supernatural agents co-opt evolved ontological categories. In three experiments, we find evidence that intuitive inferences that follow from the ontological category of PERSON co-exist and interfere with, rather than replace, mutually incompatible

beliefs about God. In Experiment 1, Christian religious adherents were slower and less accurate when asked to verify statements that presented discrepancies between the attributes of people and of God (e.g., “All beliefs God has are true”) versus statements that were entirely true or false for people and God (e.g., “God has beliefs that are true”). Experiment 2 demonstrated that interference increases under conditions of cognitive load. Experiment 3 extended these findings with a lifespan sample, revealing that lifelong practice with reflective religious beliefs does not replace conflicting intuitive inferences in representations of religious concepts. We conclude that the intuitive inferences that compose ontological categories may not be subject to belief revision.

The Dark Triad and Attraction to Sexual Exploitability Cues

Kelsey Meyer (California State University, San Bernardino), Cari D. Goetz (California State University, San Bernardino)

The Dark Triad traits (Narcissism, Machiavellianism, and Psychopathy) are collectively positively associated with short-term mating. Research has demonstrated that men find women displaying cues to sexual exploitability to be sexually attractive, particularly as short-term mates. In the current study, we investigated the relationship between the Dark Triad traits and attraction to exploitability cues. We hypothesized that in males, the Dark Triad would be positively associated with sexual attraction to women displaying cues indicative of high exploitability. Participants viewed images of women displaying cues to high exploitability and images of women displaying cues to low exploitability. They rated their sexual attraction to the women and how attractive they found them as long-term mates. This study expands our understanding of the relationship between sexual exploitability and sexual attraction and how individual differences relate to sexual exploitation.

I am big on Instagram: The effect of the number of followers on perceived status and mate attractiveness

Igor Miklousic (Institute of Social Sciences Ivo Pilar), Laith Al-Shawaf (Bilkent University), Tiffany Matej Hrkalic (University of Zagreb)

The aim of this study was to examine whether, and to what extent, does the online popularity serve as an indicator of social status, as well as the effect it has on the perception of mate attractiveness. We focused on the Instagram platform where users gain status and followers by providing various content. For the purpose of this study, both female and male mock-up Instagram profiles were created, each with 28, 155 or 28 000 «followers», while other aspects (number of posts, photos, etc.) were constant. We hypothesized that the larger number of followers would be related to higher ratings of social status for both genders and increase in perceived physical attractiveness for women raters. We also hypothesized that males would experience a decrease or self-perceived mate value when exposed to the male profiles with a large number of followers. Relations with interpersonal variables are also addressed.

Life history orientation and gambling

Sandeep Mishra (University of Regina), Tyler J. S. Meadows (University of Regina); Andrew Templeton (University of Regina)

Life history theory is a developmental framework for understanding how organisms allocate their time and energy towards important life functions. Fast life histories describe individuals who tend to engage in persistent present-oriented decision-making and behavior, whereas slow life histories describe individuals who tend to engage in deliberative, future-oriented decision-making and behavior. We

examined whether life history orientation explains variance in problem gambling tendencies. Results demonstrated that individual differences in life history orientation were significantly associated with problem gambling tendencies. Furthermore, a hierarchical regression model indicated that life history orientation explained variance in problem gambling tendencies above and beyond personality traits that have been previously associated with gambling (impulsivity, sensation seeking, and self-control). Taken together, these findings suggest that problem gambling tendencies are associated with relatively “faster” life history orientations. More broadly, the results suggest that life history theory may provide some insight into the developmental etiology of problem gambling tendencies.

Are thieves adulterers and adulterers thieves? Exploring whether cheating in one fundamental social domain implies cheating in others

Jordan Moon (Arizona State University), Jaimie Arona Krems (Arizona State University), Douglas T. Kenrick (Arizona State University), Adam B. Cohen

The aim of this study was to examine whether, and to what extent, does the online popularity serve as an indicator of social status, as well as the effect it has on the perception of mate attractiveness. We focused on the Instagram platform where users gain status and followers by providing various content. For the purpose of this study, both female and male mock-up Instagram profiles were created, each with 28, 155 or 28 000 «followers», while other aspects (number of posts, photos, etc.) were constant. We hypothesized that the larger number of followers would be related to higher ratings of social status for both genders and increase in perceived physical attractiveness for women raters. We also hypothesized that males would experience a decrease or self-perceived mate value when exposed to the male profiles with a large number of followers. Relations with interpersonal variables are also addressed.

Sex and the perceived effectiveness of short-term mate poaching acts

James Moran (Bucknell University), T Joel Wade (Bucknell University)

This study investigated actions used by heterosexual men to infiltrate a heterosexual relationship to poach a mate. Study 1 (N=39) found eighteen consensus short term mate poaching tactics using act nomination methods. The most nominated act was “get her drunk.” The eighteen acts were then presented to an additional sample of men and women, Study 2 (N=448), to determine the perceived effectiveness of each act.

A 2 (Sex of Participant) x 18 (poaching acts) Mixed Model Repeated measured ANCOVA indicated a significant interaction of sex and poaching acts, $F(17, 411) = 7.96, p < .0001, \eta^2 = .25$. Men rated 11 acts as more effective than women did. Additionally, in general, the five acts seen as most effective for men for infiltrating a heterosexual relationship to poach a female were: 1). “Spending time together” 2). “Being attentive” 3). “Being compassionate” 4). “Helping her with her problems” and 5). “Complimenting her.”

Snapchat: An app for sexual access

James Moran (Bucknell University), Kelsey Salerno (Bucknell University), T. Joel Wade (Bucknell University)

Snapchat is a popular social media app that provides users the opportunity to send and receive photos and videos; however, these photos and videos only last ten seconds, after the ten seconds, they disappear. A recent study on attitudes regarding the app suggests that Snapchat is a carefree app that allows users to show mundane aspects of their lives with a close group of individuals (Bayer, Ellison,

Schoenebeck, & Falk, 2015). However, there is no research regarding user's sexual attitudes or sexual behaviors with the app. This current project investigated men and women's differences in obtaining a mate through the app. It was hypothesized that men were more likely to use the app to gain a mate. However, results revealed that women more than men used the app to gain sexual access. Women may be utilizing Snapchat, because of its fleeting nature.

Hearing Sexual Dimorphism: Perception of Vocal Sex Ratios is Linked to Likelihood of Fertility

John Neuhoﬀ (The College of Wooster), NA

Despite widespread evidence of the effects of adult sex ratios on behavior, we know little about how sex ratios are perceived or about the potential moderating effects of the age, sex, and fertility of the perceiver. Here, participants heard brief audio clips of simultaneous voices. Perceived sex ratios were highly correlated with actual sex ratios, providing the first evidence that humans have automatic access to auditory sex ratio information. Women showed greater accuracy than men, but only at extremely biased sex ratios. However, as age increased for women, they perceived fewer male voices, accompanying a corresponding decline in fertility. Men's perceived vocal sex ratios remained stable with age and are commensurate with a dramatically slower decline in male fertility. Results suggest that in addition to effects on behavior due to the availability of potential mates, perceived sex ratios are related to the individual characteristics and reproductive capabilities of the perceiver.

Collegiate Fencing: The Interplay between Team Dynamics and Hormonal Responsiveness

Eva Niklinska (University of Notre Dame), Lee T. Gettler (University of Notre Dame)

Testosterone (T) and cortisol (C) often increase during competition, however, individual-level factors such as dominance orientations as well as group dynamics can shape such hormonal responses. Focusing on collegiate fencers ($n = 19$), we tested T and C reactivity to high-rival, low-rival, and teammate competitions relative to teammate-derived talent rankings. Fencers whose T increased likewise showed spikes in C ($p=0.001$). T and C reactivity did not differ by fencers' sex ($p>0.3$). C decreased more ($p=0.054$) and T increased more ($p=0.025$) during teammate than high-rival bouts. Higher ranked individuals had elevated T prior to fencing bouts ($p=0.021$), whereas C levels prior to bouting did not differ by ranking ($p>0.3$). Compared to lower ranked fencers, higher ranked individuals' T increased more during low-rival bouts ($p=0.005$). Our data suggest differences for anticipatory and during-competition T reactivity for higher and lower ranked fencers, highlighting the interplay of individual factors, team dynamics, and psychobiology.

Do Kinship cues influence prosocial behavior in the Ultimatum Game?

Kieran J. O'Shea (University of Glasgow), Iris J., Holzeitner (University of Glasgow), Vanessa Fasolt (University of Glasgow), Anthony J. Lee (University of Glasgow), Benedict C. Jones (University of Glasgow), Lisa M. DeBruine (University of Glasgow)

Inclusive Fitness Theory predicts that many social behaviours will be influenced by relatedness, but does not predict which specific kinship cues may be used as a proxy for genetic relatedness. Here we report preliminary data from an ongoing study where we measured altruistic and reciprocal behaviour between pairs of participants who played a version of the Ultimatum Game. Pairs were given 10 "lab coins" and asked to decide how many coins they wished to give to their partner. The game was modified so that all responses and allocations were made before the other player's decisions were revealed. Participants were rewarded with real money at the end of the experiment. We will report exploratory analyses of the

relationship between various potential cues of kinship and behaviour in this game for pairs of siblings versus pairs of unrelated friends.

Appetite for Destruction: Counterintuitive Effects of Attractive Faces on People's Food Choices

Tobias Otterbring (Karlstad University)

Faces in general and attractive faces in particular attract attention better than almost any other stimuli and are frequently used in marketing, advertising, and packaging design. However, few studies have examined the effects of attractive faces on people's choice behavior. The present research investigates whether exposure to attractive faces increases individuals' inclination to choose either healthy or unhealthy foods. Directly contradictory to the beliefs held by marketing professors, exposure to attractive (vs. unattractive) opposite-sex faces made people more motivated to choose unhealthy rather than healthy foods. This effect was stronger for men (vs. women) and for individuals who perceived themselves as inferior (vs. superior) on self-view-relevant traits, but did not generalize after exposure to attractive same-sex faces. As pictorial exposure is sufficient for the effect to occur, these findings have broad implications for advertising, marketing, and public health.

Body Mass Index (BMI), Facial Width-to-Height Ratio (fWHR), Aggression, and Dominance in Female Undergraduates

Jaime Palmer-Hague (Trinity Western University), Alexandra Fuller (Trinity Western University)

Both facial width-to-height ratio (fWHR) and body mass index (BMI) have been associated with aggression in women, but since they are correlated, individual effects remain unclear. Although recent research suggests that BMI better predicts physical aggression in female professional fighters, the specificity of this population precludes generalization to all women. Similarly, whether BMI or fWHR are indicative of other aggression types (e.g., indirect) or dominance has not been readily investigated. Here we examined the effects of fWHR and BMI on self-reported physical, verbal, and indirect aggression, as well as dominance in 55 female undergraduates. BMI, but not fWHR, was a positive predictor of physical and verbal aggression, but neither significantly predicted indirect aggression or dominance. These results provide further evidence that BMI, compared to fWHR, better signals certain types of aggressive behavior in women. Biomorph indicators of their dominance, however, warrants further study with larger samples and additional status measures.

Total Fertility Rates and Parental Investment and Environmental Adversity: Putting Life History Theory and Parental Investment Theory to a Global Test

Brett Pelham (Montgomery College)

Life history theory predicts that parents in adverse environments adopt faster reproductive strategies. Supporting this idea, a study of 150 nations showed that in nations with higher infant mortality rates, and higher pathogen loads, women began having children younger and had more children. This held true after controlling for variables such as GDP. Infant mortality rates also predicted changes in these outcomes over six decades. Similar patterns held for parental investment (e.g., attitudes about child beating, child labor rates). Consistent with Schmitt (2005), nations in which women were in the statistical minority relative to men also showed evidence of slower reproductive strategies and higher parental investment. Presumably, this last finding is due to the greater social power women have in their marriages under such conditions. This report supported life history theory and parental investment theory in a series of comprehensive and methodologically-rigorous global tests.

General intelligence is a source of individual differences between species

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Evidence of a general factor of intelligence has been found both within (g), and across species (G). Alternatively, studies examining cross-species variation using individual scores have failed to detect a single intelligence factor (Burkart et al, 2016). The degree of species specialization, the modularization of abilities, and the presence of floor and ceiling effects have been considered as causes of this anomaly. To examine the presence of g across species, this study analyzed human children and adult chimpanzees scores on the Primate Cognitive Battery Test. As expected, human children obtained higher scores on more g-loaded tasks. Using coefficients of variation (CV), this project analyzed the degree of unity on a single factor using children and chimpanzees' scores. By sequentially removing tasks with low CVs, this project not only found support for the presence of g between species, but also confirms the effect of species invariance in this type of analysis.

Feeling crowded? Get creative: Crowding cues lead to increases in creative thinking

Marjorie Prokosch (Texas Christian University), Thomas Blue (Texas Christian University), Sarah E. Hill (Texas Christian University)

For years, animal researchers have demonstrated that animals living in crowded environments diversify both body and behavior, opening new resource niches for exploitation. Two studies tested the hypothesis that crowding should also lead to diversity in human psychology, illustrated by increases in creative thinking. Increased creativity would help secure new opportunities for resource acquisition in environments filled with competitors. In both studies, participants viewed a crowding or control prime, then completed measures of creativity. In Study 1, participants completed a measure of openness, a trait positively associated with creativity. Individuals exposed to crowding cues reported more openness than those exposed to the control. In study 2, participants completed self-report and behavioral measures of creativity, followed by measures of resource concern and early environment. Analyses using conditional process revealed that crowding led to increases in creativity, with these ef

Sexual and romantic preferences in written erotica

Giovanni Randazzo (Oakland University), Todd Shackelford (Oakland University)

A content analysis of written erotica will show distinct patterns of sexual preferences in Lesbian, Gay, and Bisexual (LGB) individuals. Understanding sexual preferences may help us better understand our evolutionary past and existing psychological mechanisms. Sexual preferences are well documented in heterosexual individuals. Research on LGB individuals is lacking and inconsistent in explaining or detailing sexual preferences. Written erotica is new to us as a species but dates back to early civilization. Ancestrally we would not have read erotica, but we would have shared erotic stories orally. Therefore, popular erotica should mimic popular oral stories shared ancestrally and contain relatable and desirable material. This content analysis is done by the Linguistic Word Inquiry Count (LIWC). Data gathered via LIWC will be used to test evolutionary theories of sexual preferences found in heterosexual and LGB individuals as well as validate the use of the LIWC for written erotica.

Smiling Faces Sometimes

Lawrence Reed (McLean Hospital/Harvard Medical School), Oliver Scott Curry (University of Oxford)

Smiles and other facial displays are widely seen as signals. Signals are acts that a) affect the behaviors of others, b) evolved because of those effects, and c) are effective because the behavioral responses of others have evolved to be elicited by the act. However, relatively little is known of the mechanism(s) that maintain their reliability. We test the idea that smiles maintain their reliability due to costs incurred by dishonest signalers. Participants played an economic game online with a confederate who behaved selfishly after sending either a neutral or smiling display representing themselves. After learning of the confederate's behavior, participants had the opportunity to spend money to punish the confederate. We found that participants who cooperated spent more money punishing their partners than those who did not. We found a marginal effect of partner's display, suggesting that punishing dishonest signalers plays some role in maintaining the reliability of smiles

Optimal Harvest Strategies for Central Asian Nomads: Pastoral Adaptation to Mixed Cash-Subsistence Economies

Adam Reynolds (Emory University), Paul Hooper (Santa Fe Institute), Stefani Crabtree (Pennsylvania State University), Julia Clark (American Center for Mongolian Studies)

Despite the historical importance and modern day resilience of pastoralism – production based on domestic herds – few models rooted in evolutionary theory have been developed to understand the constraints and decision problems inherent to pastoralist subsistence strategies. We present a new behavioral ecological model and operationalize it with recent quantitative data, aiming to derive insight into adaptation by central Asian nomads to mixed cash-subsistence economies. This evolutionary model characterizes optimal strategies for maximizing long run benefits of herds by balancing tradeoffs affecting rates of animal breeding, slaughter, and market sales at the level of residential groups. We test predictions from the model using data collected through ethnographic fieldwork with nomadic pastoralists in Mongolia and southern Siberia. We emphasize the economics of life history to explain variation in energy harvesting and market participation strategies across residential groups.

Age and gender differences in drug use among hunter-gatherers: social restriction or toxin avoidance?

Erik Ringen (Human Relations Area Files at Yale University), Casey J. Roulette (San Diego State University)

Cross-national patterns of drug use indicate a near-universal absence of use prior to age 10 and, among adults, a significant male bias in use. A recent “neurotoxin regulation” model of drug use interprets these patterns in light of the fact that most globally-popular drugs (e.g., nicotine and cannabis) are plant neurotoxins, suggesting that children and women of childbearing age may be more averse to drugs due to the high costs of toxin exposure (i.e., teratogenic effects or disruption of central nervous system development). Here we utilize ethnographic data from eHRAF World Cultures to examine the demography of drug use among 66 foraging populations. We find that psychoactive drug use is a near-universal among foragers, and that significant age and gender differences in drug use exist even in the absence of strong social regulation, supporting the neurotoxin regulation model of drug use.

Derogation of Known Versus Unknown Competitors in Female Intrasexual Competition

Nina Rodriguez (Texas State University), Judith A. Easton

Previous research identified 17 tactics women use to derogate intrasexual competitors (Buss & Dedden, 1990). We previously conducted a study on individual differences in derogation use and results indicated the 17 tactics formed two factors which we hypothesized were tactics used against a known or unknown competitor. To explore this further, sixty women ($M = 23.57$, $SD = 3.29$) nominated derogation tactics

they would use if they know or do not know their competitor. Confirmatory results suggest women use more self-enhancement and direct negative attacks on known competitors (e.g., revealing sexual history or negative health habits). But when a competitor is unknown, women are more likely to shun the competitor (e.g., ignore her completely or try to make her look dumb). Therefore, when faced with intrasexual competition, we suggest women's mating mechanisms may use information about the type of competitor as input to increase chances of derogation success.

Individual differences in response to “watching eyes” and real cues of observation

Amanda Rotella (University of Guelph), Adam Sparks (UCLA), Sandeep Mishra (University of Regina), Pat Barclay (University of Guelph)

People who prefer to maximize their own gain (individualists) increase cooperation in response to being observed, whereas those who prefer equality in outcomes (prosocials) respond less strategically. We extended this research to investigate individual differences in responses to the “eyes effect”, where people increase cooperation in response to images of watching eyes. Participants classified in advance as prosocials did not vary their contributions in a dictator game according to observation. Individualists gave more money to their partner in public conditions, compared to the eye or control conditions ($d = .28$), although these results did not reach statistical significance. These findings suggest that individualists respond strategically to observation, but only under conditions of real observation and not in response to eyes, whereas prosocials are continuously cooperative even under anonymous conditions. Individual differences in strategic responses to reputational incentives are important for their implications in the evolution and maintenance of human cooperation.

A Measurement Model of Life History

Ruth Sarafin (University of New Mexico)

Life history theory explains how people use limited resources and time major life events to maximize their fitness. This theory has the potential to explain human variance in a number of traits and preferences, yet the recent explosion of evolutionary psychology papers in this area has been undermined by a lack of clear measurement model of this latent construct. Participants completed a battery of assessments pertaining to life history, and measurement model analysis, a type of latent analysis, was employed to identify significant indicators of life history strategy.

Dynamic Change, Social Networks, and Ecological Claims: Current and Future Work on the Alaskan Peninsula

Shane Scaggs (Oregon State University), Drew Gerkey (Oregon State University)

Dramatic processes of social and environmental change are occurring throughout Alaskan villages. Researchers approach this from a variety of perspectives that all intersect on the vulnerability of subsistence livelihoods. As these changes persist, access to culturally and economically significant resources becomes increasingly tenuous, providing an impetus for studies of foraging, food sharing, and ecology. We collected complete salmon sharing networks and conducted harvest surveys on nearly every household in 6 villages on the Alaskan Peninsula. We used key respondent interviews with informants from each village to contextualize sharing behavior and domains of sociocultural, and environmental change. With networks, we can test models of the evolution of cooperative social behavior and resilience to environmental disturbance. Ecological claims help conceptualize the relationships between biotic and abiotic factors, and the future of subsistence. Insights from local

ecological knowledge lay foundations for future research on this socio-ecological system, including ecological interaction webs, in which humans are embedded.

Transmission of Animal “Personality Profiles” Via Forager Oral Tradition

Michelle Scalise Sugiyama (University of Oregon)

Among foragers, hunting depends on extensive knowledge of animal behavior, habitat, and characteristics. This is evinced in the use by hunters of “personality profiles”--synopses of distinctive animal traits--to facilitate prediction of animal behavior. Tellingly, stories that identify and describe distinctive animal traits appear recurrently in forager oral tradition. These tales are often mythical, but describe actual traits, and may thus serve as a database of zoological knowledge stored and retrieved as “personality profiles.” If this hypothesis is correct, animal tales should: (1) be present across forager oral tradition; (2) foreground animals that are significant resources, hazards, competitors, or ecological cues in local habitats; and (3) describe traits that are useful for identifying, predicting availability of, locating, stalking, killing, and/or avoiding dangerous encounters with animals. This study presents cross-cultural evidence in support of these predictions.

Contagious Yawning as an Affiliative Behavior: Ingroup Outgroup Bias in Contagious Yawning across Race and Gender

Melanie Shoup-Knox (James Madison University), Daroon Jalil (James Madison University)

Among chimpanzees, contagious yawning only occurs in response to ingroup members’ yawns. Evolutionary Psychologists often consider race to be a marker of ingroup or outgroup status. We asked whether contagious yawning could be a subtle affiliative signal towards individuals of similar race and gender. Black and white males and females were recruited to view videos of individuals from each race and gender category yawning, while the experimenter documented the number of yawns in response to each video. Results showed that individuals yawned significantly more while viewing members of their same race yawning than when viewing members of a different race yawning. There was no effect of gender on yawning. Empathy, which has been shown to predict contagious yawning, was measured using the Interpersonal Reactivity Scale (Davis, 1983), but did not significantly predict the number of yawns among all participants combined or when examined within each race/gender subgroup. These findings suggest that race is a more salient ingroup cue than gender, and that this affiliative behavior is independent of individual levels of empathy.

Gender differences in the Stroop Colour-Word Test: a meta-analysis

Espen Sjoberg (Oslo and Akershus University College of Applied Sciences), Thom Baguley (Nottingham Trent University), Geoff Cole (University of Essex)

The Stroop test is a measure of inhibition. An extension of parental investment theory propose that women should outperform men, due to females employing a more choosy (inhibiting) mating strategy compared to males. Despite over 80 years of Stroop research, a thorough systematic analysis of gender effects has never been conducted. Using the meta-analysis approach, we found a total of 126 effect sizes from 60 studies. Results found a significant overall female advantage, but with a very small effect size, $d = 0.12$. Furthermore, gender differences consistently decreased with age, varied somewhat across cultures, and versions of the task employing reaction time showed larger gender differences than counting versions. Considering that the results varied across cultures, and that gender differences were larger in children compared to adults, we suggest that an evolutionary explanation for our findings is unlikely.

Impulsivity or optimal foraging: a review of delay discounting in an animal model of ADHD

Espen Sjoberg (Oslo and Akershus University College of Applied Sciences), Espen B. Johansen (Oslo and Akershus University College of Applied Sciences)

The delay discounting paradigm involves choosing between a small, immediate reinforcer (SS) or larger, delayed reinforcer (LL). In an animal model of ADHD, the Spontaneously Hypertensive Rat (SHR), the rats tend to prefer the smaller reward as time between response and reinforcer increases for the larger reward. This is typically interpreted as impulsivity, but an alternative hypothesis is that the rats are making choices in accordance to optimal foraging. We review data from available SHR studies. Our findings show that SHRs and controls do not differ significantly in performance, and that both groups are acting non-optimally. An exception is if utility is held constant while the response-reinforcer delay is increased: here, the SHRs switch from LL to SS faster than controls. The results suggests that the rats are impulsive rather making decisions to optimize foraging, which is in line with studies on humans.

Gender differences in a negative priming Stroop task

Espen Sjoberg (Oslo and Akershus University College of Applied Sciences), Antonia D'Souza (University of Essex), Geoff Cole (University of Essex)

The evolved inhibition hypothesis proposes that women should outperform men on inhibition tasks due to sex differences in mating strategies. One measure to investigate inhibition is the Stroop Colour-Word task, where previous research has found a small female advantage. However, it is unclear whether this advantage reflects superior inhibition or verbal abilities in females. We propose a comparison of performance between a standard Stroop task and a negative priming Stroop task, where inhibition is substantially harder during negative priming. Results showed a significant female advantage on both tasks, and performance for both genders was lower in the negative priming task. No significant interaction between gender and Stroop task type was found. This suggests that the female advantage on the Stroop task is not due to women expressing superior inhibition abilities compared to men. Instead, it is likely that women possess better verbal abilities and can name the ink colours faster.

Anthropopsychiatry: The Fourth Revolution in Psychiatry and the Comprehensive Science of Human Behavior

William Skiba

The integration of biological anthropology and evolutionary theory to academic psychiatry is way overdue. In my opinion and experience, we now have a critical mass of knowledge in psychiatry, neuroscience, biological anthropology, biochemistry and genomics to where it is clinically and theoretically useful. But we do not have a critical mass of multidisciplinary, cross-trained practitioners. I will review the status and history of this. I will analyze the resistance to this multidisciplinary approach, including the intertwined effects of conscious, unconscious, and institutional resistance. Finally, I will discuss the increasingly pressing need for a "macropsychiatry" to deal with the problems of the Anthropocene and the Sixth Extinction. These issues are largely behavioral problems, requiring human cooperation and long-term planning.

Work parties and manioc beer in an indigenous Trio village (Suriname)

Cole Tobin (University of Missouri-Columbia), Rob Walker (University of Missouri-Columbia)

Social and material incentives are mechanisms that can help promote and sustain large-scale cooperation, in human societies. Manioc is commonly fermented into beer across much of Amazonia and may serve to incentivize people to participate in work parties. However, the extent to which manioc beer influences others to cooperate is not fully understood. We collected work party data amongst the Trio, an indigenous horticultural society located in southern Suriname. In particular, social networks were produced by collecting data on cooperative production (e.g., hunting, fishing, farming, and construction). Three types of work parties were documented: female, male, and mixed sex. We show that when a host provides manioc beer the median size of work parties are 3 times larger than male work parties without manioc beer, and 6 times larger than female and mixed sex work parties that are also without beer. Hence, beer is used to recruit individuals to participate in large scale cooperative behavior and represents a social norm involving the exchange of manioc beer for labor. The data collected from this study provides an ethnographic account of how social and material incentives increase the scale and complexity of human cooperation.

Do adult sex ratio and violent crime rates predict regional variation in facial dominance perceptions? Evidence from an analysis of US states

Jaimie Torrance (Institute of Neuroscience and Psychology, University of Glasgow), Michal Kandrik (University of Glasgow), Anthony Lee (University of Glasgow), Lisa DeBruine (University of Glasgow), Ben Jones (University of Glasgow)

When adult sex ratio of the local population is female biased, men face greater costs due to increased direct intrasexual competition. In order to mitigate against these costs, men may be more attuned to cues of other men's physical dominance under these conditions. Consequently, we investigated the relationships between the extent to which people ($N=3586$) ascribed high dominance to masculinized versus feminized faces and variation in adult sex ratio and violent crime rates across US states. Linear mixed models showed that masculinized faces were perceived as more dominant than feminized faces, particularly for judgments of men's facial dominance. Dominance perceptions were weakly related to adult sex ratio, but not violent crime rates, and these relationships were not moderated by face sex, participant sex, or their interaction. Thus, our results suggest that dominance perceptions are relatively unaffected by broad geographical differences in adult sex ratio and violent crime rates.

Selective memory and the sex ratio: Attractive women have better memory for how men look when men outnumber women

Christopher Watkins (Division of Psychology, Abertay University), David Perrett (University of St Andrews)

While the sex ratio is important in nonhuman mate choice, we do not know if it shapes memory for cues to quality in humans. Better memory for the attractiveness (or general appearance) of individuals within the majority sex may be adaptive for exercising choice or retaining knowledge of competitor appearance in light of the environment. The current experiment manipulated the perceived sex ratio and receptivity (smiling versus neutral faces) of the local population via pictorial slideshows presented in between an old/new memory task for faces manipulated in attractiveness. Here, a receptive (smiling) local population had a more substantial effect on memory for appearance than did facial attractiveness. Regardless of sex ratio, women were better at retaining information about women's appearance.

However, following male-biased sex ratios, attractive women were better at retaining information about men's appearance, suggesting that 'market forces' moderate women's memory for how men look.