

The Human Behavior and Evolution Society

22nd Annual Meeting



University of Oregon, Eugene
June 16 – 20, 2010

22nd Annual Meeting of the Human Behavior and Evolution Society

University of Oregon, Eugene, OR, June 16th-20th

Welcome to HBES 2010. Your conference hosts are Larry Sugiyama and Michelle Scalise Sugiyama, with indispensable on-site assistance from Gary Brase.

The Program Committee consists of Ed Hagen, Eric Alden Smith, Clark Barrett, and Larry Sugiyama, with critical assistance from Nichole Hess. The website manager is Aaron Blackwell.

Acknowledgements

The HBES 2010 Organizing Committee would like to thank the following people for all of their work:

Klaree Boose	Melissa Liebert	Terry Rueckert	Carley Smith
Tara Cepen	Felicia Madamenos	Julia Ridgeway	Nick Sugiyama
Tiffany Gandolfo	Erica Midttveit		

Special thanks to Leah Frazier and Vonda Evans for their patient, generous efforts on behalf of the conference. We also wish to thank this year's judges:

New Investigator Competition

Steve Gangestad
Ray Hames
Tom Dickins

Postdoctoral Competition

Dan Fessler
Frank Marlowe
Peter Todd

Poster Competition

Larry Fiddick
Kermyt Anderson
Greg Bryant

Lifetime Achievement Award Committee

Martin Daly, Randy Thornhill, Elizabeth Cashdan

Early Career Achievement Committee

Rob Kurzban, Alan Fiske, Bruce Ellis

Support

We are grateful for support from a UO College of Arts and Sciences Program Grant (Scott Coltrane, Dean), UO Vice President and Dean of Research Richard Linton, Institute of Cognitive and Decision Sciences (Frances White, Director), Anthropology Department (Carol Silverman, Chair), Psychology Department (Lou Moses, Chair), Center for Ecology and Evolutionary Biology (Pat Philips, Chair), UO Museum of Natural and Cultural History (John Erlandson, Director) and Moonshadow Mobile (Eimar Boesjes, President).

HBES Officers

Pete Richerson (*President*)
Randy Thornhill (*President Elect*)
Steve Gangestad (*Past-President*)
Ray Hames (*Treasurer*)
Rob Kurzban (*Secretary/Archivist*)
Carolyn Hodges (*Student Rep*)
Kate Hanson Sobraske (*Student Rep*)

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Martie Haselton
Debra Lieberman
Sara Hrdy
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Todd Shackelford
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(*Publications Committee Chair*)
Debra Lieberman
(*Newsletter and Website*)
Steve Gaulin, Ruth Mace,
and Dan Fessler
(*EHB Editors-in-Chief*)

Cover Art

The graphic for this year's program cover and t-shirt was designed by Eugene artist, Nicholas Sugiyama. The image depicts the foraging niche in its Columbia River Basin incarnation. For thousands of years, people gathered at The Dalles (narrows) of the Columbia to fish from rock islands or wooden platforms extending over the water. Dip nets with 20-foot-long handles were used to intercept salmon as they leapt up the 12-mile-long series of cascades and rapids. This was a challenging task: mature salmon weighed up to 60 pounds, and fishermen were frequently swept off platforms in the course of landing their catch.

An estimated 15 to 20 million salmon passed through The Dalles each year, making it one of the most important fishing and trading sites on the continent. The uppermost cascade and village, Celilo Falls, was the oldest continuously inhabited community on the continent until March 10, 1957, the day that The Dalles Dam began operation. Members of the Warm Springs, Yakima, and Umatilla nations looked on as the water rose behind the dam, swallowing the falls and their ancient village in less than 6 hours. Despite this incalculable loss, dip net fishing for salmon continues to be an important practice for tribal members today.

GENERAL CONFERENCE INFORMATION

Registration. On Wednesday, registration will be just outside the Fir Room in the Erb Memorial Union (EMU), from 3:00-9:30 pm. Thursday and Friday registration will be in the EMU Ballroom Lobby, between 8:30 am and 3:00 pm.

Dorms are in the Living Learning Center (LLC) located off E. 15th Ave. across from Hayward Field. HBES guest check-in begins Wednesday at 3:00 pm at the Living Learning Center Area Desk, which is open from 7:00 am to 8:00 pm every day. To check in after 8:00 pm, call the Dorm Conference Hotline: 541-346-5686. Dorm guests must check out by 5:00 pm Sunday (those staying until Monday must check out by noon). Those checking out before 7:00 am or after 8:00 pm may deposit their keys in the green drop box outside the LLC. Do not lose your keys: substantial financial penalty applies.

Parking. Parking permits are available for \$8 per day/night through the UO Department of Public Safety, 1319 East 15th Avenue, just west of the LLC. Cash and Mastercard/Visa are acceptable forms of payment.

Internet Access. All registered conference participants have free access to the UO wireless service. A temporary password and login instructions have been included in your registration materials. If you do not have a laptop, computers are available in the Knight Library during operating hours.

Talks. The Keynote Address and Plenary talks will be in the EMU Ballroom. All other talks will be in the Lillis Business Complex. Presenters should save talks to flash drive in PC format, and load them onto presentation room computer at least 10 min prior to the time of their session. No Macs are available.

Posters. The Poster Wine and Desert Session takes place on Thursday from 7:30–10:00 pm in the EMU Fir Room. Presenters set up posters from 6:00-7:00 pm. Posters may be no more than 36” wide and up to 60” long, and may be taken down immediately after the Session or the following morning. Each presenter has been assigned a numbered space in which to hang their poster. To ease congestion, we ask that presenters with odd-numbered spaces be present beside their poster for the first hour of the event, and that presenters with even-numbered spaces be present beside their posters for the second hour of the event.

Open Business Meeting will take place in the EMU Ballroom on Saturday from 12:20–1:20.

Book Display will be in the Lillis Atrium for the duration of the conference.

Athletic Facilities. The U of O Recreation Center is located on 1320 East 15th and is open weekdays from 6:00 am – 8:00 pm (closed weekends). Facilities include exercise machines and weights, a pool, indoor climbing wall, and tennis and racquetball courts. To use the facilities, present ID at the front desk and tell them you are affiliated with the HBES conference. A 1-day pass is \$6 and a 3-day pass is \$15. There are also several running/biking trails around campus and throughout Eugene. For an overview of trails, see www.eugenerunningcompany.com or www.run.com/city.asp?dest=Eugene+OR.

Useful Phone Numbers (NB: In Oregon, you must dial the area code of the number you are calling):

Facilities Services	541-346-2319	non-emergency (water leaks, burning smell, etc.)
Dept. of Public Safety	541-346-6666	security, medical or fire emergency
Security Escort Service	541-346-5444	Office of Public Safety. Women can request a security escort after dusk: limited by available personnel

Women’s Center: Reservation Line: 346-4239, TTY: 346-0643. Free rape-prevention shuttle service provides females a safe alternative to walking alone at night. Reservations only accepted on day of ride on first-come first-serve basis: restrictions apply.

Assault Prevention Shuttle 541-346-RIDE ext 2 (please check rules on website before seeking service)

Eugene Police Emergency 911

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QUICK SCHEDULE

Wednesday

Conference Registration	3:00-9:30 pm	EMU Skylight Area
Welcome Reception (no-host bar)	6:30-9:30 pm	EMU Skylight Area

Thursday - Saturday

Registration (Thurs-Fri)	8:30-3:00 pm	EMU Ballroom Lobby
Coffee	8:30-9:00 am	EMU Ballroom Lobby
Morning Plenary Address	9:00-10:00 am	EMU Ballroom
Break	10:00-10:30 am	EMU Ballroom Lobby
Morning Sessions	10:30 am -12:10 pm	Lillis Business Complex
Lunch	12:10-1:30 pm	
Afternoon Plenary Address	1:30-2:30 pm	EMU Ballroom
Break	2:30-3:00 pm	EMU Ballroom Lobby
Early Afternoon Sessions	3:00-4:20 pm	Lillis Business Complex
Break	4:20-4:40 pm	Lillis Rotunda
Late Afternoon Sessions	4:40-6:00 pm	Lillis Business Complex
Book Display	9:00 am-5:00 pm	Lillis Lobby

Sunday

Coffee	8:30-9:00 am	Lillis Rotunda
Early Morning Sessions	9:00-10:40 am	Lillis Business Complex
Break	10:40-11:00 am	Lillis Rotunda
Late Morning Sessions	11:00 am-12:20 pm	Lillis Business Complex

Special Events

Welcome Reception(no-host bar)	Weds, 6:30-9:30 pm	EMU Skylight Area
Poster Session (no-host bar)	Thurs, 7:30-10:00 pm	EMU Fir Room
Banquet, Keynote Address and Lifetime Achievement Award		
Presentation to Napoleon A Chagnon	Fri, 7:00-10:00 pm	EMU Ballroom
Barbecue and Awards (no-host bar)	Sat, 6:30-9:30 pm	EMU East Lawn

Keynote and Plenary Speakers

David Haig, Keynote Address	Fri, 9:00-10:00pm	EMU Ballroom
Kim Hill	Thurs, 9:00-10:00am	EMU Ballroom
Carl Bergstrom	Thurs, 1:30-2:30pm	EMU Ballroom
Susan Carey	Fri, 9:00-10:00am	EMU Ballroom
Susan Perry	Fri, 1:30-2:30pm	EMU Ballroom
Plenary in Honor of Margo Wilson	Sat, 9:00-10:00am	EMU Ballroom
Mark Pagel	Sat, 1:30-2:30pm	EMU Ballroom

Meetings

Publication Committee Meeting	Thurs, 12:15-1:20 pm	Condon 313
Graduate Student Brownbag	Thurs, 12:15-1:20 pm	EMU Ballroom Area
Executive Committee Meeting	Fri, 12:15-1:20 pm	Condon 313
Open Business Meeting	Sat, 12:15-1:20 pm	EMU Ballroom

THURSDAY MORNING, JUNE 18th

8:30-9:00		Coffee Break		
9:00-10:00		Plenary Address: EMU Ballroom CAS Dean Scott Coltrane Welcoming Remarks <i>The Emergence of Human Uniqueness</i> Kim Hill		
10:00-10:30		Coffee Break		
ROOM	Lillis 182	Lillis 282	Lillis 211	Lillis 112
SESSION	Cooperation: evolutionary models	Ingroup/outgroup psychology	Menstrual cycle	Personality
10:30 – 10:50	Biological markets, partner choice, and the evolution of competitive altruism <i>Barclay, P</i>	Genetic Evidence for Multiple Biological Mechanisms Underlying In-group Favoritism <i>Bates, TC, Lewis, G</i>	Methodological Issues in Menstrual Cycle Research <i>Brown, SG</i>	Do Highly Adaptive Personalities Lean Left or Right? Politics and the General Personality Factor: A Behavior Genetic Study <i>Bell, E, Aitken Schermer, J, Vernon, PA</i>
10:50 – 11:10	Linked Reputation Dynamics <i>Chudek, M, Bhui, R, Henrich, J</i>	Follow the Leader: Endorsement as a cue of political coalition <i>Curry, O, Bang Petersen, M, Tooby, J, Cosmides, L</i>	Detection of ovulation through scent cues: A study of women with hormonally-confirmed ovulation <i>Gildersleeve, KA, Larson, C, Pillsworth, E, Haselton, M</i>	Sexual selection, the imprinted brain, and the evolution of autistic personality traits <i>Del Giudice, M</i>
11:10 – 11:30	Trust and Parochial Transaction in Markets as Exchange Networks <i>Kim, J</i>	Out-group Men Are Predators to the Human Mind: Conditioned Fear to Out-group Male Faces Resist Extinction <i>Navarrete, CD, Asher, BD, McDonald, MM</i>	Ovulation as a Male Mating Prime: Subtle Signs of Female Fertility Influence Men's Mating Cognition and Behavior <i>Miller, SL, Maner, JK</i>	Should evolutionary personality psychology be focused on the HEXACO instead of the Five Factor Model? Evidence from altruism and hazard management. <i>Fiddick, L</i>
11:30 – 11:50	How might apes cooperate to raise their young? <i>Newson, L, Bell, A, Richerson, P</i>	Illusory conjunctions of angry facial expressions follow intergroup biases <i>Neel, R, Becker, D, Anderson, U</i>	Tests of the stress-linked Immunocompetence Handicap Hypothesis in human male faces <i>Moore, F, Perrett, D</i>	The origins of extraversion: Joint effects of facultative calibration and functional genetic <i>Lukaszewski, AW, Roney, JR</i>
11:50 – 12:10	Helping cooperation: Competitive altruism vs. indirect reciprocity <i>Sylwester, K, Roberts, G</i>	Ancestral conditions make modern day predictions: What we have learned about humans' representation of race, sex, and accent using an adaptationist framework. <i>Pietraszewski, D</i>	The Effects of the Menstrual Cycle on Consumption <i>Saad, G, Stenstrom, E</i>	When agreeable is selfish: Physical safety threats predict individual and cross-national expression of agreeableness <i>White, AE, Mortensen, CR, Li, YJ, Cohen, AB</i>

THURSDAY EARLY AFTERNOON, JUNE 18th

12:15-1:30		Lunch Break		
ROOM	Condon 313		EMU Ballroom Area/Lobby	
12:15-1:20	Publication Committee Meeting		Graduate Student Brownbag: Organizing your digital research library using free online programs	
1:30-2:30				
Plenary Address: EMU Ballroom				
Dealing with Deception Carl Bergstrom				
2:30-3:00				
Coffee Break				
ROOM	Lillis 182	Lillis 282	Lillis 211	Lillis 112
SESSION:	Life History Strategy and Cognitive Functions Organized by: Figueredo, AJ.	Aggression and war	Environmental cognition 1	Evolution and the social sciences
3:00 – 3:20	Interpersonal Violence, Cognitive Schemata, and Life History Strategy Figueredo, AJ, Gladden, PR, Beck, CJ	Mine and Thine: The Foundations of Human Property DeScioli, P, Wilson, B	Snake scales and leopard rosettes attract the attention of 5 month-old infants Coss, RG, Nelson, M	Misrepresentations of Evolutionary Theory in Social Science Textbooks Deaner, RO, Winegard, BM, Winegard, BM
3:20 – 3:40	Life History Strategy, Morality, and Disease Avoidance: Conservatism, Disgust, and Flexible Cognitive Control Mediate the relationship between Slow Life History and Inter-group Attitudes Gladden, PR	Breastfeeding and maternal aggression in humans: Is oxytocin the link? Hahn-Holbrook, JA, Holt-Lunstad, J, Holbrook, C	Rapid detection of visually provocative animals by preschool children and adults Penkunas, MJ, Coss, RG	The Economic Psychology of Television Advertising Hanks, AS, Smith, TG, Tasnadi, A
3:40 – 4:00	Life History Strategy and Creativity Brown, S, Figueredo, AJ	Are Taller People More Competitive? Hoffman, M, Fessler, D, Gneezy, U, List, J	The adaptive basis of anthropoid neocortex evolution Smaers, J, Vinicius, L, Foley, R	Small is Beautiful? Evolutionary perspectives on big organizations Kniffin, K
4:00 – 4:20	The development of sexual aversions and altruistic motivations among communally raised Kibbutz members Lieberman, D	The collective action problem in warfare: data from cattle raiding among Turkana pastoralists Mathew, S	Cognitive adaptations for learning about plants in human infants Wertz, AE, Wynn, K	Large-scale politics as small-scale interaction: Public opinion in the face of evolutionary recurrent Petersen, MB
4:20-4:40				
Coffee Break				

THURSDAY LATE AFTERNOON, JUNE 18th

ROOM	Lillis 182	Lillis 282	Lillis 211	Lillis 112
SESSION:	Morality	Cooperation: Defection, Punishment, Spite, and Sharing	Environmental Determinants of Life History Strategy: Financial Decisions, Aggression, Physical Health, and Mental Illness Organized by: <i>Griskevicius, V</i>	Environmental Cognition 2
4:40 – 5:00	The (co)-evolution of commensality and morality <i>De Backer, CJ, Braeckman, J</i>	Males with stress-induced cortisol elevation are judged to be cooperators <i>Kiyonari, T, Takahashi, T, Furukawa, M, Schug, J, Innukai, K, Shinada, M, Hasegawa, T, Yamagishi, T</i>	Environmental Contingency in Life History Strategies: Influences of Current and Childhood Environment on Risky Decisions <i>Griskevicius, V, Tybur, JM, Delton, AW, Robertson, TE</i>	Bitter Struggle for Survival: Evolved Embodiment of Survival Motivation <i>Chen, B, Chang, L</i>
5:00 – 5:20	Bimodal distribution of aggression norms in three populations: Evidence for hawks and doves? <i>Hagen, E</i>	The ‘Spiteful’ Origins of Human Cooperation <i>Marlowe, FW, Berbesque, J, Barrett, HC, Bolyanatz, A, Tracer, D, Gurven, M</i>	Environmental determinants of incipient life history strategy: Distinguishing harshness and unpredictability <i>Ellis, B, Belsky, J, Schlomer, G</i>	Evolved Navigation Theory and experimentally deleting a source of selection in navigation. <i>Jackson, RE, Cormack, LK</i>
5:20 – 5:40	Sex, Drugs, and Moral Goals: Reproductive Strategies & Views About Recreational Drugs <i>Kurzban, R, Dukes, A, Weeden, J</i>	Costly punishment does not always increase cooperation <i>Wu, J, Zhang, B, Zhou, Z, He, Q, Zheng, X, Cressman, R, Tao, Y</i>	Health related correlates of life history strategy in a representative community sample <i>Kruger, DJ, Figueredo, AJ</i>	A Functional Account of Motion-Induced Blindness: The ‘Perceptual Scotoma’ Hypothesis <i>New, JJ</i>
5:40 – 6:00	Moral Dutifulness as Exapted Submissiveness <i>Tresan, J</i>	If sharing is not a form of exchange, then what is it? Circulation of resources by hunter-fisher-trappers in north central Siberia <i>Ziker, JP</i>	An Adaptationist Approach to the Two Factor Model of Psychopathy: Fast and Slow Life History <i>McDonald, MM, Navarrete, CD</i>	Testing the adaptive match between food memory and food experiences <i>Todd, PM, Sanders, KM, Gardner, KM</i>
6:00 – 7:30	Dinner Break			
	EMU Fir Room			
7:30-10:00	Poster Session, Dessert Social			

FRIDAY MORNING, JUNE 18th

8:30-9:00					Coffee
9:00-10:00					Plenary Address: EMU Ballroom <i>The Origin of Concepts: Representations of the Social World</i> Susan Carey
10:00-10:30					Coffee
ROOM	Lillis 182	Lillis 282	Lillis 211	Lillis 112	
SESSION	Destructive tactics in mating: the evolution of cost-inflicting strategies Organizers: Buss, D, Jones, D, Jonason, PK.	Adaptationist Approaches to Human Dyadic Cooperation Organized by: Krasnow, M.	Disease and sociality	Evolution of Developmental Systems Organized by: Ploeger, A	
10:30 – 10:50	Mating Motives for Warfare <i>Duntley, JD, Buss, DM</i>	Anger in cooperative relationships <i>Sell, A</i>	The Social Impact of Pathogen Threat: How Disease Salience Influences Conformity? <i>Bao-Pei, W, Lei, C</i>	Integrating evolutionary psychology and developmental science: Where do we stand? <i>Ploeger, A</i>	
10:50 – 11:10	The Evolution of Stalking <i>Buss, DM, Duntley, JD</i>	Your life or mine? Reported welfare tradeoff ratios when the currency is survival <i>Kim, S, Tooby, J, Cosmides, L</i>	Parasite-stress promotes in-group assortative sociality: the cases of strong family ties and heightened religiosity. <i>Fincher, C</i>	Development as Explanation: Exploring the Dynamics of Development and Evolution <i>Lickliter, R</i>	
11:10 – 11:30	Love in the age of narcissism (and psychopathy and Machiavellianism) <i>Jonason, PK</i>	A Computational Approach to Cooperation and Emotions <i>Lim, J</i>	Parasite Stress May Cause Non-State Wars, Revolutions and Coups, Terrorism, and the Absence of Peace Across the World <i>Letendre, K, Fincher, CL, Thornhill, R</i>	The development of children's social dominance relationships: Reconciling the WHY (function) with the HOW (ontogenetic change) <i>Hawley, PH</i>	
11:30 – 11:50	Sexual Coercion and the Dark Triad <i>Sisco, MM, Gladden, PR, Figueredo, AJ</i>	What are punishment and reputation for? Critical tests. <i>Krasnow, M, Pedersen, E, Tooby, J, Cosmides, L</i>	Disease Prevalence and the Origins of Cross-Cultural Differences in Conformity <i>Murray, D, Schaller, M</i>	Learning to live: A model Integrating evolutionary and developmental adaptation <i>Frankenhuis, WE, Panchanathan, K</i>	
11:50 – 12:10	Raising another man's child because of a Machiavellian wife: Differences in infidelity tactics among the Dark Triad <i>Jones, DN, Paulhus, DL</i>	X-raying the soul: Cheater detection is designed to look for guilty minds <i>Cosmides, L, Barrett, HC, Tooby, J</i>	Extending the Behavioral Immune System to Political Psychology: Are Political Conservatism and Disgust Sensitivity Really Related? <i>Tybur, JM, Merriman, LA, Caldwell, AE, McDonald, MM, Navarrete, C</i>	What evolution adds and what it takes away: Thinking through developmental constraints <i>Barrett, HC</i>	

FRIDAY AFTERNOON, JUNE 18th

12:15-1:30		Lunch Break		
ROOM		Condon 313		
12:15-1:20		Executive Committee Meeting		
1:30-2:30		Plenary Address: EMU Ballroom <i>Coalitions and “culture” in wild white-faced capuchins monkeys, <i>Cebus capucinus</i>: a 20-year study.</i> Susan Perry		
2:30-3:00		Coffee		
ROOM	Lillis 182	Lillis 282	Lillis 211	Lillis 112
SESSION:	Adaptationist Approaches to Human Group Cooperation Organized by: Delton, A	Mating: jealousy	Cultural transmission and Social Signals	Life history
3:00 – 3:20	Moral warfare: Group cooperation and the invention of the moral domain. <i>Tooby, J, Cosmides, L</i>	Maintaining Social Relations is a Key to Infidelity Reactions <i>Geher, G, Fisher, M, Cox, A, Tran, U, Hoben, A, Arrabaca, A, Chaize, C, Dietrich, R, Voracek, M</i>	Perceptions of trait and identity transmission from a cross-cultural and developmental perspective <i>Moya, C, Henrich, J, Boyd, R</i>	The early lives and physical development of British teenage mothers: evidence from the National Child Development Study <i>Dickins, T, Nettle, D, Coall, D</i>
3:20 – 3:40	The ancestral logic of politics: Fighting ability and resource level shape attitudes about income distribution. <i>Sznycer, D, Petersen, MB, Sell, A, Cosmides, L, Tooby, J</i>	Infidelity and women’s coerced first sexual intercourse in Chinese college students’ dating <i>He, S</i>	Social learning for honey hunting across the lifecycle. A case study among the Jenu Kuruba, <i>Demps, K, Zorondo-Rodriguez, F, Garcia, C, Reyes-Garcia, V</i>	Relationship Quality and Men's Oxidative Stress <i>Merriman, LA, Gangestad, SW, Thompson, ME</i>
3:40 – 4:00	Adaptations for Collective Action: Distinguishing Free Riders from Other Non-Contributors <i>Delton, A, Nemirow, J, Robertson, T, Cimino, A</i>	Do women fake orgasm to retain a mate? <i>Kaighobadi, F, Shackelford, TK, Weekes-Shackelford, VA</i>	Social Signal Detection <i>Becker, DV</i>	Brothers delay the onset of reproductive maturity and sexual activity in their sisters. <i>Milne, FH, Judge, DS</i>
4:00 – 4:20	A Psychological and Anthropometric Study of Social Support and Risk Reduction in Humans <i>Robertson, T, Delton, A, Tooby, J, Cosmides, L</i>	A Dark Side to Romantic Love: Heightened Vigilance to Attractive Intrasexual Rivals <i>Maner, J, Leo, J</i>	An Evolutionary Perspective on Humor: Sexual Selection or Interest Indication? <i>Li, NP, Griskevicius, V, Durante, KM, Jonason, PK</i>	Perception of Life History Strategy, Mate Value, and Mating Effort at Zero Acquaintance <i>Olderbak, S</i>
4:20-4:40		Coffee		

FRIDAY LATE AFTERNOON, JUNE 18th

ROOM	Lillis 182	Lillis 282	Lillis 211	Lillis 112
SESSION:	Cultural transmission 2	Mating: strategies	Parental investment tradeoffs	Disease, immune system, and life history
4:40 – 5:00	Social influence on the diffusion of cultural innovation: the case of modern of modern <i>Alvergne, A, Gerner, E, Mace, R</i>	Let's Get Serious: Communicating Commitment in Romantic Relationships <i>Ackerman, JM, Griskevicius, V, Li, NP</i>	Rural urban migration in Ethiopia: importance of wealth and family configuration <i>Clech, L</i>	Parasite transmission, resource competition, and life history allocations: The effects of family composition on the growth and immune function of Shuar children <i>Blackwell, AD, Snodgrass, JJ, Madimenos, FC, Liebert, MA, Sugiyama, LS</i>
5:00 – 5:20	Cultural Adaptations to Environmental Variability: An Evolutionary Account of East-West <i>Chang, L, Wu, B, Chen, B, Lu, H</i>	Short-Term Mating Shaped the Evolution of Narcissism: An Emerging Hypothesis <i>Holtzman, NS, Strube, MJ</i>	Family structure and child growth in rural Timor-Leste <i>Judge, DS, Reghupathy, N, Schmitt, L, Sanders, K</i>	Market integration, evolutionary mismatches, and the emergence of hypertension, high cholesterol and type 2 diabetes among indigenous Shuar of neo-tropical Ecuador <i>Liebert, MA, Snodgrass, JJ, Blackwell, AD, Madimenos, FC, Sugiyama, LS</i>
5:20 – 5:40	The evolution of prestige-biased transmission <i>Panchanathan, K</i>	The Who and Whom of Sexual Misperception <i>Perilloux, C, Easton, JA, Fleischman, DS, Buss, DM</i>	Hormonal platform for conception in natural fertility populations: Lactation and ovulation <i>Lancaster, JB, Alvarado, LC</i>	Mere Visual Perception of Others' Disease Symptoms Facilitates a More Aggressive Immune Response <i>Gervais, WM, Schaller, M, Chen, E, Miller, G, Yager, S</i>
5:40 – 6:00	Using the Lotka-Volterra Approach to Modeling Cultural Evolution <i>Richerson, PJ, Efferson, C, Boyd, R</i>	Features of the Dating Ecology: Implications for Sexual Strategies <i>Pirlott, A, Cohen, A</i>	Female Reproductive History and Bone Health among Shuar and Colonos from the Ecuadorian Amazon: A Life History Theory Perspective <i>Madimenos, FC, Snodgrass, J, Blackwell, AD, Liebert, MA, Sugiyama, LS</i>	Waist-hip Ratios of Imaginary Women: What Happens when Mating Preferences Are Unconstrained by Anatomy? <i>Lassek, W, Gaulin, S, Andrews, A</i>
ROOM	EMU Ballroom			
7:00-9:00	BANQUET AND AWARD PRESENTATION Lifetime Achievement Award: Napoleon A Chagnon			
9:00-10:00	KEYNOTE ADDRESS DAVID HAIG <i>Prader-Willi syndrome and the evolution of human childhood</i>			

SATURDAY MORNING, JUNE 19th

8:30-9:00		Coffee		
9:00-10:00		EMU Ballroom <i>Plenary Session in Honor of Margo Wilson</i> With: Martin Daly, Randy Thornhill, John Tooby, Leda Cosmides, Mel Rutherford		
10:00-10:30		Coffee		
ROOM	Lillis 182	Lillis 282	Lillis 211	Lillis 112
SESSION	The Context of Cooperation: the Relationship between Experimental Games and Cooperative Behavior in Naturalistic Settings Organized by Gerkey, D	Symposium in Honor of Margo Wilson Organized by: Krupp, DB	Sex hormones: psychology and behavior	Emotion
10:30 – 10:50	Context matters more than stable dispositions in explaining pro-social behavior <i>Gurven, M, Winking, J, Schniter, E</i>	What makes a face masculine? Comparing measures of sexual dimorphism. <i>Pound, N, Penton-Voak, I, Debruine, L, Jones, B, Sokhi, S, Trudel, K</i>	Hormonal birth control use and relationship jealousy: A more acute role for estrogen <i>Cobey, KD, Roberts, S, Pollet, T, Buunk, BP</i>	Do antidepressant medications increase or decrease the risk of relapse? <i>Andrews, P</i>
10:50 – 11:10	Face-to-face collective action games in a small-scale society: testing the effects of leadership on group performance and the division of spoils <i>von Rueden, C, Gurven, M, Kaplan, H</i>	Prospective decision-making is associated with life expectancy <i>Krupp, DB</i>	Men smelling men: testing the challenge hypothesis <i>Eppig, CG</i>	Emotional Reactions to Conditional Rules of Reciprocal Altruism <i>Brase, GL</i>
11:10 – 11:30	Ultimatum Game Behavior in a Dominican Village: Cooperative Types, Cultural Frames, and External Validity. <i>Macfarlan, SJ</i>	The impact of birth order on sexual attitudes and behavior <i>Salmon, C</i>	Salivary testosterone levels of males at a sex club <i>Escasa, MJ, Gray, PB</i>	Two prides? Evidence against the “authentic” / “hubristic” model <i>Fessler, D, Holbrook, C, Piazza, J, Sousa, P</i>
11:30 – 11:50	Cooperation in Context: Public Goods Games and Post-Soviet Collective Institutions in <i>Gerkey, D</i>	Cheerful cheaters beware! <i>Surbey, MK, Simpson, J</i>	Relationships between androgen receptor gene polymorphisms and mating effort: evidence for morphological and behavioral influences <i>Simmons, ZL, Roney, JR</i>	Sex, Ethnicity, and The Face: A Cross-Cultural Analysis of Facial Displays of Emotion <i>Gambacorta, D, Breugelmanns, S, Koenig, B, Ketelaar, T</i>
11:50 – 12:10	Experimental Cooperation and Social Networks in an Afro-Brazilian Religion <i>Soler, M</i>	Social selection for spatial cognition in kangaroo rats, humans and other food-storing species <i>Jacobs, LF</i>	Testosterone and Prolactin in Men’s Reproduction <i>Steiner, ET, Meana, M, Gray, PB</i>	The cognitive consequences of envy: Attention, memory, and the green-eyed monster <i>Hill, SE</i>
Lunch Break				
ROOM	EMU Ballroom			
12:15-1:20	Open Membership Meeting			

SATURDAY EARLY AFTERNOON, JUNE 19th

Plenary Address: EMU Ballroom

1:30-2:30

The Rise of the Speaking Machine: Explorations in Human Language Evolution
Mark Pagel

2:30-3:00

Coffee

ROOM	Lillis 182	Lillis 282	Lillis 211	Lillis 112
SESSION:	Physical attractiveness 1	Cognition: decision-making	Parental Investment Tradeoffs 1: male and female differences. Session organized by: Anderson KG	Cross-cultural analyses
3:00 – 3:20	Health and attractiveness preferences: the role of gender and ethnicity <i>Coetzee, V, De Grauw, H, Perrett, DI</i>	Epistemic Vigilance and the Error Management of Belief <i>Bergstrom, B</i>	Do other family members work more when men are away from home? Observational evidence from lowland Nicaragua and the Peruvian Andes <i>Koster, J, Winterhalder, B, Grote, M</i>	Reconciling 'Darwinian' and 'Spencerian' evolutionary approaches in Anthropology <i>Currie, TE</i>
3:20 – 3:40	Cross cultural studies of facial attractiveness and personality attribution <i>Penton-Voak, IS, Scott, I</i>	Dissonant Probabilities: A New Model of Adaptive Decision-Making <i>Davis, J</i>	Does parenthood influence how men and women spend their time? Evidence from four societies <i>Anderson, KG, Gray, P, Borgerhoff Mulder, M, Moody, C</i>	Marriage Transactions from a Darwinian Perspective <i>Huber, BR</i>
3:40 – 4:00	Change in attraction to faces following visual adaptation to low or high-weight bodies <i>Re, DE, Koike, EK, Thomson, CL, Coetzee, V, Hahn, AC, Xiao, D, Buls, D, Tiddeman, B, Boothroyd, LGt Perrett, DI</i>	The Evolutionary Roots of Decision Biases: Erasing and Exacerbating Loss Aversion <i>Li, YJ, Kenrick, DT, Griskevicius, V, Neuberg, SL</i>	Land inheritance establishes sibling competition for marriage and reproduction in rural Ethiopia. <i>Gibson, M</i>	The Potential of Guilt, Honor, and Shame in Solving the Tragedy of the Commons <i>Jacquet, J</i>
4:00 – 4:20	Psychomorphospace—Mapping perception onto morphology with geometric morphometrics (applied to aging) <i>Windhager, S, Schaefer, K</i>	Past and present environments: The evolution of decision-making <i>Wilke, A, Todd, P, Barrett, C, Mata, R, Scheibehenne, B</i>	What's a Mother to Do? Tradeoffs in Maternal Primate Strategies <i>Hazel, A, Low, BS, Welch, KB, Nepomnaschy, P</i>	Population size and linguistic evolution <i>Jordan, F, Currie, T</i>

4:20-4:40

Coffee

SATURDAY LATE AFTERNOON, JUNE 19th

ROOM	Lillis 182	Lillis 282	Lillis 211	Lillis 112
SESSION:	Physical attractiveness 2	Parental Trade-offs II: Fertility trade-offs Organized by: Lawson D	Social cognition	Cooperation: sex differences
4:40 – 5:00	Visible skin condition and mate preferences: Where we now stand <i>Fink, B, Matts, PJ</i>	The Trade-off between Fertility and Child Mortality in Sub-Saharan Africa: A Cross-National Study <i>Lawson, D, Gibson, M</i>	Recognition of Male, but not Female, Faces is Enhanced During Pregnancy <i>Anderson, MV, Rutherford, MD</i>	Sex Differences in Cooperation: A Meta-Analytic Review of Social Dilemmas <i>Balliet, DP, Li, NP, Macfarlan, SJ</i>
5:00 – 5:20	Men's Oxidative Stress, Fluctuating Asymmetry, and Physical Attractiveness <i>Gangestad, SW, Merriman, L, Emery Thompson, M</i>	Grandmaternal Trade-Offs: Mother-daughter conflict resulting from simultaneous parenthood <i>Scelza, BA</i>	Facets of Supernatural Belief: Are Adults More Susceptible than Children? <i>King, AC, Bjorklund, DF</i>	Who becomes a hero and what happens to them? A study of self-sacrificial behavior in small female groups. <i>McAndrew, FT, Perilloux, C</i>
5:20 – 5:40	Seinfeld was Right About Man Hands: Analysis of the Sexual Dimorphism of Hands <i>Dane, LK</i>	Old mothers produce less fit offspring <i>Gillespie, DO, Russell, AF, Lummaa, V</i>	Deceive Yourself to Deceive High but Not Necessarily Low Status Others <i>Lu, H, Chang, L</i>	Context-dependency in perceptions of trustworthiness <i>Smith, FG, DeBruine, LM, Jones, BC</i>
5:40 – 6:00	Ovulation Leads Women to Over-Perceive Commitment from Sexy Cads But Not Good Dads <i>Durante, KM, Griskevicius, V, Simpson, JA, Li, NP</i>	Does wealth increase parental investment biases in education? Evidence from two African populations on the cusp of the fertility transition <i>Sear, R, Gibson, M</i>	Big & mighty: Preverbal infants represent social dominance <i>Thomsen, L, Frankenhuys, WE, Carey, S</i>	Male Facial Width and Trustworthiness <i>Stirrat, M, Buls, D, Perrett, DI</i>

ROOM	East Lawn of EMU
6:30-9:30	Black Butte Porter Chicken and Ribs Barbecue

SUNDAY EARLY MORNING, JUNE 20th

ROOM	Lillis 182	Lillis 282	Lillis 211	Lillis 112
SESSION	Disease and psychological mechanisms	Kinship	Cooperation: prosociality	Reproductive success/skew
9:00 – 9:20	Are there pathogen-mediated sexually selected attractiveness preferences in humans? <i>Brown, WM, Rose, N, Kang, J</i>	Thirty Years of Kin Selection in Behavioral Ecology and Evolutionary Psychology <i>Hames, R</i>	No place to hide: when shame causes proselves to cooperate <i>Declerck, CH, Boone, C, Kiyonari, T</i>	New evidence supporting the Grandmother Hypothesis: Handgrip strength predicts Reproductive Success among indigenous women <i>Atkinson, J, Sorokowski, P, Szagda, A</i>
9:20 – 9:40	Disease avoidance and false-alarms <i>Case, TI, Stevenson, RJ, Oaten, MJ</i>	Kith, Kin, and Disgust: Evidence for Kin Directed Signaling of Emotion <i>Ketelaar, T</i>	Social support available predicts perceived cultural saliency of prosocial ideas but not normativeness of prosocial behavior <i>Maltseva, K</i>	Infanticide and Reproductive Skew in Multi-Male Primates <i>Clarke, P</i>
9:40 – 10:00	Reference effects as evolved unconscious processes in human food choice <i>Cramer, L, Antonides, G</i>	Neural Substrates of Kith-and-Kin Rationality <i>Wang, X, Zheng, H, Zhu, L</i>	Are Domestic Dogs Prosocial? <i>Naficy, ST, Panchanathan, K</i>	Income and Childlessness: Evidence from the Developed and the Developing World. <i>Fieder, M, Huber, S</i>
10:00 – 10:20	The Interaction of Disgust and Sexual Arousal in Women: Competition Between Mating and Disease Avoidance Motivations <i>Fleischman, DS, Hamilton, LD, Fessler, DM, Meston, C</i>	Relative cognitive evaluations of friendship and kinship <i>O'Gorman, R</i>	The Closer the Relationship, the Costlier the Apology to Maintain It <i>Ohtsubo, Y, Watanabe, E</i>	The Iron Grip of Sexual Selection: Grip strength is more strongly associated with male than with female childlessness in a large cross-cultural sample. <i>Pollet, TV, Stulp, G</i>
10:20 – 10:40	The nature of disgust <i>Hubbeling, D</i>	The determinants and consequences of women's fertility preferences and fertility outcomes in a rapidly acculturating Amerindian population <i>McAllister, LS, Gurven, M</i>	The impact of theory of mind on fairness and reciprocity in preschool children <i>Schug, J, Takagishi, H, Okada, H, Miyazaki, M, Yamagishi, T</i>	Intralocus sexual conflict over human height <i>Stulp, G</i>

Lillis Rotunda

10:40-11:00	Coffee
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SUNDAY LATE MORNING, JUNE 20th

ROOM	Lillis 182	Lillis 282	Lillis 211	Lillis 112
SESSION:	Kinship and Inbreeding	Mate choice	Art for Hotheads: Extreme Emotions and Outrageous Designs Organized by: Saunders, J.	Laughing Out Loud: Humor, Laughter and Evolution Organized by: Greengross, G.
11:00 – 11:20	The Westermarck Hypothesis: Interaction Effects of Co-Residence with Siblings and Co-Residence with own Children on Attitudes towards Third-Party Incest <i>Antfolk, J, Karlsson, M, Knutar, S, Bäckström, A, Santtila, P</i>	Family matters: Unattractive family members make mates less appealing in the long-term <i>Osborne, E</i>	Art is for Hotheads: On the Literary Uses of Human Emotional Predispositions <i>Mueller-Wood, AI</i>	The Prosody of Conversational Humor on a Brazilian Collective <i>Flamson, TJ, Bryant, GA, Barrett, HC</i>
11:20 – 11:40	Inbreeding Avoidance and Incest Laws Around the World <i>Jwa, AS</i>	Observers are sensitive to quality of information when deciding to mate copy <i>Place, SS, Todd, PM, Penke, L</i>	Limerence in German nineteenth-century popular romance <i>Mellmann, K</i>	Acoustic features of conversational laughter <i>Bryant, G</i>
11:40 – 12:00	Assessing the impact of consanguinity on national IQs: A cultural feedback effect model. <i>Woodley, MA</i>	Why Norwegians Have Sex <i>Kennair, LO, Grøntvedt, T, Buss, DM, Meston, CM</i>	Women Scorned: Horrific Literary Examples of Female Mate-Guarding Behavior <i>Saunders, JP</i>	What are funny people like? <i>Kaufman, SB, Erickson, J, Ramesh, S, Kozbelt, A, Magee, M, Kaufman, JC</i>
12:00 – 12:20	Ecological Constraints, Brideprice Inflation, and Embodied Capital Investment as Explanations for Marriage Delay in Lamalera, Indonesia: An Historical Demographic Investigation. <i>Nolin, DA</i>		Texas millionaires bride: contacted to see if will be replacement <i>Cox, A, Fisher M</i>	Ovulatory cycle effects on humor <i>Greengross, G, Heap, M, Mankoff, R</i>

POSTER SESSION AND DESSERT SOCIAL

Thurs, 7:30-10:00 pm, EMU Fir Room

Poster Set-up 6:00-7:00pm: Presentation of odd-numbered posters 7:30-8:30; even-numbered posters 8:30-9:30

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|---|--|
| <p>1 The Evolution of Cultural Information in ‘Information Cycles’
<i>Abel, T</i></p> <p>2 Facets of Supernatural Belief: Are Adults More Susceptible than Children?
<i>King, AC, Bjorklund, DF</i></p> <p>3 Does inequality cause risk-taking?
<i>Mishra, S</i></p> <p>4 The Preference for Nearer Navigational Goals in Humans
<i>Vazquez, D, Jackson, R</i></p> <p>5 Modeling decision making in mate choice within and across relationships
<i>Hendrickson, AT, Todd, PM, Fortenberry, JD</i></p> <p>6 Using Religious Thinking as Cues for Prosocial Behavior: Examining how children and adults perceive others expressions of religious and non-religious thinking.
<i>Periss, V</i></p> <p>7 Impact of Attractiveness on the Motivation to View Faces
<i>Hahn, AC, Lewis, JK, Re, DE, Perrett, DI, Xiao, D</i></p> <p>8 Detection of ovulation through scent cues: A study of women with hormonally-confirmed ovulation
<i>Gildersleeve, KA, Larson, C, Pillsworth, E, Haselton, M</i></p> <p>9 Feeding, Food Sharing and Heterosexual Attraction
<i>Alley, T</i></p> <p>10 Women’s Intuition: Wariness in Mate Selection
<i>Curtis, DA, Cowan, LK, Hart, CL</i></p> <p>11 Kissing cousins: Perceptions and attitudes of incest
<i>Hoben, AD, Buunk, AP</i></p> <p>12 Switching strategies: the effects of priming mate value on the on the over-inference of deception
<i>Larson, MG</i></p> <p>13 The relationship of body-mass index and waist-hip ratio to female attractiveness:
<i>Lassek, W, Gaulin, S</i></p> <p>14 Manipulations of vocal and facial masculinity in videos
<i>O’Connor, JJ, Feinberg, DR, Fraccaro, PJ, Tigie, CC, Borak, DJ, Jones, BC, DeBruine, LM, Little, AC, Perrett, DI, Tiddeman, B</i></p> <p>15 Self-rated attractiveness, health, and physical fitness are negatively related to men’s voice pitch
<i>Tigie, CC, O’Connor, JJ, Borak, DJ, Connolly, B, Feinberg, DR</i></p> | <p>16 Women’s voice pitch changes when viewing attractive men
<i>Fraccaro, PJ, Jones, BC, Vukovic, J, Smith, FG, Watkins, CD, Feinberg, DR, Little, AC, DeBruine, LM</i></p> <p>17 Choosing sides: Lateralized vocal masculinity preferences
<i>Borak, DJ, O’Connor, JJ, Tigie, CC, Feinberg, DR</i></p> <p>18 I Want What I Want When I Want It: How Mating Strategy, Self-Perceived Mating Success, Biological Sex, and Circumstance Affect Preferences for Mate Traits
<i>Gonzales, JE, Adams, HM</i></p> <p>19 A Snake in the Grass: Facilitation and Delay in Spatial Identification of Sexually Relevant Stimuli in Homosexual and Heterosexual Men
<i>Antfolk, J, Bäckström, A, Dombert, B, Zappalá, A, Mokros, A, Santtila, P</i></p> <p>20 Too Good To Be True: Women’s Suspicion of Desirable Men
<i>Cowan, LK, Curtis, DA, Hart, CL</i></p> <p>21 Women’s Appearance and Body Shape across the Menstrual Cycle: Heightened Attractiveness at Ovulation?
<i>Harris, H, Denkinger, K, Erickson, L, Bleske-Rechek, A, Nelson, L, Webb, R</i></p> <p>22 Self-Assessment of Vocal Mate Value
<i>Hughes, SM, Harrison, MA</i></p> <p>23 Reproduction Expediting: Age-related Fertility Decline, and Shifts in Mate Preferences and Social Behavior
<i>Goetz, CD, Easton, JA, Buss, DM</i></p> <p>24 Sexual selection and women’s voices
<i>Puts, D, Barndt, J, Welling, L, Dawood, K, Burriss, R</i></p> <p>25 From beast to beauty: Feeling powerless increases one’s desirability ratings of same- and opposite-sex others.
<i>Rodeheffer, C, Butterfield, M, Hill, S, Lord, C</i></p> <p>26 Do lactation cues make women less sexually attractive?
<i>Steffes, AE, Gentle, BN, Goetz, AT</i></p> <p>27 Dominance Does Not Dominate Decisions in Speed Dating
<i>Tybur, JM, Witt, AA, Bryan, A</i></p> <p>28 Two Guys, a Girl, and an Adult DVD: Testing Sperm Competition Hypotheses using Adult Film Sales
<i>Miner, EJ, McKibbin, WF, Popp, D, Shackelford, TK</i></p> |
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- 29 Personality in Indigenous Amazonians: Tests of the Big Five Model and Evolutionary Hypotheses
Massenkoff, M, von Rueden, C, Gurven, M
- 30 Sex differences in language use and deference behavior: Evolutionary foundations and implications for the workplace
Hopcroft, R
- 31 Virtual Morality: The Effects of Intrapsychic Conflict on Action in a 3-D Moral Dilemma
Asher, BD, Navarrete, CD, McDonald, MM, Mott, ML, Hauser, M
- 32 Distribution and function of policing interventions as a competition repression behavior in the evolution of cooperation in bonobos (*Pan paniscus*).
Boose, KJ, Kitchen, DM, White, FJ
- 33 Looming Large: The Effects of Determinants of Aggressive Formidability on Conceptualized Size
Fessler, DM, Tiokhin, LB, Snyder, JK
- 34 Sex Differences in Perceptions of Risk for Sexual Behaviours as Influenced by Time Perspective
Fisher, M, Cox, A, Shaw, S, Verge, L
- 35 Offense and Defense in the Adapted Mind
Lopez, AC
- 36 Indirect reciprocity may or may not solve the social dilemma
Mashima, R, Takahashi, N
- 37 The emergence of in-group favoring behavior: generalized exchange takes place within group boundaries
Onoda, R, Takahashi, N
- 38 Resource competition across the life-course among Tsimane women
Rucas, S, Gurven, M, Winking, J, Kaplan, H
- 39 Animals have also Law? Of Course!
Wada, M
- 40 3. Egalitarians Make a Costly Apology to Maintain Their Reputation
Watanabe, E, Ohtsubo, Y
- 41 An Evolutionary Perspective on Sex Differences in Experimental Trust Games:
Balliet, DP, Macfarlan, SJ
- 42 Evolutionary psychology and human history
Souza, J, Bingham, PM
- 43 Can cues of being watched reduce generosity?
Sparks, AM
- 44 Individual Differences in Altruism Slope
Carey, JM, Paulhus, D
- 45 Interpersonal aggression among Aka hunter-gatherers of the Central African Republic: Assessing the effects of sex, strength, and anger
Hess, N, Helfrecht, C, Hagen, E, Sell, A, Hewlett, B
- 46 Trust in friends or loyalty to the group: Sex differences in cooperation rates in iterated public goods games
Jaster, D, Arrow, H
- 47 Pretty women have petite feet: An EP analysis of the homo sapiens skeleton
Atkinson, J, Rowe, M
- 48 The impact of an education program about evolution on the shift from teleological to evolutionary explanations among Belgian children around the age of ten
Blancke, S, De Backer, C, Braeckman, J, Maex, J, De Laet, A, De Meyere, J
- 49 Social Experts Shape Cultural Evolution
Chudek, M, Henrich, J
- 50 Implications of perceptual learning in the visual system: An evolutionary perspective
Cook, TC, Vazquez, D, Willey, CR, Jackson, RE
- 51 The Relevance of Scientific Understanding to Morality in a Normative Sense
Huggins, J
- 52 Temporal Illusions
Kline, S, Reed, CL
- 53 Using Structural Equation Modeling in Evolutionary Psychology Research: A Study of Surprise-Enhanced Learning
Kock, N, Chatelain-Jardon, R
- 54 Sexual selection for literary displays
Lange, BP
- 55 Are evolutionary anthropologists reactionary? A survey of political attitudes
Lyle, HF, Smith, EA
- 56 Beauty is in the Recessive Gene of the Beholder: A Study of Human Preference for Mutual Recessive Genes in a Potential Mate
McCulloch, BB
- 57 Corruption and Patterns of Inter-group Interaction
Pisor, AC, Gurven, M
- 58 Evolutionary Perspectives on the Social Learning of Bone Tools on the Northwest Coast, North America
Rorabaugh, AN
- 59 Evidence of socialization in adolescence: Adolescent height predicts adult salary
Rutherford, MD, DiCroce, M
- 60 Perceived Naturalness of Food in the United States and Mexico
Serin, J, Sullivan, R
- 61 Distinct cortico-cerebellar circuits underlying anthropoid brain evolution.
Smaers, J, Steele, J, Zilles, K
- 62 Reasoning about social exchange in schizophrenia and autism spectrum disorders
Sullivan, RJ, Minzenberg, M, Solomon, M, Yoon, J, Ragland, J, Ursu, S, Ermer, E, Carter, C

- 63 What Does the Brutality of Filicide Tell us about Parental Psychology?
Weekes-Shackelford, V, Potaznick, MJ, Potaznick, MJ, Machluf, K, Machluf, K
- 64 Evolved Distance Perception and Relative Falling Risks of Common Surfaces
Willey, C, Jackson, R
- 65 A mind designed to work with frequencies, regardless of numerical literacy
Hill, WT, Brase, GL
- 66 Vulnerability to disease is associated with an enhanced preference for symmetrical faces
Young, SG, Sacco, DF, Brown, CM
- 67 The Sound of Round: Evidence for Implicit Sound Symbolism
Nielsen, AK, Rendall, D
- 68 Adaptive Threat Discrimination: Assessing the Medium and the Message
Palmer, JA, Holtzclaw, B, Carlson, C, Ducote, K, Ilaoa, S, Hill, WT
- 69 The Evolution of Vampires
Clasen, M
- 70 Pets in a Cross-Cultural Perspective
Young, SM, Gray, PB
- 71 Passion influences musical appreciation and evaluation of imagined musicians in a Brazilian sample
Varella, MC, Ferreira, JB, Bussab, VR
- 72 Decreasing Child Abuse and Neglect: An Evolutionarily Informed Intervention.
Corpuz, R, Bugental, D
- 73 Negative Political Campaign Advertising: A Darwinian Perspective
Murray, G
- 74 Subgroup prejudice: Do different subgroups of gay men elicit different threats?
Cook, CL, Cottrell, CA
- 75 A powerful, general new theory of human evolution and behavior.
Bingham, PM, Souza, J
- 76 Your Brother's Keeper?: The Effects of Moral Condemnation on Altruistic Decision Making
Hammond, JW, Easton, JA, Goetz, CD, Buss, DM
- 77 Relatedness and Altruism Among Kin in Biological and Non-biological Contexts
Von Pohle, CM, Segal, NL, Marelich, WB, Goetz, AT
- 78 Preferences for self-resemblance in infant faces and mate retention tactics
Welling, LL, Burriss, RP, Puts, DA
- 79 Is matriliney inconsistent with economic prosperity? The case of the Mosuo
Mattison, SM
- 80 Like father, like self: Emotional closeness to father, but not mother, predicts women's preferences for self-resemblance in opposite-sex, but not same-sex, faces
Watkins, CD, DeBruine, L, Smith, FG, Jones, B, Vukovic, J, Fraccaro, P
- 81 Phylogenetic methods reveal regular sequence in the evolution of increasing hierarchical political complexity
Currie, TE, Greenhill, SJ, Gray, R, Hasegawa, T, Mace, R
- 82 Interactions between the effects of fundamental and formant frequencies on women's preferences for men's voices
Feinberg, DR, Jones, BC, DeBruine, LM, O'Connor, JM, Tigue, CC, Borak, DJ
- 83 Social Functions of Irrational Beliefs
Blau, SF, Ryan, TE, Grozeva, DL
- 84 Child Signaling and Caregivers Responsiveness among the Aka foragers in the Central African Republic
Hawks, S, Meehan, CL
- 85 The effect of fundamental frequency variation in men's voice on judgments of physical dominance and prestige
Hodges-Simeon, CR, Gaulin, SJ, Puts, DA
- 86 When a Social Reward Elicits a Material Return
Matsumura, A, Ohtsubo, Y
- 87 A Biological Market Approach to Mate Value Measurement
Lu, Z
- 88 Child Homicide in Norway 1980 – 2009
Ottesen, V
- 89 Factors that Influence MHC-based Preferences
Shaw-Taylor, E, McClintock, MK
- 90 Extreme Sports: Testing Three Signaling Hypotheses Via Participation in Recreational Risk Taking
Tiokhin, LB, Fessler, DM, Snyder, JK
- 91 Voice fundamentals: how voice pitch and resonance affect assessments of speaker size, sex, and attractiveness.
Pisanski, KA, Rendall, D
- 92 Social anxiety and selective attention for angry faces: A relationship with very schematic stimuli
Alvarez, AA, Fernández, N
- 93 Female Circumcision in Indonesia: Community Survey Evidence
Cox, D
- 94 A Re-examination of the Three Domain Disgust Scale: Distinguishing Disgust from General Emotional Valence and Moral Disapproval
Pochedly, JT, Trouton, GT, Kirkpatrick, LA
- 95 Do personal sexual aversions influence moral sentiments relating to incest? A test of implicit attitudes
Smith, AR, Lieberman, D
- 96 Emotional Regulation and Recalibration in Psychopathy
Ermer, E

- 97 Adaptive and Maladaptive Grief: An evolutionary approach to emotions after loss
Tal Young, I
- 98 When despots give and take: Density-dependent exploitation under the Ideal Despotic Distribution
Bell, AV, Winterhalder, B
- 99 Masculinized bodies (D2:D4 ratio) predict masculine jealousy responses
Kennair, LO, Hagen, K, Kaasa, H, Isaksen, L, Pedersen, L, Svangtun, S, Pallesen, S
- 100 Age Stereotypes by Self and Others Influence Older Adults'
Hehman, JA, Bugental, D
- 101 Sexual orientation, hormone mediated facial features, and self-perceived sex typicality
Hall, P
- 102 Does masculinity matter? The contribution of sex-typical appearance to male attractiveness in humans
Scott, IM, Pound, N, Stephen, ID, Penton-Voak, I
- 103 Risk Preference of Individuals and Couples: Experiments in Rural Java
Takashino, N, Mulyo, JH
- 104 Are We More Cooperative With People of Good Performance, When We Perform Badly?
Shimizu, K, Udagawa, D
- 105 Baby Fever: Does it exist?
Brase, GL, Brase, SL
- 106 Testosterone and Relationship Status in Men and Women
Caldwell Hooper, AE, Gangestad, SW
- 107 Sick and Sexy: Pathogen Prevalence and Mate Preferences
Cantu, SM, Griskevicius, V, Simpson, JA
- 108 From the Bedroom to the Altar and Beyond: Romantic Couples' Sociosexuality and Relationship Functioning
Webster, GD, Laurenceau, J, Smith, CV, Mahaffey, AL, Bryan, AD
- 109 Skinny, single and physically aggressive: New evidence for female sexual competition via physical aggression
Hahn-Holbrook, J
- 110 Women's sexual psychology in the context of "friends with benefits" relationships: Underlying motivations and men's counter tactics
Trevino, SM, Goetz, AT
- 111 The Evolution of Friendship: Sex-differentiated friend functions and opposite-sex "friends"
Lewis, DM
- 112 Seeing is Misperceiving: How different sources of information affect the perception of romantic interest
Long, JM, Place, SS, Todd, PM
- 113 The Effect of Contexts on Gender Differences in Receptivity to Sexual Offers
Mo, Y, Ling, V
- 114 The Perils of Human Genetic Engineering: Why Conscious Gene Selection Is a Bad Idea
Palmer, JA
- 115 Human Female Sexual Behaviour across Sexual Orientation: Evolution, Personality and Fluidity
Radtke, S
- 116 Mating System and Mate Choice in Matrilineal Mosuo in Southwest China
Wu, J, Wang, S, He, Q, Deng, L, Wang, B, Li, C, Zhang, B, Tao, Y, Ji, T
- 117 Sexual dimorphism in growth of human manual digital proportions
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- 141 Sex Differences in Sexual Regret
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- 144 Where to build a nest? The effect of family composition on post-marital residence in Colonial New England.
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- 145 Dark, Tall, and Handsome: Evidence for a female increase in openness to other-race partners during periods of high conception risk
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- 146 Should I stay or should I go? The effect of parental survival on children's age at marriage in Colonial New England.
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- 149 Effects of household ecology and market integration on Shuar nutritional status and hemoglobin (Hgb) in an indigenous lowland Ecuadorian population
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- 150 Life-history, reproductive maturity, and the evolution of small body size: The Mamanwa negritos of northern Mindanao
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- 151 Evolutionarily Relevant Workplace Characteristics and Mental and Physical Health
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- 152 Autogenic massacre: A maladaptive response to status threat
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- 154 Reproduction Expediting: Sexual Motivations, Fantasies, and the Ticking Biological Clock
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KEYNOTE ADDRESS:
FRIDAY EVENING, JUNE 18TH: EMU BALLROOM, 9:00-10:00

DAVID HAIG

Department of Organismic and Evolutionary Biology, Harvard University, Cambridge MA 02138.

Prader-Willi syndrome and the evolution of human childhood

The evolution of genomic imprinting can be explained in terms of conflicting selective forces acting on genes of maternal and paternal origin. Paternally active/maternally silent genes in a child are predicted to be associated with benefits to the child but reproductive costs to the child's mother (or other matrilineal kin) whereas the effects of maternally active/paternally silent genes are predicted to be associated with costs to the child's individual fitness but benefits to the mother's fitness. Therefore, the clinical effects of imprinted genes can provide important clues about reproductive trade-offs facing mothers during human evolution. The analysis of imprinting disorders in humans, such as Prader-Willi syndrome, provide evidence that human life history has been shaped by conflicts within the family. Our prolonged childhood is proposed to be an adaptation of offspring that reduced maternal fitness by increasing interbirth intervals. Early weaning is proposed to be a counter-adaptation that reduced child fitness but enhanced maternal fitness.

LIFETIME ACHIEVEMENT AWARD PRESENTATION
FRIDAY EVENING, JUNE 18TH: EMU BALLROOM, APPROX 8:30

NAPOLEON CHAGNON

Department of Anthropology, UC Santa Barbara

Presented by Martin Daly, with Bill Irons

PLENARY ADDRESS ABSTRACTS

(In Order of Presentation)

THURSDAY MORNING PLENARY: 9:00-10:00AM, EMU BALLROOM

KIM HILL

School of Evolution and Social Change, Arizona State University

The Evolution of Human Uniqueness

Although humans share the same biological heritage as do all other organisms on the planet, and each species is unique in its own way, the reliance of *Homo sapiens* on culture and cooperation has resulted in what can best be described as “a spectacular evolutionary anomaly.” The extra-somatic adaptations, technological dominance, and success of our species in colonizing every terrestrial habitat have no parallel: humans are ‘unique’ in that they show a combination of characteristics that make them a statistical outlier in the living world. *Homo sapiens* accounts for about eight times as much biomass as do all other terrestrial wild vertebrates combined, biomass equivalent to that of all 14,000+ species of ants, the most successful terrestrial invertebrates. Human societies are complex, with more specialized economic niches in the United States alone than the total number of mammalian species on the planet. While some might suggest that only post-industrial humans achieved such stunning biological success, data suggest that humans living as hunter-gatherers would have attained a world population of more than 70 million individuals and a total biomass greater than that of any other large vertebrate on the planet if agriculture had not been repeatedly invented as they spread.

THURSDAY AFTERNOON PLENARY: 1:30-2:30PM, EMU BALLROOM

CARL T. BERGSTROM

Department of Biology, University of Washington

Dealing with Deception

Social function and organization are predicated on effective coordination and cooperation; these in turn require honest communication among the participants in a social group. But in order to facilitate any sort of social structure and interaction, there has to be some way to deal with the threat of deception. We see this not only at the level of complex animal societies such as baboon troops or cooperatively nesting birds or social insects, but also in the complex social organization within the body of any single multicellular organism. The problem of avoiding deception to allow social organization can be broken down into at least two categories: 1) the legitimate members of the social institution have some overlap in interests, but they also have individual incentives for deception, and 2) non-members of the social organization attempt to parasitize and exploit the system by subversion and other forms of trickery. We see the former category in the evolution of mate-choice signals; we see the latter in the evolution of immune strategies to deal with pathogens. I will discuss the problem of deception in biological systems, and outline some of the strategies that organisms use to deal with it.

FRIDAYMORNING PLENARY:9:00-10:00AM, EMU BALLROOM

SUSAN CAREY

Psychology Department, Harvard University

The Origin of Concepts: Representations of the Social World

A theory of conceptual development must specify the innate primitives, characterize the ways in which the adult conceptual repertoire differs from that of the infant (e.g., are there discontinuities in development), and specify the learning mechanisms that take innate representations as input and achieve the adult state. In this talk I discuss the upshot of current empirical work on innate representations of the social world: representations of people, intentional agency, cooperation, competition, and morality.

FRIDAY AFTERNOON PLENARY : 1:30-2:30PM, EMU BALLROOM

SUSAN PERRY

Susan Perry, Behavior, Evolution and Culture Program, & Dept. of Anthropology, UCLA

***Coalitions and “culture” in wild white-faced capuchins monkeys,
Cebus capucinus: a 20-year study.***

Capuchin monkeys are an interesting taxon for researchers interested in employing the comparative method to model human evolution, because they have independently evolved many traits shared with humans and chimpanzees. They have long life spans, slow life histories, and the largest relative brain size of any nonhuman primate. These omnivores specialize in extractive foraging, hunt vertebrates, and are tolerant of scrounging and close observation by naïve conspecifics. Not surprisingly, capuchins have developed elaborate strategies for obtaining food, and social learning plays a role in the acquisition of their foraging techniques.

Capuchins' social behavior is as complex as their foraging behavior. Coalitions are a feature of daily life in many contexts, with coalitionary lethal aggression against adult conspecifics and infanticide by new alpha males being the leading causes of death. Thus, males need allies to breed successfully. The alpha male monopolizes reproduction until his daughters mature, after which his daughters breed with the alpha male's subordinate allies. Capuchins have developed elaborate means of communicating about their relationships, involving not only stereotyped bond-testing signals, but also group-specific social conventions that undergo rapid cultural change.

The data presented are from a 20-year, 65-000 hour study of the Lomas Barbudal capuchin monkeys in Costa Rica.

SATURDAYMORNING PLENARY: 9:00-10:00AM, EMU BALLROOM
PLENARY SESSION IN HONOR OF MARGO WILSON

MARTIN DALY

Psychology Department, McMaster University

Margo Wilson 1942-2009

Margo Wilson served HBES as society president, as an editor of the society journal, and as an enthusiastic proponent of interdisciplinary collaboration in applying Darwinism to the human sciences. The speakers in this symposium will commemorate her contributions to our field, but I will first take a few minutes to commemorate her interesting life.

RANDY THORNHILL

Department of Biology, University of New Mexico, Albuquerque, NM 87114 rthorn@unm.edu

Margo Wilson's Research Continues to Inspire New Investigations of Homicide

Margo Wilson's research was unique in its breadth and depth across many categories of human interpersonal conflict and violence. Her research findings suggest that some new directions in the study of human violence may be scientifically productive. I will propose some potential determinants of homicide that have been overlooked, namely collectivist values and infectious disease stress. I will show that, compared to economic variables, collectivist values and parasite stress are stronger predictors of all categories of homicide.

JOHN TOOBY & LEDA COSMIDES

Center for Evolutionary Psychology, University of California, Santa Barbara

Remembrances of Margo

Margo Wilson has played a key role in the development of the human evolutionary sciences. We will look at Margo's life and contributions from an intellectual and personal perspective.

MEL RUTHERFORD

Psychology Department, McMaster University

SATURDAYAFTERNOON PLENARY, 1:30-2:30PM, EMU BALLROOM

MARK PAGEL

Reading Evolutionary Biology Group, School of Biological Sciences, University of Reading,

The Rise of the Speaking Machine: Explorations in Human Language Evolution

Humans have had the capability to speak since we arose around 150,000 years ago, and there are now around seven thousand or so different languages spoken around the World. It is a capability unique to our species --the languages of other animals bear about as much resemblance to human language as a Bach concerto does to a chimpanzee beating its chest -- and it propelled us to every corner of the Earth in a few tens of thousands of years after walking out of Africa. During that time our languages have evolved and changed through time and continue to do so in a manner like biological species, leaving behind some astonishing regularities in what is this remarkable culturally transmitted replicator. This talk will explore the nature of human language evolution, including finding traces of our modern languages that have persisted for tens of thousands of years, shared patterns of language use around the World, questions about why we all use the same word for some things but not others, how we agree on the words we use, why there are not more languages, and what we can expect in the future of languages in a globalised and connected world.

REGULAR SESSION AND POSTER ABSTRACTS

Arranged alphabetically by first author

Poster Number: 1

The Evolution of Cultural Informations in 'Information Cycles'

Abel, T

Late in his long career, systems ecologist H.T. Odum proposed the 'information cycle' as a general model for the formation, selection, and use of information of all types. This paper offers an appraisal of the information cycle as it may be applied to 'cultural' information of many forms, including discourse, education, and media, which were never attempted by Odum in any detail. Conclusions are that 'culture' is better described as a nested hierarchy of informations that shares properties of all hierarchies. Co-occurring information cycles produce information of different form and 'quality', each with its distinctive rate of production. Each cycle is an evolutionary cycle that rests on the generation of excess information copies, and the 'selection' of information within the larger human-ecosystem context. Information has 'function' within self-organizing systems of humans and environment that differs from reproductive fitness, but simultaneously includes it, and quantitative demonstrations are offered.

Sponsor:Taiwan National Science Council

Presentation: Fri, 4:40 Lillis 282

Let's Get Serious: Communicating Commitment in Romantic Relationships

Ackerman, JM, Griskevicius, V, Li, NP

Are men or women more likely to confess love first in romantic relationships? Who is more likely to respond happily? An evolutionary-economics perspective contends that women and men incur different potential costs and benefits from confessing love and from reacting positively to such confessions. Across four studies, we find that although people believe that women are the first to confess love and feel happier upon receiving confessions, it is actually men who confess love first and feel happier. Reactions also differ drastically depending on whether the couple has or has not engaged in sexual activity, as well as the mating strategy a person is pursuing. Thus, saying and hearing "I love you" has different meanings depending on who is doing the confessing and when those confessions are made. An evolutionary-economics perspective further suggests that displays of non-romantic commitment, and reactions to these displays, will be influenced by specific, functional biases.

Poster Number: 9

Feeding, Food Sharing and Heterosexual Attraction

Alley, T

Food sharing may be a means to increase or maintain intimacy in couples, or to attract mates, as has been reported for other species. To examine this, mixed-sex dyads were covertly observed while eating in public, then asked to complete a brief questionnaire. More food sharing occurred in dyads who were more romantically involved. As predicted, feeding was a particularly good indicator of relationship status. Feeding was seen exclusively in involved dyads, and was associated with higher reported attraction and intimacy within the dyads. Both males and females in dyads in which feeding was observed reported a more positive change in how intimate they felt with each other as a consequence of sharing the meal. Food sharing and feeding occurred more often in dyads who also displayed physical affection (kissing or hugging) during the meal. The pattern of results for observed feeding largely paralleled those for self-reports of feeding behavior.

Sponsor:Clemson University

Poster Number: 92

Social anxiety and selective attention for angry faces: A relationship with very schematic stimuli

Alvarez, AA, Fernández, N

An emotionally discrepant face is better detected in an array of otherwise homogeneous faces when it is angry (Öhman et al., 2001), especially for socially anxious observers (Gilboa-Schechtman et al., 1999). In this study, 23 students rated as high and 22 rated as low, according to their scores on the brief version of the Fear of Negative Evaluation Scale (bFNE; Leary, 1983), had to detect an odd stimulus in sets of four very schematic faces or parts of them. The targets depicted either a threatening (135°-segment= left eyebrow; 45°-segment= right eyebrow) or non-threatening expression (the other way around) among neutral distractors (horizontal eyebrows). The highly anxious individuals were faster than the less anxious ones in detecting threatening rather than non-threatening targets. This suggests that even in an impoverished form, an angry facial expression, an evolutionarily ancient signal of threat, may capture attention in individuals who are sensitive to social threat.

Sponsor:University of Santiago de Compostela

Presentation: Fri, 4:40 Lillis 182

Social influence on the diffusion of cultural innovation:
the case of modern of modern contraception

Alvergne, A, Gerner, E, Mace, R

Humans are exceptional in their ability to accumulate socially learned behaviour over generations. How cultural evolution works is, however, hotly debated for decades, not least due to a lack of empirical evidence from “real world” settings on the way cultural traits are socially transmitted. This research aims to test the relative importance of social versus asocial learning for cultural evolution through the study of a key cultural change: the adoption of modern contraception. Using a large dataset from Ethiopia where the adoption of contraception has been tracked since its beginning, we applied network based analyses to examine how the decision to start using contraception correlates with factors promoting diffusion at the individual (e.g. parity) and/or at the group level (e.g. spatial and kinship networks). The results will have implications to understand the evolution of cultural norms and to decipher the behavioural trends that ultimately lower rather than enhance individual fitness.

Sponsor:Royal Society of London and British academy
(Newton international fellowship)

Presentation: Sat, 3:20 Lillis 211

Does parenthood influence how men and women spend
their time? Evidence from four societies

Anderson, KG, Gray, P, Borgerhoff Mulder, M, Moody, C

Parenthood is expected to impact time allocation patterns for men and women in different ways. Women are predicted to increase time spent in child care and domestic activities, whereas men are predicted to increase their involvement in economically productive activities. We test this prediction using quantitative time allocation data from four subsistence societies: the Efe, Kipsigis, Madurese and Machiguenga. The dataset contains 22,165 observations on 432 individuals, and is analyzed using complementary log-log regression with random effects. We find that men who are fathers spend more time in commercial activities (such as wage labor) than non-fathers, and less time in social activities (such as chatting or group ceremonies). In contrast, women who are mothers spend more time in food production and food preparation than non-mothers, and less time in manufacturing activities (such as repairing clothes or artifacts). Parenting trade-offs do influence time allocation patterns in sex-specific ways.

Presentation: Sat, 4:40 Lillis 211

Recognition of Male, but not Female, Faces is Enhanced
During Pregnancy

Anderson, MV, Rutherford, MD

Protective mechanisms in pregnancy include Nausea and Vomiting in Pregnancy (NVP), sensitivity to health cues (Jones et al, 2005) and vigilance to out-group members (Navarette, Fessler, & Eng, 2007). Pregnancy is associated with decreased cognitive function when an adaptationist perspective predicts that the important reproductive investment should enhance cognition. We propose that a reallocation of resources from nonessential to critical areas engenders the observed cognitive decline. Here, we created two sets of face images rated on attractiveness, health, status, masculinity/femininity, and creepiness, and then used a recognition task disguised as a health rating to determine whether pregnancy facilitates face recognition. We found that pregnant women are significantly better at recognizing male, but not female faces. These results generalized across male models regardless of facial characteristics. In human evolutionary history, and today, males present a significant threat to females: Thus, enhanced recognition of male faces during pregnancy serves a protective function.

Sponsor:SSHRC

Presentation: Sat, 10:30 Lillis 112

Do antidepressant medications increase or decrease the
risk of relapse?

Andrews, P

Major depression (MD) is a clinical diagnosis, though some evolutionary hypotheses propose that most episodes are analogous to fever—adaptive stress responses. That fever is adaptive is supported by evidence that antipyretic medications disrupt fever but prolong infections. Analogously, traction on the issue of whether depression is adaptive can be gained by examining how antidepressant medications (ADMs) affect depressive outcomes. I examined 40 studies in which patients diagnosed with major depression were initially treated with monoamine oxidase inhibitors (MAOIs), tricyclic acids (TCAs), or selective serotonin reuptake inhibitors (SSRIs) and then randomly assigned to placebo. The overall relapse rate after MAOI discontinuation was very high (89%). Relapse risk after SSRI discontinuation increased with the duration of treatment, reaching a plateau at 5 months. TCAs showed a similar pattern, though there were fewer studies. Disruption of MD with ADMs appears to promote relapse upon discontinuation, suggesting that MD may be adaptive.

Poster Number: 19

A Snake in the Grass: Facilitation and Delay in Spatial Identification of Sexually Relevant Stimuli in Homosexual and Heterosexual Men

Antfolk, J, Bäckström, A, Dombert, B, Zappalá, A, Mokros, A, Santtila, P

As identifying sexually relevant stimuli can be assumed to be of evolutionary significance for reproductive purposes, it has been hypothesized that attention is automatically directed to relevant stimuli (Singer, 1984). The pop-out effect assumes facilitated identification of evolutionary relevant stimuli among other stimuli (Öhman, Flykt, & Esteves, 2001). The Sexual Content Induced Delay describes automatically increased allocation of attentional resources to sexually relevant stimuli, delaying other cognitive processes (Geer & Bellard, 1996). In accordance with LoBue and DeLoache (2008), we used a three-by-three matrix of images (clad and nude women and men), where eight images appeared as distracters and one image as target stimuli was to be identified, to investigate facilitation and delay of identifying sexually relevant target images in heterosexual and homosexual men. Our results showed a relative facilitation in identifying sexually preferred target stimuli and a relative delay in identifying sexually non-preferred target stimuli in both experiment groups.

Sponsor:Academy of Finland

Presentation: Sun, 11:00 Lillis 182

The Westermarck Hypothesis: Interaction Effects of Co-Residence with Siblings and Co-Residence with own Children on Attitudes towards Third-Party Incest

Antfolk J, Karlsson M, Knutar S, Bäckström A, Santtila, P

The incest taboo has been hypothesized to be a social extension of an adaptive incest aversion activated in the individual by co-residence with a sibling during childhood (Westermarck, 1889; 1906). Supporting this hypothesis, vignette-studies have shown that the strength of moral aversion and experienced disgust towards third-party incest is moderated by co-residence with a sibling (Lieberman, Tooby, & Cosmides, 2003; Fessler & Navarrete, 2004). Surveying 436 graduate and postgraduate university students, we wanted to replicate these findings while also investigating possible interactions effects between co-residence with a sibling and co-residence with one's own child, and with variations in the vignettes (biological vs. non-biological incest; penetrative vs. non-penetrative incest). Biological incest vignettes were judged more disgusting and morally aversive than non-biological, and penetrative more than non-penetrative. There was an interaction effect of co-residence with a sibling and co-residence with one's own child. Results and limitations of the study will be discussed.

Sponsor:Academy of Finland

Poster Number: 31

Virtual Morality: The Effects of Intrapsychic Conflict on Action in a 3-D Moral Dilemma

Asher, BD, Navarrete, CD, McDonald, MM, Mott, ML, Hauser, M

Psychological mechanisms inhibiting harmful actions can be bypassed if the benefits of harming another outweigh its costs, but such utilitarian decisions are not without intrapsychic conflict. We conducted a study designed to investigate how such processes affect behavior in a moral dilemma, where participants were presented with a graphic, 3D simulation of the "trolley problem" in a virtual environment. Results showed that 90% of participants opted for a utilitarian outcome (i.e. allowing the death of one person in order to save five), and that taking action was associated with increased autonomic arousal compared to when the identical outcome did not require action. Participants at peak arousal were the least likely to kill. Our findings suggest that inhibitory mechanisms against harm are associated with intrapsychic conflict, and that such processes may stymie actions for the greater good. The utility of virtual environment technology in the studies of morality is discussed.

Sponsor:National Science Foundation

Poster Number: 47

Pretty women have petite feet: An EP analysis of the homo sapiens skeleton

Atkinson, J, Rowe, M

To elucidate the shape of skeletons of attractive people and potentially shed light on the evolutionary forces that have shaped homo sapiens, 142 individuals (69 females) had numerous skeletal features measured. These features were then regressed on height and the 8 largest and 8 smallest residual individuals had their photos of their faces averaged ("morphed"). For example foot length was predicted by height and the 8 smallest residuals then had their faces morphed together and rated (total N=151) in a forced-choice comparison to the large foot-residual morph on a number of EP-relevant scales (e.g.; femininity, sexual openness). This process was repeated for 16 features for both sexes. Most morph pairs were exceptionally easy to discern and produced many strong rater predilections. Interestingly, not all morph preferences followed a large/small trait preference; some large (small) feature morphs in females (males) were preferred. These results will be discussed using both a proximate (mate-selection) and an ultimate (anthropological) point-of-view.

Presentation: Sun, 9:00 Lillis 112

New evidence supporting the Grandmother Hypothesis:
Handgrip strength predicts Reproductive Success among indigenous women

Atkinson, J, Sorokowski, P, Szagda, A

Many sexually dimorphic (SD) traits are intrinsically related to health and phenotypic quality in both sexes. Thus there may be a positive correlation between Reproductive Success (RS) and absolute levels of SD traits within each sex. This study investigated whether Handgrip strength (HGS), a SD trait that is also fundamentally related to longevity and health, was positively correlated to RS in the Himba, an indigenous living people in Namibia. After statistical controls for age, height and weight, HGS positively predicted the number of children and RS for women (N=56). Among older women (aged 40+&50+) these correlation became stronger. HGS was a non-significant predictor for men. HGS provides a good assay of the phenotypic quality of an individual and has the potential to predict RS in any traditional population. These results will be discussed in relation to the evolutionary analysis of sexually dimorphic traits and the Grandmother Hypothesis.

Presentation: Sat, 4:40 Lillis 112

Sex Differences in Cooperation: A Meta-Analytic Review of Social Dilemmas

Balliet, DP, Li, NP, Macfarlan, SJ

We examine predictions of evolutionary psychology and sociocultural theories of sex differences in cooperation using a meta-analysis of 85 studies from the literature on social dilemmas. The sociocultural prediction that women are generally more cooperative than men does not find support, and the overall effect size is not statistically different from zero. However, supporting evolutionary theory, male-male interactions are more cooperative than female-female interactions and men become more cooperative than women after several iterations of a social dilemma. As predicted by the sociocultural perspective, women are more cooperative than men in mixed-sex interactions. However, failing to support the sociocultural perspective, women are slightly more cooperative than men in larger groups. We discuss the results in the context of each theoretical perspective, address the need for an integrated biological and cultural approach to sex differences in cooperation, and outline directions for future research.

Poster Number: 41

An Evolutionary Perspective on Sex Differences in Experimental Trust Games:

Balliet, DP, Macfarlan, SJ

Evolutionary psychology proposes that the process of sexual selection resulted in a male, compared to female, psychology disposed towards risk-taking and a female, compared to male, psychology disposed towards reciprocity. This framework predicts that men may be more trusting during initial interactions with unrelated interaction partners, compared to women. While women, on the other hand, would be relatively more inclined to reciprocate another's trust during initial interactions with unrelated others. We examine these hypotheses in a quantitative review of the literature on sex differences in experimental economic trust games ($k = 8$, $n = 1,511$). As predicted, men are initially more trusting of unrelated others ($d = .41$), while women are more likely to reciprocate their partner's trust ($d = -.25$). We do not find that men or women are simply more altruistic, due to a null finding of a meta-analysis of sex differences in dictator games.

Presentation: Thu, 10:30 Lillis 182

Biological markets, partner choice, and the evolution of competitive altruism

Barclay, P

Many commentators note that human cooperation is not like strict Tit-for-Tat reciprocity. The present work examines cooperation within biological markets where individuals divide their attention among potential partners and can use generosity to attract attention from others, thus receiving more of the benefits actively or passively provided by those others. Mathematical models prove that this "competitive altruism" invades a population of non-cooperators, and the evolutionarily stable level of generosity increases with the size of the biological market and degree of partner choice. When the cost of generosity is independent of one's quality ("everyday generosity"), it is done more by low quality individuals, whereas when the cost decreases with one's quality ("extravagant generosity") it is done more by high quality individuals. Cooperative behaviour is best viewed within a broader biological market, and this new perspective generates novel hypotheses about altruistic sentiment, including predicting variability in generosity and imbalances in reciprocity.

Presentation: Fri, 11:50 Lillis 112

What evolution adds and what it takes away: Thinking through developmental constraints

Barrett, HC

In this talk I will compare and contrast two views of how natural selection shapes developmental systems. The “subtractivist” view holds that natural selection acts to prune the tree of possible developmental trajectories, constraining them to ever more adaptive regions of possibility space. The “additivist” view holds that natural selection retains favorable new variants of developmental trajectories, enabling outcomes that were either not possible or very unlikely before. Ultimately, of course, these can and should be seen as alternate framings of the same underlying process. They can, however, highlight different aspects of how evolution works, leading to different ways of generating hypotheses and interpreting results and to disagreements about what “adaptation” means in the context of the mind. As a case study, I consider the practical implications of the two views for understanding the evolution of the mechanisms underlying cultural transmission.

Presentation: Thu, 10:30 Lillis 282

Genetic Evidence for Multiple Biological Mechanisms Underlying In-group Favoritism

Bates, TC, Lewis, G

In-group favoritism is ubiquitous, and associated with inter-group conflict, yet is little understood from a biological perspective. A fundamental question regarding the structure of favoritism is whether it is inflexibly directed towards distinct, “essentialist” categories, such as ethnicity and race, or is deployed in a context-relevant manner. Here we report the first study (to our knowledge) of the genetic and environmental structure of in-group favoritism, examining religious, ethnic, and racial favoritism. We contrasted a model of favoritism based on a single domain-general central affiliation mechanism (CAM), with one in which each domain was influenced by specific mechanisms. In a series of multivariate analyses, utilising a large, representative sample of twins, models containing only the CAM or essentialist domains fitted the data poorly. The best-fitting model indicated that a biological mechanism exists facilitating affiliation with arbitrary groups, alongside systems evolved to process salient cues such as shared ancestry and shared belief-systems.

Presentation: Fri, 3:40 Lillis 211

Social Signal Detection

Becker, DV

It is widely conceded that the perception of social signals can be biased by unconscious cost-benefit analyses that reflect ancestral challenges to reproductive fitness. The evolutionary perspective can yield an even richer and

more general psychophysics by considering how signal clarity and receiver sensitivity coevolve. On the signal side, some signals evolve to be more inherently vivid, while others become more discriminable by mimicking other existing signaling systems. On the receiver side, in addition to differences in baseline sensitivity, fundamental emotional/motivational systems can tune perception, rendering it more sensitive to goal-relevant signals. These sensitivity effects include lowering the thresholds of detectability, increasing the rate of information-pickup for supraliminal signals, and sensitizing perceivers to dimensions of social difference, which amounts to stretching the fabric of representational space itself.

Sponsor:National Science Foundation

Poster Number: 98

When despots give and take: Density-dependent exploitation under the Ideal Despotic Distribution

Bell, AV, Winterhalder, B

Human societies are often dominated by a despotic oligarchy. While it is easy to imagine how despotism can be favored by natural selection and conjecture about the consequences for social evolution, the evolutionary mechanisms maintaining highly disproportionate resource distributions are poorly understood. For instance, the addition of subordinates to the focal habitat may increase or decrease habitat suitability for the dominant and themselves; their emigration or eviction would have the inverse effect. We present a simple model describing the dynamics of exploitation as a finite resource environment fills with subordinates. It is a simple representation of the population processes captured in the Ideal Free Distribution combined with the exploitative element of reproductive skew. We show how consumer-resource interactions (i.e. Allee effects) and common interest between the dominant and subordinate classes changes the dynamics of exploitation and the timing of migration.

Sponsor:UC Davis Anthropology, NSF

Presentation: Thu, 10:30 Lillis 112

Do Highly Adaptive Personalities Lean Left or Right? Politics and the General Personality Factor: A Behavior Genetic Study

Bell, E, Aitken Schermer, J, Vernon, PA

The relationship between a general factor of personality and political variables was examined. Significant positive phenotypic correlations were found between the GFP and variables measuring general interest in politics and voting probability, but not with variables associated with left/right differences. Analyses of the genetic correlations between these variables indicated that the significant phenotypic correlations could be partially explained by common genetic influences. One possible interpretation of these results involves the idea that the GFP measures a

general form of "adaptiveness" such that people who score highly on it have highly adaptive personalities. Such people, our data suggest, are more likely to take an interest in politics and to vote, but are not typically "right" or "left" in political orientation. These findings bring into question the claims that psychologically adaptive people tend to be left-liberal in political orientation and that conservatism stems in part from maladaptive or even pathological personality characteristics.

Presentation: Sat, 3:00 Lillis 282

Epistemic Vigilance and the Error Management of Belief
Bergstrom, B

We encounter tremendous amounts of new information every day. Does it matter where it comes from? Intuition suggests that it does. However, the study of social cognition has only begun to illuminate how this happens-- how we take into consideration the source of new information when we process it. The research discussed here considers the evolution of cognitive systems designed to achieve epistemic vigilance -- systems designed to manage potential errors that might occur through the normal dynamics of communication and information exchange. Several reported experiments investigate source processing: how we process information differently depending of who or where it comes from. These studies used standard research protocols in cognitive psychology to show that established effects in the domain of belief and decision making (such as the "truth effect") can be compromised or reversed when those protocols are modified to include variables of evolutionary social relevance.

Sponsor: Washington University, School of Arts & Sciences Dissertation Fellowship

Poster Number: 75

A powerful, general new theory of human evolution and behavior.

Bingham, PM, Souza, J

Our progress in understanding human evolution, psychology and behavior has been severely constrained by the lack of a clear, simple, testable theory accounting for the many, diverse differences between human and non-human animals. We recently proposed such a theory (Bingham and Souza, 2009, "Death from a Distance and the Birth of a Humane Universe"). This simple, yet highly general theory allows us to better understand the implications of the vast body of empirical insight from the rich evolutionary psychology and human evolution traditions. We will describe new implications of this theory for the interpretation of data from three pivotal areas: the human fossil record; evolution of language and cognitive virtuosity; and ostensibly altruistic human behavior in the experimental psychology laboratory. Our

larger argument will be that we are poised to enter a highly productive new phase in the exploration of human evolution, history and behavior.

Presentation: Fri, 4:40 Lillis 112

Parasite transmission, resource competition, and life history allocations: The effects of family composition on the growth and immune function of Shuar children
Blackwell, A, Snodgrass, JJ, Madimenos, FC, Liebert, M, Sugiyama, LS

Our past work has shown negative correlations between immunoglobulin E (IgE, an immune response to helminths) and growth, suggesting a trade-off in energy allocation. Here, we examine the effects of household composition on this tradeoff for 114 Shuar children from 45 families. Adults >40 had positive effects on growth in height ($p < .001$) and weight ($p < .001$) and on IgE in juveniles over eight ($p = .05$). Individuals <40, including children, had negative effects on height ($p = .02$) and weight ($p = .04$) in children over eight. In addition, 5-9 year olds had positive effects on IgE ($p = .02$), but only in children age seven and younger. The results suggest that adults are associated with increased energy availability for multiple branches of the trade-off between immune function and growth. In contrast, additional children shift energy into immune function early in life, suggesting that a primary cost to large family size may be increased pathogen transmission.

Sponsor: NIH 5DP1O000516-04 to Leda Cosmides; NSF BCS-0824602; UO Anthropology Department, Institute of Cognitive and Decision Sciences and Office of Research Grants; Ryoichi Sasakawa Young Leaders Fellowship

Poster Number: 48

The impact of an education program about evolution on the shift from teleological to evolutionary explanations among Belgian children around the age of ten

Blancke, S, De Backer, C, Braeckman, J, Maex, J, De Laet, A, De Meyere, J

It has been shown that in the U.S. and in the U.K. children up to the age of ten adhere to teleological explanations for the existence of living and non-living objects. Around the age 10 children tend to shift away from being "intuitive theists" to hold a stronger belief in evolution as the driving force behind the emergence and evolution of life on earth, including the emergence and evolution of humans. To test whether these results replicate in different cultures, we set up a similar study in Belgium, as a next study case to support these claims cross-culturally. Although this research needs expanding, our preliminary results confirm a cognitive shift around the age of ten.

Poster Number: 83

Social Functions of Irrational Beliefs

Blau, SF, Ryan, TE, Grozeva, DL

Cognitive-behavioral theories of psychological change hypothesize that specific cognitions serve causal roles in the etiology of emotional disorders. Rational Emotive Behavior Therapy (REBT), one of the earliest cognitive-behavioral theories, hypothesizes that Irrational Beliefs are primary in the etiology of emotional disorders, and that other cognitive errors follow from Irrational Beliefs. Among REBT theorists, Albert Ellis maintains that “musts” (inflexible demands or obligations) are the primary Irrational Beliefs, and that other Irrational Beliefs follow from these “musts.” There have been several efforts to validate Ellis’s hypothesis. So far, these efforts have not been conclusive. The present article maintains that REBT’s “musts” persist because they have served a useful function in human social interactions. Specifically, the “musts” have served as pre-commitment contracts between individuals and their social group. We propose that these pre-commitment contracts can serve both an adaptive role in some social interactions, and also as the source of non-adaptive behavior in other contexts

Poster Number: 32

Distribution and function of policing interventions as a competition repression behavior in the evolution of cooperation in bonobos (*Pan paniscus*).

Boose, KJ, Kitchen, DM, White, FJ

Bonobos (*Pan paniscus*) are often cited as models for the evolution of cooperation in humans. Repression of competition is a fundamental tenet in the evolution of cooperative behavior. Individuals that engage in behavior that represses competition facilitate within group cooperation. Policing interventions function to maintain group stability and, by nature of their impartiality, can be classified as a competition repression behavior. This study investigates policing interventions in bonobos. Results show that third party interventions into conflicts occurred significantly more than expected ($p < 0.01$) and could be classified as policing interventions ($p < 0.05$). Further, adult females intervened significantly more than any other age/sex class ($p < 0.01$), primarily into adult male-adult male conflicts, and that these interventions were significantly and positively correlated with female rank ($p < 0.05$). These results provide evidence that bonobo females may engage in behaviors that function to repress male-male agonistic contests, increase group stability, and promote within group cooperation.

Poster Number: 17

Choosing sides: Lateralized vocal masculinity preferences

Borak, DJ, O'Connor, JJ, Tigue, CC, Feinberg, DR

Studies on lateralization provide insight into the evolution of mechanisms underlying auditory processing. Prior

work has shown that men prefer high-pitched women’s voices and women prefer low-pitched men’s voices, however no studies have investigated the role of hemispheric lateralization in voice preference formation. In spoken language, prosody and emotional cues are generally processed in the right hemisphere of the brain (left ear bias); in tone languages, lexical pitch changes are generally processed in the left hemisphere (right ear bias). We investigated whether vocal masculinity preferences are laterally processed by evaluating women’s preferences for men’s and women’s voices manipulated in pitch and presented monaurally. We identified a right ear bias for women’s preferences for male voices lowered in pitch in forward but not backwards speech, suggesting hemispheric lateralization aids in mate selection. Results will be discussed in light of evidence from cognitive psychology, animal behaviour, and evolutionary psychology.

Sponsor: Social Sciences and Humanities Research Council

Presentation: Sat, 10:50 Lillis 112

Emotional Reactions to Conditional Rules of Reciprocal Altruism

Brase, GL

Trivers’ seminal 1971 article outlined a number of emotional responses that were predicted to result from various reciprocal altruism interactions. These include the emotions of liking, aggression, gratitude, sympathy, guilt, trust, and suspicion, each of which was associated with specific interaction contexts that unfolded in particular ways. Remarkably little empirical research has been conducted to evaluate these predictions, however. The present studies developed a research methodology to measure emotional reactions to reciprocal altruism situations (before/after ratings of a set of emotional reactions, given a conditional rule that embodied reciprocal altruistic acts and different actors’ behaviors). Because of similarities in the design of these stimuli to conditional reasoning task (e.g., Wason’s selection task), these results also are relevant to theories on human abilities to reason about social exchanges. The results largely, but not entirely, support Trivers’ predictions, but there were more complex emotional patterns for many situations.

Poster Number: 105

Baby Fever: Does it exist?

Brase, GL, Brase, SL

Baby fever – a visceral physical and emotional desire to have a baby—is well known in popular culture, but has not been empirically studied. One possibility is that biological sex drives and maternal feelings are sufficient and therefore specific desire for a baby is superfluous. Another possibility is that baby fever is a sociocultural

phenomenon unrelated to biological or evolutionary forces. Alternatively, baby fever could be an evolved mechanism for regulating birth timing, proceptive behavior, and life history trajectories. A series of studies found that: (a) a simple scale measure could elicit ratings of desire frequency; (b) these ratings exhibited significant sex differences; (c) this sex difference was distinct from a general desire for sexual activity; and (d) these findings generalize to a more diverse online population. Factor analyses identified three primary factors underlying baby fever. Baby fever appears to be a real phenomenon, with an underlying multifactorial structure.

Presentation: Thu, 3:40 Lillis 182

Life History Strategy and Creativity

Brown, S, Figueredo, AJ

Previous evolutionary psychological studies of mate preference suggest that women find creativity attractive in potential romantic partners. Runaway sexual selection theory posits that when a trait with no obvious survival value is found sexually or socially attractive, a “runaway” chain of events arises. Individuals with the attractive trait are more successful than others in mating so the trait becomes more prevalent in the population over evolutionary time. Consequently, the detection of, preference for, and prevalence of the trait itself are positively selected together. We tested the hypotheses that creativity conforms to this three-part criterion of runaway sexual selection theory and that slow life history (LH) is associated with greater creativity, detection of, and preference for creativity. We tested these predictions by recruiting a sample of heterosexual female undergraduates and evaluating their LH and the three aspects of creativity under investigation. Results inform knowledge of creativity, mate preference, and LH strategy.

Presentation: Thu, 10:30 Lillis 211

Methodological Issues in Menstrual Cycle Research

Brown, SG

Many studies report that women’s sexual behavior varies across their menstrual cycles, but research findings remain inconsistent. We addressed three methodological issues in research on sexuality across the menstrual cycle: how ovulation is predicted, whether analyses are based on cycles or averaged participants’ scores across cycles, and the use of an abstinent comparison group. Data were obtained from 97 participants from abstinent, heterosexual and lesbian groups. Results were similar for analyses performed using the LH surge versus backwards counts to predict ovulation. However, statistical power might be compromised when the timing of ovulation is less accurate. Likewise, we found few overall differences in the results when we analyzed data using cycles versus participants’ averaged data across cycles. Women, including those in the abstinent group, reported increased

sexual behavior prior to ovulation regardless of how ovulation was predicted or whether cycles or participants were the “units” of analysis.

Sponsor:NIH

Presentation: Sun, 9:00 Lillis 182

Are there pathogen-mediated sexually selected attractiveness preferences in humans?

Brown, WM, Rose, N, Kang, J

Hamilton and Zuk (1982) found associations across species of passerines between incidence of endoparasites and virgorous displays. It was hypothesised that ecological variation in pathogen exposure calibrates human preferences in a similar manner. Specifically attraction toward fitness indicators are expected to be stronger in high pathogen ecologies. To test this hypothesis we investigated attractiveness preference for male bodily masculinity among women raised in low (n = 45 UK-born) and high-pathogen ecologies (n = 45 Nigeria-born). Females reared in high-pathogen ecologies showed significantly stronger preferences for male body masculinity. When exposed to photographs of human pathogenic threats, UK-born (but not Nigeria-born) females showed a significantly stronger preference for masculinity compared to British-born controls. Interestingly females raised in high-pathogen ecologies for a greater proportion of their lives showed stronger body masculinity preferences. Results have implications for the hypothesis that females choose mates for genetic disease resistance by scrutiny of sexually dimorphic characters.

Sponsor:British Academy; Brunel University

Presentation: Sun, 11:20 Lillis 112

Acoustic features of conversational laughter

Bryant, G

Laughter is common in spontaneous conversation and manifests itself with incredible variation, pragmatically and acoustically. Antiphonal laughter is laughter that happens simultaneously between conversation partners, and it is thought to function distinctly from other kinds of laughter—functions that might require special acoustic attributes. In the current study, all laughter was extracted from 40 natural ten-minute conversations between male and female friends and strangers. Antiphonal laughter between conversation partners was compared acoustically to other laughs (i.e., individual laughs) by the same speakers. Compared to individual laughs, antiphonal laughs were more often voiced, had longer and more numerous calls and bouts, occurred significantly more between friends, and had other acoustic features that could facilitate synchronous chorusing. Antiphonal laughter might function to signal cooperative intentions between conversationalists, and signal affiliation to others outside of the immediate interaction.

Presentation: Fri, 10:50 Lillis 182**The Evolution of Stalking**

Buss, DM, Duntley, JD

We propose that stalking tactics are products of psychological adaptations shaped by selection to help solve recurrent adaptive problems. These include: (1) acquiring a new mate, (2) guarding an existing mate to prevent defection, (3) fending off potential mate poachers, (4) poaching someone else's mate, (5) strategically interfering with mating competitors, (6) reacquiring an ex-mate, and (7) sexual exploitation and predation. We hypothesize the existence of several sex-differentiated design features of psychological adaptations for stalking. These include sensitivity to adaptive problems for which stalking was an ancestral solution and cognitive biases in stalkers that function to motivate and perpetuate stalking behaviors. We present empirical tests of these hypotheses from a study of stalking victims ($N = 2431$). Although often abhorrent, cost-inflicting, and illegal, stalking sometimes enables successful adaptive solutions to problems of mating and intrasexual competition.

Poster Number: 119

Social reconnections or booty calls? Sex-atypical mating strategies resulting from feelings of social exclusion.

Butterfield, ME, Rodeheffer, C, Hill, SE, Lord, C

What factors influence men's and women's preferred mating strategies? Although there are likely many, an evolutionary approach suggests that mating strategy preferences are influenced by adaptively relevant contextual cues that influence the costs and benefits associated with long-term versus short-term mating. We used this logic to predict that feelings of social exclusion should influence participants' motivation to adopt sex-atypical mating strategies. The results of our experiment revealed that men who wrote about exclusion ($n = 23$) reported increased motivation to attract long-term romantic partners compared to men who wrote about acceptance ($n = 24$). In sharp contrast, women who wrote about exclusion ($n = 53$) reported increased motivation to attract short-term sexual partners compared to women who wrote about acceptance ($n = 54$). These findings are consistent with the view that preferred mating strategies are influenced by adaptively relevant contextual cues in sex-differentiated ways.

Poster Number: 106

Testosterone and Relationship Status in Men and Women

Caldwell Hooper, AE, Gangestad, SW

Testosterone (T) and relationship commitment have previously been theoretically and empirically linked in men; however, much less research has examined whether this link exists in women. We examined T levels and relationship status in healthy, active, heterosexual men and women. Consistent with the literature, we found

significant differences in T levels among men according to relationship status, with higher T in single compared to paired men. Further, we observed a significant linear trend such that as relationship status increased, testosterone levels decreased. No significant relationship between testosterone and relationship status was observed among women.

Poster Number: 107

Sick and Sexy: Pathogen Prevalence and Mate Preferences

Cantu, SM, Griskevicius, V, Simpson, JA

How does the prevalence of pathogens in the environment affect an individual's preference for certain mate traits? According to the Strategic Pluralism Model (Gangestad & Simpson, 2000), human mate preferences, tactics, and strategies should be sensitive to local environmental and contextual cues. In a disease-ridden environment, for example, the benefits from having a healthy partner should increase. Thus, we hypothesized that pathogen cues would shift mate preferences toward potential mates who exhibit greater genetic fitness. Using a priming methodology, we examined how a pathogenic environment changed preferences for a variety of possible "fitness-relevant" traits, including attractiveness, sexiness, intelligence, creativity, reliability, and dependability. Consistent with our predictions, women who were exposed to a pathogen-prime preferred more attractive and sexy men as dating partners than did women exposed to a control condition. We found no change in men's preferences. The implications of these findings are discussed.

Poster Number: 44

Individual Differences in Altruism Slope

Carey, JM, Paulhus, D

Evolutionary models of altruism have led to several interesting lines of research. Studies have shown that altruism towards a target decreases as their genetic relatedness decreases (Madsen, et al., 2007), and the same holds for the social relatedness of the target (Jones & Rachlin, 2006). We call this decrease in altruism with increasing distance, social or genetic, the "altruism slope". We hypothesized that conservative values would lead an individual to have a steeper slope than a person with more liberal values. Participants from an online community sample ($N = 251$) were asked how much they would help each of seven targets ranging in psychological closeness from "their own child" to "a stranger in another country". We then examined the interaction between the altruism slope and an index of conservatism. The interaction was significant for care during illness ($F(6) = 2.20, p < .04$) and living organ donation ($F(6) = 2.28, p < .01$). Overall, the results supported our hypothesis.

Presentation: Sun, 9:20 Lillis 182

Disease avoidance and false-alarms

Case, TI, Stevenson, RJ, Oaten, MJ

Hypervigilance to signs of disease in others is a critical feature of an evolved disease avoidance system. This system is likely to be characterised by a high false alarm rate that is somewhat impervious to knowledge. Three studies are described in which self-reported avoidance to both contagious non-contagious conditions is investigated. Consistent with anecdotal accounts from those with non-contagious conditions such as birthmarks, cancer, or mental illness; the results suggest a general tendency to avoid individuals who appear sick, irrespective of explicit knowledge about contagion. Moreover, the presence of visible symptoms amplified reported avoidance, and this effect increased with intimacy of contact. These findings are consistent with an evolved predisposition to avoid infection.

Sponsor: Australian Research Council, Macquarie University

Poster Number: 133

The Emergence of Hypertension as an Indicator of Changing Lifestyles and Psychosocial Stress in Indigenous Siberians.

Cepon, TJ, Snodgrass, J, Leonard, W

Hypertension is a leading risk factor for heart disease and stroke, thought to be linked to mismatch between ancestral and modern diet and activity patterns. Here, we use an evolutionary medicine approach to examine emergence of hypertension among 297 Yakut (Sakha) adults of northeastern Siberia, focusing on effects of novel lifestyle, dietary factors, and psycho-social stress on blood pressure. Results show men had significantly higher mean blood pressure than women, with 85% of males classified as above normal. Counter to expectations, women's blood pressure was positively correlated with traditional subsistence participation. It was also positively correlated with number of consumer and agricultural goods the women found important, regardless of whether or not they owned these items. Results suggest psycho-social stress related to accumulative desires and exposure to commercial consumer goods, rather than transition away from subsistence diet and activities per se, is important in emergence of hypertension amongst the Yakut.

Sponsor: University of Oregon, Northwestern University, Yakut Scientific Center

Presentation: Fri, 5:00 Lillis 182

Cultural Adaptations to Environmental Variability: An Evolutionary Account of East-West Differences

Chang, L, Wu, B, Chen, B, Lu, H

We hypothesize that East-West differences (e.g., independent vs. interdependent self-construal; autonomy

vs. harmony in values; hierarchical vs. egalitarian relationship) result from social learning and individual learning as primary means to adapt to the local environment. Historical and contemporary evidence from multiple sources are presented to suggest smaller extents of environmental variability in East Asia including China than in Europe and North America, favoring social learning in the East and individual learning in the West. Corresponding to these different adaptive strategies, East-West differences stem from learning styles that differ between copying and rote memorization, on the one hand, and critical thinking and innovative problem solving, on the other hand. These primary cultural differences are correlated with such personality attributes as conformity and compliance and independence and self-assertion that serve to facilitate social or individual learning. This and other cross-cultural evidence is reported to support our evolutionary explanation of why East and West differ the way they do.

Poster Number: 143

Insecure attachment and resource control strategy in middle childhood

Chen, B, Chang, L

Recent evolutionary theory contributes to our understanding of the adaptive significance of gender differences in attachment and related behavioral strategies. Within this framework, the present study examines attachment and its relationship with resource-directed behaviors during middle childhood. Results based on a sample of 361 boys and girls show: (1) Boys had higher scores than girls on avoidant attachment, while girls had higher scores than boys on preoccupied attachment. (2) Whereas avoidant attachment was significantly correlated with coercive resource-control strategies among boys, the same was not held for girls, for whom preoccupied attachment also did not predict prosocial strategies. These findings support the evolutionary prediction that gender differences in attachment patterns emerge during middle childhood as an adaptation to reorganize future reproductive strategies, and that insecure boys are more likely to shift to a coercive strategy than insecure girls whose lack of security may prove to be adaptive.

Presentation: Thu, 4:40 Lillis 112

Bitter Struggle for Survival: Evolved Embodiment of Survival Motivation

Chen, B, Chang, L

An evolutionary approach to cognitive embodiment conceptualizes bodily experience as correlated with cognitive adaptation to evolutionary challenges. We tested the hypothesis that survival motivation is grounded in the physical experience of a bitter taste. In a between-group design, participants were exposed either to bitter

(heart of a lotus seed or lotus plumule), sweet (sweetened lily petal) or no taste (lettuce leaf; all are edible and used in Chinese cuisine), while performing a simple Chinese word processing task and a future discounting game. Participants exposed to bitterness processed survival words (e.g., money and foods) faster and were more likely to “discount” the future (e.g., taking a smaller, immediate over a larger, delayed reward) than the other two groups. These and other findings partially support our prediction that the taste of bitterness, which represents a harsh environment, embodies motivation for immediate survival.

Presentation: Thu, 10:50 Lillis 182

Linked Reputation Dynamics

Chudek, M, Bhui, R, Henrich, J

We formally modelled the evolution of indirect reciprocity when reputations link outcomes across very different interactions. Ohtsuki and Iwasa (2004,2006,2007) showed that if people preferentially help (or don't harm) those with good reputations, a "leading eight" reputational systems (rules for assigning reputations based on individuals' behaviour) are both stable against invasion and robustly maintain high levels of cooperation. Panchanathan and Boyd (2004) saw that reputations can link behaviours in one setting to consequences in another; thus interactions where bad guys can be straightforwardly targeted (like prisoner's dilemmas) can stabilise cooperation in others where they can't (like public goods games). But how does such linking effect the leading eight's stability against each-other, since each judges the treatment of bad guys differently? We present a general framework for understanding the influence of reputational linking on the stability of reputational systems and specific results for the leading eight, derived by analysis and simulation.

Poster Number: 49

Social Experts Shape Cultural Evolution

Chudek, M, Henrich, J

Investigating whether and how culture evolves requires that we identify the selection pressures the human mind imposes on cultural information, either accidentally or to influence its evolution. An important step in this direction was Mesoudi, Whitten and Dunbar (2006)'s finding that humans remember social information (about several individuals interacting) better than non-social information (about the physical environment or one person's activities). We present evidence that this effect extends across cultures: first and second generation East Asian immigrants and North Americans all display it similarly. However the effect vanishes when subjects are presented with unrelated pieces of information rather than coherent narratives, mirroring a common result in memory research, the expertise effect: individuals with

expertise in a domain recall only meaningfully related items better. We report these findings and discuss the expertise effect's implications for both cultural evolution and further work on this effect.

Presentation: Sun, 9:20 Lillis 112

Infanticide and Reproductive Skew in Multi-Male Primates

Clarke, P

Understanding the forces mediating the distribution of reproductive success among males is an enduring goal of both primatology and human behavioral ecology. To date, however, this effort has been largely empirical and, as such, has been forced to rely on theory conceived with non-primate systems in mind. Reacting to this, I present a game-theoretic model aimed explicitly at characterizing male reproductive skew in primates. Using adaptive dynamics I show that, contrary to prevailing wisdom, the voluntary ceding of conceptions to subordinates by dominants may be expected under a broad range of conditions. Specifically, relatively large levels of concession can invade and become stable whenever the presence of multiple resident males mitigate the risks of infanticide. Ultimately, this work shows that the pursuit of total reproductive monopolies may often not be adaptive because males will invariably be subject to pressures beyond those simply favoring an enhanced competitive ability.

Sponsor:Department of Anthropology, University of California, Davis

Poster Number: 69

The Evolution of Vampires

Clasen, M

The scope of evolutionary explanation is expanding to encompass all things human, even the elusive products of the imagination, such as vampires. Our hyper-anxious agency detectors, coupled with a pre-scientific misunderstanding of pathogens and disease vectors, initially let the vampire loose from his grave. He has shown himself to be remarkably flexible, ever adapting to new cultural ecologies. The bloated, unattractive folkloric vampire evolved into his more ambivalent Romantic descendant, never losing his essential predatory nature, and today, teenage girls flock to be thrilled by hyper-attractive vampire males on the screen. I argue that evolved cognitive capacities for agency (especially predator) detection, as well as evolved female mate selection strategies, can explain the curious push-and-pull that vampires exert on us. The selection pressure from vampires was, presumably, negligible in ancestral environments, yet it is the Stone Age mind that they target, the Paleolithic blood flowing in our veins they crave.

Presentation: Fri, 4:40 Lillis 211

Rural urban migration in Ethiopia: importance of wealth and family configuration

Clech, L, Gibson, M

Evolutionary theory predicts that parental investment biases are one of the main explanations for dispersal by encouraging some offspring to out-migrate to find extra resources; however few studies of contemporary migration patterns have employed an evolutionary framework. Here we explore patterns of rural-urban migration in Southern Ethiopia in the context of scarcity of land, considering familial and individual strategies in the migration decision. Anthropological, demographic, economic and social network data were collected from 472 rural to urban migrants. Multilevel logistic regression analyses of quantitative data focus on household and individual level decisions to migrate, identifying effects of sex, birth rank, family configuration, and wealth. Analyses of qualitative data assess the costs and benefits of migration for these individuals and families. In line with evolutionary predictions, migration decisions are dependent on household resource availability, family size and configuration.

Sponsor:the Leverhulme Trust

Presentation: Sat, 10:30 Lillis 211

Hormonal birth control use and relationship jealousy: A more acute role for estrogen

Cobey, KD, Roberts, S, Pollet, T, Buunk, BP

Women who use hormonal contraceptives have been shown to report higher levels of jealousy than women who are regularly cycling. Here, we extend these findings by testing if self-reported levels of jealousy are directly related to the dose strength of synthetic hormones found within hormonal contraceptives. Results indicate that higher levels of ethinyl estradiol are associated with significantly higher levels of self-reported jealousy. Three types of jealousy were then considered: reactive, possessive, and anxious jealousy. The strongest significant association of ethinyl estradiol dose was found with reactive jealousy. Scores for preventative jealousy were also significantly associated, while scores for anxious jealousy were in the predicted direction but did not reach the 5% statistical significance level. These findings were unaltered when controlling for age, relationship status, mood, and combined oral contraceptive progesterone dose. The implications of these findings will be discussed in the context of there evolutionary consequences on mate choice.

Presentation: Sat, 3:00 Lillis 182

Health and attractiveness preferences: the role of gender and ethnicity

Coetzee, V, De Grauw, H, Perrett, DI

Evolutionary theory posits that attractiveness preferences should reflect health, particularly in populations with a high pathogen load. The aim of this study was to test whether attractiveness preferences for weight follow or diverge from health preferences in: a Caucasian population with a low pathogen load; and an African population with a high pathogen load. Weight was defined as the body mass index (BMI), or weight scaled for height. Participants were asked to optimize health and attractiveness in African and European faces, by making individual faces seem heavier or slimmer. Results show that (a) people prefer a significantly lower BMI when judging attractiveness than when judging health; (b) this discrepancy is primarily driven by Caucasian women; and (c) Africans prefer a higher optimum BMI than Caucasians. These findings are discussed in terms of the media's portrayal of ideal weight and the evolutionary preference for healthy individuals.

Sponsor:British Academy; Wolfson Foundation

Poster Number: 74

Subgroup prejudice: Do different subgroups of gay men elicit different threats?

Cook, CL, Cottrell, CA

How do people react toward different subgroups of gay men? An evolutionary, threat-based approach to prejudice contends that different outgroups should evoke different patterns of tangible threat perceptions, resulting in adaptive emotional and behavioral reactions focused on minimizing the perceived threats. In the current research, 436 participants (226 female, 210 male) were asked to evaluate different subgroups of gay and straight men. We predicted that gay male targets would be perceived as posing greater threats to health and moral values than straight male targets, resulting in greater disgust. We also predicted that threat perceptions would be elevated for specific subgroups of gay men (e.g., those perceived as politically active or promiscuous), resulting in greater disgust. Results supported both hypotheses, with subgroups perceived to pose greater threats than the superordinate group (e.g., promiscuous gay men vs. gay men) eliciting more disgust as well as elevated levels of overall prejudice.

Poster Number: 50

Implications of perceptual learning in the visual system: An evolutionary perspective

Cook, TC, Vazquez, D, Willey, CR, Jackson, RE

Evolution likely selected both the human ability to learn and a relatively stable visual system in order to provide a reliable signal for behavior. Purely cognitive learning

responses can develop quite quickly, but perceptual learning may occur more slowly in order to balance out the dual evolutionary needs of perceptual stability and plasticity. Cognitive and perceptual adaptations for navigation unite in order to guide and direct humans' mobile behavior. But to what extent is our visual system plastic in response to navigational familiarity and learning? Unfortunately, no findings clearly indicate how or if real-world distance estimation changes over repeated exposure, even though major research approaches predict drastically different outcomes. We tested these predictions in three experiments that also manipulated navigation costs. Data indicate that distance estimates reflect both navigation costs and a robustly stable but subtly plastic visual system.

Poster Number: 72

Decreasing Child Abuse and Neglect: An Evolutionarily Informed Intervention.

Corpuz, R, Bugental, D

We describe a parental investment model that can be applied in an intervention that facilitates investment in low reproductive value (RV) offspring. In designing our intervention, we consider the interactive effects of (1) offspring's RV and (2) parental access to resources. Parents are predicted to show either exceptionally low or exceptionally high investment in low RV children, based on their access to resources. Previous work has verified increases in parental neglect as a main effect of low resources or low offspring RV. We empirically tested the prediction that when resources are (perceived as) plentiful, mothers bias investment toward low RV offspring.

Predictions were tested using experimental and naturally occurring differences in maternal resources. To explore the effects of child risk, we compared investment in children who were preterm or full term at birth. Attention is given to the broader contributions of evolutionary research to applied intervention within the human family.

Presentation: Fri, 11:50 Lillis 282

X-raying the soul: Cheater detection is designed to look for guilty minds

Cosmides, L, Barrett, H, Tooby, J

How specialized is the system that causes reasoning about social exchange? Studies with the Wason selection task show that people perform badly when they are asked to look for violations of most conditional rules, but they succeed when they are asked to look for violations of social contracts. We will demonstrate that the mechanism involved is not designed to detect when a social contract has been violated or when someone has been cheated; instead, it is designed to look for cheaters—individuals with a disposition to cheat on social contracts. The experiments reported all use the same social contract rule, thereby holding the interpretation of the rule constant.

When features of the violator or situation are varied such that detecting violations will not reveal individuals with a disposition to cheat, there is a systematic decline in violation detection. Results suggest that the cheater detection mechanism is a cue-activated system.

Sponsor:NIH Director's Pioneer Award to LC

Presentation: Thu, 3:00 Lillis 211

Snake scales and leopard rosettes attract the attention of 5 month-old infants

Coss, RG, Nelson, M

Venomous snakes, pythons, and felid predators have constituted historical threats to human ancestors since Miocene times. Some nonhuman primates appear sensitive to the body patterns of these animals, permitting their detection through partially obscuring vegetation. The current study examined the effects of snake scale and leopard rosette patterns on the visually guided reaching behavior of human infants at 5 months of age. Fifteen Infants were presented light-orange cylinders exhibiting 4 patterns: Gaboon viper scales, leopard rosettes, Burberry plaid, and plain control. An adult pushed two upright cylinders slowly toward seated infants using a paired-comparison protocol repeated on right and left sides. Video recordings of infant gaze revealed that the Gaboon viper and leopard rosette cylinders captured the most attention, differing reliably from the Burberry plaid and plain cylinders. The attention-grabbing properties of these patterns at 5 months of age might be the developmental precursor of a well-integrated defensive behavior system.

Poster Number: 20

Too Good To Be True: Women's Suspicion of Desirable Men

Cowan, LK, Curtis, DA, Hart, CL

Women preferentially select mates with resources who are willing to commit. Strategic Interference Theory suggests that in response to the mating strategy of one sex, a counterstrategy typically evolves in the other sex. Due to the high reproductive cost for deceived ancestral women, women might have adapted counterstrategies aimed at detecting the veracity of statements about mate-value relevant information. This study examined whether women exhibited heightened suspicion when evaluating potential partners presenting mate-value relevant information. Women were asked to read and evaluate the suspiciousness of fictional responses from men presenting as potential mates. The fictional responses varied in terms of short-term vs. long-term mate value traits and high versus low quality.

The results indicated mate-value information was viewed more suspiciously than non-mate-value information. There was a Trait type x Quality interaction where the difference between high and low quality responses was

much greater for short-term traits than for long-term traits.

Presentation: Sun, 12:00 Lillis 112

The Texas Billionaire's Pregnant Bride: An evolutionary interpretation of romance fiction titles

Cox, A, Fisher, M

In this presentation, we focus on the titles of popular modern romance novels, published by Harlequin Enterprises, in order to ascertain whether these books pertain to women's sex-specific mating interests. Presumably, market demands have shaped the titles of Harlequins, such that books with titles that reflect topics of interest to women will sell the best. Two forms of analysis were undertaken to investigate whether the titles are in agreement with predictions informed by evolutionary psychology. First, we identified the most frequently occurring words to determine the most prevalent issues addressed by titles. Second, we performed a qualitative analysis to identify the most popular, recurring themes that appear in the titles. Our results indicate that Harlequin romance novel titles are congruent with women's sex-specific mating strategies, which is surmised to be the reason for their continued international success.

Poster Number: 93

Female Circumcision in Indonesia: Community Survey Evidence

Cox, D

What are the patterns of reported female circumcision across Indonesian communities? Though the Indonesian variant is thought to be symbolic and mild, recent findings suggest some practices are more invasive than previously thought. Despite burgeoning policy interest in female circumcision, there is little work describing its correlates and patterns. I exploit an innovative dataset for a culturally diverse country—the Indonesian Family Life Survey—to examine community patterns. Surprisingly, female circumcision is disproportionately prevalent in matrilineal communities, especially in famously matriarchal West Sumatra, which is often touted as an exemplar of female power. Such patterns appear to go against the grain of conventional thinking, whereby wealth concentrated in the hands of wives redounds to the well being of children, and daughters in particular. This finding invites speculation about possible behavioral underpinnings. My descriptive evidence is followed by discussion of the possible link between female circumcision and mate guarding.

Sponsor:National Institutes of Health

Presentation: Sun, 9:40 Lillis 182

Reference effects as evolved unconscious processes in human food choice

Cramer, L, Antonides, G

Difficulties in adapting food choices to today's abundant food supply may stem from the dual function of food products providing both sustenance and pleasure, requiring balance to prevent diseases from not just nutrient deficiencies but also nutrient excesses. Attempts to influence consumer food choices often rely on providing more information for conscious decision making, but this leaves out possibly more powerful evolved unconscious processes including reference effects, status quo bias and loss aversion. An experiment with 554 Dutch pupils showed a relatively strong loss aversion for evolutionarily novel hedonic food products compared to utilitarian food products. This status quo bias, adaptive in challenging and variable ancestral environments, may lead today to maintaining relatively unhealthy food choices. However, because people are more sensitive to losses, altering people's reference points so that changes are seen as a reduction of a loss instead of a gain may help people abandon unhealthy food habits.

Presentation: Sat, 3:00 Lillis 112

Reconciling 'Darwinian' and 'Spencerian' evolutionary approaches in Anthropology

Currie, TE

Traditional evolutionary approaches in Anthropology, with their focus on the increase in socio-political complexity over recent human history, owe more to Herbert Spencer than they do to Charles Darwin. Central tenets of this approach have been the idea that human societies pass through stages of political organization in a regular order, and that several features of social organization change together. These approaches have proven highly controversial and have been criticized both by mainstream anthropology and those that espouse a Darwinian approach to investigating cultural change. However, important questions relating to the mode and tempo of the evolution of human socio-political organization remain. In this talk I show how these issues can be tackled empirically within a Darwinian evolutionary framework by rigorously testing competing hypotheses using cultural phylogenetic comparative methods. Results from Austronesian-speaking societies suggest that there has indeed been a regular sequence in the evolution of human political organization.

Sponsor:Japan Society for the Promotion of Science

Poster Number: 81

Phylogenetic methods reveal regular sequence in the evolution of increasing hierarchical political complexity
Currie, TE, Greenhill, SJ, Gray, R, Hasegawa, T, Mace, R

The question of whether or not human socio-political organization has evolved through a regular sequence of forms has long been a controversial issue. However, debates have continued largely in the absence of rigorous, quantitative tests of the opposing hypotheses. Here we evaluate six competing sequential and non-sequential models of political evolution using a Bayesian phylogenetic comparative method and data from Austronesian-speaking societies. Results provide strong support for sequential over non-sequential models, particularly in the direction of increasing complexity. The study reveals that despite the numerous divergent pathways that human history has taken there have indeed been regularities in human cultural evolution and that these regularities are detectable using cultural phylogenetic techniques.

Sponsor: Japan Society for the Promotion of Science post-doctoral fellowship, ESRC/NERC Interdisciplinary Studentship, Royal Society of New Zealand Marsden Fund

Presentation: Thu, 10:50 Lillis 282

Follow the Leader: Endorsement as a cue of political coalition

Curry, O, Bang Petersen, M, Tooby, J, Cosmides, L

Previous research using a 'who said what' memory confusion protocol has established that sex, kinship and coalition – but not race – are among the fundamental categories of human social cognition. Subsequent research suggests that coalitional psychology – originally designed to track small-scale ancestral coalitions – is engaged by cues of political party membership. The present study tests: a) whether an alternative ancestrally-available cue of coalition membership – expressing support for a particular leader – also engages coalitional psychology; b) whether categorisation by leader reduces categorisation by race and age; and c) whether individuals generalise preferences from one member of a coalition to another. Undergraduate participants viewed 'local councillors' discussing their jobs, and their preferred candidate in an upcoming leadership election; the councillors varied by race (Caucasian, Indian-Asian) and by age. The results supported all three predictions, and thus provide further evidence that modern political parties are viewed by the evolved mind as ancestral coalitions.

Poster Number: 10

Women's Intuition: Wariness in Mate Selection
Curtis, DA, Cowan, LK, Hart, CL

In mate selection, males deceptively deploy false indicators of mate value. In order to avoid costs

associated with mistakenly selecting low value mates, women would benefit from wariness about men's mate value signals. This study examined females' wariness toward men who profess various traits relevant to mate selection. Specifically, we examined factors that might influence suspicion and trust.

Sixty-six female participants viewed video-recordings of males making statements about themselves. Statements made by males in the video demonstrated trait type (mate-value or non-mate value), value-level (high or low), and mate selection context (long-term or short-term). Women watched these videos and rated the believability, trustworthiness, and suspiciousness of those men. Men's statements indicating mate value were less believable than responses not related to mate value. High value statements were less believable than low value statements. Additionally, an interaction between value and mate selection context (long-term vs. short-term) was found.

Presentation: Sat, 5:20-5:40 Lillis 182

Seinfeld was Right About Man Hands: Analysis of the Sexual Dimorphism of Hands

Dane, LK

Like faces, hands and forearms may provide cues to quality used in mate choice. Two sexual dimorphic components were extracted from measurements taken on 62 male and 68 female hands and forearms. Sex-typical scores on this objective measure were associated with sexually dimorphic facial features, greater symmetry, sex typical 2D:4D, and low finger ridge counts in both sexes. Preliminary attractiveness ratings and attribute judgments were made on photographs of the dorsal view of target hands and arms. Subjectively rated and objectively measured masculine hands and arms were judged most attractive in men, while feminine hands and arms were preferred in women. Men with male typical hand index scores, low 2D:4D and high ridge counts were rated as more masculine, dominant, intelligent, healthy and as good parents. Women with feminine hands, high 2D:4D and high ridge counts were rated as more feminine. Results were consistent with similar research on faces.

Presentation: Sat, 3:20 Lillis 282

Dissonant Probabilities: A New Model of Adaptive Decision-Making

Davis, J

Models of adaptive decision-making explain and predict when an individual will switch between short-term and long-term adaptive strategies. In this paper, I present a model of adaptive decision-making based on cognitive dissonance theory. The major premise of the paper is that the individual makes multiple predictions about the future to decide a course of action in the present. Predictions focus on the probability of acquiring resources and the

probability of controlling access to those resources over time. I propose, using cognitive dissonance theory, that when probabilities are consonant the individual will pursue long-term adaptive goals. When dissonant, preference for short-term adaptive goals will strengthen. I conduct a limited test of the model using data on American youth in the National Educational Longitudinal Survey (1988-2000). Results suggest that dissonant probabilities strongly differentiate individuals in terms of short-term and long-term educational outcomes such as dropping out school and pursuing higher education.
Sponsor:U.S. National Institutes of Health

Poster Number: 128

Cook to care, cook to impress: sex differences in motives for meal preparations
De Backer, CJ, Braeckman, J

Although the preparation of meals might be shifting to more equal gender roles in young households, from an evolutionary perspective we predict that gender differences will persistently occur in motives for preparing food for others. Based on the Sexual Strategies Theory, we predict that while women cook to care for others, men will be more likely to cook meals to make an impression, and show off their skills and resources. Using data from longitudinal studies about food consumption and family activities, and a self-administered survey we present data to support this idea.

Presentation: Thu, 4:40 Lillis 182

The (co)-evolution of commensality and morality
De Backer, CJ, Braeckman, J

Throughout human history, commensality has been a means to celebrate the benefits of the indispensable cooperation in the acquisition of food. Simultaneously, commensality operates as a socialization system; by means of information transfer and practical habits related to the sharing of food (e.g. serving order, (un)fair division of food portions, etc.), norms and values that govern behavior in a group are being taught to novices. In a recent trend of globalization cooperation in the acquisition of food and commensality started to wane. Coincidentally, many societies have become more individualistic, rules and norms have started to crumble, and moral values are less emphasized. Hence, the question can be raised if changes in commensality have an effect on changes in morality. We illustrate with cross-cultural data how commensality universally acts as a system of moral socialization, and present data from a survey investigating changes in eating patterns and moral judgment.

Presentation: Thu, 3:00 Lillis 112

Misrepresentations of Evolutionary Theory in Social Science Textbooks
Deaner, RO, Winegard, BM, Winegard, BM

Evolutionary theory has long been attacked by right wing fundamentalists. In recent decades, however, it has become apparent that evolutionary theory, when applied to human behavior, suffers from similar misrepresentation and derogation by many social scientists. We hypothesize that this arises from a cycle of misinformation: scientists ignorant of evolutionary theory endorse scholarly products (e.g., publications, textbooks) that misrepresent evolution and portray it negatively; these products then foster hostility and ignorance among scholars and students. We tested predictions of this hypothesis by studying the fifteen most widely-used social science textbooks that focus on sex differences. As predicted, textbooks with more misrepresentations of evolutionary theory (1) were more popular ($r=.46$), (2) expressed more hostility towards evolutionary theory ($r=.59$), and (3) showed bias in their portrayal of politically-unpalatable empirical findings ($r=.67$). These results collectively suggest that the goal of cross-disciplinary integration is being obstructed by hostility toward, and ignorance of, evolutionary theory.

Presentation: Sun, 9:00 Lillis 211

No place to hide: when shame causes proselves to cooperate.
Declerck, CH, Boone, C, Kiyonari, T

Shame is often considered a moral emotion with action tendencies shaped by natural selection to elicit socially beneficial behavior. Yet, unlike guilt, prior experimental studies do not indicate that incidental shame boosts prosocial behavior. Based on the affect as information theory, we hypothesize that feelings of shame may trigger cooperation, but only for self-interested individuals, and only in situations where shame is clearly associated with reputation concerns. To test this hypothesis, cooperation levels are compared between a classic prisoner's dilemma (where "defect" may result from multiple motives) and a sequential prisoner's dilemma (where "defect" is the result of intentional greediness). The results indicate that prosself (but not prosocial) individuals cooperate more following incidental shame, but only in a sequential prisoner's dilemma. Hence ashamed proselves become inclined to cooperate when they believe they have no way to hide their greediness, and not because they want to make up for earlier wrong-doing.

Sponsor:NOI grant from the University of Antwerp

Presentation: Thu, 10:50 Lillis 112

Sexual selection, the imprinted brain, and the evolution of autistic personality traits

Del Giudice, M

An extension of Crespi and Badcock's "imprinted brain" model of autism and psychosis is proposed, dealing with the evolution of autistic personality traits in the non-clinical range. The hypothesis is advanced that autistic personality traits have undergone sexual selection in the context of long-term, investing couple relationships. In the light of recent theoretical developments of the kinship theory of genomic imprinting, the association between autistic traits and paternally expressed imprinted genes can be explained by parental conflict about long-term paternal investment and intergenerational resource transfer. Finally, data from young adults are presented showing that, as predicted by the model, autistic traits in the non-clinical range predict reduced interest in short-term mating and increased investment/commitment in long-term couple relationships.

Poster Number: 118

The effects of prenatal androgens on romantic attachment and sociosexuality

Del Giudice, M, Angeleri, R

Romantic attachment styles and sociosexuality are important components of human life history strategies. In this study, the effect of prenatal androgens (2D: 4D digit ratio) on attachment and sociosexuality was assessed in a sample of 435 university students. Results showed that, in females, higher prenatal exposure to androgens predicts lower attachment anxiety and (marginally) lower levels of long-term sociosexual orientation. No effects of prenatal androgens were detected in males. Finally, the study replicated the association between romantic attachment styles and sociosexuality in both sexes.

Presentation: Fri, 3:40 Lillis 182

Adaptations for Collective Action: Distinguishing Free Riders from Other Non-Contributors

Delton, A, Nemirow, J, Robertson, T, Cimino, A

Humans everywhere engage in collective action: Multiple individuals coordinate to produce a shared good that none could produce alone. Some collective actions create public goods—goods easily consumed by contributors and non-contributors alike. In this case, non-contributors can free ride, putting them in evolutionary competition with contributors. When a good is not public, however, free riding is impossible and no evolutionary competition is created. Considerations of ontogenetic payoffs, on the other hand, reveal no such asymmetry: Regardless of whether non-contributors can benefit, their actions have identical effects on contributors—either way, non-contributors reduce the benefits available to contributors. Using both implicit and explicit social cognition

measures, we test whether the mind recognizes the asymmetry predicted by evolutionary considerations. Results show that non-contributors are responded to more negatively when free riding on a public good. The human mind appears adapted for multiple types of collective action.

Sponsor: National Institute of Health

Presentation: Fri, 3:20 Lillis 211

Social learning for honey hunting across the lifecycle. A case study among the Jenu Kuruba, South India.

Demps, K, Zorondo-Rodriguez, F, Garcia, C, Reyes-Garcia, V

While cultural evolution theory makes strong predictions about which social learning biases we expect people to use, there are few predictions describing when in a person's lifecycle different learning biases will be used. By measuring knowledge and skill variation among the Jenu Kuruba, a honey hunting tribal community in South India, we can make important inferences about how people acquire different types of knowledge at different ages and which social learning strategies they use to do so. Specifically, we document the accumulation of the tacit and explicit knowledge required for collecting wild honey among 68 children and 152 adults in five communities. Combining quantitative measurements of knowledge/skill with self-report data of learning, we also infer patterns of social learning for several measures of theoretical knowledge and practical skills.

Sponsor: NSF, Agence Nationale de la Recherche (France)

Poster Number: 151

Evolutionarily Relevant Workplace Characteristics and Mental and Physical Health

Demsky, C, Colarelli, S, An, M, Pfaff, C

The modern workplace differs dramatically from the environment in which humans evolved and to which we are still primarily adapted. Unlike our ancestors, people who work in modern office buildings and factories receive little exposure to direct sunlight and flora; modern work environments provide little opportunity for physical exercise and cordial interaction; and work routines militate against adequate sleep. Therefore, employees in workplaces that are most discrepant from the environment of evolutionary adaptedness are more likely to evidence greater levels of depression, anxiety, and somatic symptoms. In this study we report the development of a survey that assesses evolutionarily relevant characteristics of the workplace, including: exposure to sunlight and greenery, noise levels, physical activity, napping, and amount and quality of interaction with animals and humans. Using student and web-generated samples, we report preliminary results on the effect of these

characteristics on physical health, mental health, and job-related outcomes.

Presentation: Thu, 3:00 Lillis 282

Mine and Thine: The Foundations of Human Property
DeScioli, P, Wilson, B

Research shows that many animal species have morphological and cognitive adaptations for fighting with others to gain resources, but it remains unclear how humans make fighting decisions. Non-human animals often adaptively calibrate fighting behavior to ecological variables such as resource quantity and whether the resource is distributed uniformly or clustered in patches. Also, non-human animals use strategies to reduce fighting costs such as resolving disputes based on power asymmetries or conventions. Here we show that humans apply an ownership convention in response to the problem of severe fighting. Participants interacted as avatars in a virtual environment where they could forage and fight for electronic food items (convertible to cash). In the patchy condition, we observed an ownership convention—the avatar who arrives first is more likely to win—but in the uniform condition, where severe fighting is rare, the ownership convention is absent.

Presentation: Fri, 3:00 Lillis 112

The early lives and physical development of British teenage mothers: evidence from the National Child Development Study

Dickins, T, Nettle, D, Coall, D

Teenage motherhood may be symptomatic of a fast life-history strategy. Consequently, one would expect early adversity and subsequent development to differ across early and later fertility females. We present findings that support this. Low birthweight for gestational age, short duration of breastfeeding, separation from mother in childhood, frequent family residential moves, and lack of paternal involvement are all independently associated with earlier first pregnancy. The association between family socioeconomic position and age at first pregnancy is partially mediated by early-life experiences. Early adversity appears to affect women's reproductive schedules in an approximately additive manner. Young mothers were also shorter than controls at age 7, had earlier menarche and accelerated breast development, earlier cessation of growth, and shorter adult stature. They had poorer emotional and behavioural adjustment than controls at age 7 and especially 11, and by age 16, idealized younger ages for marriage and parenthood than the controls.

Presentation: Fri, 10:30 Lillis 182

Mating Motives for Warfare

Duntley, JD, Buss, DM

Warfare was recurrent over human evolutionary history. We propose that problems of human mating were central selective forces favoring coalitional aggression in men, but not in women. We hypothesize that the mating benefits obtained by men from engaging in warfare included: increasing their attractiveness to mates by acquiring resources and gaining status, and obtaining mates from opposing groups by force. Warfare also made women vulnerable to sexual aggression and kidnapping. We hypothesize that male mating strategies selected for coevolved defenses in women to avoid exploitation. We conducted three studies (combined N=319) to evaluate these hypotheses. Results provide support for the existence of specialized adaptations in men for utilizing coalitional aggression as a mating strategy and adaptations in women to defend against the costs of being exploited by enemy males. Discussion focuses on the importance of within-species antagonistic coevolution in shaping adaptations for warfare.

Presentation: Sat, 5:40-6:00 Lillis 182

Ovulation Leads Women to Over-Perceive Commitment from Sexy Cads But Not Good Dads

Durante, KM, Griskevicius, V, Simpson, JA, Li, NP

Why do some women pursue sexy cads? Previous research suggests that women are more attracted to sexy cads at high fertility because ovulation motivates women to obtain genetic benefits via short-term sexual encounters. We examined how ovulation influenced women's perceptions of the likelihood that a sexy cad or a good dad would enter into a committed relationship with her, and the extent of paternal investment women thought each man would provide in potential offspring. Results showed that ovulation led women to perceive that a sexy cad would be more likely to have a committed relationship with her and provide more paternal investment in potential offspring. In contrast, fertility had no effect on perceptions of good dads. These findings suggest that ovulation may produce adaptive delusions about sexy cads, leading women to over-perceive the likelihood that such men will commit and become devoted fathers.

Poster Number: 154

Reproduction Expediting: Sexual Motivations, Fantasies, and the Ticking Biological Clock

Easton, J, Goetz, CD, Confer, JC, Buss, DM

Beginning in their late twenties, women face the unique adaptive problem of declining fertility eventually terminating at menopause. We hypothesized women have a reproduction expediting adaptation designed to take advantage of their remaining fertility. Specifically, we

predicted women approaching a decline in fertility experienced increased sexual motivations and sexual behaviors compared to women not facing a similar fertility decline. Results from a college and community sample (N = 827) indicated women approaching a decline in fertility (1) think more about sex, (2) have more frequent and intense sexual fantasies, (3) are more willing to engage in sexual intercourse, and (4) report actually engaging in sexual intercourse more frequently than women of other age groups. These findings support the hypothesis women have an adaptation entrained to their biological clocks that functions to shift sexual motivations and behaviors in ways that historically capitalized on their remaining fertility.

Presentation: Thu, 5:00 Lillis 211

Environmental determinants of incipient life history strategy: Distinguishing harshness and unpredictability
Ellis, B, Belsky, J, Schlomer, G

Life history theory delineates environmental harshness and unpredictability as fundamental influences on the development of life history strategies. To examine the unique contributions of these factors, data were collected on 1364 mothers and their newborn children, who were then followed prospectively through the 6th grade. Harshness was operationalized as socioeconomic status in the first five years of life. Unpredictability tapped residential, parental, and employment changes during this same period. The main outcome variable was aggressive-disruptive-opportunistic behavior (ADOB) in late elementary school (a precursor of a fast life history strategy). Maternal depression and parental investment were examined as intervening variables. Results indicated that harshness and unpredictability each uniquely undermined maternal mental health and parental investment and, through it, induced greater ADOB. These results are consistent with the life history theoretical model and highlight the importance of distinguishing between exposures to harsh and unpredictable environmental conditions in regulating development of life history strategy.

Sponsor:NICHHD

Presentation: Sat, 10:50 Lillis 211

Men smelling men: testing the challenge hypothesis
Eppig, CG

Previous research has shown that women are able to detect aspects of men's phenotypic quality using scent alone. This ability is theoretically beneficial for men, as well, as it pertains to assessment of possible competitors. If men do possess this ability, it may also be used to adaptively modulate competitive psychology and physiology through testosterone changes. This research tested two hypotheses: (1) men are able to detect bilateral symmetry and psychological dominance in other men

using scent cues, and (2) men will modulate their testosterone levels when exposed to the scent of men with higher or lower dominance than their own. Results show that men are able to detect chemical cues of symmetry and dominance, but could not show that men modulate their testosterone in response.

Poster Number: 96

Emotional Regulation and Recalibration in Psychopathy
Ermer, E

Psychopathy is a serious personality disorder with interpersonal, affective, and behavioral components. Psychopaths show a profound lack of morality and behavioral controls in the presence of intact general intellectual functioning. In particular, psychopaths show impairments in the display of moral emotions (empathy, guilt, remorse, etc.) coupled with intense reactivity to other events (evidenced by poor behavioral controls and impulsivity). Here we explore whether psychopaths show impaired emotional intelligence, i.e., the ability to predict emotional responses and reactions in others, and whether this affects how they tradeoff their welfare against others. Compared to matched non-psychopaths, incarcerated psychopaths show small but significant impairments in emotional intelligence, but normal welfare tradeoff patterns. These results are discussed in terms of an emotional recalibrational deficit model of psychopathy.

Sponsor:NIH, NIDA

Presentation: Sat, 11:10 Lillis 211

Salivary testosterone levels of males at a sex club
Escasa, MJ, Gray, PB

This study investigates salivary testosterone levels in men watching (n=24) versus participating (n=18) in sexual activity at the largest sex club in the U.S. Some previous studies have shown that exposure to sexual stimuli (watching erotic movies) increases testosterone levels in males. Additional studies measuring testosterone changes during actual sexual intercourse have yielded mixed results. Problems with previous studies include small sample sizes, "unnatural" lab based settings, and invasive techniques (e.g. IV blood draws). The present study entails minimally invasive sample collection (measuring testosterone in saliva), a naturalistic setting, and a larger number of subjects than previous work. Preliminary analyses indicate that testosterone levels increased among men generally during their visit to the sex club, though increases appear more pronounced among viewers than participants. We discuss these findings, as well as secondary analyses involving other possible factors: circadian and sleep rhythms; body mass index, age, and relationship status.

Poster Number: 82

Interactions between the effects of fundamental and formant frequencies on women's preferences for men's voices

Feinberg, DR, Jones, BC, DeBruine, LM, O'Connor, JM, Tigue, CC, Borak, DJ

Prior work has identified independent contributions of voice pitch and apparent vocal-tract length to women's preferences for men's voices. No study has tested for interactions among preferences for these voice qualities. Interactions between preferences for pitch and apparent vocal-tract length may reflect optimal allocation of resources devoted to somatic (vocal-tract) and ornamental (pitch) development. We manipulated men's voices to have low-pitch and large apparent vocal-tract length, low-pitch and small apparent vocal-tract length, and all other possible combinations, and tested women's preferences. Women preferred low-pitch more when associated with large vocal-tracts than when associated with small vocal-tracts. Preferences for large vocal-tracts were stronger when associated with low-pitch rather than when associated with high-pitch. Women may prefer men displaying allocation of resources such that neither somatic nor ornamental vocal features were over-expressed at a cost to the expression of the other feature.

Sponsor: Social Sciences & Humanities Research Council of Canada; Canada Foundation for Innovation; The Ministry of Research and Innovation of Ontario

Presentation: Sat, 11:10 Lillis 112

Two prides? Evidence against the "authentic" / "hubristic" model

Fessler, D, Holbrook, C, Piazza, J, Sousa, P

Tracy and Robins argue that there are two evolved facets of the emotion pride—"authentic" and "hubristic." Cognitively, authentic pride purportedly corresponds with attributing successes to personal effort, whereas hubristic pride purportedly corresponds with attributing successes to innate qualities. Behaviorally, authentic pride is predicted to foster generosity and hubristic pride to foster selfishness. We correlated authentic / hubristic pride with causal appraisals of personal successes and failures (Studies 1-2) and with resource sharing in a Dictator Game following a pride induction manipulation (Study 3). The overall results were inconsistent with the two-facet model: authentic pride correlated with attributions of success (but not failure) to innate qualities, hubristic pride correlated with attributions of failure (but not success) to personal effort, and both prides predicted less resource sharing compared to a happiness control manipulation. The apparent differences in the "two prides" appears better explained as divergent self-presentation styles, not distinct emotions.

Poster Number: 33

Looming Large: The Effects of Determinants of Aggressive Formidability on Conceptualized Size

Fessler, DM, Tiokhin, LB, Snyder, JK

Existing research suggests that, consonant with the ethnographic concept "Big Man," prestigious individuals are perceived as being physically larger than less prestigious individuals. We suggest that this reflects a derived manifestation of a phylogenetically ancient system in which size and aggressive formidability (and thus social rank) are equated. We hypothesize that, because size is a core determinant of dominance both in nonhuman species and in many human aggressive encounters, selection has long employed size as the central metric in representations of perceived relative formidability – the more that a prospective opponent is assessed as possessing attributes and resources likely to translate into victory, the larger the opponent is visually represented in the assessor's mind. We present results from preliminary studies investigating the effects on perceived size of other's risk-proneness, coalitional support, and access to weaponry, all factors predicted to influence assessments of formidability.

Sponsor: UCLA Council on Research

Presentation: Thu, 11:10 Lillis 112

Should evolutionary personality psychology be focused on the HEXACO instead of the Five Factor Model? Evidence from altruism and hazard management.

Fiddick, L

Buss (1991) and Nettle (2006) have both cast evolutionary analyses of human personality in terms of the Five Factor Model (FFM). Despite the promise of these evolutionary accounts of personality, relatively little published research has been generated by the research programs they have suggested. I will argue that this is due to the choice of the FFM instead of the six factor HEXACO model as the starting point for evolutionary hypothesis generation. The results of several studies investigating the personalities of altruists and physical risk takers will be presented to support the claim that the HEXACO does a better job of tracking evolutionarily-relevant individual differences.

Sponsor: James Cook University, School of Arts and Social Sciences

Presentation: Sun, 9:40 Lillis 112

Income and Childlessness: Evidence from the Developed and the Developing World.

Fieder, M, Huber, S

Recent studies have shown that in modern men as in traditional societies, a strong positive relationship between socioeconomic status (income) and offspring count appears. We show that the positive relationship between male income and reproduction is not limited to a

few restricted samples but can also be demonstrated using large census samples from the developed and developing world (USA, Mexico, Panama, Brazil, Venezuela, South Africa; approximately 10. Million. individuals in total). In each sample, a higher percentage of low income men remain unmarried and childless. A lower marriage (cohabitation) rate seems to cause a higher percentage of childlessness among low income men. These results are also in accordance to our findings that women married to low income men have a higher probability to remain childless. Thus, women may increase their fitness by choosing wealthy men. We conclude that sexual selection plays an important role even in modern societies.

Presentation: Thu, 3:00 Lillis 182

Symposium Paper: Interpersonal Violence, Cognitive Schemata, and Life History Strategy
Figueredo, AJ, Gladden, PR, Beck, CJ

A structural equations model was tested on a sample of undergraduate students to determine whether the inhibiting effects of a slow Life History Strategy on Interpersonal Violence were mediated through antagonistic (as opposed to mutualistic) social cognitive schemata, as measured by the Young Schema Questionnaire, the Social Comparison Scale, and the Communal/Exchange Orientation Scale. The model predictors included the Arizona Life History Battery, the Brief Ratings Inventory of Executive Functions, the Multidimensional Sociosexual Orientation Inventory, the Culture of Honor Revenge Scale, the Levenson Self-Report Primary and Secondary Psychopathy Scale, the Reactive-Proactive Aggression Questionnaire, and the Mate Value Inventory. The criterion measures for Interpersonal Violence included the Interpersonal Relations Rating Scale (a new measure of interpersonal aggression adapted from the Relationship Behavior Rating Scale, but generalized to encompass the perpetration of non-intimate-partner aggression), the Competitor Derogation Tactics Scale, the Intrasexual Competition Scale, the Mate Guarding Scale, and the Mate Retention Inventory.

Presentation: Fri, 10:50 Lillis 211

Parasite-stress promotes in-group assortative sociality: the cases of strong family ties and heightened religiosity.
Fincher, C

Throughout the world people differ in the magnitude that they value strong family ties or heightened religiosity. I propose this cross-cultural variation is a result of contingent psychological adaptation that facilitates in-group assortative sociality in the face of high levels of parasite-stress while devaluing in-group assortative sociality in areas with low levels of parasite-stress because in-group assortative sociality is important for the avoidance of and management of infection in regions with

high levels of parasite-stress. I examined this hypothesis by testing the predictions that there would be a positive association between parasite-stress and religiosity or strength of family by comparing between nations and between states in the United States of America. I found for both the international and interstate analyses that in-group assortative sociality was positively associated with parasite-stress even when controlling potentially confounding factors such as human freedom and economic development.

Presentation: Sat, 4:40 Lillis 182

Visible skin condition and mate preferences: Where we now stand
Fink, B, Matts, PJ

Young and healthy-looking skin is a feature that seems universally admired and considered attractive among humans. However, it is only recently that researchers in the field of evolutionary psychology have started to consider skin itself as a visible marker of an individual's mate quality (in terms of health and reproductive potential). Studies have shown that individual variation and age-related changes in visible skin condition, particularly those of human females, affect the perception visual attention, and judgments of their age, health, and attractiveness. In this talk, we (i) summarize the current evidence on the significance of skin condition in human social attributions, (ii) present latest insights into the perception of skin, and (iii) suggest that the emerging collaboration between the scientific fields of skin biology and evolutionary psychology provides a modern, powerful framework for investigating the causes, mechanisms and consequences of the human obsession with a youthful and healthy skin appearance.

Sponsor: German Research Foundation; Procter & Gamble

Poster Number: 34

Sex Differences in Perceptions of Risk for Sexual Behaviours as Influenced by Time Perspective
Fisher, M, Cox, A, Shaw, S, Verge, L

Much of the past research on risk-taking highlights men's risk tolerance and women's risk aversion. We argue that sexual activity represents a situation where women take greater risks than men since they are physically weaker, more susceptible to sexually transmitted infection, and must survive any resulting pregnancy. Thus, we examined women's perceptions of risk for a variety of sexual behaviours. Overall, women identified more of these behaviours as involving higher levels of risk, than did men. We then examined time perspective, and predicted that women's time orientations would influence their risk perception. This prediction was supported. For example, women with a present hedonistic perspective tend to discount the risks involved in having vaginal sexual

intercourse without a condom, whereas those with a future orientation tend to perceive it as more risky. Finally, we will discuss the need to examine interpersonal characteristics when investigating sex differences in sexual attitudes and behaviour.

Presentation: Sun, 11:00 Lillis 112

The Prosody of Conversational Humor on a Brazilian Collective

Flamson, TJ, Bryant, GA, Barrett, HC

This talk will explore the prosody (rhythm, stress, and intonation) of humor in a real-world sample of spontaneous conversation. Speech was collected during ethnographic fieldwork on a collective farm in rural northeastern Brazil, and is drawn specifically from the monthly communal business meetings. Our analyses focused on bouts of spontaneous, comparing and contrasting the prosodic features of these bouts with baseline utterances by the same speaker of similar length. This corpus provided a unique opportunity for examining the way people mark their humor production in a non-humorous environment. Contrary to the notion that speakers must mark their production of humor in order to facilitate audience understanding, no significant marking of a joking “frame” was detected across a range of vocal dimensions. These findings are consistent, however, with the encryption hypothesis of humor that predicts speakers will not generally paralinguistically mark their production of spontaneous, conversational humor in most contexts.

Presentation: Sun, 10:00 Lillis 182

The Interaction of Disgust and Sexual Arousal in Women: Competition Between Mating and Disease Avoidance Motivations

Fleischman, DS, Hamilton, LD, Fessler, DM, Meston, C

Sexual arousal is a motivational state that moves humans toward situations posing a risk of disease transmission; Disgust is an emotion that moves humans away from such situations. We investigated how these two states interact in an experimental paradigm. Women (n=40) were assigned to one of four conditions: rate disgust stimuli-watch a pornographic clip, watch a pornographic clip-rate disgust stimuli, rate fear stimuli- watch a pornographic clip, watch a pornographic clip- rate fear stimuli. Women’s physiological sexual arousal was measured with a vaginal photoplethysmograph and their disgust and fear reactions were measured by self-report. Women who experienced more subjective disgust showed significantly less physiological sexual arousal, however, women who showed more arousal experienced heightened subsequent disgust sensitivity. Participants who first viewed fear stimuli showed more arousal than those who first viewed disgust stimuli. We discuss these findings in light of the costs and benefits of mating and disease avoidance.

Sponsor:The American Association of University Women

Poster Number: 16

Women's voice pitch changes when viewing attractive men

Fraccaro, PJ, Jones, BC, Vukovic, J, Smith, FG, Watkins, CD, Feinberg, DR, Little, AC, DeBruine, LM

Although humans can raise and lower their voice pitch, it is not known whether such alterations can function to increase the likelihood of attracting preferred mates. Because men find higher-pitched women’s voices more attractive, the voice pitch with which women speak to men may depend on the strength of their attraction to those men. We tested this prediction by measuring voice pitch when women left voicemail messages for men with masculinized and feminized faces. We found that the difference in women’s voice pitch between these conditions correlated with the strength of their preference for the masculinized versus feminized faces, whereby women tended to speak with a higher voice pitch to the face they found more attractive. Speaking with a higher voice pitch when talking to men they wish to attract may function to reduce the amount of mating effort that women expend in order to attract and retain preferred mates.

Presentation: Fri, 11:30 Lillis 112

Learning to live: A model Integrating evolutionary and developmental adaptation

Frankenhuis, WE, Panchanathan, K

We present a theoretical approach that simultaneously captures evolutionary and developmental processes, modeling how natural selection shapes ontogeny. We use an adaptive dynamic program with Bayesian updating to model a tradeoff between learning about the state of the world and specializing towards a phenotypic target—specializing early may lead to a more adaptive phenotype, but learning may yield a more accurate estimate of the state of the world. The model generates optimal developmental programs (i.e., policies) for a wide range of evolutionary ecological conditions. We observe the phenotypic distributions these programs produce, thus obtaining insight into the patterning of individual differences of mature phenotypes; for instance, when phenotypes fall into relatively discrete personality types versus continuous distributions of various kinds. The model can inform empirical research in such domains as the development of stress reactivity, differential plasticity, reproductive strategies, levels of aggression, and cultural learning of expertise.

Poster Number: 134

Identification of habitual single-strap tumpline use in a mummy by CT and X-Ray imaging
Gaffney, GO

The examination of skeletal materials has proven highly successful in the understanding of past human behavior and activity patterns. However, under some circumstances, direct examination of the bones is not possible; such is the case with mummified remains. In this case, mummified remains were subjected to computerized tomography as well as digital X-ray imaging. The scans indicated a depression of the outer table in the frontal bone approximately 6 centimeters above glabella. A 3D model of the skull was constructed from the scans demonstrating that the depression extended horizontally along the frontal bone. The scans revealed pronounced insertions of sternocleidomastoid on the mastoid processes. The left temporal styloid process notably extended inferiorly; the right temporal styloid process was not observed. Collectively, these observations suggest habitual use of a single-strap tumpline. This case demonstrates the usefulness of such imaging techniques in reconstructing past behavioral activities.

Sponsor: UCLA Department of Anthropology and David Geffen School of Medicine at UCLA, Department of Radiological Sciences

Poster Number: 141

Sex Differences in Sexual Regret
Galperin, A, Haselton, MG, Poore, J, Von Hippel, W, Gonzaga, G, Buss, DM

We hypothesize that regret improves future decision-making by enabling people to avoid past mistakes that have important fitness consequences. We predicted that men would regret missed sexual opportunities (sexual omission) more than women, whereas women would regret sexual encounters (sexual commission) more than men. In an ongoing US internet study, a diverse sample of 82 women and 66 men (mean age approximately 35) reported whether they had experienced 78 different sexual regrets culled from a previous free-response study. As predicted, men reported more regrets involving missed opportunities for sex than did women, including passing up the opportunity to cheat on a partner. Also as predicted, women reported more regretted sexual encounters than did men, including having a one-night stand and feeling pressured to have sex. Short-term sociosexual orientation positively predicted the experience of regret in general, except that short-term men had relatively few sexual commission regrets.

Presentation: Sat, 11:30 Lillis 112

Sex, Ethnicity, and The Face: A Cross-Cultural Analysis of Facial Displays of Emotion

Gambacorta, D, Breugelmans, S, Koenig, B, Ketelaar, T

Previous research has found that perceptions of facial displays of emotion are dependent upon the context in which these faces appear (Avezier, et al., 2008; Masuda, et al., 2008). However this research has suggested that context is a relatively domain-general variable that affects observer's perceptions of all emotion displays equally across both genders. In the current study, participants are presented with a series of pictures depicting groups of people and are asked to rate the emotions of one individual in the center of the picture. This target individual (as well as the background individuals) vary systematically in terms of their sex (male, female), ethnicity (Caucasian, Asian) and facial expression displayed (angry, happy or neutral). In three samples of participants from Singapore, the Netherlands and the US we explore several evolutionary hypotheses concerning biases in the perceptions of facial displays of emotions that vary as a function of gender and in-group/out-group status.

Presentation: Sat, 5:00 Lillis 182

Men's Oxidative Stress, Fluctuating Asymmetry, and Physical Attractiveness

Gangestad, SW, Merriman, L, Emery Thompson, M

Aerobic organisms naturally create reactive oxygen species (ROS) as byproducts of energy production. These substances can damage DNA and tissue, and likely are major causes of mutation, aging, and a host of diseases. Oxidative stress occurs when an organism produces an overabundance of ROS relative to ROS-neutralizing antioxidants. We examined the hypotheses that individual differences in oxidative stress are associated with men's fluctuating asymmetry and physical attractiveness. We measured urinary biomarkers of oxidative stress (8-hydroxy-2'-deoxyguanosine [8-OHdG] and malondialdehyde [MDA]) in a sample of healthy men. A composite measure of oxidative stress correlated positively with FA and negatively with physical attractiveness (with potential confounds statistically controlled). Associations were not mediated by testosterone or cortisol. These findings may yield insights into previously unidentified factors that affect the development of phenotypic features under sexual selection and contribute to the shape of human life histories.

Presentation: Fri, 3:00 Lillis 282

Maintaining Social Relations is a Key to Infidelity Reactions

Geher, G, Fisher, M, Cox, A, Tran, U, Hoben, A, Arrabaca, A, Chaize, C, Dietrich, R, Voracek, M

384 participants completed a survey to assess attitudes about factors associated with infidelity which included sex and relationship-status as well as several within-group factors: (a) vaginal versus oral sex, (b) whether a disease was likely to follow, (c) whether the infidelity would likely be disseminated, and (d) whether the infidelity took place with an intimate. No main effects were found for relationship status or sex. Each within-subject factor had a significant effect: Vaginal intercourse was more distressing than oral. Infidelity with high likelihood of experience damaging reputation was distressful. Infidelity that would lead to a disease was distressful. And distress toward infidelity increases as the target moves closer to the participant's inner circle, from stranger and prostitute to same-sex best-friend and same-sex sibling. Keeping infidelity outside one's circle seems like a paramount goal of responses to infidelity—more important than fending off disease or maintaining one's reputation within the group.

Presentation: Sat, 11:30 Lillis 182

Cooperation in Context: Public Goods Games and Post-Soviet Collective Institutions in Kamchatka, Russia
Gerkey, D

Economic games provide researchers with unique opportunities to compare measures of cooperation across varying geographic and cultural contexts, but they also pose methodological and theoretical challenges. Many of these challenges concern the ways that researchers trace connections between patterns of cooperation in the games and patterns of cooperation in everyday life. In this presentation, I examine these connections using data from public goods games (PGG) with salmon fishers and reindeer herders from the Kamchatka Peninsula, Russia. Participants were randomly assigned to either a standard PGG or a PGG framed to reference one of two post-Soviet collective institutions that coordinate fishing and herding. Average contributions in the PGG were unusually high (89% of the initial endowment). I assess how these high contributions reflect the importance of cooperation in Kamchatka by combining data on PGG contributions with quantitative data on food sharing and comparing standard and framed versions of the games.

Sponsor: National Science Foundation; Wenner-Gren Foundation; Fulbright

Presentation: Fri, 5:20 Lillis 112

Mere Visual Perception of Others' Disease Symptoms Facilitates a More Aggressive Immune Response

Gervais, WM, Schaller, M, Chen, E, Miller, G, Yager, S

Pathogens have long posed an adaptive problem for humans, and much recent research has focused on the ways pathogens influence human psychology. Despite this, there is little to no research on the ways that perceiving cues of disease in the immediate environment may influence the human immune system. An experiment ($N = 28$) tested the hypothesis that the mere visual perception of disease connoting cues promotes a more aggressive immune response. Compared to a stress-inducing control condition (in which people were exposed to photographs depicting guns), when people were exposed to photographs depicting symptoms of infectious disease, their white blood cells produced higher levels of the pro-inflammatory cytokine interleukin-6 (IL-6) after incubation with a model bacterial stimulus. These results provide the first empirical evidence that visual perception of others' symptoms may cause the immune system to respond more aggressively to infection.

Sponsor: The research was supported by grants funded by the Canadian Institutes of Health Research and the Social Sciences and Humanities Research Council of Canada

Presentation: Sat, 3:40 Lillis 211

Land inheritance establishes sibling competition for marriage and reproduction in rural Ethiopia.

Gibson, M

Within an agro-pastoralist society in Southern Ethiopia recent changes in land tenure policy have altered transfers of land from parents to offspring in some households, presenting a framework to test the importance of intergenerational transfers of wealth in driving sibling competition. Where land is inherited, the number of elder siblings (particularly elder brothers) reduces a man's agricultural productivity, marriage opportunities and reproductive success (surviving offspring), as resources diminish and competition increases with each additional sibling. Where land is not inherited (but is distributed by the government), siblings do not have a measurable negative effect on male marriage and reproduction, and in some instances they may even be beneficial (brothers reduce the risk of out-migration and elder brothers increase marriage payments). Here, the presence of heritable wealth is the driver for biased parental investment and sibling competition, which may over the long-term initiate a demographic transition towards smaller family sizes.

Sponsor: The Leverhulme Trust, The Wellcome Trust, ESRC

Presentation: Thu, 10:50 Lillis 211

Detection of ovulation through scent cues: A study of women with hormonally-confirmed ovulation
Gildersleeve, KA, Larson, C, Pillsworth, E, Haselton, M
Evidence suggests that ovulation is accompanied by subtle changes in women's attractiveness. For example, several studies show that men rate women's high-fertility body scents as sexier and more pleasant than low-fertility body scents. This study builds on this work by including a hormonal measure of ovulation (luteinizing hormone tests), testing experiential correlates of men's preference for high-fertility body scents, and using multilevel modeling to determine the precise effect of fertility on odor pleasantness, sexiness, and intensity. Seventy-one regularly-cycling women wore gauze pads under both arms for 24 hours at high and low fertility. Given a forced choice between a woman's high- and low-fertility samples, 108 male raters selected high-fertility samples as more attractive at above chance levels (55.6%). Importantly, effects were only robust among women who showed evidence of a luteinizing hormone surge ($n = 41$), suggesting that studies estimating cycle phase using only day-in-cycle may often fail to detect ovulatory effects.
Sponsor:NSF-IGERT Interdisciplinary Relationship Science Program, UCLA

Presentation: Sat, 5:20 Lillis 282

Old mothers produce less fit offspring
Gillespie, DO, Russell, AF, Lummaa, V
A mother's fitness depends on her ability to produce and invest in high quality offspring throughout life. While evidence shows short-term measures of offspring quality decline with advancing maternal age, few have investigated long-term consequences of maternal age at offspring birth for offspring fitness, despite this being vital for understanding natural selection on age-schedules of fecundity. We use pedigree data of preindustrial Finns to show older mothers produced offspring with reduced survival and lifetime reproductive success. We suggest this underlies a fundamental offspring number vs. quality trade-off, and weakens selection on late-age fecundity with implications for the evolution of menopause.
Sponsor:White Rose University Consortium (DOSG), European Research Council (VL), Academy of Finland (VL) and the Royal Society of London (VL and AFR)

Presentation: Thu, 3:20 Lillis 182

Life History Strategy, Morality, and Disease Avoidance: Conservatism, Disgust, and Flexible Cognitive Control Mediate the relationship between Slow Life History and Inter-group Attitudes
Gladden, PR
Slow Life History (LH) and conservatism have each been linked with increased levels In-Group Attraction (IGA), as well as emotion-laden moral

judgments (e.g., moral disgust). Disgust and IGA have been hypothesized as disease avoidance mechanisms. LH theory suggests that disease avoidance is a form of somatic effort, elevated among Slow LH strategists. Slow LH is also implicated in increased executive control of automatic responses, which may inhibit emotional responses like disgust, as well as socially undesirable behavior. The purpose of this study was to examine a number of potential mediators of the previously observed positive relationship between slow LH and IGA. 174 undergraduates completed questionnaires measuring LH strategies, Conservatism, Executive Functioning, Emotional Intelligence, Disgust Sensitivity, Moral Disgust Intuitions, and IGA. A path-analytic structural model that fit well with the data indicated that Conservatism, Flexible Cognitive Control, and Moral Disgust partially mediate the relationship between slow LH and IGA.

Poster Number: 23

Reproduction Expediting: Age-related Fertility Decline, and Shifts in Mate Preferences and Social Behavior
Goetz, CD, Easton, JA, Buss, DM
Previous research suggests women have a reproduction expediting adaptation designed to take advantage of their remaining fertility before conception probability significantly declines. We predicted compared to other women, women approaching a decline in fertility would be motivated to advertise their sexual attractiveness, and experience mate preference shifts and engage in social activities (e.g. participate in dating websites, attend mixed-sex social events) that would increase their opportunities for sexual encounters. Female participants grouped into the following age categories: ages 18-26 (high fertility women), ages 27-45 (reproduction expediting women), and ages 46 and older (menopausal women) completed an online survey. Participants completed tasks assessing their mate preferences, a hypothetical personals ad, a forced-choice shopping task, and answered questions about their social behaviors. Results suggest reproduction expediting women do experience psychological shifts that may function to increase their opportunities to capitalize on their remaining fertility.

Poster Number: 18

I Want What I Want When I Want It: How Mating Strategy, Self-Perceived Mating Success, Biological Sex, and Circumstance Affect Preferences for Mate Traits
Gonzales, JE, Adams, HM
The purpose of the present study was to explore how biological sex, sociosexual orientation (SOI), self-perceived mating success (SPMS), and a potential relationship scenario (short-term vs. long-term) related to preference for traits in a mate. Participants (Female $n =$

135, male $n = 43$) were randomly assigned to rate how important 28 traits were in either a long-term or short-term mate, and to complete SPMS and SOI surveys. Factor analysis using Varimax rotation reduced traits into four trait groups (Eigenvalues > 1): Family-Commitment ($\alpha > .80$); Resources ($\alpha > .80$); Intelligence-Personality ($\alpha > .70$); and Heritable Fitness ($\alpha = .60$). Independent one-tailed t-tests showed significant ($p < .05$) sex and relationship scenario differences in trait group preferences. Additionally, sex-split and relationship scenario-split correlations revealed significant relationships between trait group preference and both SOI and SPMS. These findings demonstrate how both situational and personal factors contribute to mate preference.

Presentation: Sun, 12:00 Lillis 112

Ovulatory cycle effects on humor
Greengross, G, Heap, M, Mankoff, R

Recent studies have found that women's preferences change during high and low fertility phases of the menstrual cycle. Many of these differences relate to the "good genes" hypothesis, where during their high fertility phases, women show preferences for cues that indicate high mating values in men. For example, at peak fertility, women prefer men with more masculine or symmetric faces. According to many studies, sense of humor is considered sexually attractive in a potential mate, especially to women. It was likely that humor played an important role throughout our evolutionary history, especially through sexual selection. The current study examines the degree to which women's preferences throughout the menstrual cycle are related to various humor domains. Our results suggest that normally cycling women might be more sensitive to humor cues during peak fertility. We also discuss some methodological issues related to measurements of humor and fertility.

Presentation: Thu, 4:40 Lillis 211

Environmental Contingency in Life History Strategies: Influences of Current and Childhood Environment on Risky Decisions
Griskevicius, V, Tybur, JM, Delton, AW, Robertson, TE

Why are some people risk takers, while others are risk averse? Life History Theory suggests that risky decisions are influenced by environmental harshness and unpredictability. We examined experimentally how a harsh-and-unpredictable environment influenced two types of risk-taking: probability risk (e.g., \$5 for sure vs. 50% chance of \$20) and temporal risk (e.g., \$5 now vs. \$10 later). Across experiments, the influence of harshness-and-unpredictability depended critically on whether an individual grew up in a relatively resource-scarce or resource-plentiful environment. For individuals

who reported growing up poor, cues to harshness-and-unpredictability led them to take larger probability risks and smaller temporal risks. Conversely, for individuals who reported growing up wealthy, the same cues led them to take smaller probability risks and larger temporal risks. Overall, the manner in which one's current environment influences risky decisions appears to be contingent on specific features of one's childhood environment in ways consistent with Life History Theory.

Presentation: Sat, 10:30 Lillis 182

Context matters more than stable dispositions in explaining pro-social behavior
Gurven, M, Winking, J, Schniter, E

Experiments are a popular method to study altruism in laboratory and, more recently, in field settings. However, few studies have examined what behavior in lab experiments tells us about actual behavior outside the lab. To investigate external validity of common experimental economics games, we compare game behavior with prosocial behavior among Tsimane forager-horticulturalists of Bolivia. We also explore local variation in game behavior that does not seem to reflect simple ecological or individual-level differences. We find that five types of pro-social behavior (food sharing, social visits, beer sharing, labor participation, and feast contributions) are not robustly correlated with giving behavior in economics games. However, we also find that giving behavior varies among villages, that these village patterns are recognized by residents, and offers likely reflect variation in social expectations rather than stable differences in fairness norms.

Sponsor: National Science Foundation, MacArthur Foundation, National Institutes of Health

Presentation: Thu, 5:00 Lillis 182

Bimodal distribution of aggression norms in three populations: Evidence for hawks and doves?
Hagen, E

The term "social norm" suggests a single, population-wide standard of behavior. Studies of social norms against physical and indirect aggression in US undergrads, a nationally representative sample of US adults, and Central African foragers instead reveal substantial within-population variation. Intriguingly, within each of these populations, norms against aggression often exhibit a bimodal distribution: some individuals believe that aggression is very inappropriate, whereas others feel it is very appropriate. Relatively few adults take the middle position that aggression is neither appropriate nor inappropriate. In an adaptive dynamics model of the continuous hawk-dove game (also known as the snowdrift game), Doebeli et al. (2004) show that under certain conditions an initially homogeneous population first converges to an intermediate state and then bifurcates into

pure hawks and pure doves. Interpreted ontogenetically, this model suggests that children and adolescents should exhibit intermediate norms against aggression, whereas adults become either strongly opposed, or unopposed, to aggression. Hints of this developmental pattern are seen in the Central African forager population. More generally, these results suggest that in some cases “social norms” might best be seen as expressions of individually beneficial strategies rather than population-wide standards of behavior.

Sponsor: Washington State University

Poster Number: 7

Impact of Attractiveness on the Motivation to View Faces
Hahn, AC, Lewis, JK, Re, DE, Perrett, DI, Xiao, D

Facial attractiveness is believed to be indicative of genetic fitness, which influences mate quality. While facial beauty has a strong motivational influence, recent work has demonstrated that the attractiveness of a face is not the same as its motivational/reward value. We tested gender differences in motivational behaviours, and are exploring the impact of hormones on motivation in women. Participants were given a “pay-per-view” keypress task using 120 faces (60 female) ranging in attractiveness and masculinity/femininity. Participants increased or decreased the viewing time of each image by pressing a set of alternating keys. Participants also rated the attractiveness of each face. Rating scores for attractive faces were similar across subject gender. Motivational behaviour, however, differed greatly. Women expended moderate effort to view attractive faces of both genders, whereas men worked very hard only for attractive female faces. Impact of hormones, own status, and smiling are discussed.

Poster Number: 109

Skinny, single and physically aggressive: New evidence for female sexual competition via physical aggression
Hahn-Holbrook, J

It is traditionally assumed that human females do not (or very rarely) engage in physical aggression with other females to secure mates. I predicted, however, that single women (in search of a mate) and attractive women (of higher mate-value) would be more willing to physically aggress against a same-sex opponent. To test these predictions, I investigated the influence of relationship status (single, dating, committed relationship, engaged or married) and physical attractiveness (as measured by closeness to ideal BMI) on the willingness of young heterosexual women to deliver an annoying sound burst to an unduly aggressive, unmarried female confederate. As predicted, degree of romantic commitment inversely correlated with aggression. Additionally, attractive women tended to be more physically aggressive, but only

if they were unmarried. These results suggest that sexual selection shaped physical aggression strategies in women.

Sponsor: United States Air Force and Queen's University Belfast

Presentation: Thu, 3:20 Lillis 282

Breastfeeding and maternal aggression in humans: Is oxytocin the link?

Hahn-Holbrook, JA, Holt-Lunstad, J, Holbrook, C

Mothers across numerous mammalian species exhibit heightened aggression in defence of young which coincides with the course of lactation. In rodents, maternal aggression is mediated in part by release of the hormone oxytocin, which facilitates milk-ejection, maternal bonding and stress-attenuation. This study was the first to test whether oxytocin levels correlate with the aggressive behaviour of breastfeeding, formula-feeding, and nulliparous women. Breastfeeding women were significantly more aggressive than formula-feeding or nulliparous women, after controlling for age, income, marital status and employment. However, oxytocin did not correlate with breastfeeders' aggressive behaviour. Additionally, nulliparous women whose oxytocin increased during the aggressive encounter tended to be less aggressive. We suggest that increased stress (which correlated inversely with aggression and positively with oxytocin release) may account for our finding that oxytocin decreases aggression in nulliparous women. The implications of these findings for the “tend and befriend” and aggression-disinhibiting models of oxytocin are also discussed.

Sponsor: United States Air Force

Poster Number: 101

Sexual orientation, hormone mediated facial features, and self-perceived sex typicality

Hall, P

A general stereotype of homosexuals is that they are relatively sex-atypical. We confirmed this trend by comparing the size of four sexually- dimorphic facial features in models' photographs. Homosexuals' faces tended to be more sex atypical than heterosexuals' with significant differences observed for two traits among women (cheek prominence –CP; facial width:length ratio - FWH) and one for men (FWH). Both traits reflect differences in jaw growth. Since this growth occurs primarily during puberty, our findings indicate that hormonal differences between homosexuals and heterosexuals are not restricted to the prenatal period. Self-identified butch homosexual women had more masculine FWHs than did femmes, hence although butch – femme is typically considered a behaviorally based gender identity, there is a biological component as well. Finally, the influence of sex atypicality in these facial features on self assessments of sex typicality appears to

be weaker for homosexual men than for heterosexual men.

Presentation: Sun, 9:20 Lillis 282

Thirty Years of Kin Selection in Behavioral Ecology and Evolutionary Psychology

Hames, R

In this presentation I will present an overview of more than 180 research articles on kin selection spanning more than thirty years in behavioral ecology and evolutionary psychology towards the end of charting the successes, failures, general findings, and new avenues for research. While a certain amount of tension exists between these approaches I argue that both approaches are complimentary and necessary for a full understanding of the dynamics of altruism. In evolutionary psychology the topics include kin recognition, subjective closeness, willingness to assist and sacrifice for kin, male and female strategies, and reproductive value. In anthropology the topics include the reproductive consequences of kin investment, resource and labor exchanges, coalitionary support, alloparenting, and adoption. In both areas there is clear evidence that paternity certainty powerfully affects investment, nepotism is often mixed with reciprocal altruism, men and women have different strategies.

Poster Number: 76

Your Brother's Keeper?: The Effects of Moral Condemnation on Altruistic Decision Making

Hammond, JW, Easton, JA, Goetz, CD, Buss, DM

Conscience may be an evolved psychological response to the possibility of moral condemnation. The current studies examined the relationship between moral condemnation and conscience. Participants were presented with either a third-person (Study 1) or first person (Study 2) hypothetical life-or-death scenario. In the third-person conditions, 100 online participants assessed the morality of an individual's decision to save a relative or a friend. In the first-person conditions, 100 participants read the same scenario but chose whom they would save either anonymously or while being observed. They also assessed the morality of their decision. Results show inclusive fitness guides the moral assessments of third-party witnesses (Study 1). Results also indicated first-party actors' feelings of morality are stronger when they are monitored by a third-party witness (Study 2). These findings suggest conscience is sensitive to the presence of third-party witnesses, and may have evolved in part as a predictor of the threat of condemnation.

Presentation: Thu, 3:20 Lillis 112

The Economic Psychology of Television Advertising

Hanks, AS, Smith, TG, Tasnadi, A

Economic theories of the role of advertising in a market economy tend to focus on the provision of information to the consumer. The empirical validity of this rich body of work has been demonstrated convincingly, and points to a vital role for advertising in ensuring a robust and competitive marketplace. But there are also certain aspects of many advertisements—especially those seen on television—that are not easily explained by conventional economic models. In particular, much of the imagery and repetitive thematic content seen in advertisements would seem to be more “psychological” in nature than “informational.” In this paper we extend the model of Smith and Tasnadi (2009), which shows that information about threshold payoffs can induce sudden shifts in consumer demand by generating non-convexities in preferences over goods. We then examine the possibility that thematic content in a sample of 380 television advertisements conveys information about threshold payoffs. We find considerable evidence of threshold signaling (mostly relating to survival and reproduction) in our sample.

Poster Number: 155

Physical features preferred differ by desired relationship involvement

Hanson Sobraske, KN

Sex differences in mate choice criteria are well known and lie close to the theoretical roots of evolutionary psychology. A parallel literature in both traditional and evolutionary psychology suggests that some dimensions of choosiness vary with the degree of romantic involvement. These sets of findings form the background for a study on within-sex differences in mating preferences. Men were asked both what physical features they found attractive in women and what degree of romantic involvement they would prefer to have. Men who stated a preference for low-involvement relationships were more likely to nominate physical features that indicate both high estrogen and female-specific fat stores. These preferences may be adaptive: Estrogen is positively associated with fecundity, and female-specific fat stores are positively associated with cognitive functioning of offspring. By preferring these traits, men who engage in low-involvement relationships are maximizing their prospects of quickly siring a high-quality offspring.

Poster Number: 21

Women's Appearance and Body Shape across the Menstrual Cycle: Heightened Attractiveness at Ovulation?

Harris, H, Denkinger, K, Erickson, L, Bleske-Rechek, A, Nelson, L, Webb, R

Women experience cyclic changes in mate preferences and behaviors that reflect a fertile phase preference for good genes. Women choose more revealing clothing and are more receptive to romantic overtures from attractive men when they are fertile. They also manifest subtle physiological changes, such as changes in body odor, over their cycle. The current study tested the hypothesis that women's body and face are more attractive during the fertile phase of their cycle. After an intake questionnaire and information session, we visited 80 college student women at the low and high fertile phases of their menstrual cycle. At each visit, which happened upon wake-up for each woman, we photographed their face and measured their bust, waist, and hips. Naïve judges viewed each woman's set of photos and chose the one they perceived as more attractive. We present our preliminary findings on cyclic changes in body shape and attractiveness.

Sponsor:UWEC Office of Research and Sponsored Programs

Poster Number: 152

Autogenic massacre: A maladaptive response to status threat

Harrison, MA, Bowers, TG, Hughes, SM

Autogenic massacres are indiscriminant killings of two or more individuals in a single spree motivated by personal problems or psychopathology (Mullen, 2004). How can this behavior be understood through and an evolutionary framework? The present study hypothesized that the majority of these massacres were committed by males who experienced status threats or loss, as loss or barriers to status ascent would have had profound reproductive consequences through millions of years of human evolution due to the selectivity of reproductively viable females (Buss & Schmitt, 1993). We gathered available demographic information on perpetrators and the triggers of such murders. As expected, the trigger in most cases was a status loss or threat, and perpetrators were mostly low- or mid-status males with low educational attainment and serious relationship problems. This evidence suggests that autogenic murderous rampages, though clearly maladaptive, may be rooted in a male's genetic preprogramming to defend his status.

Poster Number: 84

Child Signaling and Caregivers Responsiveness among the Aka foragers in the Central African Republic

Hawks, S, Meehan, CL

Human children are highly altricial at birth, requiring more attention and care than do infants in other species. One way infants and young children may encourage caretakers to invest is by signaling need (crying/fusing, vocalizations, and attachment behaviors). This poster examines Aka forest-forager children's signals and the robustness of those signals along with the timeliness and sensitivity of caregivers' responses. While previous studies demonstrate variation in maternal responses to different types of infant signals, little is known about the effects of infant and children's signaling on allomothers. The Aka practice cooperative care giving, with an extensive social network of care givers at a child's disposal. Aka allomothers provide a significant amount of the daily care children receive and have an impact on growth and development. Therefore, the impact of infant signals and allomaternal responsive behavior will shed light on the evolution of cooperative breeding among humans.

Presentation: Fri, 11:10 Lillis 112

The development of children's social dominance relationships: Reconciling the WHY (function) with the HOW (ontogenetic change)

Hawley, PH

For decades social dominance has been aligned with agonism. Across taxa, socially dominant individuals have preferential access to resources and are socially central. If one studies humans over time, however, this model appears to fall apart already in early childhood such that agonism fails to attract sustained positive attention from group members. But social dominance does attract regard if two strategies are considered, agonism and prosociality. Before the age of five, both strategies are associated with resource control, already discernable by age mates (though developmentalists do not grant this power to young children), and high resource controllers are again socially central dependent on the strategies employed (e.g., mixed v. fixed). Finally, in this program aggression across the life span has not been associated with ostracism if aggression is part of a mixed strategy, balanced with prosociality. Eventually, assumptions held by evolutionary psychologists must be reconciled with developmental data.

Presentation: Sat, 4:00 Lillis 211

What's a Mother to Do? Tradeoffs in Maternal Primate Strategies

Hazel, A, Low, BS, Welch, KB, Nepomnaschy, P

Most studies on the evolution of inter-taxonomic diversity in reproductive traits focus mainly on the role of

phylogeny. Reproductive strategies, however, evolve through complex interactions between phylogenetic constraints and selective pressures of local environments. Here we evaluate how interactions between selective pressures and phylogenetic relationships shape observed patterns of maternal investment in living primates. Varying trade-offs emerge for time (gestation length, age at weaning) and energy (neonatal weight, weight at weaning) investment. Our analyses suggest that [1] local ecological contexts can lead to similar maternal trade-offs in species that are not closely related, resulting in comparable investment strategies both during the pre and post-natal period; [2] there can be considerable within-family variation.

Presentation: Fri, 3:20 Lillis 282

Infidelity and women's coerced first sexual intercourse in Chinese college students' dating relationships
He, S

Sexual coercion in intimate relationships is an important research problem which has been investigated within evolutionary perspectives. This study aims to test one of sperm competition hypotheses by examining the relationship between infidelity and women's coerced first sexual intercourse (CFSI) in Chinese college students' dating relationships. Total 927 Chinese college students from 8 universities in 5 cities who are currently in a dating relationship attended the study. Results showed that the prevalence of women's CFSI was 16.4% (men's self report) and 20.1% (women's partner report). In the male virgin sample, infidelity positively correlated with total CFSI and its three components (emotional manipulation, rival threat and violence threat). In the female non-virgin sample, infidelity positively correlated with violence threat. But in the male non virgin and female virgin sample there was no such significant correlation. The implications of applying sperm competition theory in women's CFSI and within Chinese culture are discussed.

Poster Number: 144

Where to build a nest? The effect of family composition on post-marital residence in Colonial New England.
Heath, KM, Williams, M, Arima, M, McCullough, JM

Sex-biased dispersal patterns among social animals show a strong propensity for females to remain in their natal group and males to disperse. However, this pattern is not so clear among Great Apes and Humans. Anthropologists argue over whether post-marital residence in the typical human society is patrilocal, matrilineal, or some other pattern, while others argue over which of these strategies would be more adaptive in a given society. However, neither camp addresses the presence of internal societal residential variability nor factors explaining the underlying causes for this variability. In this study we

investigate the internal variability in post marital residential strategies among Colonial New Englander's who married between 1680 and 1750. Here we show that, in our population, post-marital residences have great diversity but sex-related patterns emerged based on natal family composition of the newlyweds.

Poster Number: 100

Age Stereotypes by Self and Others Influence Older Adults'
Hehman, JA, Bugental, D

Older adults versus younger adults completed tasks framed as posing a pro-age or pro-youth advantage (versus a control condition). Dependent variables included the WAIS-III block design task (known to induce stress and show deficits with age) and changes in participants' mean arterial pressure (MAP; known to increase with threat). Individual differences in age-based biases were measured as a potential moderator. Older (but not younger) adults responded differentially to the framing conditions. Peak advantages on the block design task were found for older adults exposed to the pro-age framing condition who held a pro-age bias. Peak increases in MAP were found for older adults exposed to pro-youth framing who held a negative age bias. We suggest effects found for performance and MAP responses of older adults are best understood as a joint effect of stimuli that prime age stereotypes, and age-related biases held by older adults themselves, producing stereotype threat/boost effects.

Sponsor: This research was supported by a grant from the National Science Foundation (BNS 0739862) awarded to the second author.

Poster Number: 5

Modeling decision making in mate choice within and across relationships
Hendrickson, AT, Todd, PM, Fortenberry, JD

The search for and choice of potential mates involves multiple decisions over time that must be made in the face of environmental uncertainty and potentially involving multiple factors that change in importance. Previous models of mate choice have used data restricted to a brief period of time, e.g. speed dating or demographic census data. Here we present agent-based models of mate choice decisions over multiple points within multiple relationships for each individual, utilizing data from the Young Women's Project: daily diary entries from nearly 400 young women outlining their romantic and sexual interactions with partners for up to eight years. We are able to identify some of the factors influencing the initiation and cessation of single and concurrent relationships (e.g. match between ideal-partner and actual-partner traits), as well as the dynamics leading to change in behaviors (e.g. condom use, search for

additional partners) within and between relationships over time.

Sponsor: The Kinsey Institute, Indiana University
Cognitive Science Program, National Institute of Allergy
and Infectious Diseases, National Institute of Child Health
and Human Development

Poster Number: 45

Interpersonal aggression among Aka hunter-gatherers of
the Central African Republic: Assessing the effects of
sex, strength, and anger

Hess, N, Helfrecht, C, Hagen, E, Sell, A, Hewlett, B

Sex differences in physical and indirect aggression have
been found in many societies, but, to our knowledge, have
not been studied in a population of hunter-gatherers.
Among Aka foragers of the Central African Republic we
tested whether males physically aggressed more than
females, and whether females indirectly aggressed more
than males, as seen in other societies. We also tested
predictions of an evolutionary theory of physical strength,
anger, and physical aggression. We found a large male
bias in physical aggression. Controlling for anger, we
found an adult female bias in indirect aggression. Physical
strength predicted anger, which predicted hitting,
although results were sensitive to the inclusion or
exclusion of traditional healers, who were physically and
emotionally distinct from other Aka. With some important
caveats, our results generally support the predicted sex
differences in physical aggression and indirect aggression,
and the predicted relationships among anger, strength, and
aggression.

Sponsor: Washington State University

Presentation: Sat, 11:50 Lillis 112

The cognitive consequences of envy: Attention, memory,
and the green-eyed monster

Hill, SE

Although many have speculated about the adaptive
function that the emotion of envy may serve, few
empirical studies have been devoted to testing these
hypotheses. In two studies, we tested hypotheses derived
from an evolutionary account of envy. Specifically, we
sought to test the hypothesis that experiencing envy will
have important consequences for central features of social
cognition, particularly attention and memory. Study 1
demonstrated that men and women pay more attention to
and better remember information about advantaged same-
sex rivals and that these results are mediated by an
increase in enviousness. Study 2 demonstrated that these
results were magnified when envy was activated
experimentally. Results also demonstrated sex-
differentiation in ways predicted in advance from an
evolutionary account of this emotion. Findings lend
support for the adaptive function of an otherwise
unpleasant emotion.

Poster Number: 65

A mind designed to work with frequencies, regardless of
numerical literacy

Hill, WT, Brase, GL

The thesis that the mind is better prepared to process
frequencies—as compared to other numerical formats—
continues to be debated. A recent aspect of this issue is
the role of numeracy (numerical literacy; one's ability to
understand and work with numerical information), and
specifically the argument that individual differences in
numeracy interact with numerical formats. This
interaction suggests that better performance using
frequencies could be due to (non-evolutionary) numeracy
effects. The present studies ($n = 269$) revisited prior work
with cumulative probability problems and scenario risk
assessments. All results of the risk assessment question
were nonsignificant. In contrast to previous results, the
cumulative probability questions showed no interactions;
only main effects for both numerical format (frequencies
facilitate performance) and numeracy. These results
contrast with findings from some previous studies, but are
consistent with the hypothesis that the human mind is
evolutionarily prepared to understand and use
frequencies.

Poster Number: 11

Kissing cousins: Perceptions and attitudes of incest

Hoben, AD, Buunk, AP

People in Western society believe that marriage between
cousins is immoral, disgusting and incestuous, and that
such marriages may lead to children with genetic defects.
While cousin marriage is illegal in the US, it occurs in
various parts of the world such as Asia and Africa, with
rates as high as 50% in certain areas. This discrepancy in
beliefs calls into question the basis of disgust reactions to
cousin marriage. Using a questionnaire, we examined the
attitudes and beliefs regarding consanguineous marriage
in a Dutch sample. Results show that both men and
women are very disapproving of having an intimate
relationship with a cousin, and that this reaction is
primarily related to the perceived genetic defects that
children from such relationships may have. The results of
this study suggest that cultural learning plays an important
role in the emotional response to cousin marriage. The
evolutionary implications will be discussed.

Poster Number: 85

The effect of fundamental frequency variation in men's
voice on judgments of physical dominance and prestige
Hodges-Simeon, CR, Gaulin, SJ, Puts, DA

Previous correlational research has shown that low
fundamental frequency (F0) variation in men's voices is
correlated with greater physical dominance perceptions
(Hodges-Simeon, Gaulin, & Puts, under review) and is
associated with greater mating success (Hodges-Simeon,

Gaulin, & Puts, 2010). The present study uses experimental manipulations of F0 variation in order to test the hypothesis that low F0 variation signals physical dominance. Recordings of male voices were experimentally increased or decreased in F0 variation while holding other vocal parameters constant. Both manipulated and unmanipulated voices were presented to groups of male raters to be judged for physical dominance and prestige. Preliminary research demonstrates that when F0 variation is decreased, physical dominance ratings increase. We suggest that high F0 variation may communicate fear, self-perception of low dominance, and intent to concede a contest because of its association with arousal and nervousness. Future studies will assess women's judgments of attractiveness.

Presentation: Thu, 3:40 Lillis 282

Are Taller People More Competitive?

Hoffman, M, Fessler, D, Gneezy, U, List, J

Although much competitive behavior in contemporary societies is governed by norms that proscribe direct physical combat, nevertheless, because such conflict has a deep phylogenetic history, we expect that, in a wide variety of competitive social interactions, self-assessed probability of winning will in part reflect factors that contribute to physical formidability. Accordingly, we expect that such factors will contribute to individuals' willingness to enter into such competitions. We measured height and competitiveness--by having subjects chose whether they wanted to be paid piece rate or tournament for a simple task--in a sample of 1309 villagers in N.E. India, where decisions were incentivized using stakes as big as a several days' wage. We find that, even while controlling for gender, the tallest quartile are one and a half times as likely to choose the competitive option as the shortest quartile, which is the same magnitude as the gender difference in competitiveness. This result is particularly true for males. Additionally, for males, competitiveness does negatively correlates with average height within the subject's village.

Sponsor:NSF #SES-0648180

Poster Number: 130

Tibetan Buddhism and worldview defense: Cross-cultural evidence against terror management theory

Holbrook, C, Sousa, P, Hahn-Holbrook, J

Terror management theory interprets "worldview defense," or exaggerated ideological adherence, as an adaptive buffer against death anxiety produced by domain-specific psychological adaptations. A corollary perspective is that religion universally functions to reduce death anxiety. We present evidence against both (i) the domain-specificity of the mechanisms underlying worldview defense and (ii) the functional role of religion in universally ameliorating death anxiety. Unlike

reassuring Christian beliefs, Tibetan Buddhism forecasts perilous and uncertain afterlife transactions. In Study 1, devout Tibetan Buddhists produced biased evaluations of incidental (worldview-neutral) auditory stimuli following mortality-salience induction, demonstrating that afterlife doctrine determines whether religion palliates the perceived threat posed by death. In Study 2, subliminal (non-death) angry face primes elicited worldview defense in highly religious Tibetan Buddhists. These data suggest that subtle threats trigger "unconscious vigilance"—enhanced sensitivity to affectively salient stimuli—engendering evaluation bias due to misattribution rather than mechanisms unique to ideology or death.

Sponsor:Institute of Cognition & Culture, Queen's University, Belfast

Presentation: Fri, 5:00 Lillis 282

Short-Term Mating Shaped the Evolution of Narcissism: An Emerging Hypothesis

Holtzman, NS, Strube, MJ

Evolutionary theory offers etiological explanations for many traits. The etiology of narcissism, however, is traditionally explained using psychoanalytic theory. Here, we propose an evolutionary hypothesis to explain the origins of narcissism: it evolved and persisted because it has conferred advantages in short-term mating (STM) contexts. Study 1: a meta-analysis ($N > 1,000$) reveals that the typical narcissist has above-average physical attractiveness—highly valued in STM contexts. Study 2: using microphone methodology (Mehl et al., 2001), narcissists tend to use more sexual language in daily life, perhaps indicating STM-recruitment strategies. Others have demonstrated that narcissism predicts sexually coercive tendencies (Bushman et al., 2003), and that narcissism may peak with developmental specificity when STM is likely (Carlson & Gjerde, 2009). In sum, we posit that as STM became less viable around 1.5 MYA (see Eastwick's [2009] phylogenetic analysis), narcissistic traits may have presented a coherent bundle of STM-advantages, bypassing selection against STM.

Poster Number: 138

Energy economics of the traditional human extended family

Hooper, PL, Kaplan, HS, Gurven, M, Winking, J

Human life histories are characterized by a lengthened period of dependency early in life and high productivity late in life. This pattern of productivity leads to systematic imbalances between caloric production and dependent need across the lifespan of nuclear families, which necessitates resource pooling at larger scales than the nuclear family alone. We utilize data from Tsimane forager-horticulturalists to examine the implications of this peculiar life history for the formation of extended

family residential clusters, and the flow of resources within those clusters.

Sponsor:NIH/NIA, HHMI

Poster Number: 30

Sex differences in language use and deference behavior: Evolutionary foundations and implications for the workplace

Hopcroft, R

Linguists have shown that there are sex differences in language style, while sociologists and psychologists have shown that there are sex differences in deference patterns in interaction. In this paper, I argue that these differences are likely based in evolved, sexually-selected psychological predispositions rather than the result of culture-specific sex roles and socialization patterns. These sex differences in language styles and deference patterns can cause misunderstandings in the workplace, and can particularly create difficulties for women in positions of authority.

Presentation: Sun, 10:20 Lillis 182

The nature of disgust

Hubbeling, D

Disgust as measured via the Haidt disgust scale (Haidt et al, 1994) consists of three dimensions: core disgust, animal reminder disgust and (possibly) contamination disgust (Olatunji et al 2007). A sample of 160 respondents answered questions from Turiel's (1983) moral-conventional distinction about various disgust problems. They were asked whether the behavior was OK, how severe the transgression was, if the behavior was not OK, and how severe the transgression was with permission from an authority figure or when being alone. The answers differed considerably even to questions from the same disgust dimension. Therefore, it seems unlikely that the three dimensions of disgust refer to three separate functions with a specific evolutionary history. A possible explanation for the current findings is that the emotion disgust as such has not been selected for but avoidance of infections has (Curtis et al 2004) together with avoidance of harm in self or others.

Presentation: Sat, 3:20 Lillis 112

Marriage Transactions from a Darwinian Perspective

Huber, BR

This paper presents the results of cross-cultural research on marriage transactions (e.g., bride wealth, dowry) from a Darwinian perspective. Since females are a valuable reproductive resource for which males are willing to compete, it is predicted that the level of material resource investments at the time of marriage is generally higher for grooms and their kin than for brides and their relatives. In addition, brides, grooms, and their kin are expected to adjust their reproductive strategies and marriage

investments depending upon the local conditions in which they live. Adjustments will be made according to factors such as the percentage of polygynously married men, degree of social stratification, type of descent and post-marital residence, and median age at time of marriage. These predictions are tested with data from the sixty culture Probability Sample of the Human Relations Area Files.

Sponsor:College of Charleston

Poster Number: 51

The Relevance of Scientific Understanding to Morality in a Normative Sense

Huggins, J

A longstanding, consequential issue is that of the relevance of scientific understanding to morality in a normative sense. A resolution that is both scientifically grounded and soundly reasoned is found in the solution space illustrated by these foundational considerations: 1) Life values its own survival and continuance (reproduction) from the present generation to the next. 2) "The ultimate point of sociality is enhancing fitness." (C. Boggs; a paraphrase). 3) "Morality is an evolutionary adaptation to social living." (M. Bekoff and J. Pierce, *Wild Justice*). 4) "[E]thical philosophers intuit the deontological canons of morality by consulting the emotive centers of their own hypothalamic-limbic systems." (E. O. Wilson, *Sociobiology: The New Synthesis*). 5) "In ethics as in optics, we need stereoscopy to see the world in all its dimensions." (Kwame Anthony Appiah, *Experiments in Ethics*). 6) "To identify with a given desire is to affirm through reflection the normative content that the desire presents, in ways that would remain stable if subjected to further critical scrutiny." (R. Jay Wallace, *Normativity & the Will*).

Poster Number: 22

Self-Assessment of Vocal Mate Value

Hughes, SM, Harrison, MA

This study examined whether humans could accurately assess their own mate value based on voice by seeing if participants rate the attractiveness of their own voices similarly to that of independent raters. Previous research has shown that voice attractiveness is related to certain morphological markers of genetic quality and is an important factor in mate selection. Therefore, vocal attractiveness may be an important cue to mate value, and humans would need to accurately assess their own mate value before seeking a mate. Ninety-three participants rated the attractiveness of voice recordings of persons counting from one to ten without being given any information about the voice they were rating. Participants' rated their own voices, unbeknownst to them, as significantly more attractive than independent raters. These findings demonstrate that humans may not

be able to rely on the perception of their own voices as an accurate assessment of their own mate value.

Poster Number: 145

Dark, Tall, and Handsome: Evidence for a female increase in openness to other-race partners during periods of high conception risk

Izbicki, EV, Johnson, K

A study was conducted to examine whether females' perceptions of in-group and out-group males shift across the menstrual cycle. Normally cycling heterosexual Caucasian and African-American females were tested at one point each of low and high conception risk for their perceptions of Black and White male faces of varying skin tones. Fertility affected ratings of male faces for attractiveness, masculinity, and partner desirability. At low conception risk, Caucasian females preferred same-race White faces in attractiveness and desirability as relationship partners. At high conception risk, Caucasian females did not show this distinction and rated White male faces less attractive and less desirable as long-term partners. African-American females showed less cyclical effects, showing nonsignificant preferences for same-race Black faces at low risk and nonsignificant increases in attractiveness and desirability ratings of White faces at high risk. Together, the results indicate that at heightened conception risk, females become more open to other-race partners.

Presentation: Thu, 5:00 Lillis 112

Evolved Navigation Theory and experimentally deleting a source of selection in navigation.

Jackson, RE, Cormack, LK

Researchers have assumed that navigation costs, notably the risk of falling, shape human vision. One line of reasoning within this approach suggests that falling posed a source of selection and that many visual illusions arose in response to this selection. However, no data clearly indicate falling as the causal agent producing the many identified visual adaptations. Recent advances in virtual reality methods allowed us to essentially delete the presence of falling risks without altering other aspects of visual scenes. This provided the roughly the same environment that evokes large visual illusions in the real world, but without falling risks. Results suggest that this experimental removal of falling costs removed the visual illusions proposed to have evolved in response to falling. Combining a predictive evolutionary theory with advanced experimental methods helped us to determine likely causality and selection in ways otherwise unavailable.

Presentation: Sat, 11:50 Lillis 282

Social selection for spatial cognition in kangaroo rats, humans and other food-storing species

Jacobs, LF

The privilege of studying and collaborating with Margo Wilson forever changed my understanding of animal behavior (and of research and of the celebration of life itself). Margo greatly influenced my research on the nature of social competition in polygamous species and how it drives behavioral differences between the sexes. The parallel map theory of hippocampal evolution offers a mechanistic and evolutionary framework to model and predict the nature of sex differences in spatial encoding in mammals. Convergent evidence in support of this model come from studies of kangaroo rats, tree squirrels and neuroimaging evidence from humans navigating in virtual environments. These lines of evidence suggest that hippocampal specializations have been primarily driven by social competition for limited resources, such as sexual selection for access to undefendable mates and social selection for access to undefendable food stores.

Sponsor:NIH; NSF; Santa Fe Institute; Hillblom Foundation; Mary Rennie Fund; J.D. French Alzheimer's Foundation

Presentation: Sat, 3:40 Lillis 112

The Potential of Guilt, Honor, and Shame in Solving the Tragedy of the Commons

Jacquet, J

The world faces many social dilemmas, such as energy, food, and water crises, climate disruption, declining fisheries, emerging diseases, increasing antibiotic resistance, and nuclear warfare. These can all be characterized as tragedies of the commons – where individuals often make choices at the expense of the greater good. To help encourage cooperation on the side of demand, many consumer-based initiatives for conservation have appeared. These campaigns are on the rise and largely appeal to guilt – driven by an individual's willingness to do the right thing. But working higher in the demand chain, with retailers, restaurants, and governments, is a more effective strategy and will likely require relying on honor and shame – by affecting reputation using the media and gossip -- rather than guilt as a tactic. What are the differences between guilt and shame? Shame and honor? Here we examine the effects of non-regulatory, social reward and punishment -- honor and shame – on individuals in a public goods game by exposing the players who are most or least cooperative. We then explore our findings in the context of the real world conservation efforts, such eco-labeling, the Toxic Release Inventory, and Greenpeace's seafood initiatives, which endeavor to motivate change with honor and shame.

Sponsor:NSERC

Poster Number: 46

Trust in friends or loyalty to the group: Sex differences in cooperation rates in iterated public goods games
Jaster, D, Arrow, H

Throughout our evolutionary history, war has likely exerted somewhat different selective pressures on males and females. This paper explores the "male warrior" hypothesis that intergroup competition prompts higher intragroup cooperation by males but not by females. A previous study found that the male increase in cooperation is mediated by group identification (Van Vugt, De Cremer, & Janssen, 2007). The current study further explored the role of group identification and also the impact of prior relationships among group members, which was expected to increase group identification, trust, and cooperation rates. Results indicate that group identification mediated the impact of familiarity on cooperation for males, and trust mediated the impact of familiarity on cooperation for females. How war in our evolutionary history may have provided differing selective pressures for the importance of group identification for males but trust for females is discussed.

Presentation: Fri, 11:10 Lillis 182

Love in the age of narcissism (and psychopathy and Machiavellianism)
Jonason, PK

Although adaptations can be socially/morally undesirable, as long as they provide net fitness gains they will be selected in the population. Across numerous studies, there is considerable evidence suggesting the manner through which the Dark Triad are maintained in the population are via a short-term and at times exploitive mating style. The Dark Triad is positively related to numerous measures of short-term mating and not related to long-term mating. Although these individuals may prefer short-term relationships, they may reluctantly engage in long-term relationships because of the social pressures to form long-term pairbonds. However, these personality traits are poisonous for long-term relationships. Those high in the Dark Triad pay for this mating style with outright mate defection and when in relationships report low relationship competence, autonomy, relatedness, satisfaction, and commitment in a study of couples. Additional results suggest the Dark Triad are characterized by a ludic and pragma love style.

Presentation: Fri, 11:50 Lillis 182

Raising another man's child because of a Machiavellian wife: Differences in infidelity tactics among the Dark Triad
Jones, DN, Paulhus, DL

The personality traits of psychopathy, Machiavellianism, and narcissism, known as the Dark Triad, have individually been shown to predict infidelity. These traits

are overlapping but distinct, and may predict unique outcomes and strategies in infidelity. Results from a large sample of adults found that psychopaths of both sexes and female Machiavellians, were most strongly associated with infidelity. Machiavellianism, in general, was a strong protective factor against relationship dissolution following an infidelity, and Machiavellian women were risk-averse in their infidelity intentions. Psychopathy, in general, was a strong risk factor for relationship dissolution following infidelity, and psychopathic men were risk-prone in their infidelity intentions. These findings suggest that psychopaths and Machiavellians are most likely to be unfaithful, but Machiavellians (particularly women) do not get caught or ruin their relationships as a result. In sum, these findings also suggest that Machiavellian women are most likely to gene capture.

Sponsor: Social Sciences and Humanities Research Council (SSHRC)

Presentation: Sat, 4:00 Lillis 112

Population size and linguistic evolution
Jordan, F, Currie, T

The impact of demography on cultural evolution has been investigated in modelling and simulation work, but few studies have explored this relationship with empirical data. Importantly, no pertinent studies have controlled for the historical non-independence of evolutionarily related languages (Galton's Problem). Here we test the relationship between linguistic change and population size / density using data from 351 Austronesian languages. To quantify language evolution, we use phylogenetic methods to estimate lexical replacement (word turnover) in core vocabulary. Controlling for historical splitting events, we use these estimates of the rates of linguistic evolution and find (a) strong phylogenetic signal in population size and density, (b) a significant but weak relationship between lexical replacement and population size, but not density, and (c) a strong effect of splitting events on both size and density. We discuss these results relative to the Austronesian expansion and more general implications for language-culture coevolution.

Presentation: Fri, 5:00 Lillis 211

Family structure and child growth in rural Timor-Leste
Judge, DS, Reghupathy, N, Schmitt, L, Sanders, K

Child growth measures the success of family strategies when resources are limited. Timor-Leste is a primarily subsistence society with food scarcity. We assessed family resources and reproductive histories of women in 110 rural TL households. We obtained weight, height and arm circumferences from children living in these households. Arm circumference z scores were smaller for children living in households without electricity and with high crop diversity – households more distant from the

subdistrict center. Children co-residing with more biological children had higher BMI z scores than children with fewer co-resident children. In households with more adults, children had lower BMI z scores suggesting competition for food resources. Since 1975, the average age at first birth declined from 24 to 21 years but the rate of pregnancies and of births is unchanged. Mean BMI z score for each mother's children was related negatively to mother's average IBI and positively to reproductive loss.
Sponsor: University of Western Australia

Presentation: Sun, 11:20 Lillis 182

Inbreeding Avoidance and Incest Laws Around the World
Jwa, AS

The present study explores: (1) incest laws as an external manifestation of incest aversion; and (2) incest laws as an illustration of what has been called "symbolic law." First, I examine whether incest laws around the world exhibit patterns or tendencies predicted by evolutionary perspectives. Second, I discuss factors that may explain variations within these incest laws. Third, I explore the extent to which enactment or abolishment of incest laws has material impacts on normative preferences regarding incest and on the incidence of incest in a society. This evolutionary analysis in incest law can shed light on the possibility of that common legal structures are external manifestations of our evolved brain. It may, in particular, help us understand why we have some laws to prohibit behaviors that natural selection has already made rare.

Poster Number: 136

Spousal mate retention in the newlywed year and three years later

Kaighobadi, F, Shackelford, TK, Buss, DM

The current research is the first to investigate the performance across time of husband's and wives' mate retention behaviors. We assessed 49 men and 65 women on their performance of mate retention behaviors once as newlyweds and then again three years into the marriage using the Mate Retention Inventory. Our broad goals in this research were to investigate (1) the cross-time stability of husbands' and wives' mate retention behaviors and (2) sex differences in performance of mate retention behaviors across time. The results indicated that: (1) husbands' and wives' mate retention behaviors as newlyweds correlate with their mate retention behaviors three years later, (2) husbands' and wives' performance of mate retention behaviors decreases after three years of marriage, and that (3) sex differences in performance of particular mate retention tactics as newlyweds persist across time. The discussion addresses limitations of the current research and highlights directions for future research.

Presentation: Fri, 3:40 Lillis 282

Do women fake orgasm to retain a mate?

Kaighobadi, F, Shackelford, TK, Weekes-Shackelford, VA

Women are far more likely to report faking orgasm than men. We secured data from 453 women to investigate the function of pretending sexual excitement and faking orgasm as a mate retention tactic. The results indicated that (1) women who perceive high risk of partner sexual infidelity are more likely to report pretending sexual excitement and orgasm, (2) women who report higher likelihood of pretending sexual excitement and orgasm also report engaging in more frequent mate retention behaviors, and (3) perceived risk of partner sexual infidelity mediates the relationship between pretending sexual excitement and orgasm and performance of cost-inflicting mate retention behaviors. Thus, pretending sexual excitement and orgasm may be a form of mate retention performed by women who perceive high risk of partner sexual infidelity.

Presentation: Sun, 11:40 Lillis 112

What are funny people like?

Kaufman, SB, Erickson, J, Ramesh, S, Kozbelt, A, Magee, M, Kaufman, JC

What are funny people like? We set out to investigate the correlates of humor production ability using a large, ethnically diverse sample with a wide age range. To measure humor production ability we had participants complete captions on multiple pictures. We then had the captions rated by multiple judges for level of funniness. We also administered measures of intelligence, personality, and divergent thinking. We will present the results of our analysis, and discuss implications for intelligence, creativity, and the evolution of humor ability.

Poster Number: 120

The Mating Sociometer: A Regulatory Mechanism for Mating Aspirations

Kavanagh, PS, Ellis, BJ, Robins, SC

Two studies (Ns = 80 and 108) tested hypotheses derived from Kirkpatrick and Ellis' (2001) extension and application of sociometer theory to mating aspirations. Experiences of social acceptance-rejection by attractive opposite-sex confederates were experimentally manipulated, and the impact of these manipulations on self-esteem, mating aspirations, and friendship aspirations was assessed. Results indicated that social acceptance-rejection by members of the opposite-sex altered mating aspirations; that the causal link between social acceptance-rejection and mating aspirations was mediated by changes in state self-esteem; and that the impact of social acceptance-rejection by members of opposite-sex was specific to mating aspirations and did not generalize to levels of aspiration in approaching potential sex-sex friendships. This research supports a conceptualization of

a domain-specific mating sociometer, which functions to calibrate mating aspirations in response to experiences of romantic acceptance and rejection.

Sponsor: University of Canterbury Psychology
Department Doctoral Scholarship

Presentation: Sun, 11:40 Lillis 282

Why Norwegians Have Sex

Kennair, LO, Grøntvedt, T, Buss, DM, Meston, CM

The current study is a replication of Meston & Buss' (2007) investigation of reasons why humans have sex, in a Norwegian sample. While historically it has been considered that motives for having sex are few and simple, Meston and Buss found that motives for engaging in sexual intercourse are large in number and psychologically complex in nature. Meston and Buss' list of reasons was translated and back-translated and ranked by a Norwegian sample (N = 1317). Preliminary findings suggest that there is large overlap with the original study in top reasons and most infrequent reasons for having sex. The top 50 sex differences revealed less overlap. Preliminary factor analysis with a four factor solution showed items clustering on components representing physical reasons, goal attainment reasons, status/reputation reasons and insecurity reasons, thus suggesting that the factor structure found in the original investigation was replicated.

Poster Number: 99

Masculinized bodies (D2:D4 ratio) predict masculine jealousy responses

Kennair, LO, Hagen, K, Kaasa, H, Isaksen, L, Pedersen, L, Svangtun, S, Pallesen, S

Selection shaped sexual jealousy as a mechanism to prevent cuckoldry, and emotional jealousy as a mechanism to prevent resource loss. There will therefore be sex difference in what will elicit most emotional distress. Evolved sex differences are due to sex hormones. A masculinized body, due to being subject to more prenatal testosterone, would predict a more masculinized response to the jealousy scenarios. In this study we replicated Buss et al.'s (1999) two jealousy scenarios (N=682). The aim was to replicate the established sex differences in jealousy, and test whether the ratio of index finger length to ring finger length (D2:D4) predicted a masculine response pattern. The hypothesis was supported in the first of the scenarios for males, especially the most lateralized, heterosexual males. This provides support to the idea that the sex differences are due to biology and not merely the result of social learning of gender roles.

Presentation: Sun, 9:40 Lillis 282

Kith, Kin, and Disgust: Evidence for Kin Directed Signaling of Emotion

Ketelaar, T

The current study investigated whether cooperative emotional signals vary as a function of the sender-receiver relationship. Participants were videotaped while tasting both sweet and bitter drinks in the presence of either a genetic relative, a friend, a stranger, or while alone. Results indicate that participants displayed more disgust while tasting a bitter drink when they were in the presence of a genetic relative or friend than when they were in the presence of a stranger or alone. Moreover, participants also smiled more while tasting a sweet drink when they were in the presence of a genetic relative or friend than when they were in the presence of a stranger or alone. Results are discussed in terms of Kin selection theory (Hamilton, 1964) and selective investment theory (Brown & Brown, 2006) in regards to the adaptive value of signaling preferentially as a function of one's audience.

Presentation: Thu, 11:10 Lillis 182

Trust and Parochial Transaction in Markets as Exchange Networks

Kim, J

Parochial agents are necessary for the evolution of costly cooperation in a one-shot Prisoner's Dilemma, who have limited tolerance for helping dissimilar others. However, global cooperation is possible only in highly homogenized societies. Emergent cooperative societies are not robust against mutant defectors with tolerably similar markers, and they become fragmented when parochial agents socialize with similar others. Our computational study finds a narrow range of social mobility and network closure within which stable global cooperation co-evolves with hierarchical networks where less parochial agents building inclusive ties with diverse others are surrounded by more parochial ones. Facing one-shot transactions, parochial economic actors shun better deals in open markets in favor of less chances of being cheated by strangers. Their local search results in segregated markets. However, our research suggests that emergent global markets consisting of more tolerant agents can be sustainable in the presence of free-riders who fake signals of trustworthiness.

Presentation: Fri, 10:50 Lillis 282

Your life or mine? Reported welfare tradeoff ratios when the currency is survival

Kim, S, Tooby, J, Cosmides, L

Previous work established that, when making choices involving money that impact the welfare of self and other, subjects expressed consistent, person-specific welfare tradeoff ratios—WTRs—over large numbers of choices. But what about when stakes are truly serious? In a series

of choice tasks, students were asked to choose between increased life span for oneself or a target individual (sibling, mate, best friend, and acquaintance). Consistent with the hypothesis that WTRs are psychologically real, subjects revealed a single switch point of preference for each target. The revealed values were the highest for mates and siblings, followed by best friends and acquaintances. Consistent with theory, as the stakes increased, WTRs remained relatively flat for siblings, but decreased for other targets. These findings support the view that there is a single social valuation architecture that encompasses a diverse range of goods and relationships, but that the architecture is sensitive to relationship type.

Sponsor:NIH Director's Pioneer Award (to L.C.)

Poster Number: 2

Facets of Supernatural Belief: Are Adults More Susceptible than Children?

King, AC, Bjorklund, DF

This research examined the developmental differences in inhibition and cognition of 4-8 year olds as a function of the suggested presence of a supernatural agent. Previous evolutionarily-relevant research has suggested that humans are naturally primed to think in terms of supernatural agents and that, given the correct context, we readily accept novel supernatural entities and alter our behavior accordingly. All children in this study played four games designed to assess their current level of inhibitory and cognitive development. Children in the experimental condition, only, were also introduced to an invisible Princess Alice and were told that she was watching during the games. Following these measures, all children engaged in a resistance-to-temptation task. We found that cognitively advanced children were more likely to express belief in Princess Alice than were less cognitively-advanced children. This research provides support that cognitive maturity, rather than immaturity, may be necessary for children to express belief in novel supernatural agents.

Presentation: Sat, 5:00 Lillis 211

Development of inhibition as a function of the presence of an intentional agent

King, AC, Bjorklund, DF

This research examined the developmental differences in inhibition and theory-of-mind of 4-8 year olds as a function of the suggested presence of a supernatural agent. All children played four games designed to assess their current level of inhibition and theory-of-mind performance; Children in the experimental condition, only, were also introduced to an invisible Princess Alice and were told that she was watching during the games. Following these measures, all children engaged in a resistance-to-temptation task to determine any differences

in inhibition resulting from Princess Alice's suggested presence. We found that children exhibiting a well-developed theory-of-mind were more likely to express belief in Princess Alice than were children lacking this cognitive ability. This research provided support that cognitive maturity, rather than immaturity, may be necessary for children to express belief in novel supernatural agents, and highlighted the importance of context as a mediating factor in children's behavioral inhibition.

Presentation: Thu, 4:40 Lillis 282

Males with stress-induced cortisol elevation are judged to be cooperators

Kiyonari, T, Takahashi, T, Furukawa, M, Schug, J, Innukai, K, Shinada, M, Hasegawa, T, Yamagishi, T

We investigated if cheaters (who defected in a semi-sequential PD game) demonstrated stress responses, measured by cortisol elevation, when sending a video message to a partner who would decide to cooperate or defect after viewing the video message. Free cortisol was determined via saliva samples taken before game instruction and right after the video-taping. Opponents in the PD game and third-party judges who did not play the game were shown the video message and asked to judge if the video-taped players cooperated or defected in the game. The players' actual choices (cooperation vs. defection) were not related to how they were judged (the average likelihood of having cooperated estimated by the judges), but male players' level of cortisol elevation was correlated with their judged likelihood of having cooperated, especially the likelihood judged by opponents whose payments depended on the players' choice.

Sponsor:Grant-in-Aid for Scientific Research

Poster Number: 52

Temporal Illusions

Kline, S, Reed, CL

Time perception depends on context. Humans perceive the duration of threatening stimuli to be longer than non-threatening stimuli. The dilation of perceived interval length is adaptive because it allows for increased temporal real estate in which to engage a response. Based on this understanding, moving stimuli and more specifically approaching stimuli should be perceived differently than static and receding stimuli. Movement is an important cue for agency and approaching movement represents a greater threat than does receding movement. In this study, participants viewed static and moving balls and judged if the interval was closer to a short or long standard interval. Moving balls either approached or receded, while the speed of movement varied between subjects. Participants tended to overestimate moving balls when compared to stationary balls. However, the effect of direction of motion depended on the speed of an object, with

approaching stimuli only being overestimated in the fast moving condition.

Sponsor:Claremont McKenna College

Presentation: Thu, 3:40 Lillis 112

Small is Beautiful? Evolutionary perspectives on big organizations

Kniffin, K

Management researcher Harold Leavitt has recently argued that “big organizations are unhealthy environments for human beings.” While Leavitt’s argument is provocative, the argument also lacks an ultimate explanation for why big organizations might tend to be unhealthy environments. For example, Leavitt contends that the primary flaw of big organizations is their routine use of pyramidal hierarchies; however, Leavitt does not offer any consideration of why pyramidal hierarchies might be routinely developed. In this paper, I will demonstrate the ways in which evolutionary social science can inform any discussion about Leavitt’s claim. Through the integration and application of findings reported by evolutionists Chris Boehm, Jared Diamond, and Robin Dunbar, I complement Leavitt’s analysis with a deeper explanation for the commonality of hierarchies in business organizations. I also present this review to illustrate ways in which evolutionary social science can be applied to studies of life and work in contemporary business organizations.

Poster Number: 53

Using Structural Equation Modeling in Evolutionary Psychology Research: A Study of Surprise-Enhanced Learning

Kock, N, Chatelain-Jardon, R

Structural equation modeling (SEM) is a general multivariate data analysis technique that allows researchers to study path models with latent variables, where the latent variables are combinations of manifest variables (e.g., items of a questionnaire). This presentation will illustrate the use of SEM in evolutionary psychology research, by focusing on an experimental study in which a surprise stimulus caused enhanced learning. The tool used in the presentation will be WarpPLS 1.0; a new SEM software that can analyze multiple linear and nonlinear relationships among latent variables.

Presentation: Sat, 3:00 Lillis 211

Do other family members work more when men are away from home? Observational evidence from lowland Nicaragua and the Peruvian Andes

Koster, J, Winterhalder, B, Grote, M

We test a hypothesis about the effect of male absence using time allocation data collected among two indigenous societies, one in Nicaragua and one in Peru.

For comparability, we developed parallel mixed-effects logistic regression models to examine the activities of individuals other than male household heads. The outcome variable in both cases is “economic work,” which includes agricultural labor, wage labor in the community, and other “men’s work,” as defined ethnographically. In the Nicaraguan data, only sex is a significant predictor. Males work more than females. In the data from Peru, seasonality is the strongest predictor, reflecting the frequency of agricultural labor in the rainy season. There is evidence, however, that male absence is associated with greater workloads in one of the two study communities. Overall, it appears that men in Nicaragua are less likely to be away during peak times for agricultural labor whereas the opposite is true of men in the Peru sample.

Sponsor:National Science Foundation, Fulbright, Taft Research Center

Presentation: Fri, 11:30 Lillis 282

What are punishment and reputation for? Critical tests.

Krasnow, M, Pedersen, E, Tooby, J, Cosmides, L

Did punishment and the use of reputation evolve to support maintenance of cooperative group norms? Or did they evolve to enhance personal gains in trade? Here we report results from a widely used experimental paradigm, modified to make these rival hypotheses yield sharply divergent predictions. Results support the personal gain account: Subjects do not direct punishment toward those with reputations for norm violation, but instead use reputation as a cue to the risk of being personally defected on. More telling, subjects punish defectors they cooperate with subsequently, rather than wasting effort on defectors from whom only others will be at risk. This supports the hypothesis that punishment evolved primarily to benefit the punisher through bargaining for better treatment, not for upholding group norms.

Sponsor:Research funded by a grant from the Academic Senate of the University of California, Santa Barbara to L.C., NIH Pioneer's Award to L.C., and by the Global COE Program "Center for the Sociality of Mind" of Hokkaido University

Poster Number: 139

Financial strategies reflect life history variation

Kruger, DJ, Figueredo, AJ

Individuals who develop in relatively harsh and unpredictable environments may develop riskier behavioral strategies to take advantage of possibly fleeting opportunities. Figueredo and colleagues developed the 20-item Mini-K Short Form of the Arizona Life History Battery (ALHB) to assess the common factor believed to underlie a multiplicity of human life history parameters. We used a demographically representative

sample from a community health survey to assess relationships between the Mini-K and financial strategies. Those with a slower life history scored higher on conservative financial planning, building long term savings rather than maximizing current economic display. Those with a slower life history also scored lower on a scale of worries about financial distress. These relationships were maintained when controlling for age as well as educational attainment and income range, which are also arguably attributes related to life history strategy.
Sponsor: Centers for Disease Control and Prevention

Presentation: Thu, 5:20 Lillis 211

Health related correlates of life history strategy in a representative community sample
Kruger, DJ, Figueredo, AJ

Individuals who develop in relatively harsh and unpredictable environments may develop riskier behavioral strategies to take advantage of possibly fleeting opportunities. Figueredo and colleagues developed the 20-item Mini-K Short Form of the Arizona Life History Battery (ALHB) to assess the common factor believed to underlie a multiplicity of human life history parameters. We used a demographically representative sample from a community health survey to assess relationships between the Mini-K, indicating a slower life history, and health-promoting behaviors, health-adverse behaviors, health outcomes, and neighborhood conditions. As predicted, individuals who scored lower on the Mini-K: (1) experienced lower neighborhood social capital, greater fear of neighborhood crime, and lower perceived neighborhood safety; (2) reported fewer health-promoting behaviors, such as fruit and vegetable consumption; and (3) reported more health-adverse behaviors, such as smoking, binge drinking, and HIV risk behaviors. In contrast, individuals who scored higher on the Mini-K reported better physical and mental health.

Sponsor: U.S. Centers for Disease Control and Prevention

Presentation: Sat, 10:50 Lillis 282

Prospective decision-making is associated with life expectancy
Krupp, DB

Selection is expected to favor resource allocation strategies that make adjustments contingent on probable future survival and reproduction. In particular, expectations of the future should cast a shadow over current decisions to reproduce, remedy suboptimal circumstances, and pursue long-term goals. As such, cues to life expectancy may affect “prospective” decision-making. Following Wilson and Daly (1998), I show that the scheduling and occurrence of several consequential decisions are associated with life expectancy, even after controlling for affluence. In comparisons across Canadian jurisdictions, life expectancy predicted increases in age at

first reproduction and marriage. Moreover, life expectancy was positively correlated with divorce and abortion rates. Finally, life expectancy correlated positively with the likelihood of attaining high school, college, and university degrees, and negatively with the likelihood of dropping out of high school or attaining a degree in the trades. I conclude by proposing complementary means of studying these phenomena further.

Sponsor: Social Sciences and Humanities Research Council of Canada

Poster Number: 131

Sex Differences in the Motivation and Mitigation of Jealousy-Induced Interrogations
Kuhle, BX, Smedley, KD, Schmitt, DP

Given the differential costs sexual and emotional infidelity posed for each sex, we hypothesized that humans have sex-differentiated damage assessment strategies to investigate the nature of a partner’s infidelity. Study 1 tested this hypothesis using a forced-choice dilemma in which participants (N = 172) indicated whether they would be more likely to inquire about the sexual or emotional nature of a partner’s extra-pair relationship. We further hypothesized that humans have sex-differentiated damage control strategies to mitigate the costs of being caught committing infidelity. Study 2 tested this hypothesis using a forced-choice dilemma in which participants (N = 117) indicated whether they would be more likely to deny the sexual or emotional nature of their involvement with an extra-pair partner. As hypothesized, men and women strategically differed in the ways they inquired about a partner’s infidelity and responded to inquiries about their own infidelities.

Presentation: Thu, 5:20 Lillis 182

Sex, Drugs, and Moral Goals: Reproductive Strategies & Views About Recreational Drugs
Kurzban, R, Dukes, A, Weeden, J

Humans, unlike most other species, show intense interest in the activities of conspecifics, even when the activities in question pose no obvious fitness threat or opportunity. Here we investigate one content domain in which people show substantial interest, the use of drugs for non-medical purposes. Drawing from two subject populations, we look at the relationships among 1) abstract political commitments, 2) attitudes about sexuality, and 3) views surrounding recreational drugs. In two samples, one undergraduate and one internet based, we show that, as predicted by a strategic construal, drug attitudes are best predicted by sexual items rather than abstract political commitments and that the relationship between factors such as political ideology and drugs, while positive, are reduced to nearly zero when items assessing sexuality are controlled for. We conclude that considering morality

from the standpoint of strategic interests is useful in explaining why humans care about third party behavior.

Presentation: Fri, 5:20 Lillis 211

Hormonal platform for conception in natural fertility populations: Lactation and ovulation
Lancaster, JB, Alvarado, LC

Women in natural fertility populations spend their reproductive careers in a continuous round of pregnancy, birth and lactation with rare bouts of menstrual cycling when conception has failed. There is strong evidence that this pattern is associated with an overlap of both ovulation and gestation with continued supplemented lactation during the first trimester. Humans have a long gestation period combined with a high rate of spontaneous abortion in the first trimester. Models of the life time fertility costs of weaning before ovulation resumes in comparison to a first trimester overlap of functions are presented. Hormonal, psychological and behavioral implications of a first trimester overlap for women's mate-choice criteria are explored.

Poster Number: 54

Sexual selection for literary displays
Lange, BP

The display hypothesis (Miller, 1999, 2000) assumes, among others, a correlation between literary and markers of reproduction relevant success. Lyric poetry, following the handicap principle, is more difficult to fake than non-lyric literature and thus a better indicator of human reproductive quality. These two hypotheses were tested with respect to German literature of the 18th to 20th century. Literary success was operationalized by the number of entries of a writer in the literary canon of the highly respected German literary critic Reich-Ranicki who lists the literary works of 69 writers which he considers to be of high literary quality. Data about each writer's reproduction relevant successes was collected. Most writers were male. The number of entries a male writer had correlated with number of affairs / girlfriends ($r=.57$, $p<.0001$), the number of female admirers ($r=.44$, n.s.), and the total score of all mating successes, including marriages, engagements without marriages, and children ($r=.42$, $p<.002$). The correlations with children were positive but did not reach significance ($r=.28$, $p<.06$). Mating successes were higher for lyric poets than for those of other literary genres. They had more engagements without marriages ($d=0.23$, n.s.), more female admirers ($d=0.29$, n.s.), and most importantly more affairs / girlfriends ($d=0.69$, $p<.06$). In support of the Trivers-Willard hypothesis, the male-to-female sex ratio of the offspring of the famous German writers exceeded significantly the ratio assumed for the general population ($p<.002$).

Poster Number: 12

Switching strategies: the effects of priming mate value on the on the over-inference of deception
Larson, MG

Research on deception has demonstrated that to more accurately detect the truth; deception mechanisms in the mind must first be activated from cues relating to the costs of being deceived. This study examined whether a shift in approach from truth seeking to deception avoidance followed activation by relevant cues. Fifty six men and 48 women were primed for reproductive costs by being given sentence reconstruction tasks with words related to high or low levels of mate value. Participants then rated the veracity of a series of neutral statements regarding the biographical information of characters in a narrative. Support was found for the expectation that when cues relating to higher reproductive costs are provided women shift their strategy from truth seeking to deceit avoidance and protect themselves by over-inferring lies in all areas relevant to that activation cue. Future research should be undertaken to explore the variety of deception cues.

Poster Number: 13

The relationship of body-mass index and waist-hip ratio to female attractiveness:
Lassek, W, Gaulin, S

The relationship between body mass index (BMI), waist-hip ratio (WHR), and female attractiveness is both controversial and complicated by the high correlation between them as well as by the absence of highly attractive females from most stimulus sets. Because of their correlation, WHR can be predicted from BMI, and such techniques may explain variance in attractiveness among average women; but do these methods identify the pinnacle of female attractiveness? We first developed a BMI-WHR regression from a measured population of 138 UCSB female undergraduates (mean BMI 22.2), and then used it to predict measurements of highly attractive women (606 Playboy Playmates). The UCSB-based regression predicts Playmate's hip sizes but fails by a substantial margin to predict their waist sizes and WHR's. Playmates' BMI and WHR are negatively correlated. When BMI is relatively low (below 25), a very low waist size and WHR are the main determinants of female bodily attractiveness.

Presentation: Fri, 5:40 Lillis 282

Waist-hip Ratios of Imaginary Women: What Happens when Mating Preferences Are Unconstrained by Anatomy?
Lassek, W, Gaulin, S, Andrews, A

The waist-hip ratio (WHR) of real women is constrained by the abdominal organs. What happens to WHR preferences when these constraints are released? For

course credit, 490 UCSB undergraduate students provided an image of the imaginary woman they considered “most attractive.” Hip-width-to-height and waist-width-to-height ratios were computed from these images and, in parallel, from posed photographs of 140 female UCSB undergraduates wearing closefitting clothes. We restricted the photographic sample to women of normal BMI (to match the imaginary female sample). Mean hip-width-to-height ratios were quite similar for the real and imaginary populations (roughly 0.2). In contrast, waist-width-to-height ratios of the imaginary females (.099) were four standard deviations below the real female mean. Thus, a small waist size and low WHR seems to be a “supernormal stimulus” which suggests that it has been subject to negative directional selection during human evolution, probably due its relationship with maternal investment capacities.

Presentation: Sat, 4:40 Lillis 282

The Trade-off between Fertility and Child Mortality in Sub-Saharan Africa: A Cross-National Study

Lawson, D, Gibson, M

In this study we apply multi-level logistic regression to Demographic and Health Survey data from sub-Saharan Africa to consider the evidence that humans face a trade-off between fertility and offspring survival. Previous anthropological and demographic studies have found mixed evidence for this trade-off, but unfortunately, due to methodological limitations, have left us with little empirical grounds to evaluate its true generalizability and what socioecological factors may influence its local importance. Using comparative data on birth histories, household resources and child mortality, we establish the relationship between fertility and offspring survival for each region. We consider how various methods of estimating this relationship, and accounting for ‘replacement’ effects (whereby the early death of an infant favors additional births) influence the results. Finally, we explore variation in trade-off functions cross-nationally and discuss the role of economic development in influencing the benefits of fertility limitation for offspring survival and later success.

Sponsor:UK Economic and Social Research Council

Poster Number: 122

Language Trees Reflect Agricultural Expansion Scenario of Japanese Origin

Lee, S

Languages, like species, evolve by a process of descent with modification. This striking similarity between biological and linguistic evolution has enabled application of phylogenetic methods to explore how certain languages, as well as the speakers of those languages, are related to one another in space and time. For example, language phylogenies constructed with lexical data have

revealed large-scale population expansions of Austronesian, Indo-European, and Bantu language families. However, how robustly a phylogenetic approach can accommodate linguistic variation and what it reveals about prehistoric population expansions on a global scale should be investigated more exhaustively. Here we report a phylogeny of 58 Japonic languages and dialects. We used this phylogeny to estimate the date of its root and compared it with the age range suggested by agricultural expansion scenario for Japanese origin (400 B.C. - 300 A.D.). Our results indicated that Japonic language family derives from a common ancestor existed around the time of the expansion, implying that the first farmers of Japan had a profound impact on the origin of modern languages as well as people.

Sponsor:The University of Tokyo Fellowship

Presentation: Fri, 11:10 Lillis 211

Parasite Stress May Cause Non-State Wars, Revolutions and Coups, Terrorism, and the Absence of Peace Across the World

Letendre, K, Fincher, CL, Thornhill, R

We explore the application of the parasite-stress model of sociality to the understanding of cross-national variation frequency of major types of intergroup conflict (including non-state wars, revolutions and coups, and terrorist events) and to peacefulness in general. Prior research has documented that infectious-disease stress positively predicts cross-national variation in collectivism, a value system characterized by ethnocentrism and xenophobia. Recently, research has revealed that infectious disease stress predicts cross-national variation in intrastate armed conflict, a category of conflict that includes civil war. According to the parasite-stress theory, the collectivist values of ethnocentrism and xenophobia are defenses against infectious disease. From this, we argue that high parasite stresses and associated collectivist values, then, promote civil conflict. We present further support for this theoretical model with regression analyses of other classes of civil conflict and peacefulness, and a structural equation model of the relationship between infectious disease and peace.

Poster Number: 111

The Evolution of Friendship: Sex-differentiated friend functions and opposite-sex "friends"

Lewis, DM

This research examined friendship from an evolutionary perspective. Study 1 employed a budget allocation paradigm to test friend preferences. Men were hypothesized to prioritize female friends' physical attractiveness, whereas women were hypothesized to emphasize male friends' physical prowess and resources. Consistent with these predictions, men allocated significantly more “friend dollars” to their ideal opposite-

sex friend's physical attractiveness; women spent more on opposite-sex friends' resources and physical prowess. Men treated the personality of their opposite-sex friends as a luxury, relative to women. Study 2 collected free-responses of the friendships men and women form to solve the adaptive problems they differentially faced during human evolution. Men were hypothesized to form friendships to increase their status, resources, and physical prowess. Study data support all three hypotheses. Men and women were equally likely to form friendships to obtain advice about mating and the opposite sex, but both sexes sought female friends for this function.

Presentation: Fri, 4:00 Lillis 211

An Evolutionary Perspective on Humor: Sexual Selection or Interest Indication?

Li, NP, Griskevicius, V, Durante, KM, Jonason, PK

Are people who are funny more attractive? Or does being attractive lead people to be seen as funnier? The answer may depend on the underlying evolutionary function of humor. While humor has been proposed to signal "good genes," we present evidence that humor also functions to indicate interest in social relationships—in initiating new relationships and in monitoring existing ones. Consistent with this interest indicator model, across three studies both sexes were more likely to initiate humor and to respond more positively and consider the other person to be funny when initially attracted to that person. The findings support that humor dynamics—and not just humor displays—influence romantic chemistry for both men and women, suggesting that humor can ultimately function as a strategy to initiate and monitor social relationships.

Presentation: Sat, 3:40 Lillis 282

The Evolutionary Roots of Decision Biases: Erasing and Exacerbating Loss Aversion

Li, YJ, Kenrick, DT, Griskevicius, V, Neuberg, SL

Loss aversion is the tendency for a loss of resources to have more psychological impact than a gain of the same magnitude. Although a tendency toward loss aversion may initially appear to be a human universal, an evolutionary perspective suggests that organisms generally do not evolve domain-general biases, but manifest different biases in different evolutionary recurring domains. We suggest that whereas loss-aversion is adaptive in the evolutionary critical domain of survival, loss aversion is unlikely to be adaptive in the domain of mating. We tested and found support for this hypothesis across three experiments. In experiments 1 and 2, men became significantly less loss averse under a mating motivation, while women's loss aversion did not change. In experiment 3, self-protection motives exacerbated loss aversion, leading both men and women

to care significantly more about losses and care less about gains.

Sponsor:NSF

Presentation: Fri, 10:50 Lillis 112

Development as Explanation: Exploring the Dynamics of Development and Evolution

Lickliter, R

Given that all phenotypic traits arise during ontogeny as products of individual development, it follows that a primary basis for phenotypic stability and malleability within and across generations must be the process of development. Over the course of their ontogeny individuals encounter an array of developmental resources and developmental constraints, thereby making some phenotypic outcomes more likely to be supported and maintained and others prevented or eliminated. In this talk I will argue that phenotypic stability and malleability are not distinct phenomena, but rather are the products of the complex system of internal and external factors contributing to individual development. Understanding the dynamics of phenotypic stability and malleability can advance both developmental and evolutionary theory and also contribute to the realization of a developmentally based evolutionary psychology.

Sponsor:NICHHD

Presentation: Fri, 4:00-4:20 Lillis 182

The development of sexual aversions and altruistic motivations among communally raised Kibbutz members

Lieberman, D

As first proposed by Edward Westermarck, childhood coresidence is a cue to kinship and leads to the development of adult sexual aversions. The communal rearing practices of Israeli Kibbutzim provided initial evidence in favor of Westermarck's claim. Despite the absence of actual genetic relatedness, individuals raised together from birth tended not to marry one another. Critics of the Kibbutzim data suggest that the absence of marriages is better explained by the large pool of available mates outside the Kibbutz rather than by the development of innate sexual aversions. To investigate whether Westermarck's hypothesis applies to the Kibbutz, it is necessary to switch from sociological variables to psychological ones. Here we present data that show that duration of coresidence between Kibbutz members predicts both adult sexual aversions and altruistic motivations. These data corroborate past findings and provide additional evidence that coresidence serves as a kinship cue regulating sexual attraction and altruism.

Presentation: Fri, 5:40 Lillis 112

Market integration, evolutionary mismatches, and the emergence of hypertension, high cholesterol and type 2 diabetes among indigenous Shuar of neo-tropical Ecuador
Liebert, MA, Snodgrass, JJ, Blackwell, AD, Madimenos, FC, Sugiyama, LS

High cholesterol and blood pressure are major risk factors for heart disease and stroke; elevated blood glucose a risk factor for development of type-2 diabetes. Their emergence is thought to be linked to mismatch between our evolved metabolic biology, and the diet and activity patterns of modern market society. However, psychosocial stress associated with desire for material possessions better predicts hypertension among Siberian Yakut than does diet or activity. Here, we examine associations between market integration (economic production, material possession, and household food frequency), market aspirations, and measures of cardiovascular and metabolic health (cholesterol, blood pressure, glucose, body mass index) among 150 Shuar adults of Ecuadorian Amazonia. Market integration and dietary data were reduced using factor analysis, and multiple regressions then used to test association between market factors and health measures. Results highlight the dynamics of evolved health mechanisms in the context of modern conditions of market integration.

Sponsor:Support: NIH #5DP1OD000516-04 (via Center for Evolutionary Psychology, USCB); NSF BCS-0824602; University of Oregon; Ryoichi Sasakawa Young Leaders Fellowship Fund; Wenner-Gren Foundation.

Presentation: Fri, 11:10 Lillis 282

A Computational Approach to Cooperation and Emotions
Lim, J

One theoretical condition for the evolution of reciprocity is that long-run benefits are sufficiently greater than long-run costs. However, short-run benefits are not necessarily a good predictor of long-run benefits. A better predictor may be the willingness of an individual to trade off their welfare to benefit a specific other—their Welfare Tradeoff Ratio (WTR). We propose that human reciprocity is regulated, in part, by welfare tradeoff “mirroring”: I assess your WTR towards me and attempt to match it; you do the same. This process is regulated by the emotions of anger (when one’s partner’s WTR is lower than expected) and gratitude (when it is higher). A series of economic game experiments shows that subjects’ behavior is consistent with these hypotheses. Short-run benefits, moreover, play little role in regulating behavior. These findings are consistent with the logic of adaptations for regulating reciprocity but not with a short-term gains maximization strategy.

Sponsor:NIH, Global COE Program "Center for the Sociality of Mind" of Hokkaido University

Poster Number: 112

Seeing is Misperceiving: How different sources of information affect the perception of romantic interest
Long, JM, Place, SS, Todd, PM

Being able to evaluate the romantic interest between other people is adaptively important as it allows us to judge the availability of potential mates. Previous research using friendly interactions as stimuli has shown that men have a tendency to over-perceive the sexual intentions of women. Here we test for the presence of this over-perception error in specifically romantic encounters using videos of speed-dating interactions. When asked about the interest of one of the daters, observers make different types of errors after watching the man on the date versus the woman because the daters display cues of differing validity. When watching just the woman, observers were less accurate at predicting her romantic interest than when watching the men on the same dates and again predicting the women’s interest. This fits with the idea that women’s cues of romantic interest are more difficult to read than men’s, probably for important strategic reasons.
Sponsor:Indiana University

Poster Number: 35

Offense and Defense in the Adapted Mind
Lopez, AC

This study tests the hypothesis that the human psychological architecture contains evolved mechanisms designed specifically for offensive and defensive coalitional aggression. Although there is some functional overlap, these two domains of aggression activate distinct motivational and inferential pathways that regulate behavioral strategies under each, such as: participation in aggression, willingness to punish those who avoid aggression, and labor recruitment strategies. Additionally, this study presents evidence that males and females differ in terms of their expected benefits from, and their willingness to participate in, offensive and defensive coalitional aggression.

Presentation: Sat, 5:20 Lillis 211

Deceive Yourself to Deceive High but Not Necessarily Low Status Others
Lu, H, Chang, L

Low status individuals are more likely to employ self-deception to extract resources from the resource-holding high status individuals. Self-deception may be achieved by concealing useful information temporarily from the conscious self while honestly offering null information to others, and retrieve the information when the deception need ceases to exist. College student participants were exposed to Chinese words which they were told would be tested and should not be looked at. In a subsequent recognition test, participants were asked, either by a teacher (high status) or a student (equal status,

manipulated between groups), whether they had seen the words. Finally, participants were given a second recognition test for monetary incentives. Participants under high status condition performed significantly worse on the first than second test; there was no difference between the two test results under equal status condition. These and other results are discussed within social dominance theory and self-deception theory.

Poster Number: 87

A Biological Market Approach to Mate Value Measurement

Lu, Z

In this study, which is the preliminary step of the Chinese Young People Mating Project, we proposed an economical approach to access mate value. First, we documented the mate characteristics from on-line personal advertisements. At the consensual level, this portrait of mating market revealed some culture-specific preferences among Chinese young people, such as filial piety. Second, we found a sexual asymmetric pattern of mate preferences, not only including the number of desired traits, but also the content of the demands. Lastly, by utilizing the concept of biological market value, we calculated the ratio of demand to supply as the weight for each mating-related trait, and constructed two different formulas with the demand/supply coefficients for computing male and female mate value respectively. Further researches on validity examination for this new approach, the influences of mate value on other psychological variables and cognitive processes are in progress.

Presentation: Thu, 11:30 Lillis 112

The origins of extraversion: Joint effects of facultative calibration and functional genetic polymorphism
Lukaszewski, AW, Roney, JR

The origins of variation in extraversion are largely mysterious. Recent theories and some findings suggest that personality variation can be orchestrated directly by genetic polymorphisms. Few studies, however, have examined the alternative hypothesis that personality traits like extraversion are facultatively calibrated to variation in other phenotypic features, and none have considered how these distinct processes may interact in personality determination. Since physical strength and physical attractiveness likely predicted the success of extraverted behavioral strategies over human history, it was theorized that extraversion is calibrated to variation in these characteristics. Confirming these predicted patterns, across two studies, strength and attractiveness together explained a surprisingly large fraction of variance in extraversion – effects that were independent of variance explained by the androgen receptor CAG repeat polymorphism. These novel findings initially support an

integrative model wherein facultative calibration and specific genetic polymorphisms operate in concert to determine personality variation.

Poster Number: 55

Are evolutionary anthropologists reactionary? A survey of political attitudes

Lyle, HF, Smith, EA

Some critiques of the application of evolutionary theory to human behavior charge that this approach expresses or encourages conservative or reactionary political agendas. Replicating the survey of graduate students in psychology by Tybur, Miller and Gangestad (2007), we conducted an online survey of a broad sample of graduate students in anthropology (n=271 respondents). Results indicate that anthropology graduate students with a self-reported evolutionary orientation (n=86) were very liberal in their political beliefs on a variety of social and economic topics, overwhelmingly voted for a liberal U.S. presidential candidate in 2008, and identified with liberal political parties; in this, they were almost indistinguishable from the non-evolutionary anthropology students. Possible biases, including gender, age, or geographic location, are insufficient to account for the convergent views of evolutionary and non-evolutionary respondents. Our results, coupled with those from Tybur et al., contradict the claim that evolutionary-minded social scientists exhibit conservative or reactionary political views.

Presentation: Sat, 11:10 Lillis 182

Ultimatum Game Behavior in a Dominican Village: Cooperative Types, Cultural Frames, and External Validity.

Macfarlan, SJ

Economic experiments are a valuable tool for assessing normative and behavioral preferences. However, conflicting evidence exists concerning whether behavior in economic experiments maps onto economic or social behavior in “real life.” I present evidence from a Dominican community who played the Ultimatum Game in two separate years. UG behavior does not predict any measure of prosociality as measured through social network analysis or labor exchange in the village’s primary cash economic opportunity. However, subject preferences were consistent from year to year in the UG. Using both the strategy and dual-role methods, I find individuals willing to accept no money as a responder are statistically more likely to offer more money to others when they play as a proposer, compared to those who will not accept an offer of zero dollars. A post-hoc analysis suggests subjects are eliciting one of two cultural frames to contextualize this abstract game environment.

Poster Number: 140

Reproductive status and energy dynamics in an indigenous Ecuadorian forager-horticulturalist population
Madimenos, F, Snodgrass, JJ, Blackwell, AD, Liebert, MA, Sugiyama, LS

The present study uses accelerometry to measure physical activity levels (PAL) among 49 indigenous Shuar adults (23 males, 26 females) from a small rural community in Amazonian Ecuador, in an area currently transitioning from subsistence foraging-horticulture to small scale agro-pastoral production. We use accelerometry to test for differences in PAL as a function of sex and reproductive status. Overall, sex differences were not significant, but there was a significant interaction between sex and household reproductive status ($p < .01$). In families with pregnant or lactating (P/L) females, males exhibit PALs that are significantly higher than P/L females ($P < .03$), and trended higher than males without P/L partners ($p = .10$). We suggest that this reflects a cooperative parental strategy in which P/L females are adopting an energy-conserving strategy by decreasing work effort while males with P/L partners increase PALs to compensate for this reduction in P/L female work.

Sponsor: Wenner-Gren Foundation; NSF #BCS-0824602; Evonuk Foundation, Leakey Foundation, Ryoichi Sasakawa Young Leaders Fellowship, UCSB Center for Evolutionary Psychology (via NIH grant number 5DP1OD000516-5), University of Oregon

Presentation: Fri, 5:40 Lillis 211

Female Reproduction History and Bone Health among Shuar and Colonos from the Ecuadorian Amazon: A Life History Theory Perspective

Madimenos, FC, Snodgrass, J, Blackwell, AD, Liebert, MA, Sugiyama, LS

Bone mineral density (BMD) is the most important diagnostic parameter of bone health and a reliable predictor of future fracture risk. In addition to diet, female reproductive patterns-- including parity, breast-feeding, and contraceptive use--affect change in BMD throughout the lifespan. However, understanding of how reproductive factors and life history trade-offs affect bone health is limited by a lack of data from natural fertility, non-western populations. We present the first such data, using calcaneal ultrasonometer to measure BMD among Shuar, an indigenous Ecuadorian population, which we compare with BMD among non-Shuar and colonos from the same area. BMD is analyzed by sex and age, and for women, reproductive history (age at first parturition, age of first menses, number of live births, reproductive and lactation status). Results suggest trade-offs between reproduction and bone integrity are complex but there remains a protective effect of pregnancy and lactation on skeletal health.

Sponsor: Wenner-Gren Foundation for Anthropological Research; NSF # BCS-0925910; Leakey Foundation; UCSB Center for Evolutionary Psychology (via NIH grant number 5DP1OD000516-04); University of Oregon

Presentation: Sun, 9:20 Lillis 211

Social support available predicts perceived cultural saliency of prosocial ideas but not normativeness of prosocial behavior

Maltseva, K

The present study tests the hypothesis that the degree of perceived social support available predicts one's perception of prosocial norms as salient to one's cultural group. Using both qualitative and quantitative methodology, cognitive data associated with prosocial ideas in Swedish society, including their structure, accessibility in recall and intergenerational transmission, as well as information on social support and psychological health status was collected during 2008-2009 in Skåne, Sweden. Consistent predictive effects of social support were found for values but not for norms. Remarkably, endorsement of norms (both prosocial and pro-self) was strongly affected by measurements of emotional and cognitive empathy, and by one's general beliefs in human goodness. Social network size was not found to be an effective predictor of prosocial tendencies in Swedish sample. Implications for studying social learning mechanisms and exploration of the properties of norms relevant to the co-evolution of human culture and sociality are discussed.

Sponsor: Department of Anthropology, University of Connecticut

Presentation: Fri, 4:00 Lillis 282

A Dark Side to Romantic Love: Heightened Vigilance to Attractive Intrasexual Rivals

Maner, J, Leo, J

Evolutionary scholars have described romantic love as a commitment device -- an evolved psychological mechanism that facilitates long-term pair bonding. Consistent with this claim, empirical evidence suggests that romantic love promotes physiological, psychological, and behavioral processes that enhance long-term romantic commitment. But does such commitment come with a downside? Two experiments tested the hypothesis that, among people displaying high levels of dispositional jealousy, romantic love heightens vigilance to attractive intrasexual rivals. Participants in long-term romantic relationships were primed with feelings of romantic love for their long-term partner or a control state, and then performed tasks to assess their implicit evaluations of various social targets. People high in dispositional jealousy responded to the love prime by displaying negative implicit evaluations of physically attractive same sex targets. Findings suggest that although love bonds

romantic partners together, it also leads some people to become wary of losing their investment to potential competitors.

Presentation: Thu, 5:00 Lillis 282

The 'Spiteful' Origins of Human Cooperation
Marlowe, FW, Berbesque, J, Barrett, HC, Bolyanatz, A, Tracer, D, Gurven, M

We analyze second party (spiteful) punishment, third party (altruistic) punishment, and generosity in a cross-cultural experimental economics project. We show that smaller societies are less generous in the Dictator Game but no less prone to second-party punishment in the Ultimatum Game. We might assume people everywhere would be more willing to punish someone who hurt them directly (second party punishment) than someone who hurt an anonymous third person (third party punishment). While this is true of small societies, people in large societies are actually more likely to engage in third party punishment than second party punishment. Strong reciprocity including generous offers and third party punishment exists mostly in large, complex societies that face numerous, challenging collective action problems. We argue that 'spiteful' second party punishment, motivated by the basic emotion of anger, is more universal than third party punishment and sufficient to explain the origins of human cooperation.

Poster Number: 148

Multiple-species parasitic infections in a natural disease ecology: risk factors and health outcomes
Martin, M, Blackwell, A, Gurven, M, Kaplan, H

Researchers have increasingly recognized the high occurrence of multiple species parasitic infections and their influence on morbidity outcomes in human populations. Different parasite species may have antagonistic or synergistic effects on infection intensity and/or specific immune responses in the host, and have varying transmission risks that further influence the rate of co-infection. Risk of co-infection and associated morbidity in a given population may be predicted on the basis of local ecological and demographic factors, the local distribution of specific parasite species, and their associated intraspecific interactions, life cycle characteristics, immune responses and pathologies. Using demographic and biomedical data collected from 5228 Tsimane subjects during 2004-2009, we predict and test the outcomes of co-infection with different helminth and intestinal protozoan species. Rates and risk of co-infection are analyzed in association with demographic and ecological factors as well as immune and health markers from blood samples.

Sponsor: National Institute of Health, National Science Foundation

Poster Number: 36

Indirect reciprocity may or may not solve the social dilemma

Mashima, R, Takahashi, N

Although attaining mutual cooperation in a social dilemma (SD) situation has been considered extremely difficult, recent theoretical studies suggest a possibility that a 'linkage strategy' can make mutual cooperation possible. A 'linkage strategy' is a strategy which excludes defectors in SD from other social exchanges (e.g., indirect reciprocity). Although several studies have suggested the effectiveness of several types of linkage strategies (e.g., Panchanathan & Boyd, 2004; Mashima & Takahashi, 2009), whether or not, and why, if any, linkage strategies can evolve and stabilize mutual cooperation by preventing the invasion of other types of strategies is still unclear. In order to address these issues, we conducted a series of computer simulations which aimed to systematically examine the conditions under which linkage strategies are sustainable.

Poster Number: 29

Personality in Indigenous Amazonians: Tests of the Big Five Model and Evolutionary Hypotheses
Massenkoff, M, von Rueden, C, Gurven, M

We provide one of the first tests of the Big Five model of personality in a small-scale society. We administered the BFI 44-item personality questionnaire (Benet-Martínez & John, 1998) among the Tsimane' forager-horticulturalists of Bolivia. Reliability analyses initially showed minimal support for the Big Five, but reliability scores improved with removal of negatively-coded items. We tested several hypotheses of personality variation with respect to age, sex, birth order, and body size. We find that (i) Compared to women, Tsimane' men show higher levels of Extroversion, Agreeableness, Conscientiousness, and Openness, and lower levels of Neuroticism; (ii) Openness declines with age; (iii) Latter-born females are significantly less Open; and (iv) men with larger BMIs (body mass indices) are more extroverted.

Presentation: Thu, 4:00 Lillis 282

The collective action problem in warfare: data from cattle raiding among Turkana pastoralists
Mathew, S

How do acephalous societies solve the collective action problem in warfare? Using the theory on the evolution of cooperation, I addressed this through a study of cattle raiding among Turkana pastoralists in East Africa. I will present data based on in-depth interviews with a representative sample of 107 Turkana warriors, which yielded detailed first-hand accounts of 95 recent raids. I will present measures of: 1) the direct costs and benefits to individuals of joining a raid (casualty rates and livestock gain per battle), 2) the rate of free riding in raids

(desertions, straggling, and cowardice in combat), 3) the types and likelihood of sanctions on free riders, and 4) male and female mortality from warfare. The study sheds light on ongoing debates about large-scale cooperation in humans, and provides a causal understanding for the unique scale of human warfare.

Sponsor:Leakey Foundation, NSF

Poster Number: 86

When a Social Reward Elicits a Material Return

Matsumura, A, Ohtsubo, Y

A recent fMRI study by Izuma et al. (2008) revealed that social rewards (e.g., praise) activate reward-related brain areas (e.g., striatum), which were previously known to be activated by material rewards. Given the common neural basis, we hypothesized that a social reward would elicit a material (monetary) return. In the present experiment, 118 undergraduates played the dictator game (DG) in the dictator role with another participant. In the reciprocity condition, prior to DG participants received an extremely positive evaluation purportedly from their DG partner. In three other conditions, the possibility of reciprocity was eliminated (e.g., DG was played with a new partner). The mean portion allocated to the partner in DG was greater in the reciprocity condition (0.47, SD=0.12) than in the other non-reciprocity conditions (0.40, SD=0.16); $t(60.56)=2.22$, $p=.03$ by a planned contrast not assuming the equivalence of variance. Participants therefore reciprocated to the partner's praise with a monetary return.

Sponsor:Japan Society for the Promotion of Science

Poster Number: 79

Is matriliney inconsistent with economic prosperity? The case of the Mosuo

Mattison, SM

Matrilineal kinship has been considered puzzling to anthropologists. Only 17 percent of the world's cultures are matrilineal and of these, the majority practice horticultural subsistence. A variety of theories have been proposed to explain its rarity and an apparent contradiction between matriliney and economic prosperity, from those focused on how the structure of consanguineal versus affinal kinship ties and their distribution in geographic space affect resource defense, to those focused on the differential impacts of resources on men's and women's reproductive success. This paper reviews and provides support of these hypotheses using data gathered among the ethnic Mosuo of Southwest China. In particular, household composition and form of reproductive union both evince departures from normative matrilineal kinship practices in areas of relative economic prosperity. I conclude that such departures are likely to be adaptive responses to improving economic circumstances

in one of the first quantitative studies of contemporary kinship transition.

Sponsor:National Science Foundation; American Philosophical Society; University of Washington

Presentation: Sun, 10:20 Lillis 282

The determinants and consequences of women's fertility preferences and fertility outcomes in a rapidly acculturating Amerindian population

McAllister, LS, Gurven, M

It is well-documented that both ecological and social cues influence reproductive decision-making in women via several pathways. Here we present a conceptual model outlining the environmental factors that are known to, or are likely to, influence a woman's reproductive decisions. The model has ideal family size (IFS) as a proxy for reproductive decisions, and four main components: external environment, reproductive history, maternal condition, and husband's fertility preferences. The main proposed pathways are tested using data collected among the Tsimane, Amerindian forager-horticulturists. The Tsimane are undergoing rapid integration into the local market economy, increasing spatiotemporal, socioeconomic, and physiological heterogeneity within the Tsimane with concurrent impacts on fertility. Three possible explanations for why there is a discrepancy between women's stated IFS and their fertilities are also explored: limited female reproductive autonomy; improvements in maternal condition without concurrent improvements in fertility control methods; and perceived lack of returns on investments in human capital.

Presentation: Sat, 5:00 Lillis 112

Who becomes a hero and what happens to them? A study of self-sacrificial behavior in small female groups.

McAndrew, FT, Perilloux, C

It has been proposed that costly acts of altruism are conspicuous displays of resources or character traits that enhance status and position the altruist for future favors and resources. To test this prediction, 39 female undergraduates filled out a six factor, 30 item "Hero Scale" and then participated in a "group problem solving" study in which the monetary success of three person groups depended upon one of their members volunteering to endure pain (a cold stressor test) and inconvenience (getting soaked in a dunk tank). The results confirmed that engaging in self-sacrificial behavior can be a profitable long-term strategy. The behavior of the altruist was judged to be more costly than that of other group members, and they rewarded the altruist with more money and higher status. Personality factors were negligible in predicting self-sacrificial behavior and the allocation of rewards.

Sponsor:Howard Hughes Medical Institute; Knox College; University of Texas at Austin

Poster Number: 56

Beauty is in the Recessive Gene of the Beholder: A Study of Human Preference for Mutual Recessive Genes in a Potential Mate

McCulloch, BB

Humans are unique in that females have a hidden ovulation cycle, creating an adaptive problem for males by decreasing the certainty of their paternity. Given this decrease in paternal certainty, and the potential concomitant fitness consequences of cuckoldry, males should have psychological mechanisms specialized for ascertaining whether or not a child is theirs. One way in which this adaptive problem could be solved is by using the presence or absence of shared recessive Mendelian traits with full penetrance. Such a mechanism would require shared recessive traits in mating partners, predicting that males with such traits should prefer females with the same traits. Information about male and female eye and hair color preference in a potential mate was collected from www.match.com and www.celebritycouples.net. Men with recessive traits showed a significant preference for women displaying the same traits, but the pattern is not present in men with dominant traits or in women.

Poster Number: 146

Should I stay or should I go? The effect of parental survival on children's age at marriage in Colonial New England.

McCullough, JM, Rosser, S, Priest, A, Heath, KM

Considerable literature has focused on the effect of a lost parent on the natal family; however, little attention has been paid to the effect of a lost parent on the child's timing to leave the household and marry. Such information would make a valuable contribution to both the Cinderella-Effect and the helpers-at-the-nest perspectives of kin selection theory. This research considers the timing of marriage of children with both biological parents, in the absence of one or both biological parents, or with the presence of a stepparent in the natal household prior to marriage. The study population consists of individuals who married between 1680 and 1750 in Colonial New England and were raised in a natal family with minimal wealth. Here we show that family composition does affect timing of marriage particularly in terms of sex and birth order of the child.

Presentation: Thu, 5:40 Lillis 211

An Adaptationist Approach to the Two Factor Model of Psychopathy: Fast and Slow Life History Strategies

McDonald, MM, Navarrete, CD

Psychopathy has been conceptualized as a unitary construct reflecting a frequency-dependent cheating strategy. Here we present preliminary evidence for a multifaceted model of psychopathy wherein two

independent dimensions represent distinct life strategies. The first factor (F1) is characterized as a "slow" life history strategy where protective early rearing environments lead to greater energy allocation for development; the second factor (F2) indicates a "fast" strategy associated with harsh environments and energy allocations that center on reproduction. Results suggest that the quality of family relationships, not resource availability, predicts the differential expression of the two dimensions of psychopathy. Each factor, in turn, is associated with traits that complement distinct life history strategies: F1 is positively associated with impression management, and F2 is positively associated with mating effort, aggression, and impulsivity. Our findings highlight the importance of examining psychopathy as a multifaceted psychological construct associated with different life strategies.

This abstract is being submitted as part of the symposium "Environmental Determinants of Life History Strategy: Financial Decisions, Aggression, Physical health, and Mental Illness." In the case that this abstract cannot be accommodated as a symposium presentation, the authors would be willing to present it as a poster.

Presentation: Sun, 11:20 Lillis 211

Limerence in German nineteenth-century popular romance

Mellmann, K

The opinion that romantic love was 'invented' in recent western cultures has been rightly challenged by bringing to the fore the universal biological substrates of romantic love and its cross-cultural testimonies. It still seems reasonable to specify different period-typical uses and combinations of these substrates when examining literary history. The projected paper investigates the concept of love revealed in the popular romance novel in German mid-nineteenth century with regard to both its universal and period-typical aspects as well as their specific relationship. An analysis of love as depicted in E. Marlitt's first bestseller "Gold Elsie" (1866) serves to demonstrate how the fear-related submechanisms of "limerence" (Dorothy Tennov), or the psychological "attraction system" (Helen Fisher), are exploited to solve a period-specific problem of mediating marriage in an individualizing society.

Presentation: Fri, 3:20 Lillis 112

Relationship Quality and Men's Oxidative Stress

Merriman, LA, Gangestad, SW, Thompson, ME

The association between oxidative stress and quality of romantic relationships was investigated in men. Given a postulated life history trade-off between current and future reproductive potential, men currently in higher quality romantic relationships may expend less general mating effort than single men or men in lesser quality

relationships. Reduced mating effort may allow greater allocation of energy to anti-oxidant defense systems, and increased resistance to oxidative damage by reactive oxygen species. Consistent with this prediction, men who reported being in higher quality romantic relationships had significantly lower levels of oxidative stress than men lacking such relationships. Neither testosterone nor cortisol mediated the effect. Resistance to oxidative damage could be a physiological mechanism by which the experience of being in higher quality romantic relationships manifests in direct health benefits. Alternatively, men with inherently greater resistance may be more likely to achieve such relationships, owing to pre-existing superior quality or condition.

Presentation: Thu, 11:10 Lillis 211

Ovulation as a Male Mating Prime: Subtle Signs of Female Fertility Influence Men's Mating Cognition and Behavior

Miller, SL, Maner, JK

Across myriad species, cues of female fertility influence male mating behaviors. The current research provides evidence that in humans, cues of female fertility prime mating motivation in men, facilitating psychological and behavioral processes associated with the pursuit of a sexual partner. In Study 1, men exposed to the scent of a woman near peak levels of fertility displayed increased accessibility of sexual thoughts. Study 2 demonstrated that, among men who are particularly sensitive to odors, scent cues of fertility triggered heightened perceptions of female sexual arousal. Study 3 revealed that, in a face-to-face interaction, cues of fertility increased men's tendency to make risky decisions and to behaviorally mimic a female partner. Hence, subtle cues of fertility led to a cascade of mating-related processes – from lower order cognition to overt behavior – that reflect heightened mating motivation.

Presentation: Fri, 3:40 Lillis 112

Brothers delay the onset of reproductive maturity and sexual activity in their sisters.

Milne, FH, Judge, DS

The higher costs of sons compared to daughters is demonstrated to extend to a negative effect of brothers on the lifetime reproductive success of their siblings in subsistence and pre-industrial societies. In societies with fewer resource constraints, one might expect these effects to be limited or non-existent. We examine the costs of brothers and sisters in a contemporary western society of adult Australians. Girls with elder brothers had a delayed age at menarche. Younger brothers were associated with delayed onset of sexual activity in sisters, but not in brothers. Neither younger nor elder brothers influenced fitness parameters (number of pregnancies and of children, age at first pregnancy and age at first birth) in

their siblings of either sex. While brothers negatively affect their sisters' reproductive onset, this delay is not associated with a fitness cost in contemporary Australia. We discuss potential mechanisms moderating the cost of brothers in modern Australia.

Poster Number: 28

Two Guys, a Girl, and an Adult DVD: Testing Sperm Competition Hypotheses using Adult Film Sales

Miner, EJ, McKibbin, WF, Popp, D, Shackelford, TK

Men may respond to cues of a partner's sexual infidelity, such as the presence of a rival, in ways that may have increased the likelihood of ancestral men's success in sperm competition—competition between the ejaculates of two or more men to fertilize a woman's egg(s). When choosing between viewing pornographic images that depict two men interacting with one woman and images that depict two women interacting with one man, sperm competition theory has helped generate the hypothesis that men will prefer the former scenario, which suggests the presence of a rival male. This research shows that the number of images on a DVD cover depicting two men with one woman predicts DVD popularity (a composite of DVD sales rankings and length), whereas the number of images on a DVD cover depicting two women with one man does not predict DVD popularity. These results are consistent with sperm competition hypotheses.

Poster Number: 3

Does inequality cause risk-taking?

Mishra, S

Income inequality has been associated with crime rates at the aggregate level, suggesting that inequality may cause crime. No experimental research, however, has investigated this hypothesis. Because crime is a form of risk-taking, in two studies, I examined whether people engage in higher risk-taking after experiencing inequality, manifesting through (1) structural means, or (2) competitive disadvantage. In the first study, structural inequality was induced among pairs of subjects. Half were given an initial cash payment, and the other half, nothing. In the second study, I manipulated the experience of competitive disadvantage by providing positive or negative feedback about one's intelligence relative to peers in a purported aptitude test. In both studies, I found that participants engaged in significantly higher risk-taking when they were the victims of inequality. Individual differences in personality played no significant role. These results represent the first experimental evidence that inequality causes risk-taking.

Sponsor: Social Sciences and Humanities Research Council, Alberta Gaming Research Institute

Poster Number: 113

The Effect of Contexts on Gender Differences in Receptivity to Sexual Offers

Mo, Y, Ling, V

Previous studies have found heterosexual sexual receptivity to be powerfully associated with biological sex. Testing Strategic Pluralism Theory (Gangestad & Simpson, 2001), the present study examines whether perceived facial masculinity, sociosexual orientation (SOI), and/or mating context may act as moderators to sexual receptivity. Participants differing in SOI were randomly assigned to view either a masculine or feminine heterosexual face picture and to respond to a supposed offer to either go on a date with the person in the picture or to have a one-night-stand with this person. We hypothesized that there will be a 2 x 2 x 2 x 2 (male/female x restricted/unrestricted SOI x masculine/feminine stimuli x date/one-night-stand offer) interaction. Results are discussed.

Presentation: Thu, 11:30 Lillis 211

Tests of the stress-linked Immunocompetence Handicap Hypothesis in human male faces

Moore, F, Perrett, D

Recent research in avian species implicates a role of stress in the Immunocompetence Handicap Hypothesis (ICHH) of sexual selection. We tested this stress-linked ICHH by investigating the effects of interactions between sex- and stress- hormones (i.e. testosterone and cortisol) on male facial masculinity and attractiveness. Twenty-four facial stimuli were constructed from images of males on the basis of levels of salivary cortisol and testosterone. These were rated by female participants across fertile and non-fertile phases of the menstrual cycle. Women demonstrated stronger preferences for the faces of males with high testosterone at the fertile phase of the menstrual cycle when coupled with low cortisol. In a second study, we sought to identify the characteristics associated with testosterone and cortisol on which women base their attractiveness judgements (e.g. perceptions of dominance and health). Results will be discussed in the context of human mating strategies and the stress-linked ICHH.

Sponsor:Medical Research Council

Poster Number: 117

Sexual dimorphism in growth of human manual digital proportions

Morris, DM, Frost, SR, Pastor, R, Snodgrass, JJ, Sugiyama, LS, White, FJ

The relative length of the 2nd and 4th digit (2D:4D), is linked to health, attractiveness, and reproductive parameters. The 2D:4D ratio, if shaped by exposure to sex hormones in utero, should be observable at an early age. Alternatively, sexual dimorphism in 2D:4D may be a consequence of normal patterns of hand growth, and

because males have a relatively longer period of growth. We measured lengths of all metacarpals and phalanges from 15 males and 15 females at two ages: 2-3 and 17-18 collected from radiographs. Despite overlap, males and females differed in their 2D:4D ratio, with differences greater in the adult age class. Principal components analysis of all 19 hand bone lengths reveals other dimorphic aspects of hand shape, in relative metacarpal vs phalanges lengths. Results support that dimorphism in 2D:4D ratio is established by 2-3 years, but age is also a major factor in hand shape variation.

Sponsor:McNair Scholarship (DM).

Presentation: Fri, 3:40 Lillis 211

Perceptions of trait and identity transmission from a cross-cultural and developmental perspective

Moya, C, Henrich, J, Boyd, R

Previous research suggests that adults reliably develop an understanding of traits' social and biological transmission pathways, despite cross-cultural variation in how social identity is construed (Bloch et. al 2001, Astuti et. al. 2004). Here we replicate this result in two new cultural contexts with divergent social identity construals, the Peruvian Altiplano and Fiji. Additionally, we show that participants do not seem to privilege a vertical over a horizontal transmission inheritance pathway, although previous methods had only emphasized the former. Finally, we test whether children use a common heuristic for making inferences about trait similarity in these scenarios.

Sponsor:NIH

Presentation: Sun, 11:00 Lillis 211

Art is for Hotheads: On the Literary Uses of Human Emotional Predispositions

Mueller-Wood, AI

Saunders. My aim is to move beyond the content-based concerns characteristic of much of evolutionary literary criticism and attend to the (sometimes very visceral) psychobiological effects - and the concomitant sense of pleasure - that literature initiates in its recipients. Pleasure is a reward-mechanism for adaptive behaviour; however, it is even achieved when behaviour takes place in an off-line mode (for instance in fictional contexts), and literature has always made use of (and catered to) human emotional dispositions in this way. In my paper I will not only illustrate the way in which - across literary history - literature has exploited the extreme emotions of its hypothetical recipients, but also suggest that these emotions have contributed to the development of sophisticated aesthetic forms and structures (such as dramatic irony).

Presentation: Fri, 11:30 Lillis 211

Disease Prevalence and the Origins of Cross-Cultural Differences in Conformity

Murray, D, Schaller, M

Extensive cross-cultural research in the past few decades has revealed significant regional variability in behavioural conformity as well as tolerance for nonconformity; however, exactly why this variability exists remains unknown. Using a cost-benefit approach, we propose that historical regional variability in the prevalence of disease-causing pathogens is responsible, at least in part, for contemporary differences in conformity across cultures.

Consistent with this hypothesis, historical pathogen prevalence is positively correlated with two measures assessing behavioral conformity and attitudes towards obedience, and is negatively correlated with two measures assessing tolerance for nonconformity. Furthermore, preliminary results from behavioral research indicate that individuals may conform more when the threat of disease is made immediately salient. Alternative explanations are considered, and implications are discussed.

Sponsor: Social Sciences and Humanities Research Council (Canada)

Poster Number: 73

Negative Political Campaign Advertising: A Darwinian Perspective

Murray, G

Evolutionary psychology studies human behavior that is related to domain-specific psychological mechanisms that evolved to solve adaptive problems faced in human ancestral times regarding survival and reproduction (Tooby and Cosmides 1992). One such adaptive problem was how to identify individuals who “cheat” on social contracts, with an adaptive solution being a domain-specific psychological mechanism that assesses exchange partners for potential cheating (Cosmides 1989). Research suggests that negative advertising plays a significant strategic role in political campaigning and that negative advertising provides voters with information and sharpens their preferences (Kaid 2004), such as when a candidate appeals to voters’ fears (Brader 2005). Using experimental methodology, this research suggests that an adaptive psychological mechanism for cheater detection negativity bias partially explain the utility of negative advertising.

Presentation: Sun, 9:40 Lillis 211

Are Domestic Dogs Prosocial?

Naficy, ST, Panchanathan, K

Humans engage in behaviors that benefit others and are extraordinary in terms of our “prosociality”. In contrast, the range of altruistic behaviors in other primates seems qualitatively different, and are limited to and explained by kin selection and/or reciprocal altruism. Consonant with

this view, prosociality may be yoked to mindreading and perhaps culture.

Given that humans show prosociality like marmosets, a cooperatively breeding species, but chimpanzees, who aren’t cooperative breeders, don’t, there’s some evidence for the idea that prosociality may be linked to cooperative breeding.

Dogs provide us with a good comparative test. They’re descended from wolves, a cooperatively-hunting and cooperatively-breeding species. Dogs are also socialized in human societies in ways that parallel child rearing. 20 dogs were given forced-choice tests in which they were given a choice between an outcome that while always gave them a food reward, resulted in either a familiar conspecific getting or not getting one.

Presentation: Thu, 11:10 Lillis 282

Out-group Men Are Predators to the Human Mind: Conditioned Fear to Out-group Male Faces Resist Extinction

Navarrete, CD, Asher, BD, McDonald, MM

Previous studies have shown that fear responses conditioned toward exemplars of a racial out-group resist extinction, but that responses toward male exemplars of a racial in-group are readily extinguished. We conceptually replicate and extend these findings, showing that fear responses in the anticipation of aversive stimuli (electric shock paired with white noise), resist extinction when the targets are male exemplars of (a) a racial out-group, (b) a different university, or (c) a minimally-defined social category other than one’s own (i.e. “minimal groups”). Our findings are consistent with the notion that the psychology of intergroup bias in general—and modern race prejudice in particular—may be generated by a psychological system designed by natural selection to cope with threats from dangerous predators. Adaptive individual differences in fear responses are discussed.

Sponsor: National Science Foundation

Presentation: Thu, 11:30 Lillis 282

Illusory conjunctions of angry facial expressions follow intergroup biases

Neel, R, Becker, D, Anderson, U

Illusory conjunctions occur when features of one stimulus are mistakenly perceived as belonging to an adjacent stimulus (e.g., seeing a green “L” as red when it was next to a red “O”). Do illusory conjunctions occur when perceiving emotionally expressive faces? The current research examines how heuristically threat-relevant faces (Black males) and non-threat relevant faces (White males) generate such an effect for White participants: Black neutral faces were more likely to be reported as angry when paired with a White distractor. The effect did not hold when the White distractor was neutral instead of angry, suggesting that anger “leapt” from White to Black

faces. Complementary effects emerged for angry White targets. In study 2, a self-protection motivation changed these effects depending on participants' belief in a dangerous world. These results support error-management social cognition: stereotypes of threatening outgroups alter how our perceptual system assembles facial information to minimize costly errors.

Sponsor:National Science Foundation

Presentation: Thu, 5:20 Lillis 112

A Functional Account of Motion-Induced Blindness: The 'Perceptual Scotoma' Hypothesis

New, JJ

In motion-induced blindness (MIB), fully visible objects can repeatedly fluctuate into and out of conscious awareness when superimposed onto certain global moving patterns. Here we suggest a new account of this striking phenomenon. Rather than being a failure of visual processing, MIB may be a functional result of the visual system's attempt to distinguish between stimuli that reflect real objects and those that arise from damage to the visual system itself. When an object in the visual field is invariant with respect to changes occurring in a large region surrounding it, the visual system may discount that stimulus as akin to a blindspot, and may thus adaptively filter it from awareness. We report a series of experiments uncovering many new facets of MIB – each being very straightforwardly predicted by a consideration of this phenomenon's underlying functionality, employable heuristics, and proper visual conditions.

Sponsor:NIMH

Presentation: Thu, 11:30 Lillis 182

How might apes cooperate to raise their young?

Newson, L, Bell, A, Richerson, P

Cultural mechanisms facilitate cooperation in the raising of young in contemporary populations but it has recently been argued that cooperative breeding emerged early in the hominin line and contributed to the conditions that allowed complex culture to evolve (Burkart, Hrdy, & Van Schaik, 2009; Hrdy, 2009). We present two mathematical analyses exploring the conditions under which cooperation in the care and provisioning of young might have evolved in great ape with simple culture.

Cooperation can result in increased fitness by increasing infant survival and decreasing interbirth intervals. For reciprocity between females to be an evolutionarily stable strategy, the probability of continued interaction and the probability that cooperative mothers recognize on another have to be high. For males to provision mothers and infants, the rate of offspring production must be correlated with resource availability, paternity certainty has to be high and the chances of extra pair mating have to be low.

Sponsor:National Science Foundation, USA

Poster Number: 67

The Sound of Round: Evidence for Implicit Sound Symbolism

Nielsen, AK, Rendall, D

Although Kohler's (1947) findings regarding the Bouba-Kiki effect have been replicated and extended, they have classically been criticized for their transparency. Our own research has shown that removal of transparent stimuli leads to lower levels of concordance in participants' matching of nonsense words and generated images. The reduction in effect size produced by moving to a 2AFC paradigm raises questions about both the size and source of the bias which is believed to underlie the Bouba-Kiki effect. This presentation reports two experiments designed to test for implicit applications of word-sound:object-shape matching biases. In the first, congruency of stimulus pairs is shown to have no effect on subsequent memory for those stimuli. In the second, an interference pattern in participants' responses which demonstrates an implicit bias is shown. The implications of these findings for language acquisition and its subsequent use are discussed.

Sponsor:NSERC

Presentation: Sun 12:20 Lillis 182

Ecological Constraints, Brideprice Inflation, and Embodied Capital Investment as Explanations for Marriage Delay in Lamalera, Indonesia: An Historical Demographic Investigation.

Nolin, DA

Lamalera is a subsistence fishing and whaling community in southeast Indonesia. A striking feature of Lamaleran demography is the relatively late age of marriage. Marriage delay is accompanied by related features, including a high rate of adult celibacy among women and significant numbers of sons and daughters entering the clergy. Remarkably, this pattern resembles that seen in Early Modern Europe where arable land became saturated, yet land saturation cannot explain the patterns observed in this maritime foraging community. Using a century of parish records, I first estimate the age at marriage for Lamaleran men and women and the secular trend in marriage age throughout the Twentieth Century. I then consider three possible explanations for this unusual feature of Lamaleran life history: ecological constraints, brideprice inflation, and embodied capital investment.

Sponsor:Eunice Kennedy Shriver National Institute of Child Health and Human Development (NIH-NICHD)

Poster Number: 14

Manipulations of vocal and facial masculinity in videos
O'Connor, JJ, Feinberg, DR, Fraccaro, PJ, Tigue, CC, Borak, DJ, Jones, BC, DeBruine, LM, Little, AC, Perrett, DI, Tiddeman, B

Humans evaluate multiple traits when assessing potential mates, though few studies have examined how information from different traits is combined. Facial and vocal masculinity is dependent upon testosterone expression. Women's preferences for male facial and vocal masculinity are correlated and are similarly influenced by self-perceived attractiveness, hormonal contraceptive use, menstrual cycle phase, and relationship context. Therefore, facial and vocal masculinity are hypothesized to be redundant (i.e. backup) signals of mate quality, although alternative models have yet to be tested. We tested additive, interactive, and backup models by assessing women's preferences for videos with different combinations of vocal and facial masculinity. Results indicated that women who preferred masculine faces also preferred masculine voices, but revealed no additive or interactive effects of facial and vocal masculinity. These findings suggest that vocal and facial masculinity are assessed as backup cues to men's testosterone levels, rather than as additive or interactive cues.

Sponsor: Social Sciences & Humanities Research Council of Canada; Canada Foundation for Innovation; The Ministry of Research and Innovation of Ontario

Presentation: Sun, 10:00 Lillis 282

Relative cognitive evaluations of friendship and kinship
O'Gorman, R

In non-human animals, cooperation is usually due to kinship, with inclusive fitness theory predicting that closer relatedness fosters greater altruism. Humans are unusual in that we cooperate with non-kin. Because individuals are not necessarily averse to cheating kin, any relationship ideally should be based on prior experience and expected future interactions. Such relationships represent an effective means to achieve stable groups that are not resistant to cheating. I shall present data from related studies examining dispositions toward friends and family. Study one quantifies various relationships between participants and their friends and relations of varying closeness, incorporating past relationship duration and quality, expected future interactions, and perceived similarity. Study two used an IAT methodology to examine attitudes toward family and friends with regard to general attitudes, similarity, and perceived ingroup membership. The results of both studies show that friendship may be as important cognitively as kinship.

Sponsor: British Academy

Presentation: Sun, 10:00 Lillis 211

The Closer the Relationship, the Costlier the Apology to Maintain It
Ohtsubo, Y, Watanabe, E

Ohtsubo and Watanabe (2009) recently proposed a costly signaling model of apology-making: those who value the relationship more can afford a greater cost to repair the relationship when they unintentionally committed some transgression; thus, recipients of apologies discriminate honest apologies from dishonest apologies by cost involved in apologies. O&W (2009) experimentally confirmed that people perceive costly apologies sincerer than no cost apologies. The present study examined the untested premise of the model: whether people are willing to pay a greater cost to repair close relationships than casual relationships. Eighty eight undergraduates were asked to imagine that they had committed an unintentional transgression to either a close friend or a casual friend. Participants were subsequently asked to indicate their willingness to sacrifice their money and time to make an apology. Participants reported a greater willingness to sacrifice to apologize to a close friend than a casual friend.

Sponsor: Japan Society for the Promotion of Science

Presentation: Fri, 4:00 Lillis 112

Perception of Life History Strategy, Mate Value, and Mating Effort at Zero Acquaintance
Olderbak, S

Over 350 undergraduate students (response participants) were exposed to four kinds of videos of other students (stimulus participants) who were responding to questions about themselves for 10 minutes, who were (1) either male or female, with (2) either a slow or fast life history strategy (LHS), as determined by a prior measure. Response participants were asked to report on the stimulus participants' traits. Response participants demonstrated the ability to perceive the stimulus participants' LHS, mate value, and mating effort. Response participants demonstrated the strongest ability to perceive the traits of males, regardless of the male's LHS, and the strongest ability to perceive the traits of fast LHS females and a dramatically weaker ability to perceive the traits of slow LHS females. There was an interaction of the stimulus participant's LHS with their gender in their ability to perceive LHS and mating effort, but not mate value.

Poster Number: 37

The emergence of in-group favoring behavior: generalized exchange takes place within group boundaries
Onoda, R, Takahashi, N

Generalized exchange is the mechanisms that characterize human society. Previous experimental studies have shown that people practice generalized exchange within

group boundaries (Yamagishi, Jin, & Kiyonari, 1999; Yamagishi & Kiyonari, 2000). However, these past research haven't yet provided a satisfactory explanation for why this behavior they defined as in-group favoring can be adaptive. In the current study, we conducted a series of simulations to explain the behaviors from an evolutionary perspective. We used the giving game and constructed a society which composed two groups, A and B. In the game, every player was given a fixed amount of resource and has to decide how much and to whom he/she gave. The simulations showed that strict strategies (not giving any resources to players who had helped other players who didn't adopt in-group favoring strategy) help maintaining within-group generalized exchange. This result signified that only strict in-group favoring strategy can be adaptive.

Poster Number: 142

An Examination of Sexual Development in the Context of Environmental Harshness and Unpredictability
Orthel, HE, Brumbach, BH, Barger, SD

Life History (LH) literature has shown that environmental harshness and unpredictability are important predictors of an individual's allocation of resources to survival and reproduction. The objectives of the current study were twofold. First, we sought to create a more theoretically congruent representation of harshness and unpredictability than has been previously utilized in the literature. Second, using the National Longitudinal Study of Adolescent Health, predictions extending from LH theory were tested. Specifically, we hypothesized that high levels of unpredictability and harshness would be predictive of earlier onset of puberty, higher promiscuity, and infrequent contraception use. We also evaluated the extent to which correlates of harshness and unpredictability (e.g., parental socioeconomic status) moderated these associations. Results were consistent with LH theory, suggesting that environmental harshness and unpredictability are important predictors of sexual development outcomes. Our findings illustrate the specific elements of reproduction-related behaviors that are related to environmental versus familial socioeconomic characteristics.

Presentation: Sun, 11:40 Lillis 282

Family matters: Unattractive family members make mates less appealing in the long-term
Osborne, E

People should use every cue to determine a partner's genetic fitness when making mating decisions. A fuller picture of a potential mate's genetic quality can be gathered by considering the genetic quality of his/her family members. We tested this novel theory in four studies. Three studies exposed undergraduates to an opposite sex individual surrounded by attractive or

unattractive family members. Both women and men rated this potential mate lower on qualities related to genetic fitness if the target had unattractive family members. Participants also predicted lower ratings of fitness for children of the individual with an unattractive family. In a fourth study, participants predicted a drop in fitness over time for targets with unattractive family members but not unattractive coworkers, suggesting this effect is due to genetic cues of fitness instead of contrast effects. These data suggest that people use cues from family members to evaluate their mates' overall fitness.

Sponsor:Arizona State University

Poster Number: 88

Child Homicide in Norway 1980 - 2009
Ottesen, V

The present study is a study of child homicide in Norway, covering the years 1980 – 2009. This is the first study of child homicide in Norway in 30 years. As such, the study presents the first opportunity to test evolutionary informed hypotheses on child homicide in this contemporary egalitarian society. The study includes a comprehensive national sample of cases where a parent has been found guilty by the courts of murder or manslaughter. The sources of data are court rulings and forensic psychiatric evaluations of the offenders. In addition to informing on vital demographics, these sources provide detailed narratives of the relationship between the offender and victim, as well as their respective life histories. The study's sample also includes cases where the offender committed suicide. The study has accessed vital demographics in these cases. Preliminary results will be available for presentation and discussion.

Sponsor:The Norwegian Foundation for Health and Rehabilitation

Poster Number: 114

The Perils of Human Genetic Engineering: Why Conscious Gene Selection Is a Bad Idea
Palmer, JA

The possibility of creating designer babies (human germline genetic engineering) raises some very serious concerns. Human psychological tendencies exist because they aided survival and reproduction in our ancestors. However, our evolved selective preferences are directed at mate selection not infant selection. Such preferences were selected for because they typically produced healthy progeny. However, many of the traits humans find alluring in mating partners produce positive adaptive benefits in the offspring that are totally outside the conscious awareness of the progenitors (e.g., MHC-dissimilar mate selection tendencies). In the past parents tried to bestow a competitive edge upon their children by giving them higher status, better education and wealth,

but in technologically advanced societies, few characteristics are as advantageous as heightened cognitive capacity. This paper discusses why alteration of neural architecture via synthetic genes aimed toward ever-increasing cognitive ability may result in the suppression or even loss of many subtle but immensely valuable human faculties.

Poster Number: 68

Adaptive Threat Discrimination: Assessing the Medium and the Message

Palmer, JA, Holtzclaw, B, Carlson, C, Ducote, K, Illaoa, S, Hill, WT

Many primate species including humans are readily predisposed to learn to associate fear with certain categories of stimuli. In social primates, observing the emotional responses of conspecifics toward certain stimuli is a typical route for discrimination learning. In humans this observational process is highly augmented by neural mechanisms devoted to the acquisition of language and culture. We hypothesized: (1) active threats (mobile venomous animals) would be more quickly learned than passive threats (plants that are poisonous if ingested), (2) learning to discriminate the threat level of similar-looking animal species would occur more readily when conveyed by facial expressions, and (3) learning to discriminate the threat level of similar-looking plant species would occur more readily when communicated linguistically. Photographic stimuli (organisms paired with either emotive faces or words to indicate threat level) were presented to undergraduate participants who were then tested for associative recall. Results are discussed in terms of adaptive significance.

Presentation: Fri, 5:20 Lillis 182

The evolution of prestige-biased transmission

Panchanathan, K

Humans, unique in the animal world, acquire and transmit adaptive information through both genetic and cultural channels. To understand the dynamics of cultural evolution, we need to understand the nature of our social psychology, cataloguing various learning biases. Henrich and Gil-White argued that a prestige-bias is particularly effective as it increases the likelihood that naive individuals will find experts and acquire adaptive behavior. There are two parts to their argument. First, selection co-opted pre-existing psychological adaptations (designed to rank conspecifics) for the purpose of ranking cultural models. Second, selection favored imitators who conferred deference on successful models so as to gain proximity, ensuring a higher probability of successful imitation. Surprisingly, Henrich and Gil-White's argument has not been formalized. Here, I present an evolutionary model which corroborates their verbal reasoning: under a broad range of conditions,

natural selection favors prestige-biased transmission over random imitation.

Presentation: Thu, 3:20 Lillis 211

Rapid detection of visually provocative animals by preschool children and adults

Penkunas, MJ, Coss, RG

The ability to detect dangerous animals in settings with other animals in view has been historically important during human evolution. Two studies of preschool children and adults examined reaction times during visual search tasks using a touch-screen computer monitor. During 24 trials, subjects were presented photographs of target snakes embedded in matrices of 8 lizard photographs or vice versa, and target lions embedded in matrices of 8 antelopes or vice versa. In both children and adults, photographs of snakes or lions were readily detected with the fastest reaction times whereas the detection of lizards or antelopes within matrices of snakes or lions, respectively, was reliably slower. These findings are consistent with previous research arguing that snakes are simply more salient to perceivers than nondangerous targets. A complementary explanation is that snakes and lions retard the detection of nondangerous target animals because they capture attention during the visual search process.

Presentation: Sat, 3:20 Lillis 182

Cross cultural studies of facial attractiveness and personality attribution

Penton-Voak, IS, Scott, I

We will present some preliminary data from a collaborative cross-cultural study examining the social perception of attractiveness and personality in faces. Sexual dimorphic facial traits offer information about biological 'condition', and, perhaps, behavioural dispositions (there may be a 'kernel of truth' in stereotypical personality attributions). Biologically inspired models of social perception suggest that variation in trait attribution will be predictable, and reflect systematic contingencies in the environment. Data from 650+ participants from 10 field sites (including 4 natural fertility populations) indicate that while personality attributions remain stable across different cultures (as the factors underlying 'the kernel of truth' are stable cross-culturally), attractiveness judgements vary with local ecological and cultural conditions (possibly reflecting varying trade-offs different mate choice contexts).

Sponsor: Leverhulme Trust

Presentation: Fri, 5:20 Lillis 282

The Who and Whom of Sexual Misperception

Perilloux, C, Easton, JA, Fleischman, DS, Buss, DM

We used a 'speed-meeting' procedure that incorporated individual difference measures and peer ratings to test

hypotheses about men's sexual misperception and women's tendency to be misperceived. Men's tendency to misperceive differed based on relationship status; women's tendency to be misperceived did not. Multiple variables predicted the extent to which a woman was misperceived, such as her mating strategy, personality traits, and attractiveness. For single men, attractiveness and mating strategy predicted his misperception. For mated men, level of flirtatiousness and mating strategy predicted misperception. Several hypotheses received support: men's sexual overperception inclination was associated with greater interest in casual sex, higher short-term mating proclivity, and higher peer-rated attractiveness. These findings imply that although men, on average, tend to overperceive women's sexual interest, there are important individual differences in this tendency related to sexual strategies and differential allocation of resources.

Poster Number: 6

Using Religious Thinking as Cues for Prosocial Behavior: Examining how children and adults perceive others expressions of religious and non-religious thinking.

Periss, V

Previous research has found that some forms of children's incorrect cognition, which express a magical/supernatural explanation rather than the correct natural cause for an event, elicited positive affect in adults, whereas other forms of incorrect processing that made no attributions to supernatural causation did not. In addition, we also found developmental trends in the emergence of these biases. We interpret our results as suggesting supernatural thinking may act as cues of prosociality, serving as a tool to promote cooperation between nonkin group members. To test this, we examined the effects of one's religious beliefs in relation to how they judge other people's expressions of specific types of supernatural beliefs, focusing on whether attitudes towards religious thinking are judged more positively when they are consistent with the participant's own belief systems or whether religious thinking on average is perceived more positively regardless of personal beliefs.

Presentation: Thu, 4:00 Lillis 112

Large-scale politics as small-scale interaction: Public opinion in the face of evolutionary recurrent cues

Petersen, MB

Political scientists have demonstrated that citizens think of mass politics as remote from their everyday lives. At the same time, issues of modern politics carry similarities to adaptive problems inherent in ancestral small-scale social interaction. Using a memory confusion protocol imbedded in representative surveys among US and Danish citizens ($n > 2000$), I demonstrate that when a prominent political issue, social welfare, is framed in

terms of cues that have been evolutionary significant in determining sharing decisions, citizens, first, spontaneously pick up these cues and, second, stop thinking of situations of welfare provisioning as different from everyday situations involving help-giving between friends. Hence, in the face of evolutionary recurrent cues, citizens across cultures can grasp mass politics using a toolbox of inference mechanisms designed for small-scale interaction.

Sponsor: National Danish Research Council

Presentation: Thu, 11:50 Lillis 282

Ancestral conditions make modern day predictions: What we have learned about humans' representation of race, sex, and accent using an adaptationist framework.

Pietraszewski, D

Adaptationist theory and research have often been criticized as post hoc 'explanations' of known behaviors, or, as unfalsifiable stories about ancestral environments. A recent set of ten empirical studies (Pietraszewski, Cosmides, & Tooby, in prep; Pietraszewski & Schwartz, under review) provide a clear case of using minimal, careful, and explicit hypotheses about ancestral environments to derive predictions about the relationship between race, sex, and accent in the modern human mind. Intuitively, race, sex, and accent all seem to be instances of 'groups'. However, the theory and studies reviewed herein suggest: 1) The human mind contains dedicated systems for representing others' sex and accents, but not others' race, 2) the cognitive architecture responsible for representing race appears to be an output of a more abstract alliance-tracking competence, and 3) accent is not an output of alliance-tracking, but instead appears to be an index of the early social history of agents.

Poster Number: 129

Is female choice overemphasized in the evolutionary psychology of human mating? Evidence from the Shuar of Ecuador

Pillsworth, EG, Barrett, HC

Darwin's theory of sexual selection emphasizes the role of female mate choice in shaping male morphology and behavior. In evolutionary psychology, the model of female choice has served as one organizing feature of research on human mating. However, in many human societies women are reported to have very little influence over their own mating decisions; rather, parents or other kin often control the marriage decisions of daughters. This has led to the claim by some that female choice has been overestimated as a selective force in human evolution, based upon the evolutionarily novel context of modern Western sexual practices. I will present data from the Shuar, a hunter-horticulturalist society in the Amazon basin of Ecuador, to highlight the ways in which women exert mate choice within a paternalistic and highly

controlling environment, and demonstrate that choice need not be "free" to have an evolutionary impact.

Presentation: Fri, 5:40 Lillis 282

Features of the Dating Ecology: Implications for Sexual Strategies

Pirlott, A, Cohen, A

Previous research documented individual differences that correlate with sexual strategies (e.g., conservatism, gender). Less understood is how larger ecological forces influence sexual strategies. We examine how mating ecology features relate to individual sexual strategies. Although these can be seen as mathematically equivalent components of the sex ratio, we claim that the psychological experience of scarcity of partners is distinct from the presence of competitors, thus predicting different outcomes.

Students (n=474) completed questionnaires on perceptions of the presence of competitors and scarcity of partners, and their sexual strategies, sexual behaviors, sociosexual orientation, and mate value.

Results suggested that although scarcity of partners and presence of competitors are related, they also operate differently: perceptions of scarcity predicted inability to obtain mates, widening the dating network, and increased partner sexual control. Perceptions of the presence of competitors predicted widening the dating network but also increased sexual autonomy and displaying physical attractiveness and status.

Poster Number: 91

Voice fundamentals: how voice pitch and resonance affect assessments of speaker size, sex, and attractiveness.

Pisanski, KA, Rendall, D

Vocal signals are important in the context of sexual selection in animals, with selection shaping specific voice features that convey cues of health and fitness to potential rivals and mates. The human voice may be subject to similar selection pressures. Recent work has focused on two voice features: fundamental frequency (F₀, or pitch) and voice resonances (F_n, or formants). We report a series of experiments that first quantify the just-noticeable-differences in both F₀ and F_n and then test the independent and joint effects of these two voice features on listeners' ratings of speaker body-size, masculinity or femininity, and attractiveness. Results confirmed the independent salience of F₀ and F_n in speaker ratings while highlighting their differential salience when the two voice dimensions conflicted (as they can in natural voices). Principle-components-analyses revealed considerable overlap in ratings of size and masculinity (or femininity) but some independence in attractiveness ratings.

Sponsor:NSERC

Poster Number: 57

Corruption and Patterns of Inter-group Interaction

Pisor, AC, Gurven, M

Corruption is typically defined as the use of public privilege for private gain, and its study is often confined to political and corporate domains. However, because corrupt behavior entails the use of discretionary power to acquire a valued resource by exchange (despite possible social or legal censure), corruption ought to be studied in a larger set of domains. We consider corruption as a result of conflicts of interest between competing allegiances. A lack of trust in others and institutions, and greater competition with out-groups are predicted to associate with ingroup-biased morality and corruption prevalence. Using national and regional data collected by several international organizations, the present study explores the relationship between corruption and trust, group identity, inter-group relations, and ethno-linguistic diversity. Results indicate that corruption prevalence does indeed track the presence and distrust of outgroups.

Presentation: Sun, 12:00 Lillis 282

Observers are sensitive to quality of information when deciding to mate copy

Place, SS, Todd, PM, Penke, L

In mate choice, one must gather information to ascertain the value of potential mates. One source of information is the mate choice decisions of others, which can be used by observers in a phenomenon known as mate choice copying. Here we extend our previous mate copying work using observations of real mate choice interactions to show that observers are strategic in their copying, paying attention to the validity of the observed information rather than just blindly mimicking the selections of others. When female observers are presented with limited information about the man in the interaction, they rely on social information less. Additionally, when observers have low confidence in the accuracy of their perception of romantic interest in the observed interaction, they no longer perform mate choice copying. These types of discriminations are necessary for mate choice copying to be an adaptive strategy for acquiring high quality mates.

Sponsor:NSF

Presentation: Fri, 10:30 Lillis 112

Integrating evolutionary psychology and developmental science: Where do we stand?

Ploeger, A

Evolutionary psychology and developmental approaches to the understanding of the human mind have not fully embraced each other yet. In this talk I will present an overview of the attempts so far to integrate the two approaches. Some approaches have emphasized the nature and development of evolved psychological mechanisms (evolutionary developmental psychology). Others have

emphasized the transactions of information between different biological levels over the course of development (developmental systems theory). I argue for an integration of the two approaches, and show that insights from evolutionary developmental biology can offer a unique framework that supports this integration. Evolutionary developmental biology forges a synthesis of processes operating during individual development and those operating on an evolutionary timescale. I will show the benefits of this synthesis with three examples: modularity, novelties, and individual differences. These issues are of great importance for both evolutionary developmental psychology and developmental systems theory.

Poster Number: 94

A Re-examination of the Three Domain Disgust Scale: Distinguishing Disgust from General Emotional Valence and Moral Disapproval

Pochedly, JT, Trouton, GT, Kirkpatrick, LA

The Three Domain Disgust Scale (TTDS; Tybur et al., 2009) is a measure of disgust sensitivity focusing on evolutionarily relevant disgust elicitors. However, some TTDS items seem potentially problematic, as participants' ratings of "disgust" might in part reflect general negative emotional valence and/or moral disapproval rather than disgust specifically. Participants rated the 21 TTDS items three times with respect to how "disgusting," "generally unpleasant," and "morally unacceptable" they perceived the concepts. Half the participants rated disgust first, and half last. Participants then completed questionnaires with which the TTDS has been correlated previously. Our analyses assess the degree to which (1) mean disgust ratings are lowered in some domains among participants who rated disgust last versus first; (2) correlations of disgust ratings with external variables are altered by the order manipulation; and (3) disgust, unpleasantness, and immorality ratings contribute independently to prediction of the external variables in multiple regression analyses.

Poster Number: 135

Parental conflict and low paternal socioeconomic status independently accelerate female reproductive decisions.

Pollet, TV, Nettle, D

There is evidence that parental conflict and paternal socio-economic status (SES) both influence female reproductive decisions. However, the relationship between these two factors are unknown and one could suggest that parental conflict mediates the effect of paternal SES on reproductive intentions. In addition, little is known about whether these factors affect male reproductive decisions in the same way. Here we investigate the effect of parental conflict and paternal SES on desired age for a first child in a cohort of Dutch young adults (18-21 years old; NKPS data; n=+/-250) by

use of Structural Equation Modelling. The SEM Model for females showed independent effects of parental SES ($\beta=0.182$; $p<.01$) and parental conflict ($\beta=-0.216$; $p<.01$) on desired age for a first child. There was no evidence for a mediation of the effect of paternal SES. For males, only paternal SES appeared to influence desired age for a first child ($\beta=0.163$; $.05<p<.1$).

Sponsor: The NKPS is funded by grant 480-10-009 from the Major Investments Fund of the Netherlands Organization for Scientific Research (NWO), and by NIDI, Utrecht University, the University of Amsterdam and Tilburg University.

Presentation: Sun, 10:00 Lillis 112

The Iron Grip of Sexual Selection: Grip strength is more strongly associated with male than with female childlessness in a large cross-cultural sample.

Pollet, TV, Stulp, G

One trait which could be under sexual selection is physical strength. Physical strength had been shown to be a preferred trait by women. In contrast, female physical strength is not preferred by men. No study so far has tied these mate preferences to reproductive success. Here, we test whether grip strength differentially affects male and female reproductive success (fertility/childlessness). Using SHARE Wave 1, a large European sample of retirees (12 countries), we examined the effect of grip strength for childlessness via Negative Binomial Regression. We controlled for nationality, age and educational attainment and found a negative effect of grip strength on childlessness for males ($OR=1.65$; $p<.0001$). For women, there was also a negative effect of grip strength on childlessness ($OR=1.03$; $p=0.038$). In both sexes, a stronger grip strength was thus associated with a lower likelihood of childlessness. Yet, the effect was significantly stronger among men than among women (Z-Test; $p<.05$).

Sponsor: The SHARE data collection has been primarily funded by the European Commission through the 5th framework programme (project QLK6-CT-2001- 00360 in the thematic programme Quality of Life) and through the 6th framework programme

Presentation: Sat, 5:20 Lillis 182

What makes a face masculine? Comparing measures of sexual dimorphism.

Pound, N, Penton-Voak, I, Debruine, L, Jones, B, Sokhi, S, Trudel, K

Much research by evolutionary psychologists has investigated variation in female preferences for masculinity in male faces according to context and female hormonal status. However, there is little consensus on how masculinisation should be quantified for individual male faces. Some popular measures have been a composite index based on five sexually dimorphic

dimensions (Penton-Voak et al., 2001); upper facial width-to-height ratio (e.g. Carré & McCormick, 2008); eye-mouth-eye angle (Danel & Pawlowski, 2007); lip height, nose width and jaw angle (Burriss et al., 2007). We investigated the sexual dimorphism present for each of these dimensions in a large sample of males (n=218) and females (n=240). The composite index (Penton-Voak et al., 2001) exhibited the greatest sexual dimorphism in this sample while upper facial width-to-height ratio was not dimorphic. However, a novel morphometric index of facial masculinity based on PCA of face shape variation exhibited greater dimorphism than any of the previously used measures.

Sponsor: Brunel University

Poster Number: 24

Sexual selection and women's voices

Puts, D, Barndt, J, Welling, L, Dawood, K, Burriss, R

Because mate attraction is an important means by which women compete for mates, women are expected to monitor the attractiveness of their competitors. Feminine voices are attractive to men, and some evidence suggests that vocal femininity reflects fertility and perhaps genetic quality. Thus, we predicted that women would perceive greater threat potential in women with more feminine voices. To test this, we manipulated two sexually dimorphic acoustic parameters, fundamental frequency and formant dispersion, in women's voices and explored the effects on women's perceptions of attractiveness to heterosexual men and flirtatiousness. We also examined whether vocal femininity influenced attractiveness to men in short-term/sexual and long-term/committed mating contexts. We found that femininity in both acoustic parameters increased women's perceptions of a female speaker's attractiveness to men and flirtatiousness, and increased attractiveness to men, but primarily in short-term/sexual mating contexts.

Poster Number: 115

Human Female Sexual Behaviour across Sexual Orientation: Evolution, Personality and Fluidity

Radtke, S

Women's sexual behaviour across sexual orientations was evaluated in this thesis. Evolutionary theory has shown that women and men pursue different reproductive strategies and predicts that strategic interference results when women and men are trying to acquire mates. This study compared women who varied in sexual orientation to assess differences between lesbian, bisexual and heterosexual female scores in sociosexuality. Masculine and feminine personality traits were additionally assessed by the Bem Sex Role Inventory. Sexual fluidity was assessed via interviews. Results indicated that lesbians and heterosexual women had similar scores in sociosexuality, suggesting little effect of strategic

interference on lesbian sociosexuality. Extreme Kinsey scale scores were compared (i.e. completely heterosexual and completely lesbian), lesbians reported being more restricted in sociosexuality than heterosexual women. Bisexual women were statistically significantly more unrestricted compared to lesbian and heterosexual women. Lesbians had the highest self ratings of femininity when compared to heterosexual and bisexual women.

Presentation: Sat, 3:40 Lillis 182

Change in attraction to faces following visual adaptation to low or high-weight bodies

Re, DE, Koike, EK, Thomson, CL, Coetzee, V, Hahn, AC, Xiao, D, Buls, D, Tiddeman, B, Boothroyd, LG, Perrett, DI

Experience-dependent shifts in preference may confer an evolutionary benefit by shifting preferences towards traits adaptive for specific environments. Low-weight models in the media may encourage preferences for low-weight bodies, as exposure to particular body types can shift body ideals. We tested whether preferences in face adiposity were affected by viewing bodies. We assessed facial adiposity preferences by asking European participants (n=55) to manipulate three-dimensional female faces (simulating a wide BMI range) to optimal attractiveness. Participants then viewed 48 heavy or light body images (faces cropped out) to assess Asian/European ethnicity (as a distracter task) before repeating the face preference task. Participants that viewed heavy bodies shifted preferences towards higher facial adiposity, while those who viewed the light bodies showed no shift. Since after-effects in face preference follow adaptation to bodies they are unlikely to reflect low-level sensory mechanisms. Instead, they demonstrate high-level integration of information relevant to mate choice.

Presentation: Fri, 5:40 Lillis 182

Using the Lotka-Volterra Approach to Modeling Cultural Evolution

Richerson, PJ, Efferson, C, Boyd, R

We use a Lotka-Volterra model in which humans subsist on a renewable resource using a particular technology as a basic model of human ecology. The L-V formalism is the ecologists' standard way of modeling species-species and species-environment interactions. It is easily extended to the human case in which cultural evolution affects the interaction between humans and their biotic resources. Humans can invest in the species they exploit using the technology of domestication. Technology evolves in a density dependent fashion. The technology-population size feedback contains the potential for both slow and explosive growth of human populations, their resource, and technology ("intensification"). If the human

population can invest in their biotic resource ("agriculture"), slow or rapid growth can be sustained for a substantial period. On the other hand, when human populations investments in the resource are limited or impossible ("foraging"), boom and bust dynamics occur.

Presentation: Fri, 4:00 Lillis 182

A Psychological and Anthropometric Study of Social Support and Risk Reduction in Humans

Robertson, T, Delton, A, Tooby, J, Cosmides, L

Human-style foraging is high variance. Due to bad luck, illness, or injury, the amount of food a solitary forager acquires will sometimes be insufficient for survival. Theories of social evolution argue that by pooling high-variance resources, hunter-gatherers buffer against misfortune. Thus, individuals who share when they successfully forage receive repayment during future failures, thereby mitigating their risk. These theories argue that food is stored in favors, instead of physically. Although the underlying adaptations are hypothesized to be pan-human, individual differences in social support (among other variables) may change how much individuals can depend on sharing to buffer variance and thus how much they rely on other risk reduction methods. We test and find support for this prediction using a longitudinal design that tracks a number of psychological and anthropometric variables. Despite the steady food supply of modern environments, the mind contains algorithms consistent with the evolved logic of risk reduction.

Sponsor: National Institute of Health; Global COE Program "Center for the Sociality of Mind" of Hokkaido University

Poster Number: 25

From beast to beauty: Feeling powerless increases one's desirability ratings of same- and opposite-sex others.

Rodeheffer, C, Butterfield, M, Hill, S, Lord, C

A growing body of research has demonstrated that activating adaptively relevant goal states can influence how men and women experience and interpret cues in the social environment. Here we build on such research, examining the effects that feeling powerless might have on men's and women's assessments of prospective romantic partners and rivals. In our experiment (N = 117), participants were primed with high power or low power via a writing task, and then rated 10 photographs (5 men, 5 women) for physical attractiveness, desirability to date, and desirability for a long-term or short-term relationship. As predicted, participants primed with low power rated both same- and opposite-sex others significantly more desirable on these items than participants in either the high power condition or control conditions. Findings are consistent with the view that

social perceptions of others are influenced by adaptively relevant social motives.

Poster Number: 58

Evolutionary Perspectives on the Social Learning of Bone Tools on the Northwest Coast, North America

Rorabaugh, AN

While anthropologists have long discussed the evolution of social complexity on the Northwest Coast, how material culture and this complexity interact have been explored less. Viewed from a Neo-Darwinian perspective of cultural transmission, Boyd and Richerson's dual inheritance theory, the development of social stratification and systems of deference may influence the contexts of social learning. Prestige-based indirect bias, a form of transmission where behaviors are modeled after those perceived as having higher status, was predicted as a factor in the learning of technologies tied to systems of resource procurement and prestige-based status as complexity developed. Barbed bone and antler points from the Strait of Georgia are examined as a technology tied to these resource systems and prestige-based status for evidence of prestige affecting sociocultural transmission. Using phylogenetic methods (cladistics), the combinations of stylistic aspects of barbed points had a signature indicative of highly individualized learning or kin based styles.

Sponsor: Western Washington University, The Burke Museum, Royal British Columbia Museum, Simon Fraser University

Poster Number: 123

Too close to home: The relationship between disgust, perceived human-ness and willingness to eat animals

Ruby, MB, Henrich, J, Heine, SJ, Barclay, T

Theorists have proposed that evolved mechanisms to avoid pathogens have led to a hair-trigger willingness to avoid meat, rooted in a disgust reaction, in a manner that makes meat taboos more likely to spread culturally (Fessler 2003). A corollary of this approach suggests that the avoidance of meat may be related to an animal's perceived similarity to humans, because humans are more susceptible to parasites and pathogens from more closely related species. We test these hypotheses using diverse populations from Canada and Hong Kong, and find that participant perceptions of characteristics that make animals more similar to humans (e.g. intelligence, capacity for emotion) significantly predict disgust at the thought of eating them. Furthermore, manipulating the salience of these characteristics significantly increases disgust reactions. Cultural and gender differences in evoked disgust and perceptions of animal characteristics are also discussed.

Poster Number: 38

Resource competition across the life-course among Tsimane women

Rucas, S, Gurven, M, Winking, J, Kaplan, H

This work explores sources of conflict among forager-horticulturalist women in Amazonian Bolivia, and applies life history theory as a tool for understanding competitive and cooperative social networking behaviors among women. In this study, 121 Tsimane women and girls were interviewed regarding current and past disagreements with others in their community to identify categories of contested resources. Analysis of frequency data on quarrels (n=334) reveals that women target several diverse categories of resources, with social types appearing as frequently as food and mates. It was also found that the focus of women's competition changes throughout the life-course, consistent with the notion that current versus future reproduction and quantity quality trade-offs might have different influences on competition within women's social networks across different age groups.

Sponsor: NSF Grant BCS-0136274, LAII, Tinker Foundation

Poster Number: 149

Effects of household ecology and market integration on Shuar nutritional status and hemoglobin (Hgb) in an indigenous lowland Ecuadorian population

Rueckert, TJ, Snodgrass, JJ, Madimenos, FC, Blackwell, AD, Liebert, MC, Sugiyama, LS

Hemoglobin (Hgb) of 181 Shuar juveniles of Amazonian Ecuador were measured using HemoCue 201 portable spectrometer to examine effects of household composition, diet, market economy on Hgb. Traditionally forager-horticulturalists, Upano Valley Shuar experience greater market integration than Shuar living in the more remote eastern lowlands, while the latter live in endemic malarial zone. Overall, average hemoglobin concentrations were higher than those of comparable indigenous neo-tropical populations: anemia prevalence much lower. Controlling for age, household composition data indicate a relationship between number of household juveniles and hemoglobin levels, suggesting effects of household social ecology on Hgb. Factor analysis shows sex differences in the effects of market and dietary factors, with greater household involvement in foraging associated with higher Hgb in boys but not girls.

Sponsor: U. Oregon Department of Anthropology; U. Oregon Institute of Cognitive and Decision Sciences; Wenner-Gren Foundation for Anthropological Research; NSF # BCS-0925910; Leakey Foundation; UCSB Center for Evolutionary Psychology (via NIH grant number SDP1OD000516-04)

Poster Number: 59

Evidence of socialization in adolescence: Adolescent height predicts adult salary

Rutherford, MD, DiCroce, M

Judith Harris' peer socialization theory posits that an important function of adolescence is socialization. Teens use information that about self and peers in order to estimate their relative status, dominance, and attractiveness. This information informs one's life strategy. Physical height is one useful clue to relative status, especially for males. If height relative to peers in adolescence informs life strategy, then height in adolescence would be a stronger predictor of adult status. Using web-based data acquisition, we found that adult male's (N = 24, mean age = 43 years) reported adolescent height was a stronger predictor of reported current income than reported current height. The same relationship did not hold for females. Neither current nor adolescent BMI was related to adult income for men. For females (N = 48, mean age = 43), current BMI (but not adolescent BMI) was a significant negative predictor of current income. Implications are discussed in the context of Harris's theory.

Poster Number: 153

The Framing Effect Viewed Via an Evolutionary Lens

Saad, G, Gill, T

Over the past four decades, behavioral decision theorists have documented countless violations of rational choice, as originally postulated by classical economists. One such violation is the framing effect wherein two logically equivalent choice sets can yield different outcomes when framed in alternate ways. For example, a hamburger that is 90% fat free is the same as one that contains 10% fat, yet consumers' evaluations vary across the two frames. Whereas the framing effect has largely been tackled from a domain-general perspective, we show that in some instances, it occurs in ways that conforms to an adaptationist logic. For example, we have identified recurring sex differences in the extent of succumbing to the framing effect when the stimuli used are evolutionarily relevant choices (e.g., mate choice, financial investments, and acne removal products).

Presentation: Thu, 11:50 Lillis 211

The Effects of the Menstrual Cycle on Consumption

Saad, G, Stenstrom, E

A fruitful area for evolutionary-minded scholars is to identify new application areas (e.g., in law, medicine, consumer behavior, and personnel psychology). In the current work, we sought to explore the myriad of ways by which the menstrual cycle affects a woman's consumption patterns in two specific product categories, namely, food and beautification. Women tracked their daily consumption patterns (preferences, desires, and

purchases) for 35 consecutive days. As expected, food-related measures (e.g., the amount of money spent on food) were greater in the luteal phase whereas beautification-related metrics were greater in the fertile phase (e.g., a composite measure of beautification-related behaviors). It would appear that women's consumption drives are in part shaped by the waxing and waning of the salience of different Darwinian drives (mating versus food) throughout their ovulatory cycles.

Sponsor:CASA grant (internal)

Poster Number: 147

Social Inclusion Facilitates Risky Mating Behavior in Men

Sacco, DF, Brown, CM, Young, SG, Bernstein, MJ, Hugenberg, K

According to the reprioritization hypothesis (Brown et al., 2009), social inclusion facilitates survival goals, allowing organisms to shift their resources to reproductively-relevant activities. However, because of their different reproductive strategies (Buss & Schmitt, 1993), social inclusion may differentially affect men and women's specific mating tactics. Consistent with this prediction, the current research found that socially included men endorsed greater use of risky and aggressive mating strategies, compared to men in exclusion and control conditions. Inclusion status was manipulated by asking participants to write about a highly impactful situation in which they had been socially included or excluded, or their day yesterday (control). In Study 1, included men endorsed greater use of mate poaching tactics. Moreover, Study 2 found that included men were more likely to endorse mate retention tactics. Importantly, inclusion status did not affect women's use of risky mating strategies.

Presentation: Sat, 11:10 Lillis 282

The impact of birth order on sexual attitudes and behavior
Salmon, C

A great deal of research on birth order has concentrated on such dimensions as personality and intelligence. There has been relatively less work done on birth order and sexual behavior, particularly with respect to differentiating middleborns from lastborns. Sulloway (1996) suggested that laterborns might be predisposed toward sexually adventurous behavior based on their tendency toward greater risk-taking. This study examines the role of birth order in shaping sexual attitudes and behavior with the hypothesis that middleborns will be more open in their attitudes but not in all aspects of their behavior. Participants completed a survey that included a measure of sexual attitudes toward a variety of sexual behaviors as well as the sociosexuality inventory. The results, indicating substantial differences for middleborns

between attitudes and behavior, and their implications, will be discussed.

Presentation: Sun, 11:40 Lillis 211

Women Scorned: Horrific Literary Examples of Female Mate-Guarding Behavior
Saunders, JP

This presentation will focus on the phenomenon of female mate-guarding in two twentieth-century works of fiction: "Wintry Peacock" by D. H. Lawrence and *ETHAN FROME* by Edith Wharton. In both tales, the universal female tendency to resist the threats posed by male infidelity expresses itself with especial intensity. Female characters exhibit a disturbing yet fascinating capacity for ferocious jealousy and retributive cruelty. Readers' reactions to plots and characters in these works are necessarily complex. The moral outrage evoked by male defection, for example, is balanced against the moral outrage evoked by grotesquely extreme penalties imposed by jealous wives upon straying husbands--and upon the husbands' extra-pair partners. Female efforts to retain exclusive sexual access to their mates create a claustrophobic domestic environment for their male partners. The intense ambivalence experienced by readers contributes crucially to the powerful aesthetic and psychological appeal exerted by these narratives.

Presentation: Sat, 5:00 Lillis 282

Grandmaternal Trade-Offs: Mother-daughter conflict resulting from simultaneous parenthood
Scelza, BA

Maternal grandmothers have been repeatedly shown to have positive effects on their daughter's fertility and their grandchildren's survival. These benefits have been linked to an adaptation for post-menopausal lifespan in humans, which states that there can be significant benefits to women living beyond their reproductive years if that time can be used to increase their daughter's reproductive success. However, if age at first birth occurs soon after menarche, there is a significant period of time when mother and daughter can be simultaneously reproductively active. Mother-daughter conflict is expected to be high during this time due to competition for resources and direct care. Here I review data from the Puerto Rican Maternal and Infant Health Survey on co-resident pairs of mothers and daughters in order to understand how elder women's trade-offs change according to their age and reproductive status.

Poster Number: 124

The influence of sexual orientation on attractiveness ratings: Eyes of the beholder?
Schaeff, C, Hall, P

Consistent with evolutionary theory, when asked to rate photographs of faces, heterosexual raters assigned lower

attractiveness scores to more sex atypical and less symmetrical models. They also assigned lower scores to homosexual models, who tended to be more atypical and less symmetrical. Similar patterns were observed among homosexual raters suggesting that the underlying emphasis on mate quality persists despite a preference for same-sex mates. Sexual orientation did appear to exert some influence, however, since within these trends, homosexuals tended to provide higher attractiveness ratings than did heterosexuals but only for individuals perceived as more 'gay'. Given that a similar pattern was weak or absent for attractiveness versus sex typicality comparisons, homosexuals appear to be expressing a preference for their perceived peers rather than a general tendency to be less critical.

Presentation: Sun, 10:20 Lillis 211

The impact of theory of mind on fairness and reciprocity in preschool children

Schug, J, Takagishi, H, Okada, H, Miyazaki, M, Yamagishi, T

We conducted a pair of resource allocation games with preschoolers to examine the role of theory of mind on fairness and reciprocity. Thirty-two pairs of preschool children played an ultimatum game (UG) followed by a dictator game (DG). In the UG, a proposer allocated erasers between themselves and a responder, who then decided to accept or reject the offer. Next, the UG responder played the dictator in the DG and divided erasers between him/herself and the other player. The development of theory of mind was assessed by the Sally-Anne task. Replicating previous studies, the development of theory of mind had a positive effect on proposer's allocations. While theory of mind did not affect responder's behavior in the UG, it did impact positive reciprocal behavior in the subsequent DG, as participants who had acquired theory of mind were more likely to make a subsequent fair offer in the DG.

Sponsor:Hokkaido University Global COE Program: Center for the Sociality of Mind; Tamagawa University COE Program: Origins of the Social Mind

Poster Number: 102

Does masculinity matter? The contribution of sex-typical appearance to male attractiveness in humans

Scott, IM, Pound, N, Stephen, ID, Penton-Voak, I

In many animals, exaggerated sex-typical male traits signal immunocompetence and are attractive to females. It has been proposed that the same is true of facial masculinity in humans. Recent theoretical models suggest, however, that current condition is a better index of mate value than past immunocompetence. Further, despite a large literature on preferences, the preliminary issue of whether morphological masculinity is attended to in ordinary faces, where potential cues of condition are

available, remains largely unexplored. To address this, we measured morphological masculinity and attractiveness in male faces. When gauged using detailed, objective measures, morphological masculinity did not predict attractiveness. To determine whether a condition-dependent cue would explain more variation, we measured the colour of small skin patches. This relatively impoverished cue was a highly significant predictor of full-face attractiveness. To investigate why this inattention to masculinity has not been apparent in prior research, we re-measured masculinity preferences using this same set of faces and two more commonly used methods: a) subjective ratings of masculinity, and b) digitally morphed stimuli with forced-choice test. Masculinity predicted preferences with both methods. Their use in prior research may therefore have generated a misleading impression regarding the contribution of masculinity to attractiveness. Our results are consistent with the hypothesis that condition is more relevant to male attractiveness than cues of past disease resistance. We suggest that fluctuating traits such as skin colour may be "first-pass" filters for mate choice, and that stable traits such as masculinity may explain relatively little variation in attractiveness.

Presentation: Sat, 5:40 Lillis 282

Does wealth increase parental investment biases in education? Evidence from two African populations on the cusp of the fertility transition

Sear, R, Gibson, M

Why fertility declines is a puzzle, but may be partly explained by shifts in parental investment strategies: couples reduce family sizes as demographic and economic changes cause investment in child quality to become more important than quantity. Such shifts to investing in quality may first be seen in wealthy families, since investing heavily in few children is risky where the likelihood of child death or ill-health is high. Here we test the impact of resources on educational investment in two populations on the cusp of fertility decline: a patrilineal Ethiopian and a matrilineal Malawian population. In both populations greater wealth is associated with greater parental investment biases in education. In richer families, early born children are prioritized over later born, though early born sons are favored in the patrilineal population, early born daughters in the matrilineal population. Poorer families invest less in education, but also discriminate less between children.

Presentation: Fri, 10:30 Lillis 282

Anger in cooperative relationships

Sell, A

Anger is traditionally pathologized, or considered a primitive preparation for violence. We argue that the evolved function of this emotion program is the

orchestration of negotiating behavior for better outcomes in conflicts of interest. Viewed this way, the threat of violent cost-infliction (aggression) used for negotiation between noncooperators is paralleled by the threat of nonviolent benefit-withdrawal for advantageously negotiating conflicts between cooperators. These close parallels allowed the same computational and regulatory system to evolve to manage both adaptive problems. Cross-cultural experiments and surveys will be presented that test predictions about the triggers of anger, individual differences in anger proneness, and behavioral strategies deployed by anger in cooperative relationships.

Sponsor:NIH Pioneer's Award to Leda Cosmides

Poster Number: 60

Perceived Naturalness of Food in the United States and Mexico

Serin, J, Sullivan, R

This study takes an evolutionary approach to the meaning of "natural" as a desirable attribute in food and follows the work of Rozin et al. (2004) and Rozin (2005) in using a questionnaire to examine the "natural preference". The study data were collected from undergraduate students in Sacramento, California and Mexico City. First, participants rated the favourability and naturalness of six modified variants of a basic food; second, participants were asked to infer whether the six modified variants would possess the same attributes as the unmodified food item; third, participants were asked whether they prefer a natural or commercial food item when various attributes of the two forms are repeatedly stipulated as being the same; lastly, respondents were asked to make similarity judgments about unmodified and modified basic foods, food substances, and artifacts. We discuss the results with reference to domain-specific cognitive mechanisms, essentialism, and the naturalistic fallacy.

Poster Number: 89

Factors that Influence MHC-based Preferences

Shaw-Taylor, E, McClintock, MK

MHC-associated odors has been linked to behavioral preferences in humans and other species. Both assortative and disassortative preferences have been found, especially for mating. Several reasons have been suggested for this variability including balancing good genes and promoting genetic diversity, particularly with regard to pathogen resistance. We present an animal model in female rats (*Rattus norvegicus*) that examined factors that might influence MHC-based preferences. First, we establish that some female rats show behavioral recognition of MHC-different male odors. They spend more time with certain odors and, for some, this preference is influenced by the estrous cycle. We then tested mating. Of several factors, including the effects of differences at a particular MHC region (A) and relative differences between the female

and her potential mates, the type of choice had a significant effect. When both males are MHC-different, female rats of certain haplotypes show a disassortative preference.

Poster Number: 104

Are We More Cooperative With People of Good Performance, When We Perform Badly?

Shimizu, K, Udagawa, D

Empirical studies have shown that when two people meet just once in a prisoner's dilemma (PD), they tend to be cooperative. This behavior is hard to explain by evolutionary theory. We think cooperation in one-shot PD's is a case where in unclear situations people rely on a "default" behavior, produced by natural selection. We assume this has evolved to enhance fitness in "environments of evolutionary adaptedness (EEA)". Hence we suppose that if an experimental setting taps subjects' prototypical activities, they cooperate in PD's to the extent that their cooperation contributes their fitness. Our experiment consists of two parts; first, to gain profit subjects work together in "division of labor" (important socio-economic organization since EEA); secondly, they take a decision in one-shot PD's with feedback of each subject's performance. In conclusion, we find subjects with poor results in "division of labor" tend to be more cooperative with people who performed well.

Sponsor:Grant-in-Aid for Scientific Research on Priority Areas (19046002), provided by the Japanese Ministry of Education, Culture, Sports, Science and Technology.

Presentation: Sat, 11:30 Lillis 211

Relationships between androgen receptor gene polymorphisms and mating effort: evidence for morphological and behavioral influences

Simmons, ZL, Roney, JR

Androgens have been argued to play a critical role in allocating energy between mating and survival effort. Given that most of the physiological effects of androgens are realized through binding with the androgen receptor (AR), and that this receptor can regulate the expression of a number of other genes, polymorphisms in the AR might be expected to influence allocation strategies and ultimately shape an organism's phenotype. Evidence is presented showing that shorter CAG repeats in this gene are associated with potential indices of mating effort, including increased strength (which is likely instrumental in intrasexual competition), higher self-reports of dominance- and prestige-related behaviors, and greater willingness to pursue a variety of non-committed sexual relationships. These effects are not driven by differences in circulating androgen (testosterone) levels, suggesting the possibility of alternate mechanisms of calibration.

Presentation: Fri, 11:30 Lillis 182

Contribution: Sexual Coercion and the Dark Triad,
Symposium: Destructive tactics in mating: The evolution
of cost-inflicting strategies (Symposium Co-presenters-
David Buss, Daniel Jones, Peter Karl Jonason)
Sisco, MM, Gladden, PR, Figueredo, AJ

Psychopathy, Narcissism, and Machiavellianism (the “Dark Triad”) have each been hypothesized as predictors of socially deviant behavior including sexual coercion, but the three traits also covary with one another. The purpose of this study was to examine three alternative path-analytic structural models regarding the relationships between the dark triad and sexually coercive behavior, testing whether any of the three specific traits uniquely contributed to predicting sexually coercive behavior. Self-report questionnaires measuring Primary Psychopathy, Narcissism, Machiavellianism, and Sexually Coercion were administered to a sample of undergraduates. The model fits with the data was acceptable, but the most parsimonious model was one in which a single common factor composed of the three Dark Triad indicators explained the relationships among the dark triad traits and sexual coercion without any direct contributions from the specific indicators. Results indicate that Dark Triad traits, controlling for the common factor, do not differentially predict Sexually Coercive Behavior.

Poster Number: 61

Distinct cortico-cerebellar circuits underlying anthropoid brain evolution.
Smaers, J, Steele, J, Zilles, K

Despite the commonly accepted paradigm that brains work as functionally distributed systems in which interconnected structures work together in processing particular types of information, there is still limited evidence that behaviourally specialized neural circuits have evolved as concerted systems across the primate order. Previous research has focused mainly on comparing functionally specialized neural circuits in humans with those found in the brain of a ‘prototypical monkey’. These studies, however, provide only indicative clues about patterns of evolution because so few species are incorporated. Here we combine depth with breadth of analysis by demonstrating the evolution of distinct cortico-cerebellar circuits involved in different aspects of complex motor skills such as tool use across 19 anthropoid species spanning 35 Myr of divergent evolution. Our results suggest that a mosaic pattern of correlated evolution of structures related to distinct elements of learned motor skill is a major factor in explaining anthropoid brain organization.

Sponsor:European Research Council

Presentation: Thu, 3:40 Lillis 211

The adaptive basis of anthropoid neocortex evolution
Smaers, J, Vinicius, L, Foley, R

Although it is commonly agreed that anthropoid primates have an unusually large brain (and in particular neocortex) for their body size, there is a continuing contention regarding the nature of the adaptive pressures underlying this exceptional neural adaptation (are these pressures social, visual, or ecological?). The main element fuelling this debate is that although different theories make different predictions about specific subregions of the neocortex, they have only been tested using neocortex as a whole because of a lack of data. We present novel data on the main subdivisions of the neocortex in 19 anthropoid species and show that different neocortical subregions are associated to different socioecological adaptive pressures suggesting that anthropoid brain architecture reflects adaptation at an intracortical neuroanatomical level. We propose a new model of anthropoid brain evolution integrating both social and ecological selective pressures that helps clarify a longstanding debate on the nature of anthropoid neocortical adaptation.

Sponsor:European Research Council, Cambridge European Trust, Leverhulme Trust

Poster Number: 95

Do personal sexual aversions influence moral sentiments relating to incest? A test of implicit attitudes
Smith, AR, Lieberman, D

To what extent are moral sentiments relating to sibling incest a function of the sexual aversions that develop toward one’s own siblings? Although studies have shown that the same kinship cues governing the development of sexual aversions towards one’s own siblings also predict the strength of moral attitudes towards third party sibling incest, recent evidence suggests otherwise. Here we report the results of an implicit association test that addresses this question. Subjects categorized sibling incestuous acts when sibling incest was paired with morally wrong and morally right. We predicted that compared to those without opposite sex siblings, individuals with opposite sex siblings would show longer reaction times due to the greater inconsistency between sibling incest and morally right acts. We also predicted that longer durations of coresidence with opposite sex siblings, the longer the reaction time. This poster discusses results and comments on the relationship between inbreeding aversions and morality.

Sponsor:University of Miami

Presentation: Sat, 5:20 Lillis 112

Context-dependency in perceptions of trustworthiness
Smith, FG, DeBruine, LM, Jones, BC

Research shows that women are perceived as more trustworthy than men and that, within sex, feminized faces are perceived as more trustworthy than masculinized faces. However, participants in these studies judged faces devoid of context. Here we investigated the perceived trustworthiness of masculinized and feminized male and female faces conveying both female- and male-stereotyped information. Replicating previous work, female faces were perceived as more trustworthy than male faces and feminized faces were perceived as more trustworthy than masculinized faces. However, the effect of sex of face was qualified by an interaction with type of information, whereby male individuals were trusted more when conveying male-stereotyped information and female faces were trusted more when conveying female-stereotyped information. This work demonstrates the importance of context on judgments of trustworthiness, highlights the complex processes that underpin social attributions, and has implications for the substantial body of research on the evolution of cooperation.

Poster Number: 150

Life-history, reproductive maturity, and the evolution of small body size: The Mamanwa negritos of northern Mindanao
Snow, EG

Earlier menarche is associated with better nutrition during childhood. Yet, among some hunter-gatherer populations, which are assumed to have a suboptimal diet, the early onset of reproductive maturity has been linked to high rates of adult mortality and the evolution of the human pygmy phenotype. To address this apparent contradiction, I collected basic anthropometric measurements and surveyed the dietary habits and age at menarche of women in two adjacent populations in northern Mindanao, Philippines. One population, the Mamanwa (n = 100 women), hunts and gathers undomesticated foods (ca. 15-20% of diet) and is characterized by small body size (the 'negrito' phenotype). The other population, the Manobo (n = 30 women), is Australasian and dependent on agriculture. While the Mamanwa are taller than other negrito populations, they are shorter than the Manobo. Mean ages at menarche in Manobo women were significantly lower than Mamanwa women, and mean heights in Manobo women were significantly taller than Mamanwa women. These data are consistent with previous research indicating an association between increased nutrition and earlier menarche.

Presentation: Sat, 11:50 Lillis 182

Experimental Cooperation and Social Networks in an Afro-Brazilian Religion
Soler, M

Although experimental economic games are widely used as measures of cooperation, more evidence is needed to link this body of work to instances of cooperation in everyday life. Here, I present results from an ethnographic investigation conducted with members of Candomblé, an Afro-Brazilian religion. Results show that individuals who behave more generously in a public goods game are more centrally situated in the social networks of their religious congregations. Additionally, those with higher offers in the game report providing and receiving more instances of cooperative behavior from other members of their community. These data are discussed in the context of Candomblé's unique history as a refuge for former slaves in Brazil and the religion's continued role as a space of solidarity for marginalized populations.

Sponsor: National Science Foundation; Wenner-Gren Foundation

Poster Number: 42

Evolutionary psychology and human history
Souza, J, Bingham, PM

Our ability to predict/interpret human historical/political behavior is a criterion for a mature theory of human evolutionary psychology. We recently proposed a theory of evolved human social psychology giving us new understanding of the historical record (Bingham and Souza, 2009, "Death from a Distance and the Birth of a Humane Universe"). We can predictively interpret the major adaptive transitions in the human record, from the origin of Homo through the behaviorally modern human revolution, the agricultural revolutions and the rise of states. We interpret each of these transitions as having a similar underlying adaptive/strategic logic, applied at a new scale. Each transition apparently emerges from the actions of the evolved human mind under highly predictable (and empirically verifiable) circumstances. We use the behaviorally modern and Neolithic revolutions to explore the evidence that explosive increases in human adaptive sophistication are social processes produced by the evolved human mind, not genetic revolutions.

Poster Number: 43

Can cues of being watched reduce generosity?
Sparks, AM

Several recent studies report increased prosocial behavior caused by subtle cues of social presence, which are thought to introduce subconscious concern for reputation. Experiments have shown increased generosity to anonymous partners in dictator games and elevated

anonymous public goods contributions when participants are exposed to eye-like images. The present study exposed participants to photographs of real eyes or control images of landscapes while they completed a series of monetary allocation tasks. Subjects were asked to choose between (a) \$75 for themselves and \$75 for their partner, or (b) \$x for themselves, with x ranging from \$30 to \$235. Surprisingly, participants in the eyes condition allocated less to anonymous partners and to sibling partners than those in the landscapes condition. **Sponsor:** Natural Sciences and Engineering Research Council of Canada

Poster Number: 26

Do lactation cues make women less sexually attractive?
Steffes, AE, Gentle, BN, Goetz, AT

Males are more physically attracted to females displaying fertile cues such as lower waist hip ratio, feminine facial features, youth, and high energy. Phase of menstrual cycle (fertile versus non-fertile) also moderates male perception of female attractiveness. Breast feeding significantly decreases risk of conception, a phenomenon known as lactational amenorrhea. Although it was common for our ancestors to breast feed until an infant was about 30 months old, lactational amenorrhea has not been studied as a cue of fertility. It was hypothesized that a woman holding a 30-month-old child would be perceived as more attractive than the same female holding a 6-month old child. Preliminary data did not support the hypothesis. The reliability of age of child as a fertility cue is compared to the reliability of other fertility cues. Error management theory and potential moderators of the effect are also discussed.

Presentation: Sat, 11:50 Lillis 211

Testosterone and Prolactin in Men's Reproduction
Steiner, ET, Meana, M, Gray, PB

Human reproduction involves the two broad domains of mating and parenting, each with a different and often competing set of behaviors. Men's testosterone (T) and prolactin (P) have been implicated in both mating and parenting behaviors. Some of these hormone-behavior links involve short term responses (eg., T increases before orgasm whereas P increases after orgasm). Other hormone-behavior links reflect long term effects (eg., single, childless men tend to have higher T than married fathers). The current study compared single, childless men to married fathers of young children in terms of baseline T and P, and responses in these hormones with exposure to mating (sexual) versus parenting stimuli. Results and implications for the role of T and P in men's reproduction are discussed with an eye toward a more nuanced understanding of the complex roles of these hormones.

Poster Number: 125

Lip Color Contrast, Facial Sexual Dimorphism and Attractiveness

Stephen, ID, McKeegan, AM, Perrett, DI

Luminance contrast between lips and facial skin is greater in women than men, a difference enhanced by makeup. In black and white photographs, greater luminance contrast enhances femininity and attractiveness of women but reduces masculinity and attractiveness of men. However, much of the variation in lip color contrast is in redness, which is considered attractive in women in temporally and geographically diverse societies. We allow participants to manipulate lip redness and lightness in color calibrated photographs to enhance apparent masculinity (men), femininity (women) and attractiveness (both sexes). Participants increased redness contrast more in female than male faces to enhance attractiveness. Redness contrast was increased to enhance femininity, but reduced for masculinity. This pattern was not seen in lightness trials. Redness therefore better explains preferences for contrast between lips and skin. These preferences in women may be attributable to red lips' association with fecundity, vasodilation and sexual arousal.

Sponsor: ESRC

Presentation: Sat, 5:40 Lillis 112

Male Facial Width and Trustworthiness

Stirrat, M, Buls, D, Perrett, DI

Measures of hominini skulls have been shown to be sexually dimorphic in bizygomatic width. Proxy measures of this from photographs of faces have shown that male variation relates to aggression and cooperation. Using a set of 3-D and 2-D images of male heads we tested male variation in bizygomatic width against male behaviour and social perceptions of and behaviour toward these men. Results indicate that bizygomatic width predicts distrust, non-reciprocation of trust, and perceived untrustworthiness and is evident in 2-D and in 3-D information. Results will be discussed with reference to sexual selection.

Sponsor: EPSRC

Presentation: Sun, 10:20 Lillis 112

Intralocus sexual conflict over human height

Stulp, G

Sexually antagonistic selection (SAS; sex-specific selection for different trait optima) results in intralocus sexual conflict (IASC) when genetic constraints prevent the sexes from reaching their optima. The evolution of sexual dimorphism, through for instance sex-linked genetic expression, can resolve this conflict fully. Yet, IASC often persists despite the sexual dimorphism. Human height is sexually dimorphic indicating previous IASC, and previous studies have suggested SAS on

height. As height is highly heritable and genes of fathers and mothers contribute equally to the heights of sons and daughters, additional IASC over this trait may remain. In this study, we examine whether there is IASC over human height. IASC was evidenced by taller couples having more reproductive success (number of grandchildren) via their sons than daughters, while shorter parents having more success via their daughters. Thus, despite the existence of sexual dimorphism, there is ongoing intralocus sexual conflict over human height.

Poster Number: 62

Reasoning about social exchange in schizophrenia and autism spectrum disorders

Sullivan, RJ, Minzenberg, M, Solomon, M, Yoon, J, Ragland, J, Ursu, S, Ermer, E, Carter, C

Studies of conditional Wason Selection Task (WST) performance in clinical groups with cognitive impairments are interesting because of the possibility that aspects of social cognition may be preserved or impaired relative to reasoning performance in other cognitive domains. Here we look for such differences in a study of conditional WST performance in two clinical groups with recognized social cognition deficits – schizophrenia and autism spectrum disorders (ASD). We found that WST social-contract performance was preserved in schizophrenia despite deficits in descriptive logic. ASD social contract and descriptive WST performance was significantly worse than typically-developing controls. There were no between-group differences in precautionary task performance – a third control condition of comparable logical difficulty to WST social contract problems. Clinical group differences in WST social contract performance supports neo-Darwinian theory about domain specificity in social cognition, but somewhat contradicts notions of continuity of social cognition deficits in schizophrenia and ASD.

Presentation: Sat, 11:30 Lillis 282

Cheerful cheaters beware!

Surbey, MK, Simpson, J

Under what conditions does it pay to cheat or appear blue? If, as suggested by recent models, withdrawing reciprocity is a useful tactic of depressives, this would only be effective if retaliation was avoided. We examined if defection in PD-like situations was more likely to be overlooked when the cheater was described as depressed versus happy. Participants (N=139) were asked to put themselves in the place of the victims and indicate their willingness to forgive, overlook, punish, or trust the two types of cheaters. Participants additionally described the hypothetical cheaters on a number of dimensions and gauged the emotional reactions of their victims. Results indicated that participants were more likely to forgive and overlook the behaviour of depressed versus cheerful

cheaters. In addition, participants identified more with the depressed cheaters, attributed their behaviour more to the situation, and felt they were kinder, more helpful, and less ruthless than happy cheaters.

Presentation: Thu, 11:50 Lillis 182

Helping cooperation: Competitive altruism vs. indirect reciprocity

Sylwester, K, Roberts, G

Research shows that indirect reciprocity (IR) - helping those who help others - can solve the problem of over-exploitation of public goods. We propose another mechanism which enhances cooperation: competitive altruism (CA) - helping in order to acquire a cooperative partner. Groups of 4 students played a series of public good games which were (1) not alternated with any other game, (2) alternated with an indirect reciprocity game and (3) alternated with a direct reciprocity game preceded by partner choice. We found that contributions to the common pool were higher in CA than in IR setting. When group games preceded long- rather than short-term dyadic interactions this effect was even more pronounced. Individuals received more from partners in direct than indirect games, which explains strong investment in reputation before direct interactions. Our findings indicate that strategic reputation building through CA is a more robust mechanism for restoring cooperation than IR.

Sponsor:Institute of Neuroscience, Newcastle University, UK

Presentation: Fri, 3:20 Lillis 182

The ancestral logic of politics: Fighting ability and resource level shape attitudes about income distribution.

Sznycer, D, Petersen, MB, Sell, A, Cosmides, L, Tooby, J

Theoretical models of animal conflict predict that formidability—the ability to inflict costs—should determine how resources are distributed. Applying this logic to humans, we hypothesized that intuitions about resource distributions should be regulated, in part, by formidability. To test this, we collected data on upper body strength and attitudes about income redistribution in the United States, Denmark, and Argentina. We predicted that greater strength would be associated with self-favoring attitudes about income distribution, and that, given the ancestral male-bias for using direct aggression, these effects would be stronger in men. These predictions were supported. Among men of low socioeconomic status, strength correlates with approval of redistribution; among men of high socioeconomic status, strength correlates with disapproval of redistribution. This effect was absent in women. Because modern mass politics renders personal strength ineffective as a bargaining tool, these findings are consistent with evolved logic but not with calculated self-interest.

Sponsor:NIH

Poster Number: 103

Risk Preference of Individuals and Couples: Experiments in Rural Java

Takashino, N, Mulyo, JH

In August 2009, we interviewed 222 household on their household characteristics (such as age, job, schooling year of family member, the level of asset holdings etc.) and conducted field experiment on their risk preference (risk game) in 8 agrarian communities in Central Java. Using the collected data on wives and husbands, we examine 1) validity of prospect theory, 2) determinants of individual risk preference, and 3) whether the couple's risk preference is related each other. The data implies that prospect theory is more appropriate for explaining the risk preferences of subjects as compared with the expected utility theory. And results show the impacts of education, development level of the community on the villagers risk preference. Also, positive correlation is found between husbands' risk preference and that of wives (suggesting that gambler-husband's wife is also gambler).

Sponsor: Grant-in-Aid for JSPS Fellows

Poster Number: 97

Adaptive and Maladaptive Grief: An evolutionary approach to emotions after loss

Tal Young, I

Grief as an emotion may have several adaptive functions, including allowing the bereaved individual time to process emotions after loss, to solidify bonds with group by surveying allies in the family and social support network, and to plan for life after the death of the loved one. The emotion of grief may be a byproduct of attachment and forming close relationships, it may function as motivation to prevent the loss of allies, or it may act a signal of reliability to potential allies. While most people intensely grieve for no more than 6 months, for a small percentage of people something gets in the way of the usual pathway to recovery. These individuals suffer from a condition called prolonged grief, or complicated grief. In the context of evolutionary principles, I will discuss factors that may predispose certain individuals to be vulnerable to the condition of complicated grief.

Presentation: Sat, 5:40 Lillis 211

Big & mighty: preverbal infants represent social dominance

Thomsen, L, Frankenhuys, WE, Carey, S

Two experiments investigated whether pre-verbal infants use relative size as a cue to predict social dominance. In Study 1, 13-month-old infants looked longer when a big square bowed and yielded the way to a small square than vice versa but they looked equally long if either square bowed alone on the stage. Study 2 pinpointed the developmental onset of this effect between 8 and 10

months of age. Whereas these infants are too young to have participated in any dominance contests themselves this rapid onset rules out low-level perceptual saliency explanations of the data, suggesting the rich interpretation that preverbal infants have abstract representations of dominance, and use relative size - a cue that covaries with it phylogenetically, and marks it metaphorically across human cultures and languages - to predict which of two agents is likely to prevail in their very first zero-sum competition.

Poster Number: 15

Self-rated attractiveness, health, and physical fitness are negatively related to men's voice pitch

Tigue, CC, O'Connor, JJ, Borak, DJ, Connolly, B, Feinberg, DR

While most studies on self-perceived mate value focus on women's preferences for sexual dimorphism among men, there is little focus on men's self perceptions. Subordinate men vocally accommodate dominant men, and men's self-perceived dominance predicts how men's voices change in response to male-male competition. This suggests that voice quality plays a role in determining one's perceived mate value. To test this idea, we recorded men's voices and asked them to rate themselves for self-perceived attractiveness, health, physical fitness and dominance, among other qualities. Men with lower pitched voices rated themselves as more attractive, healthy, and physically fit than did men with higher pitched voices. In a subsequent playback experiment, we found that men's self-perceived attractiveness was positively correlated with women's attractiveness ratings of men's voices. Collectively, these results imply that self-perceptions of mate value may be informed by both acoustic properties of the voice and the perceptions of others.

Sponsor: Social Sciences and Humanities Research Council of Canada; Canada Foundation for Innovation; The Ministry of Research and Innovation of Ontario

Poster Number: 90

Extreme Sports: Testing Three Signaling Hypotheses Via Participation in Recreational Risk Taking

Tiokhin, LB, Fessler, DM, Snyder, JK

Survey data on participation in extreme sports were used to test three hypotheses: 1) Honest signaling of quality: costs of risk taking are lower for individuals of higher genetic quality; if stature corresponds with quality, taller individuals should participate more in extreme sports than shorter individuals; 2) Honest signaling of indifference to harm: individuals who are indifferent to their welfare constitute formidable adversaries, hence risk taking can enhance perceived formidability; because stature is a determinant of formidability, shorter individuals have more to gain by signaling indifference to harm, hence they should participate more than taller individuals; 3)

Reentering the mating market: single men take more risks than mated men; the returns on paternal investment diminish as a function of the woman's residual reproductive potential and the independence of existing offspring; consonant with a strategy of serial monogamy, among mated heterosexual men, participation should increase with partner age and offspring age.

Presentation: Thu, 5:40 Lillis 112

Testing the adaptive match between food memory and food experiences

Todd, PM, Sanders, KM, Gardner, KM

Memory—and forgetting—may be adapted to the environment structure of particular domains, with recall likelihood falling in the same way as the likelihood of reencountering a particular item (Anderson & Schooler, 1991). This has been found for domains of words and of social encounters, where power laws describe forgetting and reencounter rates. Does the same hold for the domain of food? Preliminary data suggest memory for foods eaten falls off rapidly over days. Next, to assess whether the probability of eating a particular food again after *N* days also rapidly declines, we extracted information from TweetWhatYouEat (TWYE), an online food diary for Twitter users. Using data from members with at least 90 consecutive days of entries, we found evidence for small clusters of repeatedly eaten foods, separated by longer gaps, which corresponds to the forgetting function for foods. Other domain-specific aspects of food memory are also under investigation.

Presentation: Fri, 3:00 Lillis 182

Moral warfare: Group cooperation and the invention of the moral domain.

Tooby, J, Cosmides, L

We argue that the evolution of morality was midwifed by the capacity for the rapid recruitment of individuals into a coalition around a common interest that could be punitively enforced. That is, our moral psychology evolved as a natural extension of the adaptations underlying our coalitional psychology, in interaction with a number of other elements, including (1) pre-existing adaptations that evolved to solve other adaptive problems (e.g., valuation, negotiation; language); (2) a novel set of games that were unleashed by the evolutionary expansion of coalitional and communicative adaptations; and (3) adaptations that specifically emerged for successfully navigating the family of “moral” games that were endemic to this new coalitionally infused social world. An adaptationist approach can illuminate what kind of thing morality is; how our species evolved a specialized moral psychology; and why, although our moral psychology is partly an outgrowth of our coalitional psychology, it is nonetheless distinct.

Sponsor:NIH

Presentation: Thu, 5:40 Lillis 182

Moral Dutifulness as Exapted Submissiveness

Tresan, J

Submissiveness involves monitoring compliance-relations between behavioral options and commanded behaviors, and compliance-promoting gestural, physiological, motivational, affective, and cognitive reactions (Simon 1990, Salter 2008, Bouchard 2009). Exapted submissiveness involves similar monitoring/reactions to behavior, but unelicited by command. E.g., to some, brutality, betrayal, hogging, and shirking feel more strongly forbidden than actual prohibitions explain (Freud 1940, Lewis 1952, Lippmann 1995). ES explains, in three ways, the tendency to posit invisible moral commanders: God, ancestors, homuncular superegos, categorical imperative-issuing rational faculties, etc. First, abductively. Second, the posit makes ES tractable to familiar cognitive-linguistic habits: “*x* is commanded” vs. “*x* affects us as if commanded”. Third, the positing tendency and ES may have co-evolved. ES plausibly co-evolved with guilt and shame as socially selected aids to the navigation of strongly enforced norms (Kitcher 2006, Gruenewald et al 2007, Haidt & Kesebir 2010). The positing tendency and ES inhibit transgressions more effectively than ES alone.

Poster Number: 110

Women's sexual psychology in the context of “friends with benefits” relationships: Underlying motivations and men's counter tactics

Trevino, SM, Goetz, AT

A friend with benefits (FWB) type of relationship is an ongoing sexually intimate relationship with a person whom one would consider a friend, but that one is not in a committed romantic relationship with. As FWB relationships were likely costly for ancestral women, they are puzzling from an evolutionary perspective. This study compares the importance of cues pertaining to long- and short-term mate preferences in the context of FWB partner preferences. Preliminary results suggest that females have a stronger preference for FWB partners who display cues associated with long-term mating, and may be utilizing FWB relationships to secure a committed romantic relationship. In addition, this study posits that males are aware of this tactic and are selecting females who are not a part of their in-group as a way to avoid commitment. Preliminary results suggest that males prefer casual acquaintances as FWB partners whereas females prefer friends or close friends.

Presentation: Fri, 11:50 Lillis 211

Extending the Behavioral Immune System to Political Psychology: Are Political Conservatism and Disgust Sensitivity Really Related?

Tybur, JM, Merriman, LA, Caldwell, AE, McDonald, MM, Navarrete, C

Because immune function adapts to localized pathogens, cross-group interactions threaten pathogen transmission in a manner unique from within-group interactions. Previous research suggests that a variety of individual and cultural level attitudes, cognitions, and societal structures evolve to mitigate the pathogen threats posed by such interactions. It has been suggested that such anti-pathogen defenses coalesce into a conservative political ideology. Here, we test a hypothesis that extends naturally from this previous work: political conservatism functions as a pathogen-avoidance strategy. Across three studies, we found that sensitivity to pathogen disgust is not related to political conservatism, religious fundamentalism, or right-wing authoritarianism. However, sensitivity to pathogen disgust is related to intergroup bias as measured via explicit racist attitudes. Our findings suggest that intergroup bias indeed may function as part of a behavioral anti-pathogen defense system, but that this effect may not extend to general political conservatism or other related traits.

Sponsor:National Science Foundation

Poster Number: 27

Dominance Does Not Dominate Decisions in Speed Dating

Tybur, JM, Witt, AA, Bryan, A

People consistently report preferring dominant individuals as romantic partners. However, no work has elucidated the influence of perceptions of dominance per se or the relative influence of dominance in the context of other cues (e.g., attractiveness) on the early stages of romantic relationship initiation. In the current investigation, we use a speed dating paradigm to investigate the relationship between perceptions of a potential romantic partner's physical, social, and financial dominance and their acceptance as a candidate for future romantic interactions. While all three dominance dimensions showed bivariate relationships to a partner's acceptability for a future date, none provided unique prediction over and above physical attractiveness and kindness. Ratings of partner physical attractiveness and kindness were unique predictors of romantic interest for both men and women, and ratings of partner age were unique predictors of romantic interest for men.

Poster Number: 71

Passion influences musical appreciation and evaluation of imagined musicians in a Brazilian sample

Varella, MC, Ferreira, JB, Bussab, VR

Does passion influence musicality? We investigated the relation between the intensity of passion and musical appreciation and imagined musicians. Anonymous participants were 232 men and 300 women Brazilian students from São Paulo and Natal cities, who listened to and evaluated one of three instrumental tunes (two classical and one blues) and then judged the musicians they imagined were playing the tune. More women imagined only male musicians, there was no sex difference for those who imagined musicians of both sexes and only one man imagined only female musicians. Self-reported passion in men was not related to either their appreciation of the music or to their judgements of the imagined musicians. For women, however, the more passionate the more the music was appreciated and the more positive their impressions of the imagined musicians, male only and both sexes. Sexual selection explains the male biased imagined musicians and passion influences on female evaluations.

Sponsor:CNPq

Poster Number: 4

The Preference for Nearer Navigational Goals in Humans

Vazquez, D, Jackson, R

Navigation researchers often assume that humans prefer to pursue the nearest of otherwise equivalent navigational goals. However, no research supports this assumption. The magnitude and conditions for navigational preferences remain unknown without empirical investigation. A preference for nearer goals may not even exist, consequentially undermining a large body of previous research. Evolved navigation theory provides a framework for investigating the evolutionary origins of navigation and it is from this approach that we conducted the two current experiments. We predicted 1) a preference for the nearer of otherwise equivalent goals and, 2) that this preference would increase as the distance between the goals increased. Data specified the degree of preference for nearer goals and how this preference changes over different distances. Other investigated factors also affected this preference. These data specify a selection factor for most human behaviors and these results have specific impacts on health in modern contexts.

Poster Number: 77

Relatedness and Altruism Among Kin in Biological and Non-biological Contexts

Von Pohle, CM, Segal, NL, Marelich, WB, Goetz, AT

This study investigated genetic relatedness, costly versus less costly significant contexts, and gender of the

beneficiary in regards to willingness to act altruistically. A sample of 251 participants completed the Kin Questionnaire, a measure that presented hypothetical scenarios to assess willingness to perform altruistic tasks toward kin. Analyses focused on willingness to help as a function of 1) degree of genetic relatedness, 2) costly versus less costly contexts, and 3) gender of the beneficiary. Participants are more willing to perform altruistic acts 1) as the degree of relatedness increases, 2) in costly contexts, and 3) toward female relatives. Evidence of kin selection suggests that humans might possess unconscious mechanisms associated with one's propensity to perform altruistically.

Presentation: Sat, 10:50 Lillis 182

Face-to-face collective action games in a small-scale society: testing the effects of leadership on group performance and the division of spoils
von Rueden, C, Gurven, M, Kaplan, H

Iterated public goods games suggest that group payoffs are increased when revenue allocation or the ability to punish is restricted to a single individual, i.e. leader. In these games, leaders are exogenously appointed, interactions are anonymous, and group payoffs are not contingent on accomplishment of a collective task. To test the effects of leadership under more ecologically realistic conditions, we asked groups of men from the Tsimane forager-horticulturalists of Bolivia to participate in games requiring physical interaction and dynamic problem-solving. Faster game completion time earned groups a larger monetary reward. Half of the groups were asked to elect a leader, who determined the allocation of the reward at game's end. In the context of these games, we show that leadership was awarded to men who are known to be trustworthy and of high social status, leadership improved group efficiency, and leaders did not favor themselves when dividing the spoils.

Sponsor:National Science Foundation

Poster Number: 126

Women's own voice pitch predicts their preferences for masculinity in men's voices

Vukovic, J, Jones, BC, DeBruine, L, Feinberg, D, Smith, FG, Anthony, L, Welling, WL, Main, J

Previous studies have found that indices of women's attractiveness predict variation in their masculinity preferences. Such attractiveness-contingent preferences may be adaptive if attractive women are more likely to be able to attract and/or retain masculine mates than relatively unattractive women are. Here, we examined whether women's preferences for masculine characteristics in men's voices were related to their own vocal characteristics. We found that women's preferences for men's voices with lowered (i.e., masculinized) pitch versus raised (i.e., feminized) pitch were positively

associated with women's own average voice pitch. Interestingly, the attractiveness-contingent masculinity preferences observed in our study appeared to be modulated by the semantic content of the judged speech (positively valenced versus negatively valenced speech), suggesting that attractiveness-contingent individual differences in masculinity preferences do not necessarily reflect variation in responses to simple physical properties of the stimulus.

Poster Number: 39

Animals have also Law? Of Course!

WADA, M

Law has been thought to be only human property for many years. This is wrong! Rich resources and literature, e.g., from primatology (Frans de Waal et al.) and honey bee studies prove great apes and honey bees not only have politics, policing, but also their own "morality" and "law". By re-defining law as "rules and norms, written or unwritten, with their foundations in the (human and other) animals own evolution, which accompany sanctions when not abided by," we can "find" animal laws. This will cast new light on human jurisprudence as well.

Sponsor:Hosei University, Tokyo, JAPAN

Presentation: Sun, 10:20 Lillis 282

Neural Substrates of Kith-and-Kin Rationality

Wang, X, Zheng, H, Zhu, L

We explored neural activation patterns of 23 participants when they were making hypothetical life-death choices in different kith-and-kin group contexts. Based on our previous findings (Wang, 1996, 2002, 2008), we predict that (1) large group and stranger contexts would activate more frontal cortical areas while kinship cues activate more limbic cortex. (2) A low kin/stranger ratio in a group context would trigger conflicting risk preferences and activate conflict-monitoring brain structures such as the Anterior Cingulate Cortex (ACC). The fMRI and behavioral results showed that small-group and kinship cues activated more limbic structures of the brain and resulted in a stronger risk seeking preference. ACC plus frontal lobe activations reflected a conflict in decision preference when the group at risk was a heterogeneous mixture of strangers and kin. Overall, our findings lend support to the notion of domain-specific brain modules for risk problems in homogeneous and heterogeneous groups.

Presentation: Fri, 4:00 Lillis 211

Cultural Transmission and Individual Variation in Learning Strategies

Wasieleski, H

Culture is composed of socially distributed, individually learned information. Understanding the determinants of social and individual learning within individuals is central

to learning why culture increases population-level fitness. This paper presents results from a pilot study testing individual variation in the use of social and individual learning using a novel task. In addition to task performance and imitation measures, data were collected about participants' social skill, innovativeness, proclivity for social information use, and performance on an additional measure of imitation skill. Preliminary analysis of the data indicates a strong tendency to imitate available social information. In addition, more innovative participants show greater social skill. Interestingly, the analysis also reveals a negative correlation between imitation performance on the two imitation tasks. In view of the important role of imitation in cumulative cultural evolution, these results highlight the importance of including individual variation in social learning skill in models of culture learning.

Sponsor:Center for Human Evolutionary Studies, Rutgers; Bigel Grant, Rutgers

Poster Number: 40

3. Egalitarians Make a Costly Apology to Maintain Their Reputation

Watanabe, E, Ohtsubo, Y

Stability of cooperation via indirect reciprocity relies on a social institution of apology-forgiveness, whereby accidental noncooperators can restore their standing (Ohtsuki & Iwasa, 2006). This institution requires costly apologies to prevent willful noncooperators from deceitfully apologizing. This thesis predicts that cooperators who unintentionally committed noncooperative behavior will make a costly apology to restore their public image. To test this prediction, the present study examined whether self-defined egalitarians will voluntarily incur some cost after unintentionally making an unfair resource allocation. The cost was operationalized as either a fee to apologize or a self-imposed fine. The strength of their belief in egalitarianism was assessed with Dawes et al.'s (2007) Random Income Game, which asked participants if they want to equalize randomly distributed rewards across group members. As predicted, egalitarians were more likely to incur a cost to apologize or penalize themselves, partial $r=.36$, $p<.05$ controlling for the cost type condition.

Sponsor:Japan Society for the Promotion of Science

Poster Number: 80

Like father, like self: Emotional closeness to father, but not mother, predicts women's preferences for self-resemblance in opposite-sex, but not same-sex, faces
Watkins, CD, DeBruine, L, Smith, FG, Jones, B, Vukovic, J, Fraccaro, P

Inclusive fitness and optimal outbreeding theories highlight the importance of kin recognition for adaptive behavior. Familial imprinting and self-referential

phenotype matching are two potential mechanisms for kin recognition that have been the focus of much research. While studies of human preferences for parental traits provide evidence for familial imprinting, studies of human preferences for computer-manipulated self-resemblance have been interpreted as evidence for self-referential phenotype matching. Because children resemble their parents, familial imprinting could influence preferences for self-resemblance. Here we show that women's reported emotional closeness to their father, but not mother, is positively correlated with their preferences for self-resemblance in opposite-sex, but not same-sex, individuals. However, preferences for self-resemblance were greater for same-sex than opposite-sex individuals. Collectively, these findings implicate familial imprinting in preferences for self-resemblance in opposite-sex individuals and raise the possibility that familial imprinting and self-referential phenotype matching have context-specific effects on attitudes to self-resembling individuals.

Sponsor:College of Life Sciences and Medicine, University of Aberdeen

Poster Number: 108

From the Bedroom to the Altar and Beyond: Romantic Couples' Sociosexuality and Relationship Functioning
Webster, GD, Laurenceau, J, Smith, CV, Mahaffey, AL, Bryan, AD

When people engage in heterosexual romantic relationships, do differences in sociosexuality – feeling or acting sexually promiscuous – relate to relationship functioning? We addressed this question using actor-partner interdependence models in 3 studies (420 couples, $N=840$). For 62 undergraduate dating couples (Study 1), men's and women's sociosexual attitudes and behaviors were related to their own or their partners' relationship quality, and men's sociosexual attitudes positively predicted relationship dissolution. For 238 engaged couples (Study 2), men's and women's sociosexual attitudes and behaviors related to their own or their partners' divorce beliefs, self-other overlap, and relationship satisfaction, efficacy, and quality. For 120 newlywed couples that we surveyed at 3 time points (Study 3), intercepts (mean levels) and slopes (changes over time) for men's and women's sociosexual attitudes and behaviors related to their own or their partners' intercepts or slopes for commitment, passionate love, sexual satisfaction, and relationship quality. Implications for evolutionary theory are discussed.

Poster Number: 63

What Does the Brutality of Filicide Tell us about Parental Psychology?

Weekes-Shackelford, V, Potaznick, MJ, Potaznick, MJ, Machluf, K, Machluf, K

The present study focuses on one component of filicide, namely the method or weapon used by a parent to kill a child, as a window into understanding parental psychology. Using a publically accessible internet newspaper archive of over 460 national newspapers with complete, full-text content of local and regional news, we systematically explored all filicides in Dade County, Broward County, and Palm Beach County that were reported in at least one of the local major newspapers over a 10-year period. We conducted descriptive analyses on over 100 filicides to test the hypotheses that (1) filicide methods will differ for genetic parents and non-genetic parents and (2) the brutality of the filicide, as indexed by independent ratings, will differ for genetic and non-genetic parents. The results provide corroborative support for parental motivational differences within the context of filicide.

Poster Number: 78

Preferences for self-resemblance in infant faces and mate retention tactics

Welling, LL, Burriss, RP, Puts, DA

Work examining preferences for cues to self-resemblance in child faces has been equivocal, with findings showing that men have a higher preference than women (Platek et al., 2003), that women have a higher preference than men (Bressan et al., 2009), and that both men and women have a high preference for self-resemblance (DeBruine, 2004). Using data obtained from 67 romantic couples, we present further evidence that both men and women prefer self-resemblance in children's faces, but show no significant preference for partner-resembling faces. Moreover, men's preferences for self-resemblance in infant faces were significantly correlated with their use of emotional manipulation, commitment manipulation, vigilance, and sexual inducement mate retention tactics. These data suggest that, while both men and women show a general preference for self-resemblance in children's faces, men's preferences for self-resemblance may be further modulated by the extent to which they use manipulation tactics to retain their partner.

Poster Number: 127

Face and voice attractiveness are shown to be related in females but not males: implications for the function of multiple signals

Wells, TJ, Baguley, T, Sergeant, MJ, Dunn, AK

Human faces and voices are proposed to signal heritable traits that would benefit offspring. If voices signal the same biologically relevant information as faces, then

ratings of these signals should covary. 30 males and 30 females rated a series of 20 opposite sex faces, voices and faces with matched voices in repeated measures experiments. Face and voice attractiveness in males and females both influenced ratings of overall attractiveness, with face the predominant influence. In male stimuli, no covariance between face and voice attractiveness show their relative influence on overall attractiveness to be independent. In female stimuli however, positive covariance between face and voice attractiveness gave rise to an interaction effect on overall attractiveness. Faces and voices of males may be used to glean independent information thus providing females with an overall assessment of male partners. In females, related information may be used for more accurate assessment of a single trait.

Presentation: Thu, 4:00 Lillis 211

Cognitive adaptations for learning about plants in human infants

Wertz, AE, Wynn, K

Intuitive knowledge about the biological world has been extensively studied, yet investigations of knowledge about plants per se have been vanishingly rare. However, throughout our evolutionary history, humans have utilized plants for food and as raw materials for artifact construction. Consequently, humans should possess specialized cognitive mechanisms that solve the computational problems posed by ancestrally recurrent human-plant interactions. We have begun investigating this topic by testing whether infants encode the fine-grained features of plants (e.g., leaf shape) and use those features as a basis of categorization. Fifteen-month-old infants were tested using a name extension task that crossed the dimensions of leaf shape and pot color. Infants extended the name of a novel plant to a plant with the same leaf shape/different pot color, but not to a plant with different leaf shape/same pot color. This indicates that infants use fine-grained features to categorize plants.

Presentation: Thu, 11:50 Lillis 112

When agreeable is selfish: Physical safety threats predict individual and cross-national expression of agreeableness

White, AE, Mortensen, CR, Li, YJ, Cohen, AB

An evolutionary account of personality suggests that personality characteristics are evolved psychological mechanisms designed to respond to fitness-critical threats and opportunities. The present studies explore the evolved bases of personality by examining the relationship between physical safety threats and agreeableness. When physical safety is threatened by the presence of a predator, a number of animal species exhibit herding or aggregating behavior. Even though the large groups formed by herding are attractive to predators, the rate of predation for any one individual in the group is diminished- a

phenomenon termed selfish herding (Hamilton, 1971). Extending the theory of selfish herding to humans, a series of studies reveal adaptive shifts in the expression of a personality characteristic which facilitates herding behavior, agreeableness, in individuals temporarily concerned with physical safety, individuals chronically concerned with physical safety, and in nations with a greater number of physical safety threats.

Presentation: Sat, 4:00 Lillis 282

Past and present environments: The evolution of decision-making

Wilke, A, Todd, P, Barrett, C, Mata, R, Scheibehenne, B

The human mind is filled with evolved decision mechanisms designed to meet adaptively important goals. We outline a framework for studying those mechanisms from an evolutionary cognitive psychology perspective, which emphasizes the role of the environment in shaping organisms' decision strategies. We hold that decision strategies often take the form of simple rules constructed from building blocks that draw on evolved capacities, all of which fit to particular information structures in the environment. We illustrate these ideas with research examples from our work on human foraging cognition: deciding when to leave a resource patch, searching for information in memory, predicting when a sequence of events will stop or continue, and detecting sequential dependencies when simultaneously foraging for multiple resources.

Poster Number: 132

Religion without belief

Willard, AK

Evolutionary approaches to the origins of religion have focused heavily on how aspects of our evolved psychology shape the epidemiology of religious representations in an effort to explain the prominent place of religions in human societies. Though these approaches help explain why religion representations spread, they do not differentiate religion from other phenomena, such as folktales, that share these biases. Previous studies have shown that minimally counterintuitive content makes stimuli more memorable, but have not looked at the believability of this content. Our study shows that while both minimally counterintuitive and anthropomorphic content in stories make them more memorable, they also make it less believable than a fully intuitive story. These findings suggest that a broader theoretical approach is needed, perhaps one taking account of the modeling or context biases that have been shown to be so important in other domains of cultural evolution.

Poster Number: 64

Evolved Distance Perception and Relative Falling Risks of Common Surfaces

Willey, C, Jackson, R

Environmental perception is crucial for most mobile behavior. Perception can reflect navigation costs over evolutionary time, particularly the navigational risk of falling. Previous research has repeatedly demonstrated overestimation of vertical surfaces, the navigation of which would result in a fall. However, reliable perceptual differences have never been demonstrated in the most common surfaces navigated by humans—those surfaces which are horizontal or nearly so. The two current experiments were the first to investigate perception of horizontal distance with falling risks. Participants estimated distances across falling risk surfaces and non-falling risk surfaces using distance-matching tasks. As predicted, participants selectively overestimated horizontal surfaces that posed falling risks. Furthermore, the magnitude of the overestimation reflected the relative falling risk. These findings may suggest that humans have visual adaptations that reflect a risk of falling over evolutionary time.

Presentation: Sat, 4:00 Lillis 182

Psychomorphospace—Mapping perception onto morphology with geometric morphometrics (applied to aging)

Windhager, S, Schaefer, K

Various methods such as morphing techniques and schematized drawings have been used to investigate morphological correlates of perceived traits in interpersonal encounters. With geometric morphometrics, we now have a powerful tool for the systematic assessment and statistical analysis of shape and form in relation to both biological qualities (hormone levels, age, body height etc.) and attributes (e.g. perceived femininity-masculinity, attractiveness,...). Graphical visualizations of the results can be realized as possible organismal forms and thus allow for an intuitive understanding. After considering theoretical aspects, we will demonstrate the intersection of anthropometry and psychometry, i.e. the general concept of the psychomorphospace, with a study on facial aging. Sixty Austrian men and women aged 23 to 71 years were photographed and rated by another 205 subjects for perceived age, femininity-masculinity and attractiveness. Morphological correlates of age parallel patterns of sexual dimorphism and are discussed as possible reasons why women “masculinize” during aging.

Presentation: Sun, 12:00 Lillis 182

Assessing the impact of consanguinity on national IQs: A cultural feedback effect model.

Woodley, MA

A robust negative correlation of $r = -.62$ ($P < .01$) exists between national IQs and consanguinity as measured by log% consanguineous marriages for 72 countries. Controlling for the effects of GDP per capita, education and democracy was found to attenuate this correlation ($r = -.41$; $r = -.40$; $r = -.42$, $P < .01$ respectively). Multiple regression analysis revealed that of the variables considered, consanguinity surprisingly had the least impact as a predictor of national differences in IQ ($\beta = 0$, $P > .05$) whereas GDP per capita had the highest ($\beta = .35$, $P < .01$). Finally Mingroni's heterosis hypothesis of the Flynn effect is critically examined and a new cultural feedback theory is presented to account for this result, whereby it is suggested that consanguinity could subtly influence IQs at larger scales through small inbreeding depression effects on IQs being amplified into much larger differences at the cross-national scale through their effect on factors that maximize IQs such as access to education and adequate nutrition.

Presentation: Fri, 10:30 Lillis 211

The Social Impact of Pathogen Threat: How Disease Salience Influences Conformity?

Wu, B, Chang, L

Conforming to behavioral norms is adaptive because many behaviors and norms serve as social barriers to disease transmission. Humans may possess evolved pathogen-avoidance mechanisms promoting conformity especially when pathogenic threat is salient. We investigated this hypothesis in two studies. Study 1 revealed that individuals who were chronically concerned about pathogenic threat showed higher conformity in various social settings. Study 2 revealed that, compared to those exposed to disease irrelevant cues (e.g., injuries), participants exposed to diseases salient cues (e.g., rotten foods) were more likely to conform to ostensible majority information in a task to judge and appraise painting. When potential confounding variables (e.g., uncertainty aversion) were controlled, the results remained the same for the two conditions. Evolved pathogen-avoidance mechanisms appear to include not only avoidance strategies as found by other researchers, but also approach strategies such as conforming to social norms and striving for consensus.

Sponsor: The Chinese University of Hong Kong

Poster Number: 116

Mating System and Mate Choice in Matrilineal Mosuo in Southwest China

Wu, J, Wang, S, He, Q, Deng, L, Wang, B, Li, C, Zhang, B, Tao, Y, Ji, T

The matrilineal Mosuo in China is known for its unique marriage type- 'Zouhun' (walking marriage). Demographics of sex, age, marriage type, partner etc. of a Mosuo population were collected in Lugu Lake town, Sichuan, Southwest China from 2006 to 2009 ($N = 4953$). Zouhun is characterized by duolocal marital residence; children belonging to mother's household; and men have no obligation to support his children but have to support his sister's. According to Trivers, sexual selection is associated with relative parental investment. We are interested in how mate choice and mating strategies of each sex are affected by Zouhun. We focus on (1) the mating strategies of each sex under Zouhun; (2) the determinant and implications of investment in sister's children; (3) possible difference between preference in mate choice in Mosuo population and that in industrial society (taking physical attractiveness and financial conditions for instance); and (4) impacts of policies and mainstream culture on Zouhun.

Presentation: Thu, 5:20 Lillis 282

Costly punishment does not always increase cooperation

Wu, J, Zhang, B, Zhou, Z, He, Q, Zheng, X, Cressman, R, Tao, Y

Human beings tend to help others even if a cost is involved. Costly (or altruistic) punishment means paying a cost for another individual to incur a cost. It has been argued that people will behave more cooperatively if they know that their opponent has the option of using the costly punishment. We examined this hypothesis by conducting iterated two-player Prisoners' Dilemma Game experiments in which, in each round of a game, people choose between operation, defection and punishment, while in the control experiments with only two options: cooperation and defection. The results show that the level of cooperation either stayed the same or decreased when compared with the control. We argue that this result is likely due to differences in cultural attitudes to cooperation and punishment based on similar experiments with university students from Boston that found cooperation did increase with costly punishment.

Poster Number: 66

Vulnerability to disease is associated with an enhanced preference for symmetrical faces

Young, SG, Sacco, DF, Brown, CM

Two experiments tested the hypothesis that perceived vulnerability to disease (PVD) would be associated with a preference for faces high in symmetry, a cue to good health and pathogen resistance. PVD was measured as an

individual difference in Study 1 and situationally primed in Study 2. The results across both studies indicate that heightened disease sensitivity predicts a preference for symmetrical faces. Importantly, this increased preference for symmetry when disease threats were salient did not generalize to symmetrical non-face stimuli. These results suggest an elevated and domain-specific preference for symmetry in human faces when disease-threats are accessible. This heightened preference for facial symmetry seems likely to be an adaptive response because faces can signal the presence or absence of infectious disease in individuals and situations where disease concerns are salient.

Poster Number: 70

Pets in a Cross-Cultural Perspective

Young, SM, Gray, PB

Due in part to declining human fertility, geographic mobility, and growing consumerism, pets increasingly function as emotional surrogates of children, with tremendous resources poured into their care. This function of pets may be quite different from the more typical human-pet dynamics characterizing a wider array of societies until recently. We employed the electronic Human Relations Area Files 60 society Probability Sample to code for various features of human-pet dynamics. The findings revealed that dogs are the most commonly kept pets, followed by birds, cats and other animals including horses, rodents and reptiles. Pets frequently served valuable functions such as aiding in hunting and pest removal, yet showed variation in feeding, sleeping, and positive and negative interactions across societies and pets. These data illustrate similarities and differences cross-culturally in human-pet dynamics with how pets such as dogs in the U.S. are treated today in contrast to patterns from this wider sample.

Presentation: Thu, 5:40 Lillis 282

If sharing is not a form of exchange, then what is it?

Circulation of resources by hunter-fisher-trappers in north central Siberia

Ziker, JP

In analyzing food sharing in hunter-gatherer societies, James Woodburn (1998) wrote that 'Sharing is not a form

of exchange.' Elaborating on his concept of immediate-return economic systems, Woodburn emphasized the disengagement from property among hunter-gatherers, such as the Hadza, that reduces the potentiality of dependencies, inequalities, and debts. Woodburn argued that sharing is more fundamental than reciprocity. On the other hand, empirical research on food sharing by human behavioral ecologists has focused on the degree to which sharing is contingent on previous sharing. For example, Michael Gurven (2006) found that approximately one third of sharing is contingent in a number of societies. Is food sharing a form of exchange? If not, then what is it? Using empirical data on food distributions among indigenous hunter-fisher-trappers in northern Siberia, I examine social network of food sharing relationships on a number of independent variables and self-report explanations to address this question.

Sponsor:National Science Foundation, Fulbright Canada

Poster Number: 137

Modern Statistical Models for Evolutionary Social Science

Zvoch, K

Evolutionary social scientists expect individual decision-making and observed behavioral response to vary in relation to the fitness-related opportunities and challenges present in local environmental contexts. However, the statistical techniques commonly used to test Darwinian-based predictions may not fully capture the complexity of relations posed by the underlying conceptual model. Of particular concern are issues surrounding methodologies for measuring and estimating individual development over time, the identification of distinct variant classes, and the proper unit of analysis when individuals are dispersed across multiple contexts. The purpose of this presentation will be to introduce and demonstrate the applied use of a class of latent variable models. Examples from a variety of disciplines (e.g., anthropology, biology, psychology) will be used to represent commonly observed multilevel, multivariate data structures and offer a basis for examining how modern statistical procedures can allow for a more robust specification and test of Darwinian hypotheses.

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ON-CAMPUS DINING SERVICES

Dormitory Dining Services:

DUX BISTRO. DUX Bistro is in the Living-Learning Center. Breakfast: full coffee/espresso menu, smoothies, yogurt bar, fresh fruit, baked goods such as bagels and coffeecake, hot & cold cereals, and daily hot breakfast specials like egg sandwiches and pancakes. Lunch: deli sandwiches, soup du jour, espresso drinks, fresh baked pastries, and made to order salads. Open every day during the conference from 7am – 10pm.

EMU Dining Services : All food venues are located on the EMU Main Level South Dining Area and accept cash and Visa/Mastercard. Open Wednesday, Thursday, and Friday (June 16th – June 18th) Closed Saturday and Sunday.



MANGIAMO. Organic Fair Trade coffee. Breakfast: Fresh-made strada, breakfast burritos, breakfast sandwiches, and granola, fruit + yogurt parfait. Lunch: fresh-made calzone, foccacia, gourmet sandwiches, panini, soups and salads. Full-service espresso bar, specialty coffee drinks, Italian sodas, fountain drinks, fresh-baked breads, rolls, pastries, muffins, cookies and cakes. *Open from 8am – 3pm.*

PANDA EXPRESS. Chain Chinese food includes Orange Flavored Chicken, Sweet and Sour Chicken, and Beef and Broccoli. *Open from 11am – 4pm.*

UNION MARKET. Organic Fair Trade coffee, fresh sushi, snacks, fountain and bottled beverages, take-out sandwiches and salads, health/personal care products and school supplies. *Open from 10am-3pm.*

SUBWAY. Subs and sandwiches. *Open from 8am – 6pm.*

Willamette River and Riverfront Park Access

