



**The Seventh Annual Conference of the
NorthEast Evolutionary Psychology Society**

May 30th to June 2nd 2013

Lebanon Valley College – Annville, PA

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President's Welcome

I have the distinct pleasure of welcoming you to the 7th annual conference of the NorthEastern Evolutionary Psychology Society – Making History! This theme comes loaded with meanings for each of us who have worked hard to build up this meeting of diverse scholars interested in tackling the issues pertaining to the origins of human behavior.

An immediate implication of the title comes from its more obvious entendre; that our host and long-time NEEPS member, John Hinshaw, is an Historian. John has found evolutionary theory infectious for explaining aspects within less traditionally evolutionary fields of study; indeed, Historians and scholars in the Humanities are increasingly turning to evolutionary theory to add to the richness of their investigations. NEEPS is a meeting ground for scholars from all disciplines to ponder how evolution has shaped everything from societies and social groups to the literature and art that depicts those relations.

The double-entendre comes from some historic events that have unfolded in NEEPS' short history. One major event is that the Society has taken ownership of the *Journal of Social, Evolutionary, and Cultural Psychology*, and with that ownership will partner with the American Psychological Association, adding the journal to the wealth of APA Journals. As the longest standing association for psychologists in the United States, and one with an historic publishing program all its own, we are proud that the APA has selected our title to represent evolutionary psychology to psychologists.

A third way we are Making History with this year's conference is by continuing to spotlight scholars from diverse fields of study. This year, we are proud to present our Keynote speakers, an Historian, John McNeil, PhD of Georgetown University; a Psychologist, Joanne Souza, MSc, and a Biologist, Paul Bingham, PhD, both of Stony Brook University. In addition, we present a panel in response to Mgr. Souza and Dr. Bingham's Keynote address, led by Psychologist Geoffrey Miller, PhD, and Anthropologist Holly Dunsworth, PhD. Each will present notions of the origins of humanity from a slightly different vantage point; this is part of what makes NEEPS an invigorating event to attend.

Following the 7th Annual Meeting of NEEPS, we will welcome the new executive board leaders of the Society. Led by Dan Kruger and Becky Burch, I've no doubt that NEEPS will continue Making History for the next three years, and beyond. I have been honored to serve as your President, and am glad to know each one of you personally.

Thank you to our conference host and institution, John Hinshaw, Lebanon Valley College; and to our Program Chair, Mike Frederick, for bringing this conference together. On behalf of the executive committee and conference committee, welcome to Pennsylvania and the NorthEastern Evolutionary Psychology Society tribe.

Warm wishes,

Rose Sokol-Chang, PhD

NEEPS President

BUILDINGS AND FACILITIES

Academic and Administrative Buildings

1. Carnegie Building, Admission and Financial Aid
2. Humanities Center and Administration Building:
- Academic Departments: English Department, Languages Department, History and Political Science Department, Religion and Philosophy Department, Sociology and Criminal Justice Department
- Administrative Offices: President, Business Office, Copy Center, Disabilities Services, Graduate Studies and Continuing Education, Mail Room, Media Services, Registrar, Vice President of Academic Affairs and Dean of the Faculty, Vice President of Administration and IT Services, Vice President of Finance,
- Blair Music Center: Music Department, Lutz Recital Hall, Music Recording Technology Studios
- Miller Chapel: Chaplain's Office, Chapel, Classrooms and Gallery Offices, Art Studios, Business and Economics Department, Digital Communications Department, Education Department, Emmett C. Rupp Management Department Wing, Information Technology Services, Psychology Department, William H. Lodge Mathematical Sciences Center
- Fencil Building: Art Studios
- Neidig-Garber Science Center: Biology Department, Chemistry Department, Physics Department
- Vernon and Doris Bishop Library
- Laughlin Hall Advancement Office: Alumni Programs, Annual Giving, Development, Leadership Gifts, Planned Giving
- Wagner House: Marketing and Communications

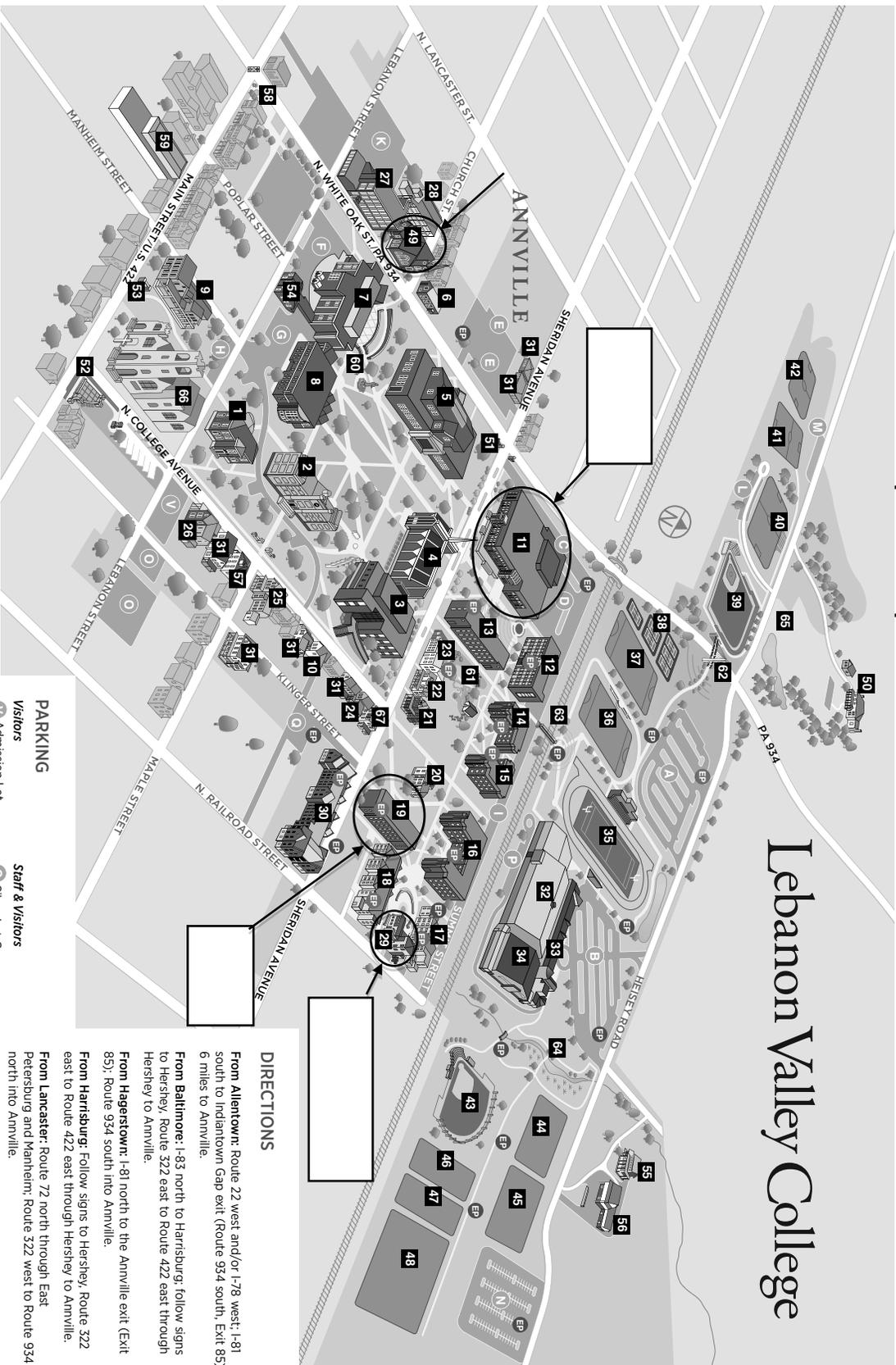
Residential Life Buildings

11. Allan W. Murd College Center: Career Services, LVC College Store, Conference Services, Dining Hall, Leedy Theater, Multicultural Affairs Office, Student Affairs Offices, Study Abroad Office, WLVC Radio, The Underground
12. Mary Capp Green Residence Hall
13. Vickroy Residence Hall
14. Keister Residence Hall
15. Hammond Residence Hall
16. Funthouser Residence Hall
17. Marquette Residence Hall
18. Dellinger Residence Hall
19. Silver Residence Hall
20. North College Residence Hall
21. Strover Health Center: Counseling Services, Health Services
22. Sheridan Avenue Residence Hall
23. Centre Residence Hall
24. Weimer Residence Hall
25. Friendship House Residence Hall
26. Reber Residence Hall
27. Derickson Hall A: Student Apartments
28. Derickson Hall B: Student Apartments
29. Yunas Commons
30. Stanson Residence Hall
31. Student Housing

Lou Sorrentino '54 Athletic Complex

32. Edward H. Arnold Sports Center: Indoor Track & Field, Intercollegiate Athletics, Pool, Recreational Facilities
33. Helman Center: Athletic Training Facilities, Classrooms, Fitness Center, Physical Therapy Program, Wellness Pool

Campus Map



Lebanon Valley College

DIRECTIONS

- From Allentown:** Route 22 west and/or I-78 west; I-81 south to Indiantown Gap exit (Route 934 south, Exit 85); 6 miles to Annville.
- From Baltimore:** I-83 north to Harrisburg; follow signs to Hershey; Route 322 east to Route 422 east through Hershey to Annville.
- From Hagerstown:** I-81 north to the Annville exit (Exit 85); Route 934 south into Annville.
- From Harrisburg:** Follow signs to Hershey; Route 322 east to Route 422 east through Hershey to Annville.
- From Lancaster:** Route 72 north through East Petersburg and Manheim; Route 322 west to Route 934 north into Annville.
- From New York City:** I-80 west or I-78 (Route 22) west to I-81 south to the Annville exit (Exit 85); Route 934 south into Annville.
- From Philadelphia:** Pennsylvania Turnpike west to exit 266; Route 72 north to Route 322 west to Route 934 north into Annville.
- From Pittsburgh:** Pennsylvania Turnpike east to exit 266; Route 72 north to Route 322 west to Route 934 north into Annville.
- From Reading:** Route 422 west through Lebanon into Annville OR Pennsylvania Turnpike west to exit 266; Route 72 north to Route 322 west to Route 934 north into Annville.
- From York:** I-83 north; Route 322 east; follow Route 422 east into Annville.

A complete list of directions and accommodations can be found at www.lvc.edu/admission/visit.

PARKING

- Visitors**
- V Admission Lot
 - A Red Lot A
 - B Red Lot B
 - K Silver Lot K
 - F Silver Lot F
 - N Gold Lot N
- Commuter/Part-time Students**
- I Green Lot I
 - Unrestricted
 - S Soccer/Baseball Lot L
 - M Soccer Practice Lot M
- Staff & Visitors**
- C Silver Lot C
 - D Silver Lot D
 - E Silver Lot E
 - G Silver Lot G
 - H Silver Lot H
 - O Silver Lot O
 - P Silver Lot P
 - Q Silver Lot Q

- EP Emergency Phone
- EL Blue Light and Emergency Phone

NEEPS 2013 – Brief Timetable:

THURSDAY – 5/30:

9:00 am to 12:00 pm – AEPS Meeting

1:00 pm to 3:00 pm – FEPS Meeting

3:30 pm – Meet to go to Hershey Park (bring your own car, money, & sunscreen)

FRIDAY – 5/31:

8:15 am to 9:00 am – Registration & Coffee

9:00 am to 9:30 am – Welcome by the President of the College & NEEPS President

9:30 am to 10:50 am – Session 1: Life History & Sociality

11:00 am to 12:40 pm – Session 2: Romance

12:50 pm to 2:00 pm - Lunch

2:10 pm to 3:30 pm – Session 3: Psychopathology & Jealousy

3:45 pm to 5:15 pm – Business Meeting

5:30 pm to 6:30 pm – Keynote Address by Paul Bingham & Joanne Souza

6:30 pm to 7:30 pm – Panel Discussion led by Geoffrey Miller & Holly Dunsworth

7:30 pm to 8:30 pm – Dinner

8:30 pm to 9:30 pm – Reception

Saturday – 6/1:

8:15 am to 9:15 am – Registration & Coffee

9:20 am to 10:40 am – Session 4: Sex

10:50 am to 12:10 pm – Session 5: Morality

12:30 pm to 1:45 pm – Lunch

2:00 pm to 3:50 pm – Poster Session

4:00 pm to 5:20 pm – Session 6: History of Evolutionary Psychology

5:30 to 6:30 pm – Break

6:45 pm to 8:00 pm – Banquet

8:00 pm to 9:00 pm – Keynote Address by John McNeil

Sunday – 6/2:

10:10 am to 11:30 am – Session 7: Sex Differences & Distance Running

NEEPS 2013 – Full Program:

THURSDAY – 5/30:

9:00 am to 12:00 pm – **Annual meeting of the Applied Evolutionary Psychology Society (AEPS)**

1:00 pm to 3:00 pm – **Annual meeting of the Feminist Evolutionary Psychology Society (FEPS)**

3:30 pm – Meet to go to Hershey Park (bring your own car, money, & sunscreen)

FRIDAY – 5/31:

8:15 am to 9:00 am – Registration & Coffee

9:00 am to 9:30 am – **Welcome by the President of the College & NEEPS President**

9:30 am to 10:50 am – **Session 1: Life History & Sociality**

- **Immediate Survival Focus: Dichotomous Thinking as a Life History Mechanism and Risk Factor for Substance Abuse**

George B. Richardson (University of Cincinnati; george.richardson@uc.edu), Chia-Liang Dai (University of Cincinnati), Ching-Chen Chen (University of Cincinnati), Patrick H. Hardesty (University of Louisville), & Michael Brubaker (University of Cincinnati)

According to Richardson and Hardesty (2012), immediate survival focus (ISF) in cognitive processing, manifested as dichotomous or black-and-white thinking, translates habitation in harsh and unpredictable environments into fast life history traits such as substance use. In this study, we tested this theory using structural equations modeling to examine the functioning of dichotomous thinking among 418 undergraduate students. We hypothesized that among students of low socio-economic status (SES), dichotomous thinking would interact with reward and threat sensitivity to predict higher

levels on fast life history traits, including substance use and preference for greater numbers of sexual partners, through impulsivity. Overall, results were consistent with the theory that drove the study.

➤ **Short-term sex ratio manipulations affect men's self-reported and perceived life history strategies**

Carey J. Fitzgerald (Oakland University; fitzgera@oakland.edu), Daniel J. Kruger (University of Michigan), Chelsea R. Loeffler (Oakland University), Todd K. Shackelford (Oakland University), & Viviana Weekes-Shackelford (Oakland University)

We manipulated the sex ratio of interacting groups of four undergraduate students and examined the effects on life history measures. Groups were female-biased (3 females, 1 male), male-biased (1 female, 3 males), and sex-balanced. Participants completed pre-task questionnaires containing half of the following scales: Sexual Attitudes, SOI, Experiences in Close Relationships, Mini-K, and ratings of other participants on parenting effort and mating effort. Participants sat together at a table and played the board game Dirty Minds for 20 minutes and then played a ball-passing task without using their hands. Afterward, participants separated and completed the second half of the scales. Data collection continues, though preliminary results support our hypotheses. Males in the male-biased condition reported the slowest life history in post-task measure, followed by males in the sex-balanced condition, and males in the female-biased condition reported the fastest life history. Ratings by other participants also followed this pattern.

➤ **Life history variation influences the reported ideal structure of sexual intercourse**

Daniel J. Kruger (University of Michigan; kruger@umich.edu), Susan M. Hughes (Albright College), Carey J. Fitzgerald (Oakland University), & Austin J. Jeffery (University of Michigan)

Research based on evolutionary theory documents individual differences in sociosexuality based on one's sex and life history. Previous studies show that men are more likely to initiate kissing before sex, whereas women are more likely to initiate kissing after sex. Women also give more importance to intimacy and bonding after sex than do men. In the current study, we found that women asked to design their ideal sexual experience desired more time for kissing and other affection both before and after intercourse, whereas men desired more time in full sexual intercourse. Those with faster life history, as assessed by multiple indicators, allocated less time to kissing and other affection after intercourse. Those with less restricted sociosexuality also allocated less time for time kissing and other affection before sex. Women reported that their partner was usually first both to separate company and fall asleep first after sex.

➤ **A General Factor of Sociality in Groups: The Coordination of Cooperation and the Mechanisms that Maintain It**

Daniel O'Brien (Harvard University; daniel_obrien@radcliffe.harvard.edu)

Prosociality (e.g., cooperation) varies across groups, and its long-term perpetuation is dependent on three things: 1) cohesion between members, 2) the enforcement of prosocial norms, and 3) the transmission of prosocial norms across generations. This suggests the evolution of a general factor of sociality that varies across human societies. The current study tests this concept in Boston, MA, comparing social patterns across neighborhoods (defined as Census block groups, N = 542). Confirmatory factor analysis found that eight survey scales reflecting the three proposed components shared a single governing factor: 1) density of social networks, social cohesion, reciprocity; 2) social control, reporting of crime, relationships with police, attitudes toward domestic abuse; 3) intergenerational closure. This factor was distinct from perceived and objective measures of disorder and crime. This provides evidence for the role of multilevel selection in the evolution of prosociality, and has implications for the further study of group-level functioning.

11:00 am to 12:40 pm – Session 2: Romance

➤ **A Conjoint Approach to Human Mate Preferences**

Justin K. Mogilski (Bucknell University; jkm025@bucknell.edu) & Joel T. Wade (Bucknell University)

Recently, some researchers have presented evidence suggesting that evolutionarily predicted sex differences in mate preferences do not persist during actual mate choice decisions. To identify temporal factors that may have contributed to these findings, we employed a type of analysis never previously used to investigate mate preferences: conjoint analysis. Nineteen profiles of potential long-term mates varying across five mate attributes were presented to 193 participants. Participants ranked the profiles by their desire to initiate a long-term relationship with the individual depicted. Conjoint analysis was used to generate importance values for each of the five attributes. Participants also rated these five attributes individually for importance in an ideal long-term mate. Evolutionarily predicted sex differences were found for ratings of individual attributes; however, none were observed for importance values calculated from conjoint rankings. These results are interpreted from an evolutionary perspective whereby temporal factors inherent in conjoint analysis influence mate choice decisions.

➤ **Women and Men's Bathroom Graffiti: An Investigation into Evolved Mating Preferences**

Sarah Radtke (Ryerson University; sradtke@ryerson.ca) & Maryanne Fisher (Saint Mary's University)

Despite the fact that graffiti is one of humanity's oldest forms of art, there has been minimal evolutionary-focused investigation on its content. In this study, we examined the themes that occur in women's and men's bathroom graffiti with the goal of ascertaining the types of information that is shared in this medium. We specifically were interested in evolved mating preferences, and documented what women and men wrote about the same and opposite sex. We examined several types of establishments including bars, nightclubs, family restaurants and universities. The most prominent themes in women's bathrooms are sexual relationships, mate competition, alliances, and same sex behavior (e.g. if you trust your boyfriend trust that I've f**cked him). Men's bathroom graffiti was different and consisted mostly of "tagging." Tagging usually takes the form of a name or signature symbol. We discuss what these major differences in bathroom graffiti may mean from an evolutionary perspective.

➤ **Perceptions of Romantic Partners Part II**

Rebecca L. Newmark (SUNY New Paltz; rebecca.newmark@gmail.com), Melvin M. Philip (SUNY New Paltz), Glenn Geher (SUNY New Paltz), Jessica Fell (SUNY New Paltz), & Laura Johnsen (Binghamton University)

In study I, we found that males rated their former romantic partners (FRPs) as being more attractive than females rated their FRPs. Also, females presented a greater change in their current versus FRP rating change of body attractiveness than males did. We propose the back pocket approach as a plausible explanation interpreting both findings in the current study. Males reported that their current romantic partner (CRP) has a more attractive face than their FRP while females reported that their CRP has a more attractive face and body than their FRP. Also, while males rated their CRPs as more attractive than their FRPs, this attractiveness gap was larger for females. The presentation will consist of data speaking to whether males may partly rate their FRPs as attractive (relative to ratings by females) as a way of psychologically keeping their past romantic partners as potentially available in the future (the back pocket approach).

➤ **Are there sex differences in relationship reconciliation behaviors?**

T. Joel Wade (Bucknell University; jwade@bucknell.edu), Justin Mogilski (Bucknell University), & Rachael Edelman (Bucknell University)

Evolutionary psychological research indicates there are sex differences in mate retention behaviors (Buss, 1998; Buss & Shackelford, 1997). However, no evolutionary psychological research has examined whether there are sex differences in the behaviors used to reconcile with a partner after a fight/spat. The present research examined this issue in 2 studies. Study 1 addressed whether there are sex differences in the reconciliation actions implemented after a fight/spat with a mate. Study 2 addressed

the perceived effectiveness of the reconciliation acts from Study 1. Men were expected to nominate actions related to emotional commitment while women were expected to nominate actions indicating sexual access (Study 1). Men were also expected to rate actions involving sex as more effective while women were expected to rate acts involving emotional commitment as more effective (Study 2). The results were partially consistent with the hypotheses for Study 1 and consistent with the hypotheses for Study 2.

➤ **Is A Broken Heart Adaptive?**

Craig Eric Morris (Binghamton University; cmorris2@binghamton.edu), Chris Reiber (Binghamton University), & Emily Roman (Binghamton University)

Post-Relationship Grief is the suite of physical and emotional trauma—and concurrent behaviors—suffered and expressed following the termination of a romantic relationship. Evolutionary predictions regarding this behavior pattern can be drawn from existing biological sex-differences research, most notably, the theoretical models of Donald Symons and David Buss. The current research program tests a series of evolutionarily informed predictions that include these biological pair-bond predictions, as well as a more sophisticated set of variables related to multiple cultural, temporal, and sexual ecologies. By extending the existing model into a new theoretical paradigm, a biocultural model, we can address multiple relevant research queries. To address these queries, we distributed two online surveys. To date, we have received over 6000 responses from participants in 90 countries. An overview of the summary findings will be presented along with a discussion of particularly intriguing trends regarding self-reported sexual identity.

12:50 pm to 2:00 pm - Lunch

2:10 pm to 3:30 pm – **Session 3: Psychopathology & Jealousy**

➤ **Through a Mirror, Darkly: Dark Triad Women and their sexual strategies**

Gregory L.K.F. Carter (Durham University, UK; g.l.k.carter@durham.ac.uk) & Anne C. Campbell (Durham University, UK)

The Dark Triad (sub-clinical narcissism, Machiavellianism and psychopathy) has repeatedly been reported to be present to a greater prevalence in men than women. However, Dark Triad women do exist, and study of this trait constellation in women has been neglected. In an attempt to redress this, male and female high Dark Triad scorers from a large (n = 899) national sample were compared on a range of measures representing domains of mating style, lifestyle orientation and personality. Although, among low Dark Triad scorers, sex differences replicated those reported widely in the literature, in high Dark Triad men and women, these sex differences were absent - most

notably, in respect of attitudes towards sex and mating. Results are discussed in terms of evolutionary theory and mating strategies, and provide evidence that the notion of the Dark Triad as facilitating a sexual strategy that is exclusively beneficial for men needs revision.

➤ **Crossing the Line: When does having “Just a Friend” become Potential Infidelity in Extrapair Relationships?**

Jack Demarest (Monmouth University; demarest@monmouth.edu) & Joanna Raymundo (Monmouth University)

This study examined how imagining your romantic partner interacting with a friend of the opposite sex in various scenarios borders on potential infidelity. 84 college students (35 M; 49 F) indicated the degree of acceptability, jealousy, insecurity, and trust they anticipated when envisioning their current mate in seven scenarios, none of which involved physical intimacy. Results showed a clear distinction between activities deemed acceptable and those not acceptable. It was also found that women rated the scenarios as more unacceptable and felt greater distrust, insecurity and jealousy than men, especially if they were currently in a long term relationship. However, the hypothesis that men and women who are in a long term relationship would have more trust in their significant other as opposed to men and women who are in a short term relationship was not supported.

➤ **Non-verbal Submissive Behavior and its Relation to Mood and Personality**

Edward D. Sturman (SUNY Plattsburgh; estur001@plattsburgh.edu) & Kylie M. McKeighan (University at Albany)

In the present study we developed a non-verbal measure of confident and submissive behavior and explored its relation to personality and mood variables. Inspired by the ethological literature, we examined confident behaviors and gaze aversion in relation to self-reported involuntary subordination, self-esteem, depressive symptoms, and extraversion. The sample consisted of 45 undergraduate psychology students (18 male, 27 female) who completed the self-report measures and then underwent a videotaped interview. / Confident behaviors were significantly related to higher extraversion and self-esteem and lower levels of depressive symptoms and involuntary subordination. Submissive behaviors were significantly correlated with self-reported depressive symptoms and involuntary subordination. In males, involuntary subordination was strongly correlated with a downward gaze and the proportion of time that males looked at the interviewer. The results of the study suggest that objective measures, derived from evolutionary theory, may have some utility in identifying psychopathology as well as protective mechanisms.

➤ **Unnecessary work: Contrafreeloading in quinpirole-treated rats as a model of compulsive checking**

Michael J. Frederick (Hamilton College; mjfreder@hamilton.edu)

Contrafreeloading occurs when animals work for rewards that are freely available. The benefit derived from this unnecessary work is information about resources. The dopamine agonist quinpirole increases contrafreeloading in rats, which may be a useful animal model of compulsive checking. Checking the status of a resource is an adaptive behavior, and the optimal frequency of checking depends on the rate of changes in the environment. Thus, the high frequency of checking (i.e. contrafreeloading) in quinpirole-treated rats may be beneficial when new reward contingencies are introduced. Rats were treated daily with quinpirole or vehicle and allowed to consume free water or press either of two levers to earn water. Quinpirole increased rates of contrafreeloading. Next, the rats were required to alternate between two levers to earn water. Quinpirole-treated rats learned this new 'forced switch' task more quickly, suggesting that a high rate of checking was advantageous when reward contingencies were altered.

3:45 pm to 5:15 pm – Business Meeting

5:30 pm to 6:30 pm – **Keynote Address: Paul Bingham & Joanne Souza**

➤ **Humans Uniqueness as a Product of Natural Selection: Understanding our Psychology, History, and the Contemporary World**

Paul M. Bingham (Stony Brook University; pbingham@notes.cc.sunysb.edu) & Joanne Souza (Stony Brook University)

Our talk will explore diverse scientific and pragmatic implications of social coercion theory, explaining how our pre-human ancestors were transformed by natural selection in a way that allowed cost effective management of the non-kin conflict of interest problem for the first time in the history of the planet. This capacity, in turn, produced the Homo lineage and its unique biology in straightforward ways, including our enlarged brains (and life history redesign), sophisticated language, and our species-typical ethical psychology. Moreover, our unprecedented capacity for coercive management of conflicts of interest produced our novel social behavior as the “pedagogical,” “economic,” and “democratic” animal. Common errors in understanding ultimate causation of our social behavior as a result of the evocative subjective power of our proximate psychology will be discussed. Finally, increased human adaptive sophistication throughout our history and through the present moment is explained as a transparent product of our ancient biology, on social coercion theory. Among diverse historical data that now come into sharp focus are the emergence of both democratized and hierarchical, male-dominated societies and their corresponding humanity/inhumanity and economic productivity/poverty. Understanding natural

selection and social coercion theory can shed powerful new light on the ultimate causes of the economic and political problems we face, including productive and effective insights into potential solutions.

6:30 pm to 7:30 pm – **Panel Discussion led by Geoffrey Miller & Holly Dunsworth**

7:30 pm to 8:30 pm – Dinner

8:30 pm to 9:30 pm – Reception

Saturday – 6/1:

8:15 am to 9:15 am – Registration & Coffee

9:20 am to 10:40 am – **Session 4: Sex**

➤ **Do Parents Attempt to “Daughter-guard” Through “Birds and Bees” Talks?**

Barry X. Kuhle (University of Scranton; BarryKuhle@gmail.com), Chelsea A. Cooper (University of Scranton), Andrew J. Merkle (University of Scranton), Nicole A. Pepe (University of Scranton), Aida Ribanovic (University of Scranton), Arielle L. Verdesco (University of Scranton), & Tiffany L. Wettstein (University of Scranton)

The daughter-guarding hypothesis posits that “parents possess adaptations with design features that function to defend their daughter’s sexual reputation, preserve her mate value, and protect her from sexual victimization” (Perilloux, Fleischman, & Buss, 2008, p. 219). One way that parents may attempt to guard their daughters’ sexualities is by conveying to them certain messages about sex. To explore this possibility, we administered an online questionnaire that tested sex-linked predictions derived from the daughter-guarding hypothesis about the content of parent-child communication about sex. Participants were undergraduates from a Northeastern U.S. Catholic university (n = 226) and young adults recruited through Facebook (n = 391). As predicted, daughters were more likely than sons to recall receiving messages from their parents that (a) emphasized being discriminating in allocating sexual access, (b) emphasized abstinence, and (c) encouraged them to deter, inhibit, and defend against their partners’ sexual advances.

➤ **One size does NOT fit all: Scripting in different sexual encounters**

Jennifer A. Shukusky (Rutgers University; jas819@scarletmail.rutgers.edu)

There is a great deal of evidence supporting a sexual script that guides intimate behavior between individuals. People, however, engage in many different types of relationships including hookups, one-night stands, friends with benefits, short-term relationships, and long-term relationships. While research shows that people discriminate between their relationships based on level of commitment, exclusivity, and emotion, little research has been done to explore how people differentiate between sexual partners through their behaviors. In the current study, it was predicted that the sexual script would vary across different types of relationships. People were expected to engage in different sexual activities with different sexual partners. Emerging adults (n=273) completed an online survey about their relationship experiences and desires. Sex differences were found in desires to engage in a greater number of sexual behaviors, to have casual relationships, and to have sexual intercourse in casual relationships, consistent with evolutionary theory.

➤ **The phenomenology of the female orgasm: Support for the pair-bond hypothesis**

John R. Wheatley (Penn State University; jrw5492@psu.edu), Ashley P. Matz (Penn State University), Lisa L.M. Welling (Oakland University), Rodrigo A. Cardenas (Penn State University), Khytam Dawood (Penn State University), Alex K. Hill (Penn State University), & David A. Puts (Penn State University)

A hotly debated question in human sexuality concerns the possible adaptiveness of the female orgasm. We adopt a novel approach to this question by focusing on the phenomenology of women's orgasms. The subjective quality of orgasms, as measured by the duration, intensity, and positive feelings associated with them, was found to be highly significantly related to women's evaluation of their partners' attractiveness, masculinity, and dominance. However, women's orgasm quality was found to be unrelated to their partners' characteristics as assessed by independent raters. Orgasm quality was also unrelated to objective morphometrics of their partners' facial masculinity and fluctuating asymmetry, as well as their size and strength. These results suggest that female orgasm quality may be more closely related to a woman's idiosyncratic perception of her partner than his objectively measured physical attributes. These results are discussed in light of competing hypotheses of the adaptive function of the female orgasm.

➤ **Semen exposure, contraceptive use, and women's perceptions of their partners**

Claire A. Nicolas (Hollins University; cnicolas@hollins.edu) & Richard L. Michalski (Hollins University)

Using samples of community and college students and using responses to high risk or low risk semen exposure scenarios, women mated to more attractive partners exhibited a greater willingness to expose themselves to a potential long-term partner's semen and exhibited a greater frequency of orgasm with their in-pair partners. When examining actual semen exposure and contraceptive use with their current partners, however, we documented that women mated to more attractive partners were less likely to engage

in behaviors that lead to a greater probability of pregnancy. The contrasting findings between the relationship of partner attractiveness and hypothetical scenarios and actual pregnancy risking behaviors suggest a role of partner coercion in actual sexual behaviors. The discussion addresses this possibility along with limitations and directions for future research.

10:50 am to 12:10 pm – **Session 5: Morality**

➤ **Assessing Prinz's Non-evolutionary Account of Morality**

Stephen G. Morris (College of Staten Island/CUNY; stephen.morris@csi.cuny.edu)

I argue that the non-evolutionary account of morality provided by Jesse Prinz fails to provide a better explanation of the origins of the human moral faculty than the prevailing evolutionary account. While most contemporary ethicists seem willing to accept the evolutionary account of morality, philosopher Jesse Prinz has provided what is probably the most in-depth attack of it to date. In defending the evolutionary account of morality against Prinz's attacks, I argue that whereas the evolutionary account can offer a unified set of explanations for a variety of phenomena that are associated with the human moral faculty, Prinz's non-evolutionary account can only work by positing ad hoc explanations for the same phenomena. I conclude that the evolutionary account constitutes a superior empirical explanation for the moral faculty than does Prinz's culture-based account insofar as it exhibits the kind of simplicity and elegance that we expect of an acceptable empirical theory.

➤ **The Moral Brain as Content and Context for Educational Innovation in Southwestern Madagascar**

Dustin Eirdosh (University of Toliara, Madagascar; Dustin@edufutures.net)

Development challenges facing the communities of Southwestern Madagascar are numerous, onerous, and interconnected in nature. For many development professionals in the region; education is viewed as a core engine for generating long-term, positive change within these communities. The question remains, however, what type of education? In the fall of 2012, the Department of Psychology at the University of Toliara became the first University of an African Nation to become a Level I member of the international EvoS Consortium for Evolutionary Studies. During the first half of 2013; an introductory course in Social & Evolutionary Neuropsychology has been developed and implemented for incoming Undergraduates from multiple disciplines. Additionally, we have begun to integrate a Science, Religion, & Public Policy Study Group within advanced English Language programs. The current progress of these projects is reported; as well a discussion of directions for future research and applications.

➤ **What are the Evolutionary Foundations of Moral Cognition?**

Jordan N. Kiper (University of Connecticut; jordan.kiper@uconn.edu)

This article discusses how the vantage point of evolutionary psychology can break the current stalemate in moral psychology when it comes to the question of moral cognition. It argues that the three leading theories on moral cognition – moral foundations theory, universal moral grammar, and the CAD hypothesis – are compatible, because they identify different proximate mechanisms, computational domains, phenotypic variants, and adaptive behaviors. It then shows that a multiple systems approach to moral cognition can be rationalized by evolutionary psychology and tested by using the methods of both cognitive science and behavioral ecology. The article concludes by defending three sets of moral computations that, in light of human evolution and natural selection, might appropriately be called Darwinian virtues.

➤ **The Four Horsemen of Morality**

Kilian J. Garvey (University of Louisiana; garvey@ulm.edu)

How and why do morals vary across the political spectrum? According to its founders the Moral Foundations Theory was developed to describe moral differences across cultures. The focus on individualizing morality (harm avoidance and fairness) discussed in middle class American university towns ignored, in their words, the equally legitimate focus on binding morality (ingroup loyalty, respect for authority, and attention to purity of mind and body) practiced in other parts of the world and in other historical eras. It will be argued here that differences in moral cognition are largely the adaptive result of variation in environmental threats. When a population inhabits a region free of war, famine, pestilence, and imminent death, focus may be shifted from maintaining group cohesion to protecting individuals. Analysis of two studies found that absent environmental threats (which should “allow” individualizing morality) and controlling for SES individuals with higher disgust sensitivity and anxiety proneness, and lower tolerance of ambiguity rated binding morality as more relevant than individualizing.

12:30 pm to 1:45 pm – Lunch

2:00 pm to 3:50 pm – **Poster Session**

4:00 pm to 5:20 pm – **Session 6: History of Evolutionary Psychology**

➤ **Evolutionary Ramifications of the Hunter-Gatherer’s Sense of Place**

Barty A. Thompson (Albright College; bthompson@alb.edu)

This presentation examines sense of place among hunter-gatherers. An effort was made to identify ethnographies, which provided enough data about overall land-use such that variables related to sense of place could be determined. Twenty-five hunter-gatherer groups from different areas of the world were examined, and their properties associated with sense of place were ranked and assessed from an evolutionary perspective. The vast majority of hunter-gatherers exhibited a sense of place. Concerning known constructs of sense of place, spatial identity was the most salient and was closely associated to spatial attachment, whereas spatial dependency was less connected. While there was evidence of multiple senses of place among hunter-gatherers, social as opposed to ecological variables were more significant. The hunter-gatherer data appears to indicate that sense of place operates to identify us with a particular social group and makes up a component of human coalitional psychology.

➤ **Learning from evolutionary historians**

John H. Hinshaw (Lebanon Valley College; hinshaw@lvc.edu)

Historians have been late adapters of evolutionary theory. This talk helps to explain why that is the case. It also provides an overview of the small but lively group of Darwinian historians that analyze the history of the environment, social history, and the expansion of European colonialism. Historians like Edmund Russell have explained how people have reshaped the physical environment and become a factor in the selection of species. John McNeill has shown how European colonization spread diseases such as malaria and yellow fever. The fact that local populations developed higher resistances to them shaped the dynamics of wars of conquest and independence. Evolutionary history remains part of the humanities, but provides important insights into evolutionary processes.

➤ **The Lost Evolutionary Psychologist: B.F. Skinner and His Darwinian Roots**

Jon G. Sigurjonsson (City College, CUNY; jon.sigurjonsson@gmail.com)

Evolutionary psychology's scientific goal is to map out the universals of human nature. This goal has largely been accomplished and evolutionary psychology has been able to explain a wide variety of human behavior. In order to explore the applied capacity of evolutionary psychology, steps must be taken to move the macro analysis to a micro level. This micro level could include detailed memetic analysis as well as adaptation in groups and individuals. One branch of psychology that has not been considered evolutionary psychology is the radical behaviorism of B.F. Skinner. Recently, behaviorism has seen resurgence in the interest in the status of behavioral explanations in the evolutionary explanatory framework. The purpose of this talk is to introduce the audience to this branch of behaviorism, to review how it explains neural and group

selection and if, and then how, this branch of behaviorism could be made compatible with evolutionary psychology.

➤ **The Psychology of Culpability in the 21st Century**

Phillip A. Loatman (Rutgers University; Loatmanp@gmail.com)

Recent advances in psychology and biology reveal that behavior is determined by physical brain operations and brain chemistry. Bad brain wiring, over stimulation of brain regions, head trauma, or traumatic experiences can cause abnormal behavior. This new understanding of the brain, however, has yet to be fully integrating into the law. Some researchers argue that these advances will have a transformative effect on culpability and the judicial system. This study seeks to understand how individuals assess culpability across different scenarios in a mock criminal murder case. Participants were asked to assess the responsibility of the murderer and to recommend a sentence to the judge in one of the following conditions: the murderer (1) has a brain tumor, (2) was a victim of childhood sexual abuse, (3) was under the influence of recreational drugs, (4) was physically abused by a spouse, or (5) has no problems (control).

5:30 to 6:30 pm – Break

6:45 pm to 8:00 pm – Banquet

8:00 pm to 9:00 pm – **Keynote Address: John McNeil**

➤ **When Mosquitoes Made History: The Greater Caribbean, 1600-1900**

John McNeil (Georgetown University; mcneillj@georgetown.edu)

Can comparatively unintelligent arthropods make history? In the right circumstances, yes they can. People inadvertently created such circumstances in the Caribbean and American South when building societies and economies on slave plantations. The slave trade brought new pathogens and vectors to the Americas, and plantations and port cities provided good habitat for both. Mosquito-borne disease, chiefly yellow fever but malaria as well, powerfully affected settlement patterns, imperial warfare, and revolutionary struggles in the Greater Caribbean until the early 20th century. This talk explains the ecological changes that ushered in a new disease regime in the 17th century and offers examples of the historical impact of mosquito-borne disease including the final campaigns of the American Revolution.

Sunday – 6/2:

10:10 am to 11:30 am – **Session 7: Sex Differences & Distance Running**

➤ **Ankle Morphology Good for Running Down Prey Predicts Promiscuity in Mating Orientation**

Gordon Bear (Ramapo College; gbear@ramapo.edu), Jovan Naidoo (Ramapo College), & Leslie Migliaccio (Ramapo College)

Shorter heels enhance endurance running. Across young 23 men, shorter heels co-occurred with higher scores on a questionnaire assessing short-term mating orientation (e.g., “Sex without love is okay”); $r = -.62$ by one measure of the heel, $-.47$ by another. With long-term mating orientation the correlation was nil. Also nil were correlations between the heel and scores on questionnaires assessing self-reported counts of actual sexual partners and one-night stands; narcissism; risk-taking; endorsement of the norms of the male sex-role; and ad-hoc items assessing desire for children, willingness to marry a sexual partner who becomes pregnant, and approval of fidelity in romantic relationships. Could the explanation lie in the evolution of adaptations for endurance running in the genus *Homo* 2 mya?

➤ **Masters Track Participation Reveals a Stable Sex Difference in Competitiveness, 1988-2012**

Robert O. Deaner (Grand Valley State University; robert.deaner@gmail.com) & Michael P. Mead (Grand Valley State University)

Men are more likely than women to engage in direct competition, but it is unclear if this reflects social structural conditions or evolved predispositions. These theories can be addressed by testing if the sex difference in sports competitiveness has decreased in the U.S., a society where social roles have converged. Study 1 assessed participation and relatively fast performances by masters runners (40-74 years) at road races and track meets. Fast performances occurred twenty times more often at track meets than at road races, indicating that track meet participation is a valid indicator of competitiveness. Study 2 used yearly rankings lists to test whether the sex difference in track participation decreased from 1988 to 2012. Men participated three times as often as women and there was no evidence for a reliable decrease in any event or age group. Therefore, the sex difference in competitiveness partly reflects evolved predispositions.

➤ **That sounds attractive: The sexual selection of music**

Katherine E. Eskine (Xavier University; keskine@xula.edu)

Music may be adaptive because it increases individuals' reproductive success through sexual selection. Thus, music may contribute to mating opportunities by aiding in mate choice or by evolving as an honest signal of fitness. There remains some debate in the field as to what fitness music may be exhibiting. The present research investigates if music is (or has recently been) sexually selected for and if it is an honest signal of fluid or emotional intelligence. Using samples of undergraduates, several planned tasks examined the effects of sexual/romantic arousal on the production, aptitude, and subjective rating of music. Results from the first study indicated that being primed with long-term mating increased displays of musicality in both sexes; however, when primed with short-term mating, only males displayed an increased performance in musical production. Preliminary results from our second study replicated these findings and also revealed a meaningful association between emotional intelligence and musical production, suggesting that musical production may be showcasing a fitness for emotional intelligence.

➤ **Exploring the use of big data for human color preference research**

Casey S. McGlasson (Indiana University–Bloomington; cmcglass@indiana.edu), Jared Lorince (Indiana University–Bloomington), David J. Crandall (Indiana University–Bloomington), & Peter M. Todd (Indiana University–Bloomington)

The study of color preferences has long been an active area of research in psychology. Researchers disagree about the ultimate and proximate causes of color preferences, as well as the ultimate and proximate causes of differences in color preference between groups, such as males and females. We evaluate the claim that sex differences in color preference exist using a novel implicit method. We propose a data-mining approach using Flickr, an online photo-sharing system. By analyzing the color spectra of photographs that specific populations of interest choose to upload, we can assess color preferences in an implicit (behavior-based) rather than explicit (ratings-based) manner and on a much larger scale than can be done in a laboratory context. Using this method, we find strong sex differences for the predominant reddish and bluish hues, with women uploading more photos with more reddish pixels and men uploading more photos with more bluish pixels.

Poster Abstracts:

1. Frequency, Intensity, and Expression of Post Relationship Grief in India and the United States

Emily Roman (Binghamton University; rroman.emily@gmail.com), Craig Eric Morris (Binghamton University), & Chris Reiber (Binghamton University)

Post-Relationship Grief is the suite of physical and emotional distress—and concurrent behaviors—suffered and expressed following the termination of a romantic relationship. Evolutionary predictions regarding this behavior pattern can be drawn from existing biological sex-differences research, most notably, the theoretical models of Donald Symons and David Buss. The current research program tests a series of evolutionarily informed predictions that include these biological pair-bond predictions, as well as a more sophisticated set of variables related to multiple cultural, temporal, and sexual ecologies. By extending the existing model into a new theoretical paradigm, a biocultural model (BCM), we can address multiple relevant research queries. An essential in addressing PRG as a human universal is to compare experiences cross-culturally. In this poster, we will present the frequency, intensity, and expression of PRG in India and the USA—two populations with disparate cultural mating structures—as reflected by the survey responses of over 3000 participants.

2. Are You Smarter than a Personal Ad?: An Ability-based Measure of Mating Intelligence

Briana R. Tauber (SUNY New Paltz; btauber25@hawkmail.newpaltz.edu), Glenn Geher (SUNY New Paltz), Daryn Bleach (SUNY New Paltz), Jamille Bore (SUNY New Paltz), & Raina Hafftko (SUNY New Paltz)

Geher and Kaufman (2007) were the first to devise a measurement of Mating Intelligence (MI). While the MI construct is still in its infancy, their self-report MI scale has been used in a handful of studies whose goal is to further understand human mating behavior. This research aims to create a valid ability-based measure of MI. Two separate studies will be conducted; the first will require participants to create personal advertisements seeking a mate, and the second will require another group of participants to rate the personal ads created in Study 1 on various attributes (e.g., attractiveness, authenticity, IQ, successfulness in attracting a mate). Together, these studies will provide us with greater understanding of the MI construct. It will allow us to see individual differences in the cross-sex mind reading and mate-deception domains of MI originally developed by Geher and Kaufman (2007), grasp a better understanding of human mating behavior, and further validate the MI construct as a whole.

3. Changes in Women's Perceptions of Other Women across the Ovulatory Cycle: Evidence for Intrasexual Competition?

Amanda E. Guitar (SUNY New Paltz; mguitar16@gmail.com)

Research has found that heterosexual women are particularly sensitive to markers of maleness during their fertile phase, while lesbians at high fertility are more sensitive to markers of femaleness. These results suggest that women at high fertility may be more sensitive to sexually-relevant cues as opposed to reproductively-relevant cues. The current study examines this issue by having women of varying sexual preferences complete two implicit association tasks (IAT) while they are in either a high-conception risk phase (i.e., follicular) or low-conception risk phase (i.e., luteal). The first IAT assesses attitudes towards cues of sexually-relevant stimuli (images of provocatively or conservatively dressed women) and the second IAT examines cues of reproductively-relevant stimuli (images of women who are or are not visibly pregnant). It is predicted that heterosexual women at high fertility will have the highest negative biases towards the provocatively dressed and non-visibly pregnant images than any other group.

4. Inequality-Aversion aversion: Human punishment is not motivated by disadvantageous-inequality aversion.

Jesse Marczyk (New Mexico State University; jmarczyk87@gmail.com)

Previous research by Raihani & McAuliffe (2012) has suggested that people's desire for punishment is driven predominately not by the reciprocity, but rather inequality aversion. However, their research confounds reciprocating losses and inequality aversion, as generating losses was the only way to generate inequality. The current research removes this confound, by allowing inequality to be created in a way that does not directly impact participants either negatively or positively. The results demonstrate that inequality aversion per se does not drive the motivation for punishment, and the conceptual role of inequality in punishment decisions ought to be rethought.

5. Does it matter who pulls the switch? Perceptions of intentions in the Trolley Dilemma

Jesse Marczyk (New Mexico State University; jmarczyk87@gmail.com)

Humans face the adaptive problem of predicting the likely behavior of those they interact with. One means through which people try to predict the behavior of others would be through perceptions of their intentions; what goals others seek to achieve through their behavior. Unfortunately for perceivers, intentions are not readily observable in the same way that physical traits like eye color are; rather intentions need to be inferred from other cues. One of those cues might be perceptions of who benefits and suffers from an act. When reacting to a Trolley Dilemma, holding the act (pulling a

switch) and the outcome (5 live, 1 die) constant, the payoff for the person who pulls the switch matters when it comes to moral judgments.

6. Women on Hormonal Contraceptives: A Different World?

Rebecca L. Newmark (SUNY New Paltz; rebecca.newmark@gmail.com), Glenn Geher (SUNY New Paltz), & Melvin M. Philip (SUNY NewPaltz)

Normally cycling females experience natural cyclic shifts in various traits. When women use hormonal contraception (HC), these natural cyclical changes are no longer present. Many physical differences between HC users and non-users have been examined. However, far fewer psychological and behavioral traits that are likely associated with hormonal contraceptive use have been studied. Our goal is to examine dispositional and behavioral traits that are affected by HC use. The variables to be examined include life-history strategy, infidelity, sociosexuality, intrasexual competition, female social-networking, and risk-taking behavior. The broad prediction is that a lack of ovulation will lead to a higher proportion of time in a state of long-term mating. Thus, women on HC are predicted to show markers of a relatively slow life history and low levels of sociosexuality, coupled with low levels of both intrasexual competition and risky behavior, when compared to naturally cycling females.

7. The relationship between premenstrual syndrome and sexual preferences

Ashley N. Peterson (Binghamton University; apeter12@binghamton.edu), Chris Reiber (Binghamton University), & Glenn Geher (SUNY New Paltz)

Premenstrual Syndrome (PMS) is a psycho-medical condition experienced by reproductive-aged women worldwide (Severino & Moline, 1989) in both developed and developing nations (Halbreich et al., 2007). Reiber (2008, 2009) proposed an evolutionary model whereby PMS is a byproduct of the other menstrual cycle patterns “[and] results from the cessation of cyclic evolutionarily adaptive, heightened, positive states that [occur] ...during the fertile phase of the menstrual cycle,” (2009, p. 12). However, women do not find themselves in reproductively favorable conditions all the time and, thus, may experience symptoms of PMS during the fertile phase of the menstrual cycle, which act to signal it is not a good time to reproduce. The current study will examine differences in sexual preferences between pre-ovulatory women and post-ovulatory women and their relationship to PMS symptom severity. It is expected that a women who pre-ovulatory will indicate liking vaginal sex more than women who are post-ovulatory.

8. The effects of sex ratio on the frequency of violent sexual crime in human populations

Elan A. Abreu (SUNY New Paltz; elanabreu@yahoo.com)

Relative to females, the males of many mammalian, avian, arthropod, and piscine species are often more sexually aggressive—a trait which is evidenced to have been influenced by intrasexual competition during its evolution. Incidentally, since population sex ratios may drive the evolution of such traits, this analysis sought to determine if they could also have an effect on the frequencies of aggressive sexual behavior of Human males. To do this, statistics from the years 1998 and 2008 of 3 non-sexual violent crimes were collected from 12 countries, and compared against their rates of sexual violent crime. This information was then compared against the sex ratios of their respective countries, and run through SPSS for an analysis. Overall, despite the insignificant results, ($P = >.05$), the large effect sizes do indicate a positive relationship between higher male-to-female sex ratios, and higher rates of sexual violent crime, relative to non-sexual violent crime.

9. How well do men's faces and voices index mate quality and dominance?

Leslie M. Doll (Pennsylvania State University; lmd330@psu.edu), Alexander K. Hill (Pennsylvania State University), Michelle A. Rotella (Pennsylvania State University), Rodrigo A. Cárdenas (Pennsylvania State University), Lisa L.M. Welling (Pennsylvania State University), John R. Wheatley (Pennsylvania State University), & David A. Puts (Pennsylvania State University)

Men's faces and voices may advertise information about their mate quality, social competence, and dominance. We hypothesized that if faces and voices do advertise this information, then social peers' assessments of men's attractiveness and dominance would predict 1) strangers' ratings of attractiveness and dominance made from facial photographs and voice clips and 2) self-ratings. To test this, we recruited two social fraternities, two socially-affiliated sororities, and independent male and female raters to evaluate men's short- and long-term attractiveness, fighting ability, and leadership ability. Unfamiliar men's assessments of fighting and leadership ability made from photographs, but not voice clips, significantly predicted familiar men's assessments. Unfamiliar women's assessments of short- and long-term attractiveness made from photographs and voice clips significantly predicted familiar women's assessments. Self-ratings in all categories except leadership predicted peers' evaluations. These findings support the conclusion that faces and voices provide valuable information about mate quality and competitiveness for mates.

10. An evolutionary mathematical model for acceleration of intuitive risk judgments based on inclusive fitness maximization

Hidenori Komatsu (Central Research Institute of Electric Power Industry; komatsu@criepi.denken.or.jp), Takeo Imanaka (Central Research Institute of Electric Power Industry), Yasuhiro Hashimoto (The University of Tokyo), & Taishi Sugiyama (Central Research Institute of Electric Power Industry)

It has been known that intuitive risk judgments are decelerated or accelerated by various factors. As one such factor, it is phenomenologically known that intuitive risk judgments are accelerated when they are perceived to threaten future generations. Yet, the mechanism of such acceleration is not fully understood. We show a mathematical model of evolution to describe the mechanism that people become risk-averse when risks are perceived to threaten future generations, from the viewpoint of inclusive fitness theory. Through the analysis, we show that one's attitude to maximize inclusive fitness can make his survival rate higher (i. e. he becomes risk-averse) than when his contribution to altruistic behavior to his relatives is absent, under an environment where there is a trade-off structure between his own reproduction, his survival, and his relative's reproduction. Further possible extensions of our analysis are also discussed.

11. Human Evolution and the Paleohomunculus

Dean Abel (Smile.theory75@yahoo.co.uk)

I offer multidisciplinary evidence which supports the thesis that the limbic system evaluates the valence of our emotional state, by comparing our muscular feedback to that of a foetal ape. The limbic system responds to our imagination as though it is unaware of the evolution of the cerebral cortex. This research suggests that the limbic system is also unaware of our structural evolution. This would result in the feedback from our upright posture being decoded as an ape dominance display; the feedback from Homosapien facial musculature would be decoded as positive affect display. This is significant because the limbic system rewards displays of dominance and positive affect, with the release of immunoprotective hormones and neurotransmitters. The muscular evolution required for this circumvention of the usual methods of eliciting the rewards of positive affect, is evident in our genes and the fossil record. PaleoHomunculus may be situated in the, Indusium Griseum.

12. Mate's Eye View: The role of camera angle in online dating

Anastasia Makhanova (University of Kentucky; a.makhanova@uky.edu), & Saul L. Miller (University of Kentucky)

With online dating and networking websites steadily gaining popularity, a photograph displayed on a profile can have tremendous effects on the forthcoming interactions or

the lack thereof. Camera angle (from above, straight on, or below) is an element of a photograph that can potentially manipulate the perception of the individual. Analyses of pictures from users of an online dating website (N=878) revealed that men and women post pictures taken at different camera angles, $\chi^2(2)=27.14$, $p<.001$. Specifically, women (but not men) posted more photographs taken from above (i.e., looking up) than straight on or below (i.e., looking down) ($p's<.05$). We hypothesize that camera angle influences the perceptions of youth, dominance, and femininity/masculinity, such that women look younger, more feminine, and less dominant when the picture is taken from above, and that individuals' choice of photograph reflects their mating motivation. We are currently testing these hypotheses in 2 experimental studies.

13. Economic and Cultural Influences on Mate Selection: A Preliminary Study

Samantha L. Bissell (City College – CUNY; sbissell7@gmail.com), & Jón G. Sigurjónsson (City College – CUNY)

The malleability of human behavior enables survival in an ever changing environment. In order for a biological trait to be selected for, it must either be negative, neutral or positive for the organism in accordance with the environment to heighten the chance of an evolutionary success. Therefore, to survive in an altered climate, biological selectionism or adaptation due to environmental changes must occur. We will utilize the absolute GDP as an economic status measure for Iceland, USA and Ireland and compare the groups by assessing the relative GDP status within the country to understand what qualities are desired in a potential mate. We expect to find that in cultures with limited resources, a higher level of monogamy to care for the offspring will occur, and as accessibility to resources increases, monogamy will decline. Mating selection strategies will be selected for depending on environmental pressures.

14. Mate expulsion decisions across sex: A Conjoint Analysis

T. Joel Wade (Bucknell University; jwade@bucknell.edu), Justin Mogilski (Bucknell University), & Rachael Edelman (Bucknell University)

Prior research examining mate expulsion indicates that women are more likely to expel a mate due to deficits in emotional access while men are more likely to expel a mate due to deficits in sexual access. However, some previously ignored temporal factors have not been considered. The present research examined the role of some temporal factors with respect to emotional and sexual access deficits and mate expulsion decisions using Conjoint Analysis. Conjoint Analysis allows one to take into account the role of temporal factors, and it allows one to make more definitive conclusions regarding the respective importance of the two types of access deficits. Women were expected to rank large deficits in emotional access as more likely to lead to mate

expulsion while men were expected to rank large deficits in sexual access as more likely to lead to mate expulsion. The results were consistent with the hypotheses.

15. Evidence for negative feedback between testosterone and men’s copulatory success: Sociosexuality, sexual variety and men’s testosterone

David A. Puts (Penn State University ; dap27@psu.edu), Lauramarie E. Pope (Penn State University), Alexander K. Hill (Penn State University), Rodrigo A. Cardenas (Penn State University), & Lisa L. M. Welling (Penn State University)

Men’s sociosexual attitudes and desires are positively correlated with testosterone, while their sociosexual behavior is not, but women show the reverse association (Edelestein et al., 2011). However, this is puzzling, given that men’s sociosexual attitudes and desires predict sociosexual behavior. We investigated the nature of these discrepancies and found that 1) testosterone fully mediates the sex difference in sociosexuality, 2) testosterone is differentially associated with sociosexuality between the sexes, in that it predicts men’s sociosexual psychology, but not women’s, and, 3) when sociosexual psychology is controlled, there is a significant negative relationship between sociosexual behavior and testosterone, possibly because satisfaction in mating success may lower men’s testosterone, minimizing its immunosuppressant effect when higher levels of testosterone are not needed.

16. Preferences for sexual behaviors and rough sex across the menstrual cycle

Bryan Kern (SUNY Oswego; kern@oswego.edu), Aaron Gehan (SUNY Oswego), & Rebecca L. Burch (SUNY Oswego)

Utilizing a sample of hundreds of sexually active undergraduate students, we attempted to examine: the prevalence of rougher/more violent sexual behaviors, preference for or initiation of behaviors, and whether initiation fluctuated with the menstrual cycle in females. Both men and women were sampled on sexual history, sexual behavior, and an inventory of behaviors that would be categorized as rough sexual behaviors. Participants were also asked their definition of rough sex. Both males and females reported initiating rough sex and gave specific examples of contexts that acted as triggers. Both sexes reported that rough sex was often triggered by male sexual jealousy. Females also reported attempting to evoke jealousy in their partner more often while ovulating (see Whetstone & Burch NEPS 2011 poster). Females who were naturally cycling were isolated and particular sexual behaviors, both those defined as “rough” and not, were shown to fluctuate across the menstrual cycle.

17. Issues with consumer behavior and sustainability

Bryan R. Kern (SUNY Oswego; kern@oswego.edu) & Rebecca L. Burch (SUNY Oswego)

Most consumers have not considered the consequences of their purchasing behaviors when it comes to sustainable living. Most attempts at creating sustainable projects have failed over the years, and it is due in part to both consumer behavior and greed. Most consumers tend to acquire behaviors that are convenient to them, and do not think about the long-term effects their choices have on the environment. Why think about what will happen to a tree, if said tree is not in their front yard? This also goes for the idea of thinking about the future. Vlek and Steg (2007) outlined different environmental developments, including climate changes, energy demand and pollution. What this research proposes is that we, as humans, need to think about alternative ways to change the flow of consumer behavior to better suit sustainable practices utilizing evolutionary principles.

18. Assigning Altruism: Pedagogy and practice

Aaron Gehan (SUNY Oswego; agehan@oswego.edu), Bryan Kern (SUNY Oswego) & Rebecca L. Burch (SUNY Oswego)

Using small undergraduate classes as social groups, we assigned a number of altruistic acts to students. In assignment 1, students were given the option to perform an altruistic act for a stranger while not allowing them to reciprocate and examine the reaction and apply it to the course. In assignment 2, each student was tasked with asking for a favor from a fellow student and performing a favor for a different fellow student. Students were then asked to evaluate the acts from the perspective of themselves as the giver and receiver and to apply it to the course content. This allows the researchers/instructors to examine the perception and effects of altruistic acts (both as a giver and receiver), how the actions and real world experience affect knowledge of course content, and to determine whether giving or receiving the altruistic act triggers greater bonding and affiliation.

19. Does Parental Financial Investment Vary as a Function of Perceived Child Sexual Orientation?

Grant T. Trouton (SUNY New Paltz; gtrouton88@gmail.com)

An evolutionary perspective on parental care suggests that natural selection would have favored mechanisms by which parents can evaluate the likelihood of a given offspring's chances of successful reproduction. Previous research has identified two factors, congenital health and age, which affect levels of parental investment in humans (Daly & Wilson, 1988, 1995). Specifically, data suggests that congenitally ill children are at greater risk for emotional and physical abuse, and young children are at a greater risk of

family-generated infanticide and homicide. Interestingly, homosexuals have frequently been documented to experience similarly elevated rates of abuse as well as high levels of suicide, although such information has yet to be interpreted from an evolutionary perspective. I employ a monetary-allocation task to test the hypothesis that adults will associate gender non-conformity with homosexuality, and will thus invest less in hypothetical offspring who are either implicitly or explicitly homosexual, compared to their heterosexual counterparts.

20. Ultimate answers to proximate questions: The evolutionary motivations behind tattoos and body piercings in popular culture

Rachael A. Carmen (SUNY New Paltz; Rachael.Carmen@gmail.com), Amanda E. Guitar (SUNY New Paltz), & Haley M. Dillon (Kansas State University)

Numerous studies have found that piercing and tattooing the body is an increasingly prevalent trend in modern popular culture; however, this is not only a modern practice. Evidence of various forms of body ornamentation has been found in human societies dating back thousands of years, yet few have approached this topic from an evolutionary perspective. For instance, the general motivations for getting tattoos and piercings have tended to fall into the same three categories for hundreds of years: (a) a symbol of an important past event, love, or friendship, (b) group membership, and/or (c) a marker of individuality. We argue that these motivations are simply proximate behaviors for an ultimate evolutionary reason: the perpetuation of one's genes. We propose two new theories about the origins of body ornamentation. First, in our "human canvas" hypothesis, we propose a link between body ornamentation and the human species' historical use of symbolic thought. Second, in our "upping the ante" hypothesis, we suggest that the steady rise in popularity of tattooing and piercing in Western culture has come about due to larger population densities and advancements in healthcare, which has led individuals to seek new and unique displays of fitness (i.e., body ornamentation).

21. Untangling the complexities of the female orgasm: A mixed theoretical approach

Rachael A. Carmen (SUNY New Paltz; Rachael.Carmen@gmail.com), Glenn Geher (SUNY New Paltz), & Justin R. Garcia (Indiana University)

Orgasm rates in the general population are particularly interesting because there exists considerable variation in this trait, particularly among women. In evolutionary terms, while male orgasms promote perpetuation of one's genes, the function of female orgasm has remained shrouded in mystery and tense scientific debate. The current study aims to further our understanding of women's orgasm by using an evolutionary perspective to consider orgasm in relation to women's potential fecundity (i.e., menstrual cycle stage). We investigate whether 1) women who are closer to ovulation

will be more likely to have increased libido, marked by an increase in sexual interest and, for some, increased frequency in orgasm; 2) women with high Emotional and Mating intelligence will experience higher rates of orgasm, particularly during ovulation; 3) women with a “high-k life history strategy” (i.e., faster life history strategy) will be more likely to be generally more orgasmic than women with slower life history strategies.

22. The Yanamamo In Us: Male Coalitionary Defeat Of An Outgroup May Lead To Sexual Coercion Of Outgroup Females

Erik M. Lund (University of Kentucky; e.m.lund@uky.edu), David S. Chester (University of Kentucky), C. Nathan Dewall (University of Kentucky), & Saul L. Miller (University of Kentucky)

Warfare is part of human nature. Indeed, intergroup conflict has been a pervasive aspect of human life across our evolutionary history. Because of frequent encounters with out-groups we have evolved a complex suite of psychological and behavioral responses attuned to these contexts. A growing body of literature has demonstrated that responses to out-group threat differ among males and females (e.g., Yuki & Yokota, 2008; Bugental & Beaulieu, 2009). Most relevant to the current research, it has been shown in the anthropological literature (Chagnon, 1979; Morris, 1996), and in the animal behavior literature (Wrangham & Peterson, 1996) that victory over an out-group disposes males (but not females) towards sexually aggressive behavior. Specifically, victory over out-group males leads to sexually aggressive behavior towards out-group females. In preliminary data we’re finding that after coalitionary defeat of an outgroup – males show increased aggression, increased approach and liking of outgroup females, and increased rape proclivity.

23. Words that pack a Pleistocene punch: Sex differences and similarities in reactions to insults and compliments

Marissa A. Harrison (Penn State Harrisburg; mah52@psu.edu), Melanie S. Koser (Penn State Harrisburg), & Susan M. Hughes (Albright College)

What happens when a potential partner’s assessment of us insults or compliments our mate value? Since women typically focus on indicators of resource acquisition and men typically focus on indicators of fertility when choosing a mate (Buss, 1989), we predicted that opposite-sex generated insults and compliments about resource potential would affect men and those about reproductive cues would affect women more strongly. Our survey of 131 college students showed men were more insulted by comments like “Your muscles are small” and complimented by “You are probably indispensable to your place of employment.” Further, women were more insulted by statements such as “You have a large waist” and complimented by “Your skin is flawless.” Thus, our hypothesis was

supported. Interestingly, general reproductive insults like “No one would ever go on a date with you” and compliments like “You should have children” were perceived by men and women similarly. Results are discussed.

24. Life History Therapy with Graphs

George B. Richardson (University of Cincinnati; george.richardson@uc.edu), Tania Perry (University of Cincinnati), Michael Brubaker (University of Cincinnati), Ching-Chen Chen (University of Louisville), & Chia-Liang Dai (University of Cincinnati)

Advances in life history research and methodological advances in causal modeling can improve the practice of psychotherapy and counseling. Life history theory can be used to integrate the practice of cognitive-behavioral therapy (CBT) with person-environment (PE) fit theory. In addition, the graphs used by scientists to efficiently describe and test causal theories can be used, in simplified form, as therapeutic tools for making client belief systems explicit and increasing fit between client cognitions, behaviors, and environments. This session will describe how life history theory provides an overarching framework that incorporates CBT and PE fit, and will demonstrate a simple step-by-step procedure for implementing graphs within this framework.

25. Pathogen Prevalence predicts rejection of Evolutionary Psychology: A Behavioral Immune System analysis of the Geher-Gambacorta 50

Kristin M. Johnson (University of Louisiana; somervkm@warhawks.ulm.edu) & Kilian J. Garvey (University of Louisiana)

This study uses the parasite-stress theory of human values in a replication and extension of previous research exploring Geher and Gambacorta’s analysis of political resistance to evolutionary psychology. The Behavioral Immune System (BIS) hypothesis has been used to explain regional variation in beliefs and worldviews (differences in geographical pathogen prevalence generate variation in cultural norms) primarily through the self-protective emotion of disgust. The current study explored beliefs about the basis of behavioral differences in male and female human and non-human animals (nature or nurture), previously attributed to political orientation. Subjects from two regions (low vs high pathogen prevalence) completed measures of rational/experiential thinking, disgust, and political orientation as well as Geher and Gambacorta’s 50 item survey of evolutionary beliefs. A multiple regression analysis supported the BIS hypothesis as disgust sensitivity accounted for differences in rejecting evolutionary explanations of human and non-human behavior better than political orientation.

26. The Behavioral Immune System, Cognitive Style, and Political Orientation

Kristin M. Johnson (University of Louisiana; somervkm@warhawks.ulm.edu) & Kilian J. Garvey (University of Louisiana)

Although people might believe political ideology is the result of conscious and careful deliberation, there is compelling evidence that political preferences are driven by individual differences in survival concerns as much as, if not more than, consideration of abstract policies. The behavioral immune system (BIS) theory suggests that exposure to higher environmental pathogen loads might produce emotional traits (e.g., disgust) that lead to adaptive disease avoidance strategies. In addition to facilitating avoidance of pathogens, an emotional trait such as disgust might produce social cognition leading to a conservative political orientation. The current study (n=486) compared disgust sensitivity and rational/experiential cognitive styles as predictors of voting preferences in high versus low pathogen regions in the United States. Results support the BIS hypothesis that regional differences in disease avoidance (as measured by disgust sensitivity) are a stronger predictor of political ideology than cognitive style.

27. Footbridge Morality and Pathogen Stress: Increasing the number of victims to be saved matters more in low than in high pathogen prevalence regions

Kasey Rhodes (University of Louisiana; rhodeskm@warhawks.ulm.edu) & Kilian J. Garvey (University of Louisiana)

The footbridge dilemma is a moral “thought experiment” which asks subjects if they would push a man off of a bridge to stop a train from running over, and killing five (or more) people. In this within-subject study participants from two regions (high or low pathogen prevalence) were asked to answer seven versions of the footbridge dilemma (push one man to save five, ten, fifteen, twenty, fifty, one hundred, and one thousand people). While most people initially refuse to push, subjects in this study increasingly changed their answers from “no” to “yes” as the number of victims to be saved increased but did so significantly faster in the low pathogen region. Results are interpreted through the behavioral immune system theory which has found more rigid cognitive styles in high pathogen prevalent regions of the world.

28. Parasite stress predicts firearm homicides: A test of the behavioral immune system

Kasey Rhodes (University of Louisiana; rhodeskm@warhawks.ulm.edu) & Kilian J. Garvey (University of Louisiana)

The behavioral immune system theory has found that regional differences in pathogen load predict regional differences in a number of violent crimes. In this replication study, the use of firearms in murders, robberies, and assaults in the continental United States was predicted to vary as a product of pathogen prevalence. The states of Louisiana and

Maine were then selected for further analysis because (1) they represent pathogen prevalence extremes, (2) per capita gun ownership is nearly identical, and (3) the investigator's previous research on individual differences in social cognition happens to have taken place largely in these two states. Results show that murders committed with a firearm are better predicted by pathogen prevalence than murders in general. Further analysis of regional differences in emotional and cognitive traits supports our prediction.

29. Emotional and cognitive traits predict belief in god in low but not high pathogen prevalent regions of the US: A possible ceiling effect in the behavioral immune system

Kilian J. Garvey (University of Louisiana; garvey@ulm.edu) & Kristen M. Johnson (University of Louisiana)

The behavioral immune system is a cluster of cultural, cognitive, emotional, and psychological mechanisms selected to protect individuals from illness in areas of high pathogen stress. One of these mechanisms, religiosity, is thought to emphasize ingroup assortive sociality, reducing exposure to novel parasites carried by outgroup members. While previous research has found that regional pathogen levels predict religiosity the present study attempted to tease apart underlying emotional and cognitive traits accounting for individual differences in belief in god. Participants (n=418) from northeastern (low pathogen) and southeastern (high pathogen) regions of the US showed vast differences in belief in god, disgust sensitivity, rational/experiential cognitive styles, and neophobic/neophilic measures. A multiple regression analysis found that after regional differences, anxiety and disgust contributed significantly to the overall variance in belief but follow up analyses only found differences in the low pathogen region suggesting a ceiling effect to the behavioral immune system.

30. Can the behavioral immune system explain creationism? Seeking existential relief from the anxiety of pathogen stress

Kilian J. Garvey (University of Louisiana; garvey@ulm.edu) & Kristen M. Johnson (University of Louisiana)

While the behavioral immune system is commonly defined as a complex of emotional and psychological mechanisms designed to detect and avoid cues indicating the presence of infectious pathogens in the environment, there is evidence that the existential threat associated with living in areas of high pathogen stress might lead to higher acceptance of comforting cultural worldviews not directly related to biological hazards. In this study subjects from high and low pathogen stress regions of the United States completed measures of disgust sensitivity and belief in the biblical creation of earth, and, as predicted, measures of both were stronger in the high pathogen stress region. While disgust sensitivity is an obvious protection against oral incorporation of infectious substances, it will be argued that acceptance of the genesis story of creation,

and attraction to the general protective tenor of the bible, is the result of proximate feelings of susceptibility to illness and, perhaps, ultimate anxiety towards signs of morality that are, at least by implication, assuaged by the promise of an afterlife generally associated with religion.

31. Your Cheatin' Voice Will Tell on You

Susan M. Hughes (Albright College; shughes@alb.edu), Sarah Morrow (Albright College), & Marissa A. Harrison (Penn State Harrisburg)

Evidence suggests that many physical, behavioral, and trait qualities can be detected from only hearing the sound of a person's voice, irrespective of the semantic information gathered through speech. This study examined whether raters could detect the likelihood that a person has cheated on their romantic partners by hearing only the speaker's voice. Voice samples of those who self-reported having sexually cheated on previous romantic partners or not were played to independent raters without being given any information about the speakers. Overall, raters were fairly accurate in identifying speakers who had cheated from those who had not, and the more extra-pair partners the speakers reported having, the more likely they were rated as having the proclivity to have cheated. Neither effect was dependent upon voice attractiveness or other speaker characteristics. These data suggest that the human voice may be of value as a cheater detection tool.

32. The EvoS Blogs: Global Outreach for the EvoS Consortium

Megan E. Geher (New Paltz Middle School; megangeher@yahoo.com) & Glenn Geher (SUNY New Paltz)

With support from the NSF, the EvoS blogs were started in 2009. The EvoS blogs are designed to help provide various informal comments related to evolution from the perspectives of scholars and students across academic disciplines. They include such diverse areas as anthropology, biology, and psychology - and they include PhD-level scholars from various institutions along with students at the graduate, undergraduate, and middle-school levels. This presentation will include a table that summarizes all the blogs and all the bloggers along with a summary of our own EvoS blogs ("Changes over Time" (Megan) and "Building Darwin's Bridges" (Glenn)). Excerpts of our blogs will be included - along with a call for conference participants to consider starting their own EvoS blogs!

33. Friendship as a Risk Mitigation Tactic during Human Mate Poaching

Justin K. Mogilski (Bucknell University; jkm025@bucknell.edu) & T. Joel Wade (Bucknell University)

Previous research has identified human mate poaching as an alternative mating strategy that entails risks/costs typically not present in other forms of romantic attraction. This study is the first to experimentally investigate friendship between a poacher and poachee as a risk/cost mitigation tactic. Participants read vignettes that differed by whether the poacher was male/female and whether the poacher and poachee were friends/acquaintances. Participants assessed the likelihood of the poacher being successful and incurring costs. They also rated the poacher and poachee on several mate characteristics. Results revealed that friendship increases the perceived likelihood of success of a mate poaching attempt and decreases several risks/costs typically associated with mate poaching. Friendship also altered perceptions of both poachers and poachees across evolutionarily relevant mate characteristics. This study complements previous findings and is the first experimental investigation of tactics mate poachers may use to mitigate the risks associated with mate poaching.

34. Sex and marriage strategies: An investigation into the punishment of non-monogamous mating strategies

David Widman (Juniata College; widman@juniata.edu), Melvin M. Philip (SUNY New Paltz), Rebecca L. Newmark (SUNY New Paltz), Glenn Geher (SUNY New Paltz), Briana Tauber (SUNY New Paltz), & Morgan E. Gleason (SUNY New Paltz)

Due to the altricial nature of offspring, *Homo sapiens* have evolved monogamy as a dominant, long-term mating strategy. However, non-monogamous reproductive behaviors are not uncommon in the species and can be perceived as a form of reproductive cheating. This study examined whether the presence of children, the gender of the “cheater” and the gender of the respondent would affect the punishment and severity of the transgression for reproductively relevant cheating behaviors, specifically polygamy. We found that both the gender of the respondent and the presence of children significantly affected the punishment and estimates of the severity of the transgression for polygamous marriages. Specifically, men meted out less punishment than women and the presence of children from polygamous marriages generated more punishment and greater transgression. This pattern of punishment is consistent with both the evolved nature of mating strategies between the sexes and the hypothesis that marriage is a reproductive contract.

35. Factors Affecting the Detection of Relationship Status Deception

Fatima Aboul-Seoud (University at Albany; FAboul-Seoud@albany.edu), Gordon G. Gallup (University at Albany), & Melvin M. Philip (University at Albany)

Evolutionary theory predicts that people should have sex-specific adaptations based on differential reproductive costs and benefits. Males have to contend with the costs of being cuckolded, while females have to contend with the costs of being abandoned. Previous research on reproductive deception has shown that males and females engage in sex-specific deception in ways that maximize fitness (Tooke & Camire, 1991). This project examined the ability to discern ingenuous and disingenuous claims about romantic and sexual relationship status. Participants viewed and rated the veracity of pre-recorded claims about targets' relationship status. Results showed that the ability to discern claim veracity was dependent upon the type of claim that was made, whether the claim was true or false, and the sex of the claimant and the rater. Findings provide important additions to the literature on reproductively relevant deception.

36. Survival Processing in Flavor Memory

Cook, S.P. (Millersville University), Gallagher, S.P. (Millersville University; Shawn.Gallagher@millersville.edu), Hallock, H. (Millersville University) & Garman, H. (Millersville University)

We explored the effect of survival-processing on flavor recognition. Fifty-three undergraduates were assigned to an encoding condition (survival-processing, marketing-processing, or bitterness rating) followed by a recognition test. The results show effects of encoding condition: flavor memory under survival-processing or marketing-processing was superior to memory under bitterness processing. There was no difference between survival-processing and marketing-processing. Levels-of-Processing can explain these results. It is possible however, that marketing-processing invokes survival processing, suggesting the need for further research.

37. Notice anything new about me?: Examining intrasexual competition through animal analogs

Laura Moore (University of Alabama; lemoore3@crimson.ua.edu), Jonathan Belanich (University of Alabama), Christopher Lynn (University of Alabama), & Ryan Earley (University of Alabama)

We examine intrasexual competition in convict cichlid fish to extrapolate about disparities in human adornment practices. The multimillion dollar cosmetics industry has historically been advertised in terms of attracting a mate, however studies show that men are not aware of changes in adornments to the same extent as other females. Intrasexual competition could be the explain these phenomena. Feminist theory suggests that intrasexual competition is socially constructed, which is at odds with evolutionary theory. Rather than opting for one approach over the other, an integrative

approach can provide more clarity. Animal models provide insights to human behavior otherwise left to speculation. For instance, convict cichlids display intrasexual dominance behavior similar to humans. Female cichlids have an orange spot previously thought to be a mate attraction tool. By manipulating the size of orange spots on a fish model as an analog for women's cosmetics, we measure aggression between the female and the model fish. We hypothesize that the level of aggression shown by the females will escalate proportionally to the size of the model's spot. These data may shed light on the gender disparity in cosmetic sales.