

New Hampshire, 2012

NOEES

Evolution Lives Free or Dies

Sixth Annual Conference

April 27<sup>th</sup>-29<sup>th</sup>

The logo for Plymouth State University features a stylized, wavy line above the text "Plymouth State" in a serif font, with "UNIVERSITY" in a smaller, all-caps serif font below it.

Plymouth State  
UNIVERSITY



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## Welcome to Plymouth State University, NEEPS 2012!

It is spring and we are in the midst of the White Mountains – welcome to the 6<sup>th</sup> annual meeting of the NorthEastern Evolutionary Psychology Society! Many of you have already been buzzing about this year’s conference. Add together a great line up of talks, posters, and keynote sessions by David Livingstone Smith and Robert Kurzban, and you can see why NEEPS stays on so many radars throughout the year. Our annual conference and pre-conference meetings seem to get more and more full; yet, we remain an intimate group of colleagues, collaborators, and friends.

Earlier this year the Indiana Senate voted in favor of Senate Bill 89, which would require teachers to include creation science as a theory of the origin of life. As members of the higher education community, we continue to face such challenges to the education of evolutionary theory. This makes our featured workshop, “The State of Evolutionary Psychology in Academia and Future Directions” (by Dan Kruger and Glenn Geher) more timely than ever.

Carrying on conference traditions, such as annual workshops, is integral to the success of NEEPS and part of what makes us a community. Our research and teaching does not take place in a vacuum, and it is the strength of our collaborations that will speak to the importance of evolutionary theory in human life. Our tight-knit tribe again includes members from around the United States and the world, spreading that old New Hampshire message “Live Free or Die” to the venue of evolutionary studies on an international level.

A few more traditions have spread out in new directions. Dan O’Brien edited his first NEEPS Proceedings issue of the *Journal of Social, Evolutionary, and Cultural Psychology*, which came out in December 2011. In addition, the interest in evolutionary neuroscience displayed at the last conference spawned a special NEEPS issue of *Frontiers in Evolutionary Neuroscience*. Finally, this year we even return to the tradition of athleticism, debuting the first ever NEEPS 5K walk and run.

So with an eye to tradition and future directions, on behalf of myself, conference host David Zehr, program chair Ben Crosier, and vice president Dan Kruger, welcome to NEEPS!

Yours,

Rosemarie Sokol Chang

# Acknowledgements

The NEEPS 2012 Organizing Committee thanks the following people for their work in making this year's conference a success:

Conference Host: David Zehr

Conference Organizers: McKenzie Burke, Dan Hopper, and Terri Dautcher

Program Chair: Ben Crosier

Student Award Judges: Nicholas Armenti, Maryanne Fisher, Glenn Geher, and John Hinshaw

Executive Committee:

President, Rosemarie Sokol Chang

Past-President, Glenn Geher

Vice President, Dan Kruger

Secretary, Sarah Strout

Treasurer, John Hinshaw

Membership Officer, Scott Barry Kaufman

Communications Officer, Edward Sturman

Members at Large, Alice Andrews, Rebecca Burch, Maryanne Fisher, Kilian Garvey, Gordon Gallup, and Steve Platek

Student Representative, Ben Crosier

Thank you to Dan Hopper and McKenzie Burke for designing our T-shirt, and Megan Geher for this year's booklet cover logo.

## JSEC-NEEPS Special Issue

For the fifth consecutive year, the Journal of Social, Evolutionary, and Cultural Psychology will publish a special issue comprised of papers presented at the annual Conference of the North Eastern Evolutionary Psychology Society, highlighting the sorts of work that makes this regional society so vibrant.

To submit your talk or poster from NEEPS 2012 for consideration in the NEEPS Proceedings of JSEC, please visit the submission guidelines at <http://www.jsecjournal.com/submissions.htm>. [Note that manuscripts for the NEEPS issue need not incorporate multiple disciplinary perspectives].

Conference abstracts will be automatically included in the special issue unless a paper form of the presentation is submitted and accepted in the special issue, or the author(s) opt-out of having the abstract included. To opt-out, or volunteer to review paper submissions (sorry, no student reviewers) please email Dan O'Brien at [dtumminelliob@yahoo.com](mailto:dtumminelliob@yahoo.com).

The deadline for submission is July 15, 2012 for publication in the December 2012 special issue. Please submit your papers to [dtumminelliob@yahoo.com](mailto:dtumminelliob@yahoo.com).

## Call for Papers

EvoS Journal: The Journal of the Evolutionary Studies Consortium is preparing a special issue on teaching evolutionary theory in the higher education classroom. We especially welcome pedagogical pieces from disciplines not traditionally associated with evolution, such as the humanities, social sciences, and the arts. The online medium of this peer-reviewed journal allows us to post graphics, audio, and video files along with traditional text articles. We are seeking submissions in one of the following formats (particularly curriculum articles):

- Curriculum Articles, that include teaching materials for implementing innovative teaching ideas related to evolutionary studies in your own classroom.
- Research Reports, that report original research from the classroom, using experimental or non-experimental methods.
- Theoretical/Review Contributions, that provide insights into issues tied to evolutionary studies in higher education.

Please submit ideas for articles to Rosemarie Sokol Chang ([evostudies@gmail.com](mailto:evostudies@gmail.com)). This issue is scheduled for a 2012 publication date, therefore submissions must be received by May 31, 2012 for consideration.

In general, EvoS Journal welcomes submissions related to evolutionary theory in higher education, as well as outstanding undergraduate articles from courses offered through the Evolutionary Studies program. Encourage your undergrad students to submit!

For more information on submissions, see the EvoS Journal website at <http://evostudies.org/evos-journal/>.

# Brief Timetable

	<b>Date/time</b>	<b>Event</b>	<b>Location</b>
4/26	9:00–12:00	FEPS Workshop	Heritage Commons
4/26	1:00–5:00	AEPS Workshop	Boyd Hall, 144
4/26	6:00–7:15	NEEPS 5K	Meeting outside Boyd Hall, 144 at 5:45
4/26	8:00	Baba Brinkman Performance	Boyd Hall, 144
		Registration	Boyd Lobby
4/27	10:00–10:30	Welcome	Boyd Hall, 144
4/27	10:30–12:10	Talk Session 1: Morality and Altruism	Boyd Hall, 144
4/27	12:10–1:15	Lunch Break	
4/27	1:15–1:30	Poster Setup	Lamson Library, 124
4/27	1:30–3:30	Poster Session	Lamson Library, 124
4/27	3:30–3:50	Break	
4/27	3:50–5:10	Talk Session 2: LGBTQ and Evolutionary Psychology	Boyd Hall, 144
4/27	5:15–7:00	Reception and Dinner Break	Frost Commons
4/27	7:00–8:00	David Livingstone Smith Keynote Address	Boyd Hall, 144
4/28	9:00–10:30	Business Meeting	Lamson Library , Tower Room
4/28	10:30–10:40	Break	
4/28	10:40–12:00	Talk Session 3: Gender and Sexuality	Boyd Hall, 144

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4/28	12:00–2:00	Lunch	
4/28	2:00–3:20	Talk Session 4: Attractiveness	Boyd Hall, 144
4/28	3:20–3:40	Break	
4/28	3:40–5:00	Talk Session 5: Aggression and Mating	Boyd Hall, 144
4/28	5:00–5:30	Break	
4/28	5:30–6:30	Robert Kurzban Keynote Address	Boyd Hall, 144
4/28	6:30–8:30	Banquet	Prospect Dining Hall, Newfound Room
4/29	9:00–10:20	Talk Session 6: Applied Evolutionary Psychology	Boyd Hall, 144
4/29	10:20–10:30	Break	
4/29	10:30–11:30	Workshop: The State of Evolutionary Psychology in Academia and Future Directions	Boyd Hall, 144
4/29	11:30–12:50	Talk Session 7: Attachment and Children	Boyd Hall, 144

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# Thursday, April 26<sup>th</sup>

## 9:00 – 12:00 Feminist Evolutionary Psychology Society Workshop

At this third annual pre-conference workshop, our goal is to brainstorm new projects, reconnect with each other, and engage in lively discussion. This year, our meeting will focus on various new and ongoing projects and developing the structure of FEPS. If you are working on a project from last year, or have ideas of a project you would like to collaborate upon, please bring the details with you to the meeting.

## 1:00 – 5:00 Applied Evolutionary Psychology Society Workshop

The Applied Evolutionary Psychology Society (AEPS) annual workshop will continue its mission is to promote the application of evolutionary psychology to practical domains such as business, law, policymaking, mental health, education, etc. See our website (<http://www.aepsociety.org/>), Facebook group (<http://www.facebook.com/groups/AEPSolutions/>) for more information!

## 6:00 – 7:15 First Annual NEEPS 5K

Please congregate outside of the AEPS meeting around 5:45 with your running gear, and we'll walk to the start line. This is a fun and unofficial run/walk 5K.

## 8:00 Baba Brinkman Performance

The Canadian rap artist, known for his celebrated show “The Rap Guide to Evolution,” which interprets the work of Charles Darwin in a modern way will give a rap performance. See <http://aepsociety.org> for ticket pricing.

## Friday April 27<sup>th</sup>

### 10:00 -10:30 Opening Remarks

### 10:30 -12:10 Talk Session 1: Morality and Altruism

#### **Quinpirole-treated rats prefer to work for water rather than ‘freeload’, but show behavioral flexibility during extinction.**

*Michael J. Frederick (Hamilton University, [mjfreder@hamilton.edu](mailto:mjfreder@hamilton.edu))*

Contrafreeloading occurs when animals work for rewards that are freely available. One evolutionary explanation suggests that contrafreeloading provides organisms with information about resources. In proximate terms, earned rewards involve greater activation of the brain’s reward centers. Quinpirole, a dopamine agonist, increases contrafreeloading in rats. One explanation is that the drug confers behavioral rigidity, causing rats to persistently bar-press rather than switch to free water. The current study challenges this interpretation. Rats were treated daily with quinpirole or vehicle and allowed to consume free water or press either of two levers to earn water. Quinpirole led to increased rates of contrafreeloading. However, during extinction, drug-treated rats increased their intake of free water, decreased bar-pressing, and frequently switched between the previously active levers. Rather than showing rigidity, the rats altered their behavior to maintain water intake while periodically checking the status of the inactive levers, consistent with an information-gathering explanation for contrafreeloading.

#### **The Halo of Altruism Shines on Perceptions of Male Attractiveness.**

*Daniel J. Kruger (University of Michigan, [kruger@umich.edu](mailto:kruger@umich.edu)), Jordan Anopa (University of Michigan) and Carey Fitzgerald (Oakland University)*

Altruistic acts are seemingly unselfish and may limit an individual’s survival or reproduction and simultaneously raise the prospects of other individuals. Evolutionary models explain the existence of altruism through kin selection and reciprocity. Altruistic acts may also have benefits in attracting romantic partners by giving an impression that a potential mate is kind and understanding. It is also possible that altruistic acts could affect assessments of physical attractiveness, which would presumably be independent. We paired constructed images of male faces with altruistic opportunity scenarios in a survey format and compared participants’ attractiveness ratings for altruists, non-altruists, and neutral characters. Women rated male altruists as more physically attractive than non-altruists and neutral characters when the cost of helping was moderate or high. Women’s ratings did not differ for the low helping cost scenario. Men’s ratings did not differ by altruism condition.

### **Belief in god and church attendance predict a curious restriction of moral consideration.**

*Kristy Brosseau (Southern Maine Community College, [kristy00102@gmail.com](mailto:kristy00102@gmail.com)) and Kilian Garvey (Southern Maine Community College)*

As most religious traditions would claim to promote and embrace higher moral principles one might predict that belief in god and church attendance would correlate with attitudes consistent with caring and justice, especially towards those who need it the most (marginalized or outcast people). However, strong religious attitudes might also lead to (or, perhaps, be caused by) strong exclusionary beliefs. / This study was designed to explore how self reported belief in god and church attendance might be associated with moral reasoning. Ironically, results indicated that a stronger belief in god and more frequent church attendance was correlated with significantly lower consideration of care and fairness, and significantly higher preference for restricting generosity to in-group members as well as stronger adherence to authority figures (as opposed to a universal notion of propriety) and customs of purity. / Results are interpreted as supporting Pascal Boyer's hypothesis of the evolutionary functionality of religion.

### **Gift-Giving at Israeli weddings as a function of genetic relatedness and maternal lineage.**

*Gad Saad (Concordia, [gadsaad@jmsb.concordia.ca](mailto:gadsaad@jmsb.concordia.ca)), Sigal Tifferet (Ruppin Academic Center) and Nir Ido (Ruppin Academic Center)*

This study examines gift giving at Israeli weddings. In accordance with kin selection theory, we hypothesized that wedding guests possessing greater genetic relatedness to the newlyweds offered greater sums of money (as wedding gifts). We also hypothesized that family members stemming from the maternal side (where kin certainty is higher), would offer the newlyweds more money than those stemming from the paternal side. Data on the monetary gift sums of the wedding guests from thirty weddings were collapsed according to two criteria: (1) genetic relatedness (0%, 6.25%, 12.5%, 25%, and 50%), (2) genetic assuredness (maternal or paternal lineage). Both hypotheses were supported. We discuss the implications of these data in understanding family dynamics and friendships, as well as practical applications associated with the marketing of gifts.

### **The Reverse Trolley Dilemma: Utilitarian vs. deontological moral judgments.**

*Kilian Garvey (Southern Maine Community College, [kiliangarvey@gmail.com](mailto:kiliangarvey@gmail.com)), Kristy Brosseau (Southern Maine Community College) and Paine Jennings (Southern Maine Community College)*

In this study moral reasoning was examined by presenting a reversal of a Trolley Problem experiment originally designed to test where Hamilton's rule might distinguish deontological (prohibiting direct harm against specific individuals) from consequentialist (favoring welfare maximizing choices) moral reasoning. Instead of being asked "would you divert a train from killing multiple people to, instead, kill one person tied to Track B?" (when the "one" was a stranger, a cousin, or a sibling), subjects were asked "would you divert a train to save one person to a track which

would kill multiple people?” A within subjects 4x5 study (5, 10, 15, or 20 people to be “sacrificed” x “saving” a stranger, best friend, cousin, sibling, or your child) found subjects more likely to break deontological rules in cases of increasing genetic relatedness (except for the best friend). In addition, increasing the potential number of victims activated consequentialist reasoning at the expense of Hamilton’s rule.

**12:10 – 1:15 Lunch**

**1:15 – 1:30 Poster Setup**

**1:30 – 3:30 Poster Session**

**3:30 - 3:50 Break**

**3:50 – 5:10 Talk Session 2: LGBTQ and Evolutionary Psychology**

**Born Both Ways: The Alloparenting Hypothesis for Sexual Fluidity in Women.**

*Barry X. Kuhle (University of Scranton, [BarryKuhle@gmail.com](mailto:BarryKuhle@gmail.com)) and Sarah Radke (Ryerson University)*

As reproduction is the engine of evolution, a seemingly counter-reproductive trait such as homosexuality is puzzling. We propose the alloparenting hypothesis which posits that sexual fluidity in women is a contingent adaptation that increased ancestral women’s ability to form pair bonds with female alloparents who helped them rear children to reproductive age. A fluid sexuality would have helped ancestral women solve the adaptive problems of a dearth of paternal resources due to rape and to their mates’ death, desertion, or divestment of resources. Under this view, sexual fluidity is a conditional female reproductive strategy in which pursuit of opposite-sex or same-sex partners is influenced by the perceived likelihood of receiving adequate paternal investment. Discussion focuses on (a) evidence for alloparenting and sexual fluidity in humans and other animals and (b) evidence that bears upon seven circumstances predicted to shunt some women into forming same-sex romantic bonds.

**Gay Men have Biological Children Too!**

*Sarah Strout (Dominican College, [sarah.strout@dc.edu](mailto:sarah.strout@dc.edu))*

This research explores the reproductive success of homosexual males. Research in evolutionary psychology has largely ignored the homosexual population because of the fallacy that homosexual men do not reproduce. 175 participants took the survey. After matching for age, the groups contained 70 participants each. Interestingly, not only did homosexual men have a higher number of biological children than expected,

there was no significant difference in the number of biological children of homosexual and heterosexual men. Also of interest was that for all other factors, no significant differences existed between the two groups of men. For both groups, the factors that were related to the number of children were participant age, birth order, and indirect measures of testosterone. This research suggests that homosexual men do reproduce at a level similar to heterosexual men and both seem to be affected by the same factors in relation to reproductive success.

### **Lesbian Pulp Fiction: An Analysis of Women's Mate Preferences.**

*Sarah Radtke (Ryerson University, [sradtke@ryerson.ca](mailto:sradtke@ryerson.ca)) and Maryanne Fisher (St. Mary's University)*

In this study, we examine the themes that occur in lesbian pulp fiction stories to explore women's evolved mating preferences. The vast majority of the evolutionary psychological literature has examined heterosexual preferences. Moreover, as far as we are aware, all work within the area of Darwinian literary studies has focussed on heterosexuals. This latter field has gained substantial ground in a short timeframe. The premise is that one can examine texts to understand human's evolved motives, behaviours, and emotions. Therefore, our investigation into a genre specifically focussing on lesbians will provide insight into these areas, and specifically allow us to better comprehend how this population is distinct from other groups. We examine character descriptions, including names, gender roles, and sexual experience, as well as cues to mate preference within lesbian relationships, and compare these results to the existing empirical studies.

### **Sick of Prejudice: How Contagion Cues Affect Responses Toward Gay Men.**

*Steve Newell (University of Florida, [Smnewell@ufl.edu](mailto:Smnewell@ufl.edu)) and Catherine Cottrell (University of Florida)*

From a threat-based approach to prejudice, gay men are stereotypically associated with contagion threats (e.g., threats to health and values), which evoke disgust and related discriminatory tendencies (Cottrell & Neuberg, 2005). A threat-based approach also suggests that an individual's sensitivity to a threat may depend upon environmental cues relevant to that threat. We tested this by manipulating whether participants encountered an experimental confederate feigning cold symptoms and then inquiring about their attitudes toward various groups, including gay men. Participants exposed to our ostensibly sick confederate expressed higher levels of perceptions of contagion threat and disgust toward gay men, but not other groups. Overall, these findings suggest that environmental cues can affect individuals' sensitivity to relevant threats, as well as associated cognitive and affective responses to relevant out-groups.

**5:15 – 7:00 Reception**

**7:00 – 8:00 Keynote Address.**

**David Livingstone Smith: The Nature of Human Nature**

After a long period of eclipse, the notion of human nature is back in vogue. Psychologists, anthropologists, philosophers, and others can once again talk about human nature without embarrassment. But talk of human nature raises important questions which all too often remain unaddressed. What, exactly, do we mean by "human nature"? What *should* we mean by it? Can *any* plausible concept of human nature bear the explanatory weight that we are inclined to place on it? In this talk I will critically examine some objections to the very idea of human nature, have a look at some current notions of what "human nature" is supposed to denote, and consider the prospects for a satisfactory account of it.

# Saturday April 28<sup>th</sup>

## 9:00 – 10:30 **Business Meeting**

Everyone who registered for the conference is welcome to attend the business meeting.

## 10:30 – 10:40 **Break**

## 10:40 – 12:00 **Talk Session 3: Gender and Sexuality**

### **Sex Differences in Meal Preparation Motives**

*Charlotte DeBacker (University of Antwerp, [Charlotte.DeBacker@ua.ac.be](mailto:Charlotte.DeBacker@ua.ac.be)) and Maryanne Fisher (St. Mary's University)*

Meals take time and energy to prepare. Egalitarian gender role shifts means there is less difference in how much time women and men spend preparing food. However, evolutionary psychological theory can be used to predict sex differences in motives for cooking, particularly cooking for others. In the context of courtship, women may wish to show nurturance, while men wish to impress and display resources (Buss & Schmitt, 1993). Hence, women may cook to show they care, while men may cook to impress others, for instance by spending more money on meals. Also, evolutionary-informed predictions suggest grandmothers will invest more energy into meal preparation than grandfathers. Using data from longitudinal food studies and a self-administered survey, we present data to support the hypothesis that sex differences will continue to exist in motives for cooking, and women will play a greater role in cooking for offspring throughout their lifetime.

### **Sex Difference Indistracted During Mating: Was Kinsey Right?**

*Marisa J Levy (Binghamton University, [mlevy5@binghamton.edu](mailto:mlevy5@binghamton.edu)), Justin Garcia (Kinsey Institute) and Nicole Cameron (Binghamton University)*

Alfred Kinsey, a well-known sexologist once said, "Cheese crumbs spread before a pair of copulating rats will distract the female but not the male." This study aimed to investigate this statement. Three scenarios were used: a control, fruit loops, and a flashing light. Furthermore, animals were tested in either a paced or non-paced mating condition for each scenario. In the non-paced condition males were able to exert more control over copulation, whereas in the paced condition females controlled mating. Over the course of a 30-minute session, both sexes slowed their mating effort over time. Food stimuli resulted in greater intervals in the paced condition when females will choose to eat over copulate but in decreased intervals in the non-paced condition when males still attempted to mount females. Furthermore, females displayed the largest difference in inter mount intervals due to food. Both sexes copulated less frequently following flashing light introduction.

**Attitudes about nature vs nurture in human and non-human animals: A replication of the Geher 50 study.**

*Paine Jennings (Southern Maine Community College, [painemaxine@rocketmail.com](mailto:painemaxine@rocketmail.com)) and Killian Garvey (Southern Maine Community College)*

This study was designed as a replication and extension of Geher's (2010) exploration of individual differences in motivations underlying beliefs about resistance to evolutionary psychology in five subscales: sex differences between (a) men and women, (b) boys and girls, (c) roosters and hens, (d) differences between dogs and cats, and (e) human universals. In addition to political orientation, affective and cognitive measures were taken, as well as overall belief in creationism versus evolution. As predicted, resistance to evolutionary psychology corresponded to (1) political orientation as well as (2) more sensitive affective and (3) closed versus open cognitive traits, and these attributions were stronger in the human as opposed to non-human animal subscales. In addition, even though none of the items in the Geher 50 mention god or religion, a biblical creationist worldview corresponded to nurture as opposed to nature attributions. Results of this study were interpreted through the savanna-affect hypothesis.

**Semen Sampling and Seminal Priming: Implications for Mate Choice, Immune System Tolerance, Spontaneous Abortion, and Morning Sickness.**

*Gordon G. Gallup (SUNY Albany, [gallup@albany.edu](mailto:gallup@albany.edu))*

Seminal plasma contains sex hormones, endorphins, neurotransmitters, placental hormones, and immunosuppressants, along with features that neutralize vaginal acidity and support sperm. The composition of semen likely evolved to promote the male's reproductive best interests (Burch & Gallup, 2006), which in turn has resulted in co-evolutionary and counter adaptations in females (Gallup, Burch, & Petricone, 2012). Here evidence is reviewed concerning the effect of seminal priming on female immune system suppression and tolerance. Evidence concerning the incidence of preeclampsia and other forms of spontaneous abortion was used by Davis and Gallup (2006) to develop a model which suggests that each man may have a chemically unique semen signature, and the frequency of insemination by the child's father appears to be an important factor in promoting healthy pregnancies. In the present paper this model is extended to generate testable predictions about the effects of seminal priming and changes in paternity on the severity of morning sickness. With high frequency insemination (seminal priming) the female likely develops immune system tolerance to the chemistry of her partner's semen, which later generalizes to the fetus and reduces the incidence and severity of morning sickness. Evidence for the antidepressant properties of semen (Gallup, Burch, & Platek, 2002) is also revisited. Bolstered by additional data and unsolicited semen testimonials, it is suggested that semen sampling may be an embedded feature of human courtship and may unwittingly influence mate choice by women.

**12:00 – 2:00 Lunch**

## 2:00 – 3:20 Talk Session 4: Attractiveness

### **Facial Symmetry of Athletes and Perceived Attractiveness.**

*Lauren Ruscin (Monmouth University, [laurenmr1@verizon.net](mailto:laurenmr1@verizon.net)) and Jack Demarest (Monmouth University)*

Facial symmetry has been found to increase physical attraction across cultures (Rhodes, et al., 2001) and varies with health and testosterone load. This study examined trait ratings for 20 facial photographs of male and female athletes that varied in symmetry. Using a 7-point scale (1= not very; 4 = moderately; 7 = extremely), photographs of athletes with symmetrical faces were rated more attractive than athletes with asymmetrical faces. Attractiveness, but not facial symmetry, was positively correlated with perceptions of health, fitness and skill at their sport. Asked about the likelihood of having a relationship with opposite sex athletes (i.e., friendship, one night stand, short term relationship, long-term relationship), those who were rated more attractive, healthy, and physically fit were more likely to be chosen. While grouping athletes by symmetry had an impact on ratings of attractiveness, the correlation was not significant, perhaps due to the small variability in symmetry among these athletes.

### **Oh no she didn't! Female intrasexual competition is partly mediated by physical characteristics that men find attractive.**

*Tia Y. Walters (Georgia Gwinnett College, [tia\\_walters@ymail.com](mailto:tia_walters@ymail.com)) and Steven Platek (Georgia Gwinnett College)*

Women's intrasexual competition remains understudied. We executed three experiments investigating the role to which women are perceptually aware of phenotypic cues to high mate value in other women (waist-to-hip ratio, WHR) and their use of WHR cues to carefully "negotiate mating space" and present themselves as the best choice in mate selection and/or mate retention scenarios. The results suggest that women are not only sensitive to, but will utilize WHR and that women's relational aggression is an intrasexual competitive behavior, partly mediated by a female's own phenotypic quality and relationship status, and facultatively utilized in context where a high quality male is present. The findings also suggest that utilization of WHR in intrasexual competitions is linked to a woman's self-perception of her own attractiveness and body morphology; i.e. women who deviated greatly from optimal WHR configuration were less likely to use physical cues for competition. This further supports the facultative nature of intrasexual cues that women use for acquisition of high quality mating partners. The authors think that these findings suggest that self-perceptions drive specific intrasexual competitive strategies that would be most advantageous based upon one's own morphological configuration. Data will also be presented from a follow-up pilot study that measured variability in androgens among women.

**Ovulatory Shifts in Mating Intelligence.**

Ashley Peterson (SUNY New Paltz, [anjpeterson@gmail.com](mailto:anjpeterson@gmail.com)) Rachael Carmen (SUNY New Paltz) and Glenn Geher (SUNY New Paltz)

Women are fertile approximately one-sixth of the month (Wilcox, Weinberg, & Baird, 1995). Based on this fact, Thornhill and Gangestad (2008) suggest that women possess dual sexuality – estrous sexuality (i.e., reproductive/conceptive sexuality) and extended sexuality (i.e., non-reproductive/non-conceptive sexuality). Each type of sexuality is proposed to have its own function and, therefore, the current study sought to determine if women's mating intelligence, the cognitive mechanisms necessary for mating and reproduction, varied with their conception probability and birth-control-usage. One hundred and fifty-three heterosexual women completed measures of reproductive history, including indicating their birth control-usage and date of their previous menstrual cycle, and mating intelligence (Geher & Kaufman, 2007). It was found that women's conception probability was positively correlated with their mating intelligence only among normally cycling women. Implications are discussed. Implications are discussed.

**Sexual Access, Emotional Access, Personality Dimensions and Mate Expulsion.**

T. Joel Wade (Bucknell University, [jwade@bucknell.edu](mailto:jwade@bucknell.edu)) and Katie Culver (Bucknell University)

Prior research examining mate expulsion decisions has focused on whether or not deficits in emotional or sexual access play a role in the decision. That research shows that deficits in emotional access lead to mate expulsion. However, scenarios depicting the deficits as all or nothing rather than more realistic scenarios depicting incremental deficits in emotional and sexual access were used in that research. The present research examined the role of emotional and sexual access deficits using scenarios depicting incremental deficits, and sought to determine whether Big-5 personality dimensions play a role. Deficits in emotional access were hypothesized to be chosen more often as the reason to expel a mate. The results obtained were consistent with the hypothesis. Additionally, Conscientiousness plays a role in the decision making. These results are discussed in terms of prior research

**3:20 – 3:40 Break**

**3:40 – 5:00 Talk Session 5: Aggression and Mating****Facial Proportions: Wider for High School Boys Who Play In-Your-Face Sports.**

Gordon Bear (Ramapo College, [gbear@ramapo.edu](mailto:gbear@ramapo.edu)) and Alexandra Ashmont (Pace University)

We extended recent research on sexual dimorphism in the cranium by extracting data from a high school yearbook, measuring the breadth of the faces relative to their heights in the head shots. Among senior boys, those who played only confrontational sports such as football had broader faces than those who played only nonconfrontational sports such as golf ( $p < .0005$ ). The pattern seems similar to

those reported for college men and professional hockey players: Broader faces correlate with more aggressive play in laboratory games and on the rink (Carré & McCormick, 2008; Carré, McCormick, & Mondloch, 2009; Stirrat & Perrett, 2010). Among the senior girls in our study, the difference was in the opposite direction and marginal ( $p = .11$ ), but one of the batches involved in the comparison numbered only 4.

### **Facultative Formidability: Physical Size Shapes Aggressive Behaviors in Men.**

*Gregory D. Webster (University of Florida, [gdwebs@ufl.edu](mailto:gdwebs@ufl.edu)), Tatiana Schember (University of Florida) and Ben Crosier (University of Florida)*

Can one's physical size inform interpersonal behavioral strategies? Drawing on resource holding potential, reactive heritability and facultative calibration, the recalibration theory of anger, and the general aggression model, we predicted that men would show positive height- and weight-aggression associations across three studies. We showed that both height and weight were positively related to penalization for aggression in indoor lacrosse (Study 1). Small-scale meta-analyses showed that the height- and weight-aggression links for men were significant and stronger for contact (vs. response scale) physical aggression (Study 2). Finally, from the victim's perspective, using an archival forensic homicide sample, we showed that men were more likely to be killed at a distance (i.e., gunshot) than at close range (e.g., beating, stabbing, strangulation) the heavier—but not taller—they were (Study 3). Collectively, these findings supported the abovementioned theories and suggested that, in men, physical size may shape aggressive behaviors in adaptive ways.

### **Exposed Intestines & Contaminated Cooks: Sex, Stress, and Satiation Interact to Predict Disgust Sensitivity.**

*Laith Al-Shawaf (University of Texas at Austin, [laith.alshawaf@gmail.com](mailto:laith.alshawaf@gmail.com))*

The emotion of disgust motivates behavioral avoidance of infectious agents. An evolutionary perspective predicts that individual differences in disgust should depend on the ancestral costs and benefits of avoiding contaminants. Previous research advanced the compensatory behavioral prophylaxis hypothesis: progesterone-induced immunosuppression should be accompanied by increased disgust sensitivity and behavioral avoidance of contaminants. However, extant data do not address whether factors other than progesterone-induced immunosuppression also trigger heightened disgust. The current study adjudicates between competing prophylaxis hypotheses by testing whether stress and satiation, which shift the costs and benefits of prophylactic behaviors but are unrelated to progesterone-induced immunosuppression, predict disgust sensitivity. Results revealed a sex-stress-satiation interaction in predicting scores on the Disgust Scale-Revised (DS-R). This study provides discriminating evidence in support of a broader system of compensatory prophylaxis, proposes a more theoretically and empirically compelling factor structure for the DS-R, and illuminates the functional basis of individual differences in disgust sensitivity.

**The Dark Triad, Attractiveness, and Mating Strategy**

*Gregory Carter (University of Durham, [g.l.k.carter@durham.ac.uk](mailto:g.l.k.carter@durham.ac.uk))*

In the 10 years since the term was coined by Paulhus and Williams, the 'Dark Triad' - the collective term for the sub-clinical trio of inter-related personality traits of Narcissism, Machiavellianism and Psychopathy - has prompted much debate; recently, that debate has taken on an evolutionary aspect. Research by the presenter has found that women find, and rate, men who possess these traits as significantly more attractive than their peers who do not. What is the reason for this? The draw of 'good genes'? A male surge in the genetic arms race? Several candidate explanations bear merit. The presenter will discuss this personality construct in a manner which should allow researchers across the evolutionary discipline to access the debate, explore the issues it presents, and more, drawing on a recently-conducted study, and the resultant, compelling, empirical evidence.

**5:00 – 5:30 Break**

**5:30 – 6:30 Keynote Address. Robert Kurzban: Why Everyone (Else) Is a Hypocrite: Evolution and the Modular Mind.**

The key to understanding inconsistency – including hypocrisy – is modularity, the idea that the mind consists of a very large number of specialized functional units, designed by natural selection, operating with varying degrees of autonomy. Modularity undermines deeply held intuitions, and a wide range of hypotheses, about the nature of the mind. It presents insurmountable problems for those theories that require a coherent self, and for theories that assume that people maintain a consistent set of beliefs and preferences that guide their decision making. In this presentation, I'll discuss modularity, with an emphasis on how the phenomenon is visible at all levels of cognition, from perception to decision making to moral reasoning. I'll show how modularity informs – and potentially recasts – research in areas such as self-esteem, self-deception, self-enhancement, and self-control. By focusing on the relationship between modularity and social strategic dynamics, I'll illustrate why everyone (else) is a hypocrite.

**6:30 – 8:30 Banquet**

# Sunday April 29<sup>th</sup>

## 9:00-10:20 Talk Session 6: Applied Evolutionary Psychology

### **Community Perception: An Adaptation for Interpreting Community Quality.**

*Dan O'Brien (Harvard University, [daniel\\_obrien@radcliffe.edu](mailto:daniel_obrien@radcliffe.edu))*

Community perception is the ability to accurately assess the safety of an unfamiliar neighborhood using the conditions of houses, lawns and streets. Because deterioration (i.e., physical disorder) is in fact associated with weaker communities with higher crime, these interpretations are overwhelmingly accurate, and lead to adaptive social behavior. This talk presents experimental evidence of how individuals can accurately assess the quality of a community based on images of physical structures; and that exposure to disorder inhibits prosocial behavior, which is adaptive for a threatening environment. Synthesizing this with other work on disorder, the talk seeks to answer the question: what role has this adaptation played historically, and how has this shaped its form and function?

### **Evolved to Cabaret: Expressing Human Behavioral Evolution Through Costume Design.**

*Laura Johnsen (SUNY New Paltz, [lauraljohnsen@gmail.com](mailto:lauraljohnsen@gmail.com)), Andrea Varga (SUNY New Paltz) and Glenn Geher (SUNY New Paltz)*

Clothing plays an important part in our evolutionary history. Perhaps used as a way to attract mates, clothing has evolved to indicate social status and personal expression (Roach & Eicher, 1965). Changes in clothing are often marked by changes in economic status (O'hara & Sicignano 1985). Art and culture provide glimpses into clothing's role in human nature. Cabaret, the 1966 musical by Kander and Ebb, is an excellent representation of the unique time period of Weimar Germany as it emphasizes clothing's role as an indicator of status and reproductive motives. The current paper attempts to unify the fields of Evolutionary Psychology and Theatre Arts through a script and character analysis of Cabaret. The analysis examines evolutionary psychology themes and a summary will be included as to how a real main stage production at SUNY New Paltz will utilize the evolutionary analysis in the production.

### **Toward an Evolutionary Neurocognitive Model of Obsessive-Compulsive Disorder.**

*Daniel J. Glass (SUNY New Paltz, [glassyd@gmail.com](mailto:glassyd@gmail.com)) and Amanda Guitar (SUNY New Paltz)*

Obsessive-Compulsive Disorder (OCD) is a disorder characterized by its clinical heterogeneity, but also a commonality of symptom clusters known as "symptom dimensions." Previous research using factor analysis has shown that the symptom-structure of OCD falls into four factors—1) contamination fears and cleaning compulsions, 2) checking rituals and violent or aggressive thoughts, 3) obsessions

with numbers and order, and 4) hoarding, respectively. The purpose of this study was to replicate, in a community sample, the four-factor model found in a previous meta-analysis. The results support the four-factor model and suggest that OCD affects the brain in one of a number of discrete and predictable ways because the affected domains are underlied by discrete neural systems in the brain, which may meet the criteria for evolved “modules.” These findings can inform the understanding and treatment of OCD as well as offer insight into the neurocognitive structure of the normally functioning brain.

### **Evolution and Medicine: Reducing Diagnostic Discordance in Women’s Health Issues.**

*Chris Reiber (Binghamton University, [creiber@binghamton.edu](mailto:creiber@binghamton.edu))*

Diagnostic discordance—disagreement between patients and their physicians/clinicians-- breeds negative consequences. However, for disorders that are not discrete entities with conceptually defensible diagnostic definitions, and/or where subjective symptom reports are the diagnostic keystone, the appropriate and relative weighting of clinician and patient opinions becomes unclear and diagnostic discordance becomes likely. Many women’s health issues are plagued by this problem. Data from two studies of Premenstrual Syndrome (PMS) will illustrate critical issues related to diagnostic discordance using various definitions and diagnostic criteria sets. An evolutionary approach to clinical disorders can serve to illuminate ultimate causation, thus providing conceptually defensible definitions and diagnostic sets that better reflect reality, leading to lower diagnostic discordance and thereby improving patient-clinician relationships and ultimately, health.

**10:20 – 10:30 Break**

**10:30 – 11:30 Workshop: The State of Evolutionary Psychology in Academia and Future Directions by Glenn Geher and Daniel Kruger**

**11:30 – 12:50 Talk Session 7: Attachment & Children**

### **Does Parent-Child Attachment Affect Attitudes Toward and Engagement in Hookup Culture?**

*Jennifer A. Shukusky (Rutgers University, [jas819@scarletmail.rutgers.edu](mailto:jas819@scarletmail.rutgers.edu))*

Examining the association between one’s relationships with his/her opposite sex parent and his/her engagement in hookup culture on a university campus, it was hypothesized that those who do not have a strong, close, positive relationships with their opposite-sex parent would be more likely to engage in casual sexual behavior.

### **Situation-Specific Emotional States: A Test of Evolutionary Functionality.**

*Amanda E. Guitar (SUNY New Paltz, [mguitar16@gmail.com](mailto:mguitar16@gmail.com)), Daniel Glass (SUNY New Paltz) and Glenn Geher (SUNY New Paltz)*

Scholars have suggested that emotions increase fitness by adjusting the response of the individual to the specific situation. Thus, the particular emotion experienced by an individual should be dependent on whether the situation is a threat/opportunity, whether it is in the physical/social domain, and if the outcome is a success/failure. Nesse and Ellsworth (2009) created a model around this idea that predicts which emotions should arise in these particular situations. The current study empirically tested this model using the virtual simulation program 'Second Life.' Participants' "avatars" were placed in socially and physically threatening and opportunistic situations; further, participants were randomly assigned to succeed or fail at each task. After completing each task, participants were asked to rate the degree to which they experienced the emotions predicted by the model to arise in these situations. Significant results were found for the social opportunity, physical threat, and social threat (failure conditions only).

### **The Impact of Life Defeat and Victory on Mood and Attachment Patterns.**

*Edward Sturman (SUNY Plattsburgh, [estur001@plattsburgh.edu](mailto:estur001@plattsburgh.edu)), Brandon Barton (SUNY Plattsburgh), Emmi Tuomela (SUNY Plattsburgh), Jennifer Candella (SUNY Plattsburgh), and Marcus Valentine (SUNY Plattsburgh)*

The present study sought to explore how perceptions of defeat and victory impact on mood and attachment patterns. According to social rank theory, defeat leads to involuntary subordination, which is adaptive in the short-term as it functions to disengage individuals from a losing struggle. However, if defeat cannot be accepted, involuntary subordination becomes prolonged and may manifest as major depression. Involuntary subordination and depressive symptoms should theoretically lead to a more fearful, and less secure, attachment pattern. Results from the present study indicated that higher levels of defeat significantly predicted involuntary subordination and depressive symptoms, but these relationships were mediated by the extent to which one is able to accept defeat. Further, involuntary subordination was significantly related to secure attachment and fearful attachment. The present study demonstrated that, by taking an evolutionary point of view, we can improve our understanding of the relationships between life events, mood, and interpersonal relations.

### **Beyond Diversity: A Curriculum for What All Kids Have in Common.**

*Gary Bernhard (UMass Amherst, [bernhard@uww.umass.edu](mailto:bernhard@uww.umass.edu)) and Kalman Glantz*

Multiculturalism is a nearly ubiquitous feature of public schooling today. In an attempt to reckon with the enormous diversity that exists in most schools, teachers attempt to acknowledge minority cultures in curricula and through events such as multicultural dinners and celebrations. Unfortunately, this well-meaning attempt to help children "appreciate" difference tends to drive kids apart rather than bring them together. Multicultural education doesn't work because it doesn't present a coherent, larger "we" that all people can be part of, an identity that transcends apparent

differences. We need a curriculum that emphasizes commonality and explores what it means to be a human being. In this presentation we offer an overview of such a curriculum grounded in pan-human themes. These themes are common to all cultures in all times because they were developed in the course of our species' evolution in hunter-gatherer bands.

**12:50 – Conference Ends**

# Poster Abstracts

## **1. Dominance and deference: The effect of social status on creative display in a competitive mating context**

*Daniel Gambacorta (New Mexico State University, [dmg@nmsu.edu](mailto:dmg@nmsu.edu)) and Timothy Ketelaar (New Mexico State University)*

Dominance is a form of status derived from the ability to control resources via threat of physical force. One way that humans can defer to more dominant individuals is by inhibiting creative displays in competitive mating contexts. This form of deference could function to prevent physical harm from more dominant competitors. To test this hypothesis, fifty-one male participants were led to believe that they were competing with another male for the chance to go on a lunch date with an attractive female. Participants were shown a shirtless picture of their competitor depicting either a dominant (strong) male or a nondominant (scrawny) male. Videotapes of participants being interviewed by the female with the male competitor watching were then rated on several dimensions by a team of coders. Results revealed that participants competing against a dominant male produced fewer and lower quality creative displays than participants competing against a nondominant male.

## **2. Perceived Physical Attractiveness Influences Relationship Investment and Mate Guarding Behaviors**

*Broderick A Sawyer (Eastern Connecticut State University, [sawyerbr@my.easternct.edu](mailto:sawyerbr@my.easternct.edu)), Rachel Bibee (Eastern Connecticut State University) and Alita J. Cousins (Eastern Connecticut State University)*

This study was conducted to determine how physical attractiveness affects relationship investment and mate guarding tactics. Undergraduate dating couples (N=101) filled out various measures including questions about partner attractiveness, relationship investment, and mate guarding. Both men and women who rated their partners as more attractive were more investing in their relationship. Men with more attractive partners were shown to display more protective, more monopolizing, and more possessive mate guarding tactics towards their partners. Males with less attractive partners were more violent towards competitors, suggesting that males may perceive that the costs for their partner finding a new mate may increase the likelihood that she will tolerate this more costly tactic. Women with less attractive partners were more likely to threaten competitors, the only tactic that is not directed toward their partner, and may be mitigating the potential that their partner will leave the relationship—while keeping mate poachers away.

## **3. Exams may be dangerous to grandpa's health: How inclusive fitness influences students' fraudulent excuses.**

*Carey J Fitzgerald (Oakland University, [fitzgera@oakland.edu](mailto:fitzgera@oakland.edu)) and Chelsea Loeffler (Oakland University)*

Undergraduates have been known to lie about the death of a grandparent in order to miss a class/exam. This study provides the first evolutionary perspective regarding these fraudulent excuses. Inclusive fitness theory states that maternal grandmothers are

closest to their grandchildren because of their assured biological relation. Paternal grandfathers are the least close because of their two degrees of paternity uncertainty. Participants (N = 471) were given a questionnaire about their relationship with their grandparents (emotional closeness with them, using them for fraudulent excuses, and hypothetical scenarios about fraudulent excuses). Forty-four participants reported using fraudulent excuses, but they used their grandmothers more often than grandfathers in these excuses. Data from hypothetical scenarios strongly supported inclusive fitness theory. More participants said they would lie about their paternal grandfather's death/failing health than any other grandparent. Participants also indicated they would be least likely to lie about their maternal grandmother's death/failing health.

#### **4. Females Use a Male's Lifestyle Attributes to Predict His Mating Strategy**

*Ari J Freuman (SUNY New Paltz, [freuma65@newpaltz.edu](mailto:freuma65@newpaltz.edu))*

In order to determine a male's primary mating strategy, a female can hypothetically draw on the nature of his lifestyles attributes (e.g., hobby, employment, etc.). In this study, females rated attributes that they considered riskier (for physical or non-physical harm) and more exhibitionistic, as more likely to be those of short-term strategist, and conversely, females rated attributes which they considered less risky and less exhibitionistic as less likely to be those of a short-term strategist. This finding supports the hypothesis that females will draw on the level of risk and exhibitionism a male opts for in order to predict his primary mating strategy. Furthermore it is consistent with previously literature that supports the hypothesis that males who engage in risky and showy behavior are more likely to be short-term strategists.

#### **5. Thinking and feeling: Individual differences in responses to the Moral Foundations Questionnaire.**

*Paine J. Jennings (Southern Maine Community College, [painemaxine@rocketmail.com](mailto:painemaxine@rocketmail.com)) and Kilian J. Garvey (Southern Maine Community College)*

These studies were designed as a follow up and extension of previous research exploring emotional and cognitive substratum of responses to the Moral Foundations Questionnaire (MFQ: Haidt and Graham, 2007). The correlations of BIS/BAS (an affective measure), REI (cognitive preferences) and IQ (aptitude for abstract thought), and the MFQ (moral reasoning) were replicated in study one and extended to measures of disgust sensitivity and tolerance of ambiguity in study two and fear perception and need for cognitive closure in study three. / Results supported previous research which found that that the evolutionarily older affective and cognitive styles are more predictive of basic (i.e., older) kin centered moral reasoning while evolutionarily novel affective and cognitive styles are more predictive of higher level universally applied moral reasoning.

#### **6. The Modular Mind: Performance on Wason tasks predicts sensitivity to (scientific) rule breaking.**

*Kristy S Brosseau (Southern Maine Community College, [kristy00102@gmail.com](mailto:kristy00102@gmail.com)) and Kilian J. Garvey (Southern Maine Community College)*

In this study performance on four different Wason Card Tasks (WCTs) was used to explore individual differences in distinguishing between science and pseudoscience, in

this case the difference between astronomy and astrology, in an attempt to understand if scientific thinking might be a form of the evolutionarily selected cognitive module of “cheater detection.” 234 subjects completed the four WCTs, the astrology and astronomy questions (8 point Likert scale), and the Rational Experiential Inventory (REI). As a purported measure of ability to detect cheaters/cheating successful performance on all four of the WCTs predicted both confidence in the science of astronomy and doubt in the pseudoscience of astrology better than Rational or Experiential cognitive preferences. These results, while preliminary, suggest that rejecting the pseudoscience of astrology might be a matter of cheater detection.

## **7. The laterality of moral reasoning: Interhemispheric interaction and the Moral Foundations Questionnaire**

*Kilian J. Garvey (Southern Maine Community College, [kiliangarvey@gmail.com](mailto:kiliangarvey@gmail.com)) and Paine M. Jennings (Southern Maine Community College)*

Efficiency of interhemispheric interaction predicts a variety of cognitive processes, from political orientation to appreciation of irony. In particular, efficient interhemispheric interaction allows updating previously held beliefs and is likely to result in a more nuanced world view. In this study handedness and familial sinistrality, relatively indirect but accurate measures of interhemispheric interaction, are used to explore moral reasoning and possible underlying cognitive (tolerance of ambiguity) and affective traits (fear perception). Data were collected from 184 undergraduates who completed the Edinburgh Handedness Inventory, the Moral Foundations Questionnaire, the Tolerance of Ambiguity Scale, and the Fear Perception Index. Results show that mixed handedness (associated with a thicker corpus callosum which facilitates interhemispheric interaction) or a first generation mixed handed relative, is associated with higher tolerance of ambiguity and lower likelihood to perceive relatively ambiguous situations as dangerous, which, it will be argued, is what “allows” moral reasoning to extend existential consideration to non-kin.

## **8. The Trolley Dilemma and the Best Friend Exception to Hamilton’s Rule**

*Kilian J. Garvey (Southern Maine Community College, [kiliangarvey@gmail.com](mailto:kiliangarvey@gmail.com)) and Kristy S. Brosseau (Southern Maine Community College)*

As a follow-up and extension of a previous exploration of Hamiltonian decision making, this study employed a 4x5 version of the classic Trolley problem. Subjects were asked if they would pull a switch to divert a train from running over either 5, 10, 15, or 20 people to a track where a person, your best friend, your cousin, your sibling, or your child was tied instead. The decision to pull the switch was found to be an interaction of number of people [n] “saved” x genetic relatedness [r] of the “victim.” As in the original study, increasing [n] positively affected willingness to pull the switch, although this change was non-significant in the stranger and the child condition. And while the best friend is likely no more genetically related than any of the strangers, subjects were significantly less likely to “pull the switch” in this condition than in the cousin condition.

### **9. Morphological Indicators of Hormone Levels in Relation to Cognitive Ability**

*Jessica P Lail (Georgia Gwinnett College, [jlail@ggc.edu](mailto:jlail@ggc.edu)) and Steven M Platek (Georgia Gwinnett College)*

A majority of males have been shown to prefer a low waist-to-hip ratio (WHR) and that a low WHR is related to a variety of factors, namely a decrease in mortality, intelligence, and higher reproductive viability, all factors contributing to a higher likelihood of successfully producing and caring for offspring. Little information, however, has been produced explaining the nature of the intelligence predicted by WHR. If WHR is a predictor of general, overall intelligence, could it also have predictive power for certain types of intelligence? This research study aimed to investigate the intelligence type differences among women of various WHR using a sample of college women.

### **10. Hookups to Romantic Relationships: Expanding the Sexual Script for Various Partnerships**

*Jennifer A Shukusky (Rutgers University, [jas819@scarletmail.rutgers.edu](mailto:jas819@scarletmail.rutgers.edu))*

Evidence supports a sexual script which guides intimate behavior between heterosexual individuals. People, however, differentiate between their romantic and non-romantic partners. The sexual script may not apply equally to hookups, friends with benefits, dating partners, and romantic partners. People are expected to engage in different sexual activities in various relationships.

### **11. Perceptions of Romantic Partners**

*Rebecca L Newmark (SUNY New Paltz, [rebecca.newmark@gmail.com](mailto:rebecca.newmark@gmail.com)) and Laura Johnsen (SUNY New Paltz)*

Geher et al. (2005) discovered that people rate their current romantic partners more positively on broad personality traits in comparison to their most recent former partners. Our current research query is endeavoring to expand on Geher et al.'s findings. While there was no sex-differentiated discovery, there are traits that are differentially important to males and females (Buss, 2003). Specifically, physical attractiveness appears to hold more importance for males than females, and status holds more importance for females compared to males. The current study examines current and former partner ratings for females and males related to aspects of physical attractiveness and status. We hypothesize that a female's assessment will express a larger 'current versus former partner gap' for status. In other words, it is expected that females will rate their current partners higher in terms of status compared to other qualities (e.g., open-mindedness) relative to their former partners. We also conjecture that males will exhibit a relatively large 'current versus former partner gap' in their ratings of physical attractiveness compared to other traits of their current versus former partners.

### **12. Perceptions of Male Facial Scarring**

*T. Joel Wade (Bucknell University, [jwade@bucknell.edu](mailto:jwade@bucknell.edu)) and Justin K Mogilski (Bucknell University)*

There is a growing body of evidence that perturbations of the skin such as scarring may alter perceptions of attractiveness and mate desirability, particularly in men. The current

study expanded upon this body of evidence by investigating whether the presence of facial scarring on a male will affect perceptions of a male's personality, intelligence, parenting ability, social skills, dominance, and masculinity, as well as previous measures of attractiveness. Half of the participants were shown a picture of a young, adult male without a facial scar while the other half were shown the same male with a photorealistic scar. Participants then rated the male for each measure under investigation. Additionally, each participant completed a social desirability index and demographic questionnaire. Aside from one measure of parenting skills where a man with a scar was rated higher, no significant differences were found between groups. The study results and implications will be further examined.

### **13. Which Traits Matter Most, and Why, II: The Case for Attachment, Sex Drive, and Experience**

*Ashley N Peterson (SUNY New Paltz, [anjpeterson@gmail.com](mailto:anjpeterson@gmail.com)) and Glenn Geher (SUNY New Paltz)*

Prior research by evolutionary psychologists has examined dispositional predictors, such as personality, sociosexuality, life history, and attachment style, in relation to mating, yet only one study has examined how these traits predict an individual's sexual preferences (i.e., Peterson, Geher, & Kaufman, 2011). Thus, the current study, extending the research of Peterson, Geher, and Kaufman (2011), examined previous studied dispositional predictors, including the Big Five, sociosexuality, life history, and mating intelligence, and three additional ones, attachment, sex drive, and disgust sensitivity. A sample of 638 participants completed a battery of measures of each of these traits as well as providing information about their sexual preferences. The traits predicted variability in sexual preferences – with the attachment dimensions, avoidance and anxiety, and sex drive being most predictive. In addition, sex differences emerged (e.g., males reported enjoying most of the sex acts more than females).

### **14. An Exploration of Women's use of Indirect Aggression in Relation to Mate Competition**

*Beth E DeCoste ([beth-236@hotmail.com](mailto:beth-236@hotmail.com)) and Maryanne L Fisher*

Aggression is an evolved psychological mechanism that functions for a number of reasons. One reason is to compete with others for limited resources that aid in both survival and reproduction, particularly quality mates. Although the most obvious, and well researched form of aggression is physical aggression, indirect aggression has been identified as an effective yet safe form of competing, which includes gossiping, ostracism, damaging the targets confidence and self esteem, criticizing another's appearance or personality, etc, (Hess, 2006). The current study is aimed at gaining a qualitative perspective of females' experiences of indirect aggression as both a victim and a perpetrator. We used open-ended surveys and asked females to describe their experiences regarding indirect aggression. We expected women to recall a wide variety of experiences, many of which are focussed on mating competition. Moreover, we predicted the majority of recollections would be based on experiences as victims, rather than perpetrators.

### **15. Experience and Coping Skills of Homesickness Among Young Individuals**

*Suzanne Y Melanson (sym.melanson@gmail.com) and Maryanne L Fisher*

There is little scholarly investigation into homesickness, although the research that does exist indicates that it is very prevalent and experienced by the majority of individuals at least once in their life. For example, between 50%-80% of the general population will experience some form of homesickness during their lives (Fisher, 1989). It is an important phenomenon, because experiencing homesickness has been linked with depression, memory lapses, poor concentration and distress (Fisher & Hood, 1987; Burt, 1993). There are few coping mechanisms designed to help individuals with homesickness. In this study, we examine what coping styles are used by men and women, when they are experiencing homesickness. Our goal is to not compare these instances of homesickness but rather arrive at some generalizable conclusions about experiences of homesickness, as it may relate to participant sex and age. This study is underway at present time.

### **16. “Intelligent Infidelity”: Theoretical Framework to Examine if Females Engage in Phenotypic Matching Between Extra-Pair Partners and In-Pair Mates to Avoid the Detection of Infidelity**

*Melvin M Philip (SUNY New Paltz, melvin.m.philip@gmail.com) and Glenn Geher (SUNY New Paltz)*

Despite the costs they suffer when caught, individuals can reap distinct fitness-relevant benefits by engaging in infidelity. Unlike females, whose genetic maternity is assured, males must deal with the possibility that they may be investing in offspring who are not related to them. Males use a variety of strategies to assure paternity when it comes to offspring. They assess facial resemblance to determine if they should provide for their long-term pair-bonded mates' offspring (Platek et al., 2003). Females may preferentially pick extra-pair mates who resemble their in-pair partners unconsciously to reduce suspicions of infidelity due to facial-feature differences between the long-term mates and the females' offspring. We propose a theoretical framework for “Intelligent Infidelity” - and provide a variety of methods to test whether individuals, particularly females, engage in phenotypic matching between in-pair and extra-pair partners. This examination would give insight into the strategies that individuals use to hide infidelity.

### **17. Light my fire: Mating strategies and preferences in Blaze romance novels**

*Laura L Johnsen (SUNY New Paltz, lauraljohnsen@gmail.com), Maryanne Fisher (Saint Mary's University) and Glenn Geher (SUNY New Paltz)*

Harlequin romance novels have been studied to provide insight into female-specific mating strategies from an evolutionary perspective (Fisher & Cox 2009, 2010). Male characters in Harlequins tend to have “cad” -like traits (e.g. manly, confident, sexy) with “dad” -like intentions (e.g. settling down, raising a family, marriage). Others (e.g. Strout et al. 2010) examined diversity in women's mating strategies. Our study addresses which combination of traits and mating strategies create the most desirable mate, and the most likely to be a mating rival. We predicted that short-term oriented characters are not trusted as much as long-term oriented characters (due to rivalry). However, we

also predicted long-term oriented characters with “cad” traits will be rated as the most desirable.

### **18. Male Sexual Orientation and the Ability to Detect Female Ovulation via Olfaction**

*Grant T Trouton (SUNY New Paltz, [n02508698@hawkmail.newpaltz.edu](mailto:n02508698@hawkmail.newpaltz.edu)), Mandy Guitar (SUNY New Paltz), Rachael Carmen (SUNY New Paltz) and Terry Grandis (SUNY New Paltz)*

Do non-heterosexual males typically find ovulating women to be more attractive than non-ovulating women? Previous research conducted by Singh and Bronstad (2001), and Thornhill and Gangestad (1999), have examined male abilities to detect female ovulation via t-shirt studies, but have yet to include male sexual orientation as part of their analysis. To fill this research gap, we attempt to test whether people of varying sexual orientations (e.g., homosexual, bisexual, heterosexual) can distinguish between a female during different phases of her menstrual cycle (e.g., follicular or ovulatory phase), based on smell. Theoretically, since homosexual males are least reliant on female pheromonal cues that indicate fertility, we hypothesize that homosexual males will be poorest at distinguishing between the follicular and ovulatory phases of a woman’s reproductive cycle. Similarly, we hypothesize that bisexual males will be able to detect between these two stages more than homosexual males, but less than heterosexual males.

### **19. Emotional assessment of religious images by believers and nonbelievers**

*David R Widman (Juniata College, [widman@juniata.edu](mailto:widman@juniata.edu)), Matthew B Musser (Juniata College), Carlyn M Hinish (Juniata College), Andrew C Masullo (Juniata College) and Savannah M Trabosh (Juniata College)*

Evolutionary psychologists have suggested that religion evolved because it enhanced in-group formation, allowing for greater cooperation within the group and subsequent increases in fitness. The present study examined this hypothesis by asking groups of declared Christians and nonChristians to assess emotional reactions to religious and secular images. Each participant assessed images using the self-assessment manikin system. The only significant difference between the Christians and nonChristians was on the valence scale for the religious nonviolent images; Christians rated their emotional response to these images as more positive than the nonChristians. This same result was also seen when comparing high dogmatic Christians and low dogmatic Christians with the high dogmatic Christians reporting greater positive emotions while viewing the religious nonviolent images. This result is consistent with the in-group hypothesis of the evolution of religion; the greater the Christian identity, the greater the positive emotions towards Christian imagery.

### **20. You Ain’t Woman Enough to Take My Man: Female Intrasexual Competition as Portrayed in Songs**

*Maryanne Fisher (Saint Mary's University, [mlfisher.99@gmail.com](mailto:mlfisher.99@gmail.com)) and Cristina L. Candea (Max-Planck Institute)*

There has been increasing interest in examining how human cultural artifacts, such as popular culture, can best be understood through an evolutionary psychological lens.

Here we examine a very specific issue: songs about female intrasexual competition for mates. We collected 17 English language songs, spanning several musical genres and decades. Songs varied considerably in content. For example, some were about directly confronting a rival and asking her to leave the mate alone, while others asked the mate not to choose another woman. Some dealt with differences in mate value between rivals and oneself, or how rival women were unattractive. We present the themes from our analysis and discuss how they map onto known problems women face when trying to retain and obtain mates, in light of intrasexual competition.

## **21. Assessing Definitions and Interpretations of Sexual and Emotional Infidelity**

*Amanda E Guitar (SUNY New Paltz, [muitar16@gmail.com](mailto:muitar16@gmail.com)), Maryanne L Fisher (Saint Mary's University), Justin R Garcia (The Kinsey Institute for Research in Sex, Gender, and Reproduction, Indiana University), Daniel J Kruger (University of Michigan) and Glenn Geher (SUNY New Paltz)*

Whereas the behaviors that constitute sexual infidelity might be intuitive, it is less clear what emotional infidelity entails. This research will explore the epistemological nature of emotional and sexual infidelity. Research has examined differential reactions to “emotional” and “sexual” infidelity – but no comprehensive, open-ended studies have yet been conducted to explore how adults actually define these constructs. This research will investigate the definitions and interpretations of these constructs in an open-ended manner. The current study will have an initial group of participants provide exemplars of what they believe constitutes emotional and sexual infidelity. Next, a second group of participants will rate to what extent they agree that the exemplars provided are typical of each type of infidelity. Results will be analyzed by examining which exemplars had the highest mean ratings. These findings will provide a more accurate and detailed depiction of how individuals define acts of infidelity.

## **22. Female Clothing Choices as Display of Intrasexual Competition**

*Maria DeNicola (Saint Mary's University, [maria.denicola@yahoo.ca](mailto:maria.denicola@yahoo.ca)), Beth DeCoste (Saint Mary's University), Suzanne Melanson (Saint Mary's University), Sarah Shaw (Saint Mary's University), Sarah-Ann MacPhail (Saint Mary's University) and Maryanne L. Fisher (Saint Mary's University)*

Women rely on their social alliances for support, but these friendships can also involve rivalry for mates. How women navigate the decision of whether someone is a friend versus a foe has not been well examined. Thus, our current study aims to explore indirect intrasexual competition between same-sex female friends. In the first part of our study, women and men rated female clothing for attractiveness and promiscuity. In the second part, we used the hypothetical situation of two female friends who were picking their outfits for five different social settings. Settings ranged from a coffee shop to a nightclub. Women were asked to select their own and their friend's outfit. We hypothesize women will dress their same-sex friend less attractively and more promiscuously than they would dress themselves in order to increase their own chances of obtaining a quality mate. Results will be discussed using the framework of evolution and mating competition strategies.

### **23. In-group Bias to Contagiously Yawn in Humans**

*J Ryan Porter (Georgia Gwinnett College, [jaryan.porter@gmail.com](mailto:jaryan.porter@gmail.com)) and Steven M Platek (Georgia Gwinnett College)*

In-group bias is a well documented phenomenon amongst Homo sapiens. Individuals prefer others similar to themselves. Research literature suggests that contagious yawning may have a social function in that it serves as an unconscious empathic process. A recent study showed in-group bias in tribes of chimpanzees (*Pan troglodytes*) towards propensity to contagiously yawn, suggesting an empathic link. While other theories as to the function of contagious yawning in humans have been proposed and are supported by theoretical evidence, minimal research has been done to investigate contagious yawning's potential social role in humans. 40 college students were observed while watching videos of African Americans and Caucasians either yawning, smiling, or maintaining a neutral face. Results indicated that individuals were more susceptible to contagious yawning while viewing footage of members of their own race yawn. This suggests an in-group bias towards contagious yawning in humans and provides further support for an empathic function of contagious yawning.

### **24. Women's Sociosexual Orientation and Components of Attractiveness**

*Carin Perilloux (Williams College, [carin.perilloux@williams.edu](mailto:carin.perilloux@williams.edu)), Jaime C. Cloud (University of Texas) at Austin and David M. Buss (University of Texas at Austin)*

The current study examined the relationship between ratings of facial, bodily, and overall physical attractiveness and sociosexual orientation (SOI-R) in women. Female undergraduates ( $N = 93$ ) posed for face and body photographs in standard black gym clothing. Male ( $N = 105$ ) and female ( $N = 113$ ) undergraduates rated these photographs on attractiveness. Women rated their physical attractiveness about 3 points higher, on a 10-point scale, than third-party raters. This discrepancy was positively correlated with SOI-R scores, but only for bodily attractiveness ratings. BMI and SOI interacted to predict self-ratings of overall attractiveness: the higher the SOI-R, the more likely BMI was positively correlated with self-perceived attractiveness. The more attractive women rated themselves, the higher they scored on the SOI-R Behavior and Desire subscales. The results indicate that sexual unrestrictedness is related to higher self-perceived attractiveness in women, particularly bodily attractiveness. Discussion focuses on potential causes of this relationship.

### **25. Marriage as a reproductive contract, the wedding as a reproductive ritual.**

*Samantha Whetstone [whetston@oswego.edu](mailto:whetston@oswego.edu) and Rebecca L Burch (SUNY Oswego)*

Buckle et al., (1996) and various works of Helen Fisher have examined patterns of marriage and determined that marriages serve as a reproductive contract between men and women. Marriage in the vast majority of cases lasting for periods of time sufficient to raise a child until it can care for itself. Patterns of marriage and divorce also show the genders acting in their own reproductive best interests, for example, men initiating divorce later in life to find younger, more fertile partners. With this in mind, we investigated the rituals, symbols and ceremonies associated with marriages across several cultures. In each culture, the wedding ceremony contains rituals of reproduction and fertility (which is of importance to both sexes), but also displays of wealth and

resources on the part of the groom (which is of particular evolutionary interest to females), and symbols of chastity on the part of the bride (which is of particular evolutionary interest to males).

## **26. What do you do with your partner after you cheat? Men and women give different responses**

*Samantha Whetstone [whetston@oswego.edu](mailto:whetston@oswego.edu) and Rebecca L Burch (SUNY Oswego)*

This study examined patterns of male and female sexual behavior when having extra pair copulations and when interacting with their partners afterwards. The results show stark differences in how men and women behave after committing EPCS. Over a third of both men and women report engaging in EPCS. Both sexes report similar descriptions of EPC behavior. However, they act significantly differently when they see their partners after the EPC. For example, females report significantly less desire to have an IPC (Intrapair Copulation) after and EPC and report that their male partners are significantly more enthusiastic about having an IPC. Females also report significantly less sexual arousal, less sexual aggression, shorter sex, and less sexual satisfaction. Females also report fewer orgasms, more difficult, and less intense orgasms. Data also show that these differences in sexual behavior create distress on the part of males, and may provide cues to the infidelity.

## **27. Extensions of the semen chemistry model; implications, innovations, and controversy**

*Rebecca L Burch (SUNY Oswego, [rebecca.burch@oswego.edu](mailto:rebecca.burch@oswego.edu)) and Gordon G Gallup (SUNY Albany)*

Since the publication of “Does Semen have Antidepressant Properties?” in 2002, there has been great controversy over what effects semen could have on female physiology. Research has identified several compounds that could be mechanisms for seminal effects, and each generates further questions about semen’s role and efficacy in several processes. For example, the presence of ovulatory hormones in human (but not in chimpanzee) semen points to the interplay between semen chemistry, concealed ovulation, and sexual co-evolution. The role of oral sex in the incidence of preeclampsia, and the presence of pregnancy proteins, implies a role in pregnancy maintenance. While supportive semen chemistry data are constantly emerging, many questions remain: what role does semen chemistry play in sperm competition? What role does it play in intersexual competition? Can it shift with context and life history? This review discusses each of these possibilities and adds further extensions and predictions to the model.

## **28. Marriage: A Product of Sexual Selection**

*Matthew T DeLong (SUNY Oswego, [delong@oswego.edu](mailto:delong@oswego.edu))*

Humans, by means of sexual selection, have evolved mate preferences that suggest the importance of marriage throughout our species' history. Females prefer differing levels of masculinized features as they progress through the menstrual cycle, while simultaneously describing less masculinized faces as "better parents." Males have been shown to prefer females with lower waist-to-hip ratios. It is suggested that both masculine facial features in men, and low waist-to-hip ratios in females are indicators of

future health. The internal bargaining between "strong genes" and apparent parental capabilities suggests that marriage is not just a social construct, but a survival and reproductive technique. However, the fact that females prefer faces that were not rated as "better parents" during the most fertile phases of her menstrual cycle reinforces the need of greater research on the evolutionary history of human mate selection and marriage.

### **29. Is mating intelligence tied to men's and women's ability to mind-read their partner's emotional state?**

*Anastasia Makhanova (Hendrix College, [makhanovaaa@hendrix.edu](mailto:makhanovaaa@hendrix.edu)) and Jennifer Penner (Hendrix College)*

For pair-bonding animals like humans, mate choice and relationship success can be closely tied to reproductive success, which is presumably why humans have cognitive instruments dedicated to making mating decisions (i.e., Mating Intelligence, MI, Geher & Miller, 2007). We hypothesized that men's and women's accuracy in predicting their romantic partner's feelings toward hypothetical men (described as wealthy, funny, athletic, or risk-taking) would be related to their MI score. We found that couples (N=12) agreed more often than expected by chance on whom the woman would find most attractive ( $p=.014$ ), but were no better than chance at predicting which man would induce the most jealousy in the male partner ( $p>.05$ ). MI scores were not related to participants' accuracy, and in fact, were generally relatively low, indicating that individuals' predictions about their partners feelings may be more closely tied to shared experiences than to general mating intelligence.

### **30. The money shot: Arousal thresholds altered by pornographic indicators of sperm competition.**

*Martin De Vita (SUNY Oswego, [martindevita0@gmail.com](mailto:martindevita0@gmail.com)) and Rebecca L Burch (SUNY Oswego)*

External male ejaculation is a common feature in pornography. Witnessing male external ejaculation within erotic content may affect arousal thresholds. When interpreted from an evolutionary perspective, the effects of witnessing external ejaculation on arousal thresholds can potentially be explained in terms of human sperm competition. During the environment of evolutionary adaptedness, facultative polyandry may have acted as a selection pressure. Males competing for the fertilization of polyandrous females would have needed to evolve strategies in order to be evolutionarily fit. In a group sex setting, a competitor's ejaculation (and the initiation of his refractory period) may act as an arousal cue that elicits viewer orgasm, in turn maximizing the time that the viewer's ejaculate can spend within the reproductive tract without being displaced by his competitor's erection. This notion provides a potential explanation for the prevalence and popularity of male ejaculation in pornographic content.

### **31. A Correlational Study of Waist-To-Hip-Ratio (WHR) and Shoulder-To-Hip-Ratio (SHR) with Ratings of Cues of Attractiveness and Reproductive Value in Magazine Advertisements.**

*Jack Rosati (Monmouth University, [s0712454@monmouth.edu](mailto:s0712454@monmouth.edu)) and Ellyn Rosati (Monmouth University)*

Waist-to-hip ratio (WHR) and shoulder-to-hip ratio (SHR) influence judgments of attractiveness of women and men, respectively. These traits, among many, impact mate choice, overall health, and fertility. The present archival study determined how these cues were utilized in advertising found in three magazines marketed for different audiences (The New Yorker, Cosmopolitan, and Gentlemen's Quarterly) over the last 60 years. Measurements of WHR and SHR of male and female models in the advertising in these magazines were taken and compared with ratings of attractiveness, health, fertility and the nurturance of the models. Results revealed no change of WHR for male or female models across decades with slightly larger female SHRs in the 1980s. Ratings of the female models indicated a significant negative correlation between WHR and face and body attraction, while ratings of male models showed a significant positive correlation between SHR and the model's attractiveness.

### **32. What do Women Paint?**

*Rosemarie Sokol Chang (SUNY New Paltz, [rischang@gmail.com](mailto:rischang@gmail.com)) and Maryanne Fisher (St. Mary's University)*

Two proposed evolutionary functions of art that have been posited are art as a byproduct of human large brains (e.g. Gould) and art as a sexually selected (male-produced) trait (e.g. Dutton, Miller). While there have historically been more male than female artists, we propose that this bias could well be based on politico-historical norms as much as evolved sex differences. Inspired by Hinshaw's (2011) investigation of the representation of fatherhood in paintings, we present here what women, as creators of art, have primarily focused on as topic of their paintings. We have restricted this preliminary investigation to Western, non-abstract paintings to perform a face-value level analysis of what is important to female artists. We found many instances of women painting other women, and often these are emotionally-evoking images. For example, women grieving, isolated, or joyous. Mothering was well represented, but also paintings of family members and self-portraits. Flowers and food objects were frequent topics, and household scenes (e.g., a living room or kitchen table). We rarely found paintings of war, violence, or conflict. We discuss our findings using predictions based in evolutionary theory.

### **33. An evolutionary psychological explanation for Risk Perception Biases**

*Hidenori Komatsu (Central Research Institute of Electric Power Industry, [komatsu@criepi.denken.or.jp](mailto:komatsu@criepi.denken.or.jp)) and Taishi Sugiyama (Central Research Institute of Electric Power Industry)*

Risk Perception Biases (RPBs) are deviations of subjective risks from objective risks caused by heuristics. Increased or decreased subjective risks can have an influence on public opinion and consequently on policymaking, and thus it is important to understand the mechanism of RPBs. Here we give the RPBs a unified explanation from

an evolutionary psychological perspective, which has not been discussed elaborately so far, based on an existing list of RPBs. Each RPB in the list could be categorized into the four: management of individual fitness, inclusive fitness, iterative games, and cultural adaptation. Next we show what kind of risks were principal selection pressure in the Stone Age, and how they can cause RPBs in the modern age, through the comparison of the case examples of risks in both ages. We also show a mathematical model of evolution to explain why people become risk-averse when the risk involves future generations.

### **34. Investigation of genes associated with sexually differentiated cognitive profiles**

Adrian Israel (Georgia Gwinnett College, [aisrael@ggc.edu](mailto:aisrael@ggc.edu)) Steven Platek (Georgia Gwinnett College) and James Russell

Transsexuals identify with a gender opposite of their own biological make-up. The prevalence of transsexualism ranges from 1:2,900 to 1:100,000; and the biological causation for the condition is just beginning to be explored in current research. Our current study of 150 subjects is investigating whether sex steroidogenesis genes are associated with male-to-female transsexualism. DNA sequencing data is being collected and analyzed to determine if similarities exist. Analysis of the variable polymorphism lengths of three genes – androgen receptor (AR), estrogen receptor  $\beta$  (ER $\beta$ ), and CYP19 – in Caucasian transsexuals is being compared with heterosexual and homosexual male subjects. Previous research has cast transsexualism as a psychological abnormality, though recent findings may support a biological explanation. Current research indicates that further study is warranted to determine the location and usefulness of the variance.

### **35. A Proposed Evolutionary Origin for Impulse Control Disorders**

Elan A Abreu (SUNY New Paltz, [elanabreu@yahoo.com](mailto:elanabreu@yahoo.com))

Impulse-Control Disorders (ICDs) are a set of psychiatric disorders characterized by highly repetitive, stereotyped and compulsively performed inter\intra-personally harmful actions, which are done due to an inability to resist the impulse to engage in said action(s). Through assessing the afflicted demographics, the personality traits of ICD sufferers, the phylogenetic age of the associated neural mechanisms, and the typical functions of said mechanisms, a hypothesis of ICDs as a disorder of the most emotionally reactive mechanisms underlying survival and social perception, has been proposed, and fairly explored. Despite the novel and tentative nature of this perspective, it does perhaps have some explanatory and predictive capabilities, implications for future research of ICDs, and could provide insight as to how the proneness to malfunction present in the underlying neural mechanisms could be amended in the future.

**36. The evolution of belief-based reality decision making**

*James E Russell (Georgia Gwinnett College, [jrussell@ggc.edu](mailto:jrussell@ggc.edu)) and Steven M Platek (Georgia Gwinnett College)*

Belief systems in human populations shape decision making behavior and are shaped by natural selection and social evolution. Decisions based on beliefs are associated with everything from setting an alarm clock in anticipation of sunrise to purchasing alien abduction insurance. We will focus on those latter beliefs, those that lack empirical evidence and are often associated with a religious or inspirational experience. Why do unfounded beliefs govern human behavior? Our approach is hypothetical and based in hominid evolution. We construct our hypothesis from neoteny and domestication theory. The delayed maturation process of humans and the postnatal development of the human brain play crucial roles in early establishment of foundational belief systems. In a growing human population with increased social structure these functional belief systems serve as exaptations related to manipulation of a primitively adaptive trait and the establishment of an unfounded belief-based reality acting on the decision making process.

**37. Outline of Creativity as Selfregulated Neuronal Adaptation for Energy Efficiency - Experimental Data from Stress-Induced Creativity-Crowding in Rewarded Divergent Thinking Tasks**

*Thomas Hirschmann (University of Mannheim, [thomas.hirschmann@gmail.com](mailto:thomas.hirschmann@gmail.com))*

My poster examines experimental results about the relationship between stress and creativity to provide new insights on the question whether rewards are generally detrimental or beneficial for creativity. Especially I will discuss if and under which conditions rewards are being perceived as stressful and how stress may change the effect of rewards on creativity. In this regard my data suggests that rewards may be creativity-enhancing when provided in a stress-free context but that stress may “crowd-out” an existing creativity-increase. In addition to reporting about the relationship between rewards, stress and creativity, I will also take a look at the role of intrinsic motivation in this triangle, showing a negative correlation with perceived stress. While my results forbid an attribution of stress-induced crowding-effects to a decrease of intrinsic motivation, I discovered a robust attention-effect as potential explanation. A corresponding evolutionary theory of cognitive efficiency as neuronal substrate of creativity is presented as explanation.

**38. Can the radiator hypothesis shed light on the etiology and treatment of Multiple Sclerosis?**

*Jeremy A Atkinson (SUNY Albany, [jeremy.atkinson@gmail.com](mailto:jeremy.atkinson@gmail.com))*

Multiple Sclerosis (MS) is intimately associated with thermoregulatory dysfunction. Traditional medical theory believes that the MS-thermoregulation dysfunction link is caused by the disease itself. However the specific causal nature of this link has not been fully elucidated and, more importantly, does not remove the possibility that thermoregulatory dysfunction plays a causal role in the etiology of MS. Drawing on

evolutionary theory, physiological thermoregulatory research and recent experimental findings, it will be elucidated that humans are acutely sensitive to thermoregulatory dysfunctions, have numerous adaptations to thermo-regulate their brains and that MS patients are actively attempting to specifically cool their brains via physiological and behavioral responses. Given these findings, it is hypothesized that MS patients have physical and/or physiological traits, particularly in the head, which predates the onset of the disease, predisposing them towards thermoregulatory dysfunction and act as accelerants of MS progression.

### **39. Is oxytocin really the "Love Hormone"? The answer coming from both human and animal research.**

*Nicole M Cameron (Binghamton University, [ncameron@binghamton.edu](mailto:ncameron@binghamton.edu)) and Amanda P Borrow (Binghamton University)*

The hormone oxytocin (OT) is released both centrally and peripherally during and after copulation. Although research in humans suggests a central role in sexuality, the most reliable findings to date involve peripheral activation. We will discuss these results and will particularly focus on understanding the most recent findings from fMRI data and the effects of exogenous peripheral OT administration. We will then consider hypotheses of the roles played by central and systemic OT release as well as their control and modulation in the female, summarizing recent findings from animal research from our lab and others.

### **40. The Impact of Relational Proximity on Guilt from Infidelity**

*Rachael Carmen (SUNY New Paltz), [Rachael.Carmen@gmail.com](mailto:Rachael.Carmen@gmail.com), Maryanne Fisher (Saint Mary's University) and Glenn Geher (SUNY New Paltz)*

Many studies have been conducted using the evolutionary psychological perspective to examine people's reactions to infidelity (Buss & Haselton, 2005; Fisher et al., 2009). Fisher and colleagues (2009) found that the degree of genetic closeness between a target and a person's romantic partner moderated his or her stress response to imagined infidelity. The current study aimed to get at which aspects of cheating on a significant other elicited various levels of guilt felt from cheating on a partner. We proposed that women would feel more guilt overall, which would be mediated by: Proximity of interloper (stranger, partners' same sex best friend, partners' same sex sibling), type of sex (vaginal vs. oral), who is likely to find out (everybody vs. nobody), STD likelihood, orgasm likelihood, and pregnancy likelihood. Results revealed significant main effects for participant sex, type of sexual activity, and relational proximity on guilt.

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20. Silver Center for the Arts
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25. Campus Safety/University Police
26. Draper & Maynard Building
27. Human Resources Office
28. Harold E. Hyde Hall
29. 25 Highland Avenue
30. Counseling and Human Relations Center
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37. Langdon Woods Residential Complex
38. Facilities Services Building
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