

# NORTHEASTERN EVOLUTIONARY PSYCHOLOGY SOCIETY

June 2<sup>nd</sup>–4<sup>th</sup>  
2019

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13<sup>th</sup> Annual Conference on the  
Evolutionary Behavioral Sciences

A silhouette graphic showing the progression of human evolution from an ape-like ancestor to a modern human, positioned centrally below the conference title.

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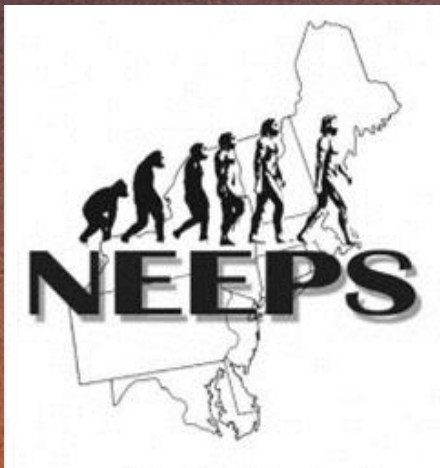
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# NORTH EASTERN EVOLUTIONARY PSYCHOLOGY SOCIETY

WWW.NEEPSOCIETY.ORG

13th Annual  
Evolutionary Behavioral Science Conference  
Sunday, June 2nd, 2019 – Tuesday, June 4th, 2019  
Boston, MA, USA



## The NonProfit Center

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# PRESIDENT'S WELCOME

As President of NEEPS, and on behalf of the NEEPS members, I heartily welcome you to the 13th Annual Northeastern Evolutionary Psychology Society (NEEPS) conference. It is delightful and uplifting to return to Boston which was the site of one of our largest and most diverse conferences ever.

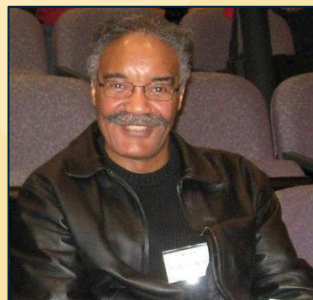
NEEPS was created from Prof. Glenn Geher's vision in 2007, as a regional affiliated society of the Human Behavior and Evolution Society. Our first conference was held in 2007. Since that time the conference has been held in various locations in the Northeastern United States: Binghamton, New York; Oswego, New York; Manchester, New Hampshire; Boston, Massachusetts; Lebanon Valley, Pennsylvania; and in Halifax, Nova Scotia. Reflecting the nature of evolutionary theory, NEEPS is truly an interdisciplinary society with members having training in various areas of inquiry. NEEPS has grown quite a bit since its inception in 2007, attracting even more worldwide membership every year, with record or near record conference submissions every year. NEEPS is the largest Evolutionary Psychology Society in the United States, and the largest International Evolutionary Psychology Society as well. NEEPS has attracted some prominent keynote speakers over the years, David Buss, Helen Fisher, Gordon Gallup, Marlene Zuk, Doug Kenrick, Steven Pinker, David Sloan Wilson, Jerome Barkow, Louise Barrett, Catherine Salmon, Todd Disotell, and Martie Hasleton to name a few, and we continue to do so.

The NEEPS keynotes for this year are Rebecca Burch and Bobbi Low, who will present thought-provoking talks! Over the past 13 years NEEPS has had an impressive array of talks and posters as well. NEEPS 2019 continues this tradition, as readily evidenced from the program. The Program Chair for NEEPS 2019, Marissa Harrison, along with the program committee, has assembled another impressive array of talks and posters.

In addition to the impressive and enlightening scholarly presentations at NEEPS, NEEPS conferences have a tradition of fostering a very collegial and congenial atmosphere. If this is your first NEEPS conference, you will find that NEEPS members are welcoming to Faculty, graduate students, undergraduates, and everyone attending the conference. Interactions among NEEPS conference attendees often lead to lasting collaborations and friendships such that the conferences seem like reunions. I am also proud to mention, as past NEEPS presidents have done, that NEEPS has facilitated members' ability to obtain academic positions, tenure, and promotions to the Senior faculty level. After the conference, I hope you will agree with me that NEEPS is truly a wonderful conference to attend. We are especially grateful to our conference hosts, Jimmy Moran and Stacey Makhanova, who have put together an outstanding conference and social program for this NEEPS conference. I look forward to taking part in the various activities, and I am certain you will enjoy them.

NEEPS typically holds a business meeting during the conference and I encourage you to attend that meeting as we will be making decisions about future NEEPS conferences, and soliciting nominations for NEEPS 2020, 2021, and 2022 sites, hosts, and program chairs. Once again, as your president, I am happy to welcome you to the 13<sup>th</sup> Annual meeting of the Northeastern Evolutionary Psychology Society.

T. Joel Wade, Ph.D.  
NEEPS President  
Bucknell University



# HOSTS' WELCOME

Hello NEEPSters!

Welcome to the 13th Annual NorthEastern Evolutionary Psychology Society's Conference! We want to thank you for coming to our fantastic society. We both discovered NEEPS by chance. As undergraduate students, we went to our first NEEPS conference and were immediately greeted by warm and friendly faculty members and students, and after our first NEEPS, we kept coming back! Which is why when we were asked to organize this year's NEEPS we agreed, because this society is more than just an academic organization, it's family.

To all the new NEEPSters, welcome! We feel like NEEPS' greatest strength is the collaboration between faculty and student, and we are excited for you to join in. We hope that if this is your first time at NEEPS, it won't be your last and we welcome back all of the returning NEEPSters. As for the familiar faces, it's great to see you!

We would like to thank the program committee and the NEEPS board for all your hard work. Especially Marissa Harrison, thank you for organizing the abstract submissions and for being a wonderful program chair. Laura Johnsen, who designed this beautiful program which you are reading. Special thank you to Sarah Hill, David Buss, Steven Gangestad, and Tania Reynolds for agreeing to be on our mentor lunch. Also, thank you to Bobbi Low and Becky Burch for being our stellar keynotes.

We are so happy to have you here at NEEPS XIII and welcome to Boston!

Sincerely,  
Your co-hosts  
Stacey Makhanova and Jimmy Moran



# ACKNOWLEDGMENTS

We sincerely hope you enjoy the NEEPS Conference! Thank you to the NEEPS Officers, Conference Hosts, Program Committee, Keynote Speakers, Student Mentor Lunch Panel Members, FEPS Officers, AEPS Officers, NonProfit staff, and all NEEPSters for their hard work, dedication, and cooperation putting this conference together. Thank you to all presenters and attendees for your contributions. NEEPS XIII is a celebration of the advances made by the *little evolutionary psychology society that could*. Here's to "Lucky 13."



Special thanks to Killian Garvey for all of the photos from NEEPS!



# EBS & JOINING NEEPS

## EVOLUTIONARY BEHAVIORAL SCIENCES (EBS)

EBS is the official journal of NEEPS.

Editor-in-Chief:	Catherine Salmon
Publisher:	The American Psychological Association
ISSN:	2330-2925
eISSN:	2330-2933
Published:	Quarterly, beginning in January



Evolutionary Behavioral Sciences (EBS) publishes manuscripts that advance the study of human behavior from an evolutionary perspective, with an emphasis on work that integrates evolutionary theory with other approaches and perspectives from across the behavioral sciences, including the range of subdisciplines within psychology as well as the social sciences (e.g., sociology, political science, criminology) and humanities (e.g., history, literature studies). This includes a special interest in work that explores:

- The role of evolved mechanisms in real-world phenomena, especially when the findings hold implications for policy or practice;
- The expression of evolved cognitive, behavioral, and physiological mechanisms across contexts and the consequences they have for the patterns and structure of society;
- The interplay between evolved psychological mechanisms and cultural influences in driving behavior, including papers that test established theory in new cultural contexts.

EBS publishes both empirical and theoretical manuscripts and welcomes quantitative, qualitative, and mixed-method approaches. EBS will consider research on non-human animals provided it offers some insight on a current question in the study of human behavior. The journal is also interested in articles that seek to translate evolutionary reasoning into implications for policy and practice.

The journal also publishes short reports (of no more than 2,500 words) that present new findings in brief without a lengthy theoretical background. In addition, EBS sees reproducibility as a major challenge facing science in general and encourages the submission of replication studies, especially when they test existing knowledge in ways that probe underlying assumptions, and meta-analyses that assess the overall body of work around a particular question.

In an American Psychological Association (APA) Editor Spotlight interview, Dr. Salmon said, “This journal should serve as a nexus for work in any field that can benefit from using an adaptationist lens to examine behavior and behavioral mechanisms.”

<https://www.apa.org/pubs/journals/ebs/>

## JOINING NEEPS

NEEPS stands as a coordinated global effort among scholars and students in the evolutionary behavioral sciences. Since 2007, members of NEEPS have taken steps to advance our understanding of the interface between evolution and human behavior. To join our society, please visit <http://neepsociety.com/>



# PROFESSIONAL CONDUCT POLICY

NEEPS is a society that defines itself in terms of positive and supportive interactions among members. NEEPS is a highly collegial society and maintaining professional conduct is essential to maintaining this part of our identity. In fact, maintaining a safe, comfortable, and supportive environment is so basic to our mission, that we are implementing the policies delineated herein to ensure that a safe and supportive context continues to underlie NEEPS activities. Here, we define NEEPS activities broadly.

Definitions of “NEEPS Activities”:

- Interactions during oral and poster presentations at the NEEPS annual conference;
- Interactions during the annual business meeting along with other meetings that take place during the conference;
- Interactions on the host campus during the duration of the NEEPS annual conference;
- Interactions during the annual conference that take place off campus but that primarily or exclusively include NEEPS members. This context may correspond to gatherings at restaurants, off-campus parties, bars, etc.;
- Email and other electronic communication at any time that directly bear on the business of NEEPS;
- Other interactions via any media that clearly bear on the business of NEEPS

In the context of such NEEPS-related interactions, activities and behaviors that fall under the following categories are considered inappropriate and against the spirit of NEEPS:

Inappropriate Activities and Behaviors:

- sexual harassment of any kind;
- personal harassment of a non-sexual variety;
- hate behaviors, such as derogatory comments regarding the ethnicity or sexual orientation of others, especially directed in a disrespectful manner;
- menacing behaviors that lead to high levels of discomfort in others;
- threatening behaviors that lead to high levels of discomfort in others;
- physically aggressive behaviors – particularly in instances in which unwanted physical contact is initiated in an aggressive manner;
- disorderly conduct that leads to high levels of discomfort in others;
- theft of personal and other possessions;
- vandalism;
- actions that are illegal in light of applicable state or local laws – particularly felony offenses

Consequences: Consequences associated with documented breaches of this policy will be determined by the President of the Society along with at least two other members of the Board deemed relevant to a particular situation. Such other members could include the program chair for a relevant conference as well. The most likely consequence of an agreed-upon breach of this policy would be membership termination, as per NEEPS By-laws ARTICLE III.8. Depending on the gravity of the situation, other consequences will be considered in light of the specific circumstances. Severe instances will result in the full-scale investigation of the matter by the local police force.



# SPECIAL EVENTS

## Student Mentor Lunch

Students, please join us at the NEEPS Student Mentor Lunch on Sunday, June 2, at 12:15PM. Our scheduled panel of guests includes Dr. David Buss, Professor, University of Texas, Austin; Dr. Steven Gangestad, Professor, University of New Mexico; Dr. Sarah Hill, Associate Professor, Texas Christian University; Dr. Tania Reynolds, Postdoctoral Fellow, Kinsey Institute.



Dr. David Buss



Dr. Steven Gangestad



Dr. Sarah Hill



Dr. Tania Reynolds

## NEEPS Welcome Reception

Following Dr. Becky Burch's Keynote Address, on Sunday, June 2<sup>nd</sup>, we will be holding a reception to welcome delegates in the Jonathan Spack Community Conference Center. Special Guests include Dr. Leda Cosmides and Dr. John Tooby!



Dr. Leda Cosmides



Dr. John Tooby

## NEEPS Banquet

Please join us on Monday, June 3, at 7:30PM for the NEEPS Banquet. Award winners will be announced after the meal. The banquet is in the same location as the presentations. Dress is business formal.



On June 3<sup>rd</sup>, Rock Bottom Brewery will offer 10% off drinks from 6-11pm with presentation of NEEPS Badge



# PRESENTATION INFORMATION

## ORAL PRESENTATIONS

Oral academic presentations focus on one or a few key research points. A good empirical presentation conveys research background (properly cited), hypotheses, results, and discussion. It stresses key and unique findings and makes suggestions for future research. A good theoretical-only presentation should highlight the relevant focus issue, selected background research, the outcome of the theoretical review or integration, and where possible, present new directions for empirical work. All effective presentations use slides for key talking points versus cramming text into slides from top to bottom. Your presentation should be loaded prior to the session on the room computer (we cannot promise connection for your own laptop). A flash drive is strongly recommended in the event of internet access issues. **Oral presentations will not go over 10 minutes, after which about 2 minutes can be devoted to questions and answers.**

## DATA BLITZ

New to NEEPS in 2019, a Data Blitz session contains a rapid series of 5-minute presentations. Each presentation should include 3 to 5 slides [e.g., Title and Author(s)/Affiliation(s), Background Overview, Study Design, and Results], and slides should be preloaded on the room computer (we cannot promise connection for your own laptop). A flash drive is strongly recommended in the event of internet access issues. Briefly state your hypotheses and focus on presenting your study design and key, data-driven results. In a data blitz, the presenter should endeavor to summarize their most interesting empirical findings. It is not advisable to cram a lengthy study into 3 slides. Avoid animation, as it unnecessarily takes up time. Presenters must adhere to the strict 5 minutes allotted, after which about 2 minutes can be devoted to questions and answers.

## POSTERS

Posters should follow American Psychological Association (APA) suggested format for layout and major content areas. A casual reader should be able to discern your key points (APA, 2018). Posters should clearly present major hypotheses and findings and may suggest future directions for research. A good poster presents a clearly communicated, cogent sequence of information. Posters cannot be over 4 feet wide (48 inches; 1.22 meters; 122 cm). A set-up time and a removal time are built in to the conference. Please hang your poster in your designated number area only. Your poster number will be in the conference program. <https://www.apa.org/convention/poster-instructions.pdf>



# AWARDS

## 2018 AWARD WINNERS

The NorthEastern Evolutionary Psychology Society bestows awards for excellence in presentations, as does the Feminist Evolutionary Perspectives Society (FEPS).



*NEEPS STUDENT TALK*

GARETH CRAZE

*NEEPS STUDENT POSTER*

ZEYNEP SENVELI

*NEEPS HONORABLE MENTION (POSTER)*

MADELINE BENNETTI

*FEPS FACULTY TALK*

VICTORIA INGALLS

*FEPS STUDENT TALK*

LAURA JOHNSEN

*FEPS FACULTY POSTER* REBECCA BURCH AND MARYANNE FISHER

*FEPS STUDENT POSTER*

EMILY RUNDLE

NEEPS also features other award and recognition programs, as described in detail on our webpage: <http://neepsociety.com/neeps-fellow-program/>

## NEEPS FELLOW AWARD

Achieving Fellow status in NEEPS is considered a high honor that is only allocated to scholars with 10+ years of post-doctoral experience (and at least three years of membership in NEEPS) who have clearly established an international reputation for their work, and have advanced the broader goals of NEEPS, including such activities as fostering student presentations at NEEPS, supporting outreach to student and early career groups for NEEPS attendance, serving on the NEEPS board, chairing the program for a conference, hosting a conference, etc. or other forms of clear mentorship and engagement.

## NEEPS LIFETIME ACHIEVEMENT AWARD PROGRAM

Earning a NEEPS Lifetime Achievement Award is considered the highest honor one can achieve within NEEPS. It is only considered for scholars who are NEEPS members, with 20+ years of post-doctoral experience. A clear record of innovative work that has shaped the field and advanced the broader goals of NEEPS, including such activities as fostering student presentations at NEEPS, supporting outreach to student and early career groups for NEEPS attendance, serving on the NEEPS board, chairing the program for a conference, hosting a conference, etc. or other forms of clear mentorship and engagement. The focus here is on a combination of scholarship, mentorship, and legacy.



# KEYNOTE SPEAKERS

## DR. REBECCA L. BURCH

rebecca.burch@oswego.edu



### **My career, a cautionary tale: What I, and we, can do better**

Most Keynote addresses are a greatest hits album; a highlight reel of successful experiments and impactful findings. However, academic careers are series of decisions, both good and bad. For this talk, important studies and good decisions will be discussed, but it is the bad decisions, and what hasn't been investigated, that might provide more insight into where we are as a field and where we should be going.

## Biography

Rebecca Burch is a Professor in the department of Human Development at SUNY Oswego. She received her Ph.D. at SUNY Albany in Biological Psychology. Her main research interests involve paternal certainty and paternal assurance tactics, various types of sexual behavior, sexual signaling, feminist evolutionary perspectives, and cultural variation in a number of human behaviors, including sex, pair bonding, and parenting. She also enjoys viewing popular culture through an evolutionary lens.

Her latest research has included comic book bodies as supernormal stimuli, semen displacement during extrapair copulations, definitions of rough sexual behavior, and paternal assurance tactics in convicted spouse abusers. Her research has garnered a considerable amount of interest from the media, including nonfiction books, novels, websites, blogs, magazines and other news outlets. She is a proud founding member of the NEEPS community and is co-chair of the Feminist Evolutionary Perspectives Society.



# KEYNOTE SPEAKERS

## DR. BOBBI LOW

bobbilow@umich.edu

### **Weird women: How modern women's lives are evolutionarily strange, and how they vary**

We humans are somewhat unusual primates in our life histories. But among the variation in human lifetimes, one group stands out as almost bizarre in evolutionary terms: modern professional women in highly-developed nations. The life histories of most of the women I know, and likely most of women at this meeting, so unusual that we are, in an evolutionary sense, *Weird Women*. I'll explore this in a comparative sense: just \*what\* is weird about our life histories? How did we get this way? Does it make evolutionary sense?



## Biography

Bobbi Low is Professor Emeritus in the Natural Resources and Environment Department at Michigan State University. In 1972, Professor Low became the first full-time female faculty member at the School of Natural Resources. Dr. Low's research centers on behavioral ecology and life history theory: how these were shaped by evolution, and how they in turn constrain optimal management. She links data collection, analysis, and theory; her methodologies include dynamic modeling, optimization, agent-based modeling and game theory. She has published on the topics of ecology and life history and how they influence mating and marriage systems. Dr. Low's book, "Why Sex Matters: A Darwinian Look at Human Behavior," is a staple in evolutionary studies courses and underscores how our evolutionary history continues to affect our ecological present. Her son calls her the "Indiana Jones of Moms."

# JUNE 2<sup>ND</sup> & 3<sup>RD</sup> SCHEDULE

## SUNDAY, JUNE 2<sup>ND</sup>

Jonathan Spack Community Conference Center

8:00-8:45	Registration & Coffee
9:00	Welcome
9:15-10:30	Session I: Risk and Stress
10:45-12:15	Session II: Mating Games and Dangers
12:15-1:45	Mentoring Lunch
1:45-2:30	Data Blitz Session I: Eat, Talk, and Stress
2:45-4:15	Session III: Health
4:30-5:45	Session IV: Sexuality and Gender Roles
6:00-7:00	Keynote Address by Rebecca Burch, Introduction by Maryanne Fisher
7:00	Reception

## MONDAY, JUNE 3<sup>RD</sup>

Jonathan Spack Community Conference Center

8:00-8:45	Registration & Coffee
9:00-10:15	Session V: Culture, Cognition, and Cooperation
10:30-12:00	Session VI: Family, Systems, and Attachment
12:00-1:30	Board Meeting (with pizza! All are welcome)
1:30-2:15	Data Blitz Session 2: Games We Play
2:30-3:15	Session VII: Feminist Evolutionary Perspectives Society
3:15-3:30	Poster Session Set-up
3:30-5:00	Poster Session
5:15-6:15	Keynote Address by Bobbi Low, Introduction by T. Joel Wade
7:15-9:00	Banquet



# JUNE 4<sup>TH</sup>: FEPS MEETING

*Conference Center West: 9:00AM-12:00PM*

## About FEPS:

The society exists to bridge two scientific viewpoints that are often in opposition: evolutionary psychology and feminism. We believe that each can be unified into a productive study of the evolution of humans. Each approach has historically adopted some biases that impede a full understanding of the complexities of human psychology, particularly a perspective of psychology that includes aspects of our shared evolution as well as cultural and environmental influences. FEPS supports research that: a) is informed by a female perspective, b) directly investigates the active role that females have had in human evolution, and/or c) studies gender in the evolutionary context with scientific theory and methodology (including a close examination into the way research questions are formulated and research subjects selected). We welcome any members, of any gender or sex, who are sensitive to the combination of feminism and evolutionary psychology. For more information, please go to <https://feministevoperspectivessociety.tumblr.com/> or find us on Facebook at <https://www.facebook.com/feministevolutionaryperspectives/>.



## Presentations

### Issues With Applying Parental Investment Theory: What's The Next Big Idea?

*Maryanne L. Fisher, Saint Mary's University (mlfisher.99@gmail.com); Rebecca L. Burch, SUNY Oswego; Elisabeth Oberzaucher, University of Vienna; Laura K. Weir, Saint Mary's University; Rosemarie Sokol-Chang, American Psychological Association*

Parental investment theory (PIT), as devised by Trivers (1972), is the backbone of most evolutionary perspectives of human mating behaviour. PIT, as envisioned by Trivers, refers to any investment in an offspring by a parent that increases the offspring's fitness but decreases the parent's ability to invest in other offspring. Here we review some of the limitations with PIT and argue that those performing human-based evolutionary analyses must start to review past assumptions and work toward development of new models that more accurately capture the complexity, nuances, and context-dependent nature of mating behaviour. We will present some promising first steps.

### More Than Just a Pretty Face: Depiction of Women in Evolutionary Psychology Textbooks

*Rebecca L. Burch, State University of New York at Oswego*

A great deal of Evolutionary Psychology (EP) texts and research emphasize the attractiveness of women over other skills or qualities. I would argue that given the parameters of the evolutionary landscape, the skills and strategies women used after mating and birth (particularly because it is widely argued that almost all women have an opportunity to mate) would be more important to their evolutionary success. To this end, I examined introductory EP textbooks for the following content: if physical attractiveness was listed as a factor in female evolutionary success, if intelligence/resourcefulness or other traits were listed as factors, if skills and strategies women use after mating and birth were discussed, and if the role of older women was mentioned. The majority of EP texts discuss female attractiveness in detail, omit female intelligence and resourcefulness, over-emphasize the role of men in feeding families, and neglect older women. Female authored texts provided more information on these topics than male authors texts.

# JUNE 4<sup>TH</sup>: AEPS MEETING

*Conference Center West, 1:00PM-4:00PM*

The Applied Evolutionary Psychology Society (AEPS) is proud to announce our upcoming Mental Health Symposium. The symposium will be targeted toward mental health practitioners (clinical & counseling psychologists, mental health counselors, social workers, psychiatrists, etc.) and will focus on specific, practical ways in which the evolutionary behavioral sciences can inform day-to-day mental health practice. The keynote speaker will be Dr. Stefan Hofmann of Boston University, a clinical psychologist specializing in anxiety disorders, who will give a talk entitled “Integrating Evolutionary Science into Clinical Practice.” Other featured speakers will include Kalman Glantz, speaking on evolutionary approaches to individual psychotherapy, Marianne Brandon on evolutionary approaches to couples and sex therapy, Martin Knowles on evolutionary approaches to family therapy, and Daniel J. Glass on misconceptions about evolutionary clinical perspectives.

Continuing Education Units (CEUs) will be offered for the following professional organizations: the American Psychological Association, New Jersey Board of Social Work, New Jersey Alcohol and Drug Counselor Committee, and New Jersey State Board of Marriage and Family Therapy Examiners.

About AEPS: The mission of the Applied Evolutionary Psychology Society (AEPS) is to promote the use of evolutionary theory in applied fields such as policy-making, business, law, education, medicine, and mental health. To achieve this goal, AEPS holds academic workshops and conferences to provide resources for, and connections between, researchers on the one hand, and practitioners, policy-makers, executives, and the general public on the other. To learn more about AEPS, visit our website at [aepsociety.org](http://aepsociety.org) and/or find us on Facebook at <https://www.facebook.com/groups/AEPSolutions/>.





# PRESENTATION ABSTRACTS



# JUNE 2<sup>ND</sup>

## SESSION I: RISK AND STRESS (9:15 – 10:30AM)

### Does Error Management Theory Reduce Overestimation Of Sexual Intent?

*James B. Moran, Tulane University (jmoran5@tulane.edu); Damian R. Murray, Tulane University*

*Twitter: @jimmy\_moran\_ & @DamianMurray1*

Two projects used error management theory (EMT) to educate men about sexual assault, instead of the conventional men's status in society (i.e., Power Dynamics, PD). Study 1 (N = 58) found that men learned more and trusted EMT compared to PD. Study 2, provided men with an ambiguous vignette of a man and woman meeting at a bar. The men (N = 148) then had to perceive the woman's sexual desire. Afterward, they were randomized to be in an EMT condition, PD condition, or control. Men who were in the EMT condition had a lower overestimation of sexual intent.

### Searching For Biomarkers Of Life History Trajectories In Blood Plasma: Interleukin-6 And Cortisol

*Michael J. Frederick, University of Baltimore (mfrederick@ubalt.edu); Ingrid K. Tulloch, Morgan State University*

A central hypothesis of life history theory is that developmental stress propels individuals towards “fast” strategies characterized by accelerated sexual maturity, the prioritization of short-term goals, and increased sociosexuality. However, measuring developmental stress is challenging. To move beyond previously employed measures such as birth weight and childhood socioeconomic status, we collected blood samples from adult participants and assessed levels of two biomarkers: interleukin-6 and cortisol. Interleukin-6 levels are typically higher in those exposed to early trauma and adversity, while cortisol is a classic stress hormone. We tested for relationships between these biomarkers and measures of K-factor, sensation seeking, impulsivity, sociosexuality, and political orientation. We report our results and comment on the ongoing search for physiological markers of life history.

### Nudges For The Future: Boosting One's Sense Of Familial Support Moderates Extreme Response Toward The Impact Of Air Pollution

*Hidenori Komatsu, Central Research Institute of Electric Power Industry, Japan (komatsu@criepi.denken.or.jp); Nobuyuki Tanaka, Central Research Institute of Electric Power Industry; Hiromi Kubota, Central Research Institute of Electric Power Industry; Hirotada Ohashi, The University of Tokyo*

The impact of sources of risk perceived to threaten future generations is often subjectively assessed to be extremely serious. In a previous study, we investigated the effect of ‘nudging’ messages that reminded respondents of familial support and found that extreme responses toward such sources of risk could be moderated. We identified the mechanism using an evolutionary multi-agent simulation model based on altruistic evolution. In this study, we enhanced the intervention effect by adding an illustration or photograph to the messages. We conducted a randomized controlled trial online to show how the intervention effect can be reinforced by visual information.



# JUNE 2<sup>ND</sup>

## Life History Strategies Within Monogamous And Consensually Non-monogamous Romantic Relationships

*Justin K. Mogilski, University of South Carolina Salkehatchie (jmogilsk@mailbox.sc.edu); Simon D. Reeve, Oakland University; Sarah H. Donaldson, Oregon University; Sylis C. A. Nicolas; Lisa L. M. Welling, Oakland University*

Life History Theory predicts that organisms adaptively vary in how they allocate time and resources toward growth and reproduction. Here, we compare measures of pubertal development and life history between men and women who are currently in monogamous ( $n = 560$ ), open ( $n = 97$ ), and consensually non-monogamous (CNM;  $n = 129$ ) romantic relationships. Women in CNM relationships reported earlier puberty relative to their peers than women in monogamous and open relationships. Men reported similar pubertal timing across all three relationship types. Furthermore, those within CNM and open relationships reported lower scores on life history measures than monogamous individuals. These results suggest that pursuit of consensual non-monogamy is associated with a faster life history strategy, particularly among women.

## Do High Mate-value Males Adopt A Less Restricted Sociosexual Orientation?

*Steven Arnocky, Nipissing University (stevena@nipissingu.ca); Jessica Desrochers\*, Nipissing University (jedesrochers739@community.nipissingu.ca); Graham Albert, Boston University; Carolyn Hodges-Simeon, Boston University; Benjamin Kelly, Nipissing University; Danielle Lynch, Nipissing University; Jacob Belanger, Nipissing University; Megan Mackinnon, Nipissing University; Ashley Locke, Nipissing University. \*Presenter*

Men, relative to women, can benefit their total reproductive success by engaging in short-term pluralistic mating. Yet not all men enact such a mating strategy. It has previously been hypothesized that high mate value men should be most likely to adopt a short-term mating strategy. Yet evidence to support such a link has been mixed. Across four studies, we found that higher mate value, determined both by self-report and physiological measures, generally adopt a more unrestricted sociosexual orientation. Together these studies provide compelling evidence that men's mate value is an important factor affecting their tendency to engage in short-term mating.



# JUNE 2<sup>ND</sup>

## SESSION II: MATING GAMES AND DANGERS (10:45AM – 12:15PM).

### **Attractive Dad Bod?: Women Perceive Men With Lower Waist-to-chest Ratios (Wcrs) As More Attractive, And More Evolutionarily Fit**

*T. Joel Wade, Bucknell University (jwade@bucknell.edu); Lisa Welling, Oakland University; Simon Reeve, Oakland University; James Moran, Tulane University*

Using images developed via 3D graphical modeling software, controlling for body size, and body composition, the present research examined how 122 women perceive men with WCRs of .60, .70, .80 and .90 in terms of: attractiveness, other evolutionarily relevant traits, and short- and long-term mate potential. The .70 WCR male was expected to receive the highest ratings for: attractiveness, dominance, status, masculinity, health, intelligence, success, good mate potential, social competence, and short-term mate potential. The .80 and .90 WCR males were expected to receive higher ratings for: affectionateness, age, nurturance, friendliness, femininity, good parent potential, and long-term mate potential. The results were primarily consistent with the hypotheses. These findings are discussed in terms of prior research.

### **The "Hunter-gatherer" Model Of Serial Murder**

*Marissa A. Harrison, Penn State Harrisburg (mah52@psu.edu); Susan M. Hughes, Albright College; Adam Jordan Gott, Penn State Harrisburg*

We examined whether the crimes of serial murderers were reminiscent of sex-specific ancient hunter-gatherer tendencies and followed predictions based on fitness maximization tactics. We collected data from a large sample of serial killers who committed their crimes in the United States. Notably, direct, statistical comparisons of the traits and crimes of serial murderers are heretofore nonexistent. Our data indeed showed that male serial killers (MSKs) were “hunters,” who stalked and killed strangers over larger territories, with sex as a primary motive, more frequently than did female serial killers (FSKs). Data also showed that FSKs were “gatherers,” killing those around them and collecting profits more frequently than did MSKs. Limitations and future directions are discussed.

### **Love At First Fright: Perceived Nervous Reactions Associated With Initial Attraction**

*Susan M. Hughes, Albright College (shughes@albright.edu); Marissa A. Harrison, Penn State Harrisburg; Kathleen de Haan, Albright College*

We sought to examine nervous reactions when first interacting with a particularly attractive person/potential romantic partner. We documented 280 participants' retrospective self-reports of experiencing a variety of physiological, behavioral, and vocal reactions during an initial encounter with a person they found highly attractive. Participants also reported observing similar nervous reactions by others whom they perceived were attracted to them. These findings were examined while considering individual differences in sociosexual orientation (i.e., propensity toward uncommitted sex), self-perceived mate value, level of empathy, and gender. Although appearing nervous and awkward during an initial encounter with an attractive other may seem counterproductive for future mating success, we discuss potential adaptive functions for displaying these responses.



## Is There A Sex Difference In Setting "Guinness-style" World Records? A Test Of The Male Show-off Hypothesis

*Robert O. Deaner, Grand Valley State University (robert.deaner@gmail.com)*

The male show-off hypothesis holds that men have a greater predisposition than women to engage in public displays revealing their underlying fitness and desirable traits. Here we offer an empirical test of this hypothesis by studying "Guinness-style" world records, a show-off domain that is open to all. Study 1 analyzed a recent edition of the Guinness book. Of 388 records that were suitable for inclusion, females set 83 records (21%). Study 2 analyzed a systematic sample of records from RecordSetter.com, where individuals define their own records. Of 424 suitable records, females set 85 records (20%). In both studies, the sex difference remained even after addressing potential confounds. Thus "Guinness-style" record setting is a domain that supports the male show-off hypothesis.

## The Potential Role Of Testosterone As A Relationship Protection Mechanism

*Stefan M. M. Goetz, Wayne State University (stefan.goetz@wayne.edu);*

*Justin M. Carré, Nipissing University*

The present research tests the hypothesis that testosterone serves as a relationship protection mechanism among men highly committed to their partners. Past research has suggested that testosterone may be deleterious to monogamous relationships, however these have been correlational in nature. Using a between subject, double blind, placebo treatment protocol, the role of testosterone in sharpening relationship protection responses when confronted with an attractive alternative will be evaluated. The study includes 300 healthy heterosexual men, half in a committed relationship and half single. The videotaped interaction will be coded for a variety of indicators of attraction and interest along with men's self-reports of attraction and interest in the confederate.

## Do Women Derogate Rivals More When Men Are Scarce?

*Thomas Richardson, University of Manchester (Thomas.richardson@manchester.ac.uk);*

*Tucker Gilman, University of Manchester*

*Twitter: @Richie\_Research*

The operational sex ratio has been shown to influence a variety of behaviours in humans and non-human animals, particularly relating to intrasexual competition. One way females compete for mates is by derogating other women's attractiveness. Recent studies have shown that priming participants with different sex ratios can induce sex ratio effects on behaviour. In a pre-registered, double blind experiment, 50 single women came to the lab twice and were primed with either a favourable (many men) or unfavourable (few men) sex ratio. We assessed whether unfavourable sex ratios increased intrasexual competitiveness and competitor derogation in the form of decreased ratings of female facial attractiveness and kindness, and whether they expressed less choosiness by rating male faces as more attractive.

# JUNE 2<sup>ND</sup>

## DATA BLITZ I: EAT, TALK, STRESS (1:45 – 2:45PM)

### Psycholinguistic Sex Differences In Literary Fiction: A Computerised Text Analysis Of 300 Novels

*Severi Luoto, University of Auckland (s.luoto@auckland.ac.nz)*

*Twitter: @SeveriLuoto*

Although psychological sex differences have been reported in a variety of domains, linguists still debate about the magnitude of such differences in language use. I present findings from a corpus linguistic study that examined sex differences in British, Irish, and American literary canons of the 19th and early 20th centuries. Very large sex differences were found for article use, personal pronoun use, positive emotion words, social words, and words reflecting analytical thinking. Other psycholinguistic categories showed sex differences ranging from negligible to large. These quantitative findings on 300 novels provide further challenges to the gender similarities hypothesis whilst supporting the sex differences hypothesis arising from and supported by evolutionary science.

### Gluttons For Punishment? Experimentally Induced Hunger Unexpectedly Reduces Harshness Of Suggested Punishments

*Riley N. Loria, Tulane University (rloria@tulane.edu); Nicholas Kerry, Tulane University; Damian R. Murray, Tulane University*

*Twitter: @CosmicSheOwl & @DamianMurray1*

There is evidence that visceral states can influence social cognition, and some previous research suggested that hunger could play a role in judicial decision-making. The present study examined the relationship of hunger with judicial sentencing in a controlled experiment. Hunger was manipulated by asking 226 undergraduates to fast for at least four hours before the study. Participants in the satiated condition received a snack before taking questionnaires. Those in the hungry condition received cookies after the questionnaires. Contrary to predictions, hungry participants recommended more lenient punishments. They also endorsed more financially egalitarian views, consistent with previous research. While unexpected, these results provide tentative evidence that hunger may influence punishment and sentencing decisions.

### The Sexual Implications Of Eating: Willingness To Try New Food Provides A Cue Of Sociosexual Behavior

*Hannah K. Bradshaw, Texas Christian University (h.k.bradshaw@tcu.edu); Summer Mengelkoch, Texas Christian University; Alex Darrell, Texas Christian University; Sarah E. Hill, Texas Christian University*

Guided by past research showing that food neophobia is related to a more unrestricted mating strategy, here, we examine whether target's willingness to try new food (or lack thereof) provides cues of past sociosexual behavior across four experiments. Results indicate targets that are willing to try new food are perceived to be more attractive and desirable as a sexual and romantic partner, and to have more past sexual partners. Importantly, this effect was found to be specific to willingness to try new food and not general willingness to try new things. Moreover, the relationship between willingness to try new food and inferences of sociosexual behavior was found to be driven by perceptions of target's sexual disgust sensitivity.



# JUNE 2<sup>ND</sup>

## Environmental Preferences: Impact On Cognitive Processing And Physiological Stress Reduction

*Jack Demarest, Monmouth University (demarest@monmouth.edu); Julianne Calvano, Monmouth University; Kierstan Tagnosky, Monmouth University*

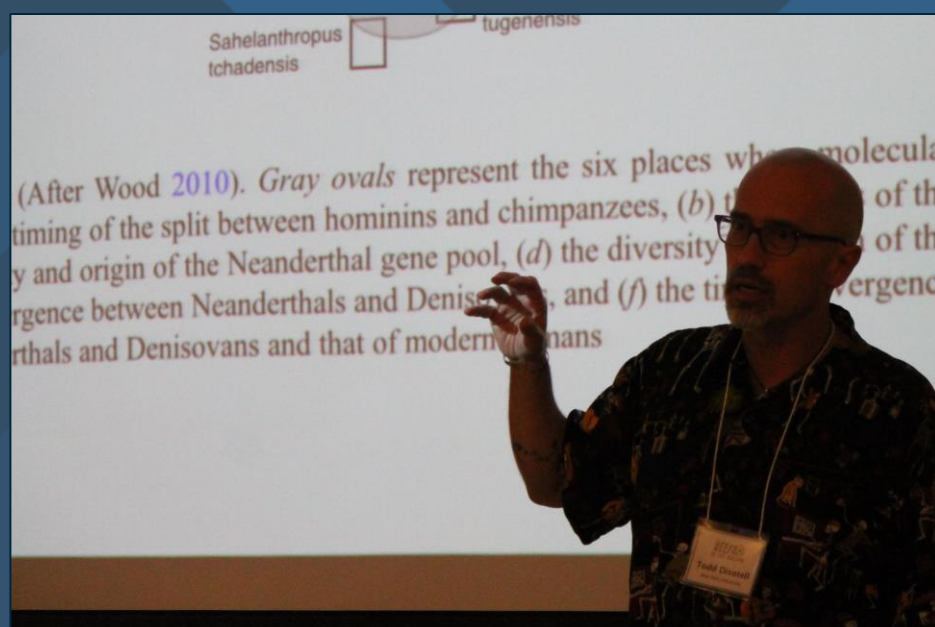
Two studies examined the influence of environmental words and images on psychological well-being. Participants in Study1 viewed 10 nature-related words and 10 technological words on a computer screen. They rated the words as either pleasant or unpleasant by quickly pressing a designated key. A computer program recorded Number Pleasant and Reaction Time. Nature words produced more pleasurable emotions with faster reaction time than technological words. Participants in Study2 viewed images of a savanna, a forest, and a cityscape. They rated each image regarding how desirable and how stressful they felt. Pulse and blood pressure were also recorded. The cityscape produced the most stressful feelings and was least desirable. The forest image was most desirable. Physiological measures were less clear.

## Global Variation In Innovation And Economic Complexity

*Severi Luoto, University of Auckland (s.luoto@auckland.ac.nz)*

*Twitter: @SeveriLuoto*

Evolution causes biological diversity through adaptation to environmental conditions. With a dataset comprising 122 nations, I explore ecological and demographic predictors of global variation in innovation and economic complexity. The results show that economic complexity is higher in countries with colder winters, an effect mediated almost completely by intelligence. Economic complexity is constrained by population-level adolescent fertility rates, showing a tradeoff between early reproduction and investment into economic development and innovation. This research sheds light on the ways in which evolutionary processes shape human adaptation to local environments. The results indicate that these adaptive processes occur both at the level of psychological traits (intelligence, innovative capacity) and realised behaviours, indexed by global variation in reproductive timing, innovation, and economic complexity.



# JUNE 2<sup>ND</sup>

## SESSION III: HEALTH (2:45 – 4:00PM)

### Pathogen Sensitivity Shapes Preference For Romantic And Sexual Partner Health

*Marjorie L. Prokosch, Tulane University (mprokosch@tulane.edu); James B. Moran, Tulane University; Damian R. Murray, Tulane University*

*Twitter: @MlProkosch, @jimmy\_moran\_ & @DamianMurray1*

The current research examined how pathogens shape people's health preferences for prospective mates. We hypothesized that people high in vulnerability (infectability, sickness history) and sensitivity to pathogens (germ aversion, disgust, current pathogen threat) would emphasize health in both romantic and sexual partners. Participants reported their minimum and ideal criteria for 9 different traits (e.g., health) in potential mates, then reported pathogen vulnerability and sensitivity. While results did not support the hypothesis that vulnerability would relate to increased desire for healthy partners, they did reveal a positive relationship between pathogen sensitivity and partner health. Further, there was a main effect of pathogen sensitivity, such that highly sensitive people were exacting in their preferences for a variety of partner traits beyond health.

### The Curious And Deadly Interaction Of Pathogens And Gun Ownership

*Kilian James Garvey (kiliangarvey@gmail.com)*

The behavioral immune system theory has found that regional differences in regional pathogen load predicts regional differences in a number of violent crimes, in particular the use of firearms in murders compared with overall murder rates in the United States. In this follow up study, pathogen prevalence was compared to the percentage of individuals in a state who owned firearms, to explain the number of murders committed with firearms in those states. Results show that murders committed with a firearm are better predicted by pathogen prevalence well above differences in percent of individuals who own firearms.

### Pathogen Disgust Sensitivity Changes According To The Perceived Harshness Of The Environment

*Carlota Batres, Franklin and Marshall College (cbatres@fandm.edu); David Perrett, University of St Andrews*

*Twitter: @carlota\_batres*

Much research has explored behaviours that are linked with disgust sensitivity. Few studies, however, have been devoted to understanding how fixed or variable disgust sensitivity is. We therefore aimed to examine whether disgust sensitivity can change with the environment by repeatedly testing university students whose environment was not changing and university student cadets undergoing intensive training at an army camp. We found that an increase in the perceived harshness of the environment was associated with a decrease in pathogen disgust sensitivity. Our results support the idea that disgust sensitivity is malleable depending on the environment. More specifically, we propose that in a harsh environment, where survival is more difficult, pathogen disgust sensitivity decreases to allow the consumption of available resources.



# JUNE 2<sup>ND</sup>

## Introducing Evolutionary Psychopharmacology: Examining The Influence Of Acetaminophen On Psychological Adaptations

*Andrew C. Gallup, SUNY Polytechnic Institute (gallupa@sunypoly.edu); Brianda Gagnon, SUNY Polytechnic Institute; Bruna Rosic, SUNY Polytechnic Institute; Omar T. Eldakar, Nova Southeastern University*

*Twitter: @acgallup*

Acetaminophen (paracetamol, Tylenol), which is the most widely used medication among Americans, has recently been shown to diminish varied forms of psychological pain and distress by producing a generalized evaluative dampening effect. The current research, which intersects with the fields of evolutionary psychology and psychopharmacology, investigates whether these psychoactive effects are strong enough to disrupt prewired neural circuits controlling domain-specific psychological adaptations. Using a double-blind placebo-controlled design, we examine how acetaminophen modulates the (1) evaluation sensitivity and (2) visual processing of stimuli that vary in evolutionary salience. Data collection for this project is ongoing, but we propose that similar psychopharmacological techniques could provide a robust method for testing evolutionary hypotheses of human behavior.

## A Life History Framework Promotes Understanding Of Variation In Health-related Behaviors And Outcomes

*Daniel J. Kruger, University of Michigan (kruger@umich.edu); Jessica S. Kruger, University at Buffalo, SUNY; Timothy Jordan, University of Toledo; Jiunn-Jjye Sheu, University of Toledo; Tavis Glassman, University of Toledo; Steven A. Miller, Rosalind Franklin University*

Scholars are increasingly integrating Life History Theory (LHT) into models of and research on human psychology and behavior. Life History Theory is also a powerful framework for promoting understanding of variation in health-related behavioral patterns and why they vary consistent with environmental conditions. This study examined the relationship between psychological indicators of life history strategy and health related behaviors and outcomes in data from a sample of adults across the USA and from a demographically representative sample in a Midwestern US county. Indicators of slower life histories (especially future-oriented time horizons) predicted higher levels of health promoting behaviors and lower levels of health adverse behaviors, and these in turn were predicted by environmental conditions.



# JUNE 2<sup>ND</sup>

## SESSION IV: SEXUALITY AND GENDER ROLES (4:15 – 5:45PM)

### A Life History Approach To The Female Sexual Orientation Spectrum

Severi Luoto, University of Auckland ([s.luoto@auckland.ac.nz](mailto:s.luoto@auckland.ac.nz)); Indrikis Krams, University of Latvia; Markus J. Rantala, University of Turku

Twitter: @SeveriLuoto

Women's capacity for sexual fluidity is at least as interesting a phenomenon from the point of view of evolutionary biology as exclusively homosexual orientation. Using the synergistic approach of Tinbergen's four questions, I review the evolutionary-developmental origins of various phenotypes in the female sexual orientation spectrum. This synthetic review indicates that various nonheterosexual female phenotypes emerge from and contribute to hormonally mediated fast life history strategies. Life history theory provides a biobehavioral explanatory framework for nonheterosexual women's masculinized body morphology, psychological dispositions, and their elevated likelihood of experiencing violence, substance use, obesity, teenage pregnancy, and lower general health. Synthesizing life history theory with the female sexual orientation spectrum enriches existing scientific knowledge on the evolutionary-developmental mechanisms of human sex differences.

### A Cross-cultural Examination Of The Relationship Among Sexual Orientation, Sociosexuality, And Dark Triad Traits In Women (And Men)

Vania I. Rolon, Brunel University London ([1525141@brunel.ac.uk](mailto:1525141@brunel.ac.uk));  
David P. Schmitt, Brunel University London

Based on a previous study that found that sexual orientation differences in Dark Triad traits among women were mediated by sociosexuality, we used data from the second wave of the International Sexuality Description Project to examine whether this relationship would replicate across seven world regions – North America, Central/South America, North/West Europe, South/East Europe, Middle East and Africa, South/Southeast Asia, and East Asia – as well as among men. Results for women suggest sociosexuality is more often a mediator of Dark Triad differences – particularly of psychopathy – between bisexual and heterosexual women than it is between bisexual and homosexual women. Among men, sociosexuality does not seem to mediate sexual orientation differences in Dark Triad traits across any world region.

### The Mate Expulsion Inventory

Nestor M. Maria, CSU San Bernardino ([marian@coyote.csusb.edu](mailto:marian@coyote.csusb.edu));  
Cari D. Goetz, CSU San Bernardino

We conducted four studies to examine the psychology of mate expulsion and develop the Mate Expulsion Inventory to serve as a parallel measure to the oft-cited Mate Retention Inventory. Study 1 participants nominated behaviors people do to reduce commitment in, or terminate, long-term relationships and generated 168 unique mate expulsion behaviors. Study 2 participants rated the frequency with which they performed the hypothesized mate expulsion behaviors prior to their last break up. We retained the 51 behaviors that were on average at least performed "Rarely" by participants. In Studies 3 and 4 we examined the validity and underlying factor structure of our newly-developed Mate Expulsion Inventory. Our results demonstrate the evolved design of mechanisms that function to terminate relationships.



# JUNE 2<sup>ND</sup>

## **You Can't Always Get What You Want: A Replication Of Alexander And Fisher's (2003) Bogus Pipeline Study Of Sex Differences In Human Mating**

*Joshua Duntley, Stockton University (joshua.duntley@stockton.edu);*

*Nicole Hafner, Stockton University*

*Twitter: @duntley*

Alexander and Fisher (2003) argued that participants lie on surveys about sex due to normative gender role expectations, leading men to exaggerate and women to understate their sexual behavior. In a bogus pipeline experiment, where some participants completed a survey while connected to a polygraph, they found smaller sex differences and greater sexual experience among women in the polygraph condition, which they argued refuted evolutionary explanations. We replicated the study with more diverse participants, also measuring desire for partner variety. 327 participants were randomly assigned to one of three conditions. Slightly smaller sex differences in the polygraph condition replicated. However, differences in reported sexual experience disappeared and men showed significantly greater desire for partner variety across conditions.

## **Celebrities, Ceos, And Athletes: What Factors Minimize And Maximize Gender Differences In Openness To Short-term Mating?**

*David Frederick, Chapman University (enderflies1@aol.com); Jenna Alley, University of Utah; Tania Reynolds, Indiana University at Bloomington; Justin Garcia, University of Indiana at Bloomington; David Schmitt, Brunel University*

Have gender differences in desire for casual sex disappeared? Recent studies suggest men and women are largely similar in their desire for short-term mating, especially after controlling for social stigma and other proximate factors (Conley et al., 2011, 2013). Across five national and college student samples (total N = 60,000), we examined how methodological approach and qualities of potential sex partners strongly moderate the size of gender differences in interest in casual sex. Looking at partner characteristics, sex differences were partially attenuated when potential partners had high athleticism, social status, and resources. Looking at methods, gender differences varied substantially across the “ideal,” “minimum,” and “maximum” number of partners desired. Sexual Strategies Theory provides a useful framework for interpreting these results.

## **An Experimental Examination Of Demand-side Preferences For Female And Male Leaders—an Update**

*Gregg R. Murray, Augusta University (gmurray@augusta.edu);*

*Bruce A. Carroll, Georgia Gwinnett College*

*Twitter: @GreggRMurray*

Individuals often employ heuristics to evaluate females and males. Leading demand- and supply-side explanations account for some of the variance in this phenomenon but leave a great deal unexplained. This research attempts to account for additional, independent demand-related variance by considering mounting evidence that both environmental and biological factors contribute to human behavior. It experimentally assesses how varying types of inter- and intragroup threat—evolutionarily salient situations—affect demand for female and male leaders. The results suggest that, even while controlling for a widely accepted demand-side explanation, leadership situations can be important in an evolutionarily explicable manner: intergroup threat increases preferences for physically formidable leaders and male leaders, while intragroup cooperation increases preferences for female leaders.

# JUNE 3<sup>RD</sup>

## SESSION V: CULTURE, COGNITION, AND COOPERATION (9:00 – 10:15AM)

### Move Over! Learned Vs Innate Processes: Examining The Relationship Between Visual Word And Face Processing

*Alec R. Goldstein, SUNY New Paltz (Goldstea2@hawkmail.newpaltz.edu); Elizabeth Hirshorn, SUNY New Paltz*

The brain has not had enough time to physically adapt for the invention of written language. In the brain, the right hemisphere is associated with a specialization in holistic processing, which is thought to be used for processing faces in literate adults. However, there are documented individual differences in ‘reading style,’ which is linked to both behavioral differences in reading processing (e.g., analytic vs. holistic) and laterality of brain processing (Hirshorn et al., 2018). Given this, we hypothesized that those who exhibit more holistic word processing will show less holistic, and in turn more analytic, face processing due to a weaker need to shift face processing to the right hemisphere. Preliminary data revealed a negative relationship between word and face inversion.

### Development Of A Timed Facial Expression Decoding Task

*Liana S.E. Hone, University at Buffalo (lhone@buffalo.edu); John E. Scofield, University of Missouri; Bruce D. Bartholow, University of Missouri; David C. Geary, University of Missouri*  
*Twitter: @lianasehone*

Deficits occur in sexually-selected cognitive traits (e.g., women’s social acuity, including decoding facial expressions) when exposure to stressors (e.g., toxins) divert limited resources away from the maintenance of cognitive competences. As a first step in testing whether women’s cognitive advantages in social acuity are disrupted by stressors, we developed a novel paradigm to test sex differences in the ability to decode facial expressions. We hypothesized that women would be able to decode facial expressions more quickly and accurately than would men. This task evinced moderate sex differences in the predicted direction, with women outperforming men. Among its many applications, this task can be used to test whether women’s cognitive advantages in social acuity are disrupted by stressors, such as alcohol use.

### Political Results: Outcomes Of Sporting Events Affect Egalitarian Attitudes And Ingroup Evaluations

*Joseph Easterly (jeaste4@gmail.com); Nicholas Kerry, Tulane University; Damian R. Murray, Tulane University; Jason L. Harman, Louisiana State University; John-Luke McCord, Louisiana State University*

Vicariously experiencing major sporting events is a worldwide phenomenon; however, limited research has examined how results from sporting events influence socio-political attitudes. “Strategic” perspectives on morality and political attitudes suggest that spectators may have higher ingroup preference and less egalitarian attitudes after seeing their team win. Two studies were conducted. Study 1 surveyed 589 United Kingdom participants immediately following the Euro 2016 soccer tournament. Study 2 surveyed 648 fans before and after four major college football games in the USA. We found consistent evidence that vicarious winners perceived their ingroup more favorably and were less egalitarian than vicarious losers. These findings suggest that events such as sports results, may acutely influence moral and political views.



# JUNE 3<sup>RD</sup>

## Understanding The Urban Commons: Thoughts From The Frontline Of Applied Evolutionary Psychology

*Dan O'Brien, Northeastern University (d.obrien@neu.edu)*

*Twitter: @Bostonari*

The Boston Area Research Initiative and the City of Boston undertook a study of custodianship in the urban commons, that is, how people take care of public spaces and infrastructure. The study advanced the understanding of the commons while using evolutionary insights to inform policy and practice by analyzing 1,000,000+ requests for government services received by the city's 311 system. The results supported the territoriality thesis, or the idea that custodianship is rooted in evolved motivations to care for spaces with which an individual identifies. More traditional interpretations of the commons rooted in theories of cooperation were not supported. The results also provide insights on how evolutionary behavioral scientists might best extend their work to practical questions with public sector partners.

## Telling The Unspeakable: Storytelling As A Cultural Solution To The Problem Of Acquiring Useful Social Knowledge With A Modular Mind

*Juan Perote-Peña, University of Zaragoza (jperote@unizar.es)*

The human propensity to consume fictional stories is a human universal that demands a convincing evolutionary explanation. I propose a gene-culture coevolution model that explains why two modules in human brains might have evolved such that the first demands strategic ignorance about certain truths in the social world that will be harmful to possess consciously and the second (unconscious) triggers adaptive social actions based on the same social information. But for this mind to evolve, the problematic information should be packed in a disguised way that makes its content accessible to the second module but not to the first. I argue that the symbolic and metaphorical representations so frequently found in stories might be well adapted for this function.



# JUNE 3<sup>RD</sup>

## SESSION VI: FAMILY SYSTEMS AND ATTACHMENT (10:30AM – 12:00PM)

### **Who Suppresses Female Sexuality? An Examination Of Support For Islamic Veiling In A Secular Muslim Democracy As A Function Of Sex And Offspring Sex**

*Khandis R. Blake, UNSW Sydney (k.blake@unsw.edu.au); Robert C. Brooks, UNSW Sydney*

*Twitter: @khandisblake*

The question of which sex suppresses female sexuality more avidly neglects that our interests are never ambiguously masculine or feminine; each of us has a combination of male and female kin which alters how much of our future fitness derive from each sex. Here we exploit a nationally representative sample of 600 Tunisians to test whether support for Islamic veiling—a proxy for female sexual suppression—is more common amongst one sex than the other, and is affected by the relative sex of one's offspring. We found that men were more supportive of Islamic veiling than women, but women with more sons were more supportive of veiling than those with fewer sons. Far from being the fixed strategy of one sex, sexual suppression manifests facultatively to promote one's reproductive interests directly or indirectly by creating conditions beneficial to one's descendants.

### **The Fascinating Lives Of Nayers During The Pre-british Period: The Interplay Of Matrilineality, Paternity Uncertainty, And Castes From An Evolutionary Perspective**

*Sethu Karthikeyan, Pace University (skarthikeyan@pace.edu);*

*Maryanne Fisher, Saint Mary's University*

A matrilineal system was prevalent in the Nayers in Kerala, India, in the pre-British era; wealth was apportioned to daughters, and males invested in their sister's children rather than in their own children. This system makes evolutionary sense when paternity uncertainty is considered, given investment in daughters is high in communities where paternity uncertainty is high. The pre-colonial Nayers offers a unique opportunity to explore a possible origin of matriliney and the power of evolutionary science to explain those features that stand out as exceptions even in a matrilineal system. This case is unique because of a combination of factors such as the absence of institutionalized marriage, a definite notion of fatherhood, and the strong influence of the caste system.

### **Politics And Parental Care: Experimental And Mediation Tests Of The Causal Link Between Parenting Motivation And Social Conservatism**

*Nicholas Kerry, Tulane University (nkerry@tulane.edu);*

*Damian R. Murray, Tulane University*

People vary greatly in their desire to have children, their affective reactions towards children, and their willingness to care for children. Strategic perspectives on political attitudes suggest that parenting motivation should be associated with more socially conservative attitudes, since these attitudes prioritize norms that emphasize self-protection, and discourage short-term sexual behavior. We found a strong, consistent relationship between parenting motivation and social conservatism. Further, parenthood mediated age-related increases in social conservatism and an experimental child-interaction prime increased social conservatism (although effects were equivocal across studies). Finally, the relationship between parenting motivation and social conservatism was mediated by both mating orientation and belief in a dangerous world. These findings attest to the important relationship between parenthood, parenting motivation, and social conservatism.



## Dark Parenting: The Relationship Between The Dark Triad And Parenting Styles

*Glenn Geher, SUNY New Paltz (geherg@newpaltz.edu); Jacqueline Di Santo, SUNY New Paltz; Genevieve Durso, SUNY New Paltz; Alec Goldstein, SUNY New Paltz; Julie Planke, SUNY New Paltz*

*Twitter: @glenngeher*

The Dark Triad, including narcissism, psychopathy, and Machiavellianism, are famously predictive of outcomes in the domain of human mating. While the domain of parenting is just as relevant to Darwin's bottom line as is the domain of mating, no past research has explored the relationship between the Dark Triad and parenting styles. The current study explores this relationship by administering measures of the Dark Triad, parenting styles, the attachment style to a sample of over 160 parents. We found that the Dark Triad is negatively related to the authoritative parenting style and is positively related to both permissive and authoritarian parenting. These effects are mediated through insecure attachment styles.

## The Relationship Between Attachment Style And Stress Responses In Men And Women

*Jessica K. Hlay, Boston University (jesshlay@gmail.com); Benjamin N. Johnson, The Pennsylvania State University; Carolyn R. Hodges-Simeon, Boston University; Kenneth N. Levy, The Pennsylvania State University*

*Twitter: @jesshlay*

We propose that a robust predictor of stress responses may lie in attachment style. The relationships among sex, adult attachment style, and stress responses were examined in 1,091 adults from three samples. Results suggested that while women preferred tend/befriend and flight responses over men, and men engaged in more fight responses than women, both sexes endorsed using tend/befriend behaviors during stress more than other responses. Attachment style was an independent, robust predictor of all stress responses. Additionally, women who were more avoidantly-attached were as likely as men to engage in fight behaviors, while less avoidantly-attached women displayed the lowest levels of this response. Our results indicate that variables other than sex should be considered as predictors when measuring stress responses.

## Psychtable: The Web-based Taxonomy Of Evolved Psychological Adaptations

*Niruban Balachandran\*, World Bank (niruban25@gmail.com); Daniel Jeremy Glass\*, Southfield Center for Development; Olivia Jewell, Brunel University London; Yzar Wehbe, PsychTable.org; Katrina Hercules. \*Presenters*

*Twitter: @psychtable*

*<https://www.psychtable.org/>*

PsychTable.org is an online, mass collaborative taxonomy that organizes proposed human evolved psychological adaptations (EPAs) and allows users to view and rate the literature that supports and challenges the existence of each. This online tool is intended to be a resource for researchers, students, and the public alike. NEEPS has played a critical role in the formation and nurturance of PsychTable and has officially endorsed the project. This presentation will provide a view of the PsychTable platform as it currently stands, describe how PsychTable works, and provide an update on the progress of the project. Feedback will be elicited from the NEEPS community on how to further support and improve the platform.

# JUNE 3<sup>RD</sup>

## DATA BLITZ 2: GAMES WE PLAY (1:30 – 2:15PM)

### The Psychometric Evaluation Of The Intrasexual Competition Scale

*Graham O. Albert, Boston University (grahama@bu.edu); Zeynep Senveli, Boston University; Jessica K. Hlay, Boston University; George B. Richardson, University of Cincinnati; Steven A. Arnocky, Nipissing University; Carolyn R. Hodges-Simeon, Boston University*

The Intrasexual Competition Scale (ICS) measures intrasexual competition as an attitude. In Study 1, we report the results of an exploratory factor analysis on participants' responses to the ICS. In Study 2, we replicated the structure of the ICS found in Study 1 using confirmatory factor analysis (CFA) with an independent sample of men and women. A two-factor solution yielded the best fit. The two factors reflected respondents' feelings of frustration when intrasexual competitors are better than they are, and respondents' enjoyment of being better than intrasexual competitors. Partial measurement invariance held across the sexes. Together, these analyses suggest that the ICS is a valid measure of individuals' attitude towards intrasexual competition.

### Capturing The Attention Of Caregivers: Variability In Infant Vocalizations

*Catharine Castelluccio de Diesbach, The Graduate Center, CUNY (catharinecastelluccio@yahoo.com); Advisor: Dr. John L. Locke*

The effect of variability in infant vocalizations on potential caregivers' heart rate variability, facial expressions, and subjective ratings on emotional reactions and desire to approach infant was examined in an evolutionary context. Recordings of non-canonical, canonical, fussing, and crying vocalizations were utilized to elicit physiological and self-reported reactions from sixty participants including breastfeeding mothers, non-mothers at high and low estradiol points in menstrual cycle, fathers, and non-fathers. Participants showed the greatest percentage of happy facial expressions and positive ratings for babbling. Fathers reported significantly higher happiness levels and positive ratings for babbling than non-fathers. Results are discussed within an evolutionary framework considering potential influences of parental selection of vocal behaviors, sex hormones on caregivers' responses to infants, and an attraction to complexity of sounds across species.

### Effects Of An Interpersonal Dictator Game On Jealousy Versus Trust

*Ana Maria Fernandez, Laboratory of Evolution and Interpersonal Relationships (LERI), Universidad de Santiago de Chile (ana.fernandez@usach.cl); Maria Teresa Barbato, Social Complexity Research Center (CICS), Universidad del Desarrollo, Santiago; Carlos Rodríguez-Sickert, Social Complexity Research Center (CICS), Universidad del Desarrollo, Santiago; José Antonio Muñoz-Reyes, Center for Advanced Studies (CEA), Universidad de Playa Ancha, Viña del Mar; Michele Dufey, Universidad de Chile*

Jealousy is an emotion triggered by the potential loss of a valued relationship and in mating responds to adaptive challenges for women and men in the exclusivity of their reproductive bond. We present a novel method to experimentally trigger adaptive sex-differences in jealousy, and compare it with trust. We were able to measure the induction of jealousy through an interpersonal dictator game in an MTurk™ sample and 28 heterosexual couples. This protocol exerted the evocation of sex differences in jealousy but not in trust. We discuss how changes in jealousy, but not in other emotions involved in close relationships, is predicted by parental investment theory and the implications for the conception of jealousy designed specifically for protecting reproductive bonds.



# JUNE 3<sup>RD</sup>

## Testosterone Reactivity And Perceptions Of Challenge From Romantic Partner During Conflict

*Anastasia Makhanova (makhanova@psy.fsu.edu), James McNulty, Lisa Eckel, Larissa Nikonova, Jon Maner, Florida State University*

Research guided by the Challenge Hypothesis has demonstrated that people—men in particular—experience increased testosterone reactivity when challenged in the context of sports and in-lab competitions with unfamiliar partners. However, research in close relationships highlights that romantic partners often challenge each other during conflict situations. We examined whether husbands and wives experienced testosterone reactivity when they were challenged by their spouse. Fifty newlywed couples discussed four marital problems. Each member of the couple reported how much they perceived their partner to be challenging them during the discussions. Pre- and post-discussion saliva samples were assayed for testosterone. For men, but not for women, perceptions of challenge were associated with heightened testosterone reactivity, and this result replicated across three different measures of testosterone reactivity. Findings were specific to men's perceptions of challenge, and held controlling for objective measures of challenge coded from videos of the conversations. These results highlight the benefits of considering pair-bonded relationships as a novel context for investigating associations involving hormones and behavior.

## Multilevel Analysis Reveals Differential Functions Of Good/Neutral Dreams, Bad Dreams, And Nightmares On Change In Negative Affect

*Olivia H. Tousignant\*, Suffolk University (otousignant-pienkos@su.suffolk.edu); Daniel J. Glass\*, Southfield Center for Development (djglass@suffolk.edu); Michael K. Suvak, Suffolk University; Gary D. Fireman, Suffolk University. \*Presenters*

The current study examines how good/neutral dreams, bad dreams, and idiopathic nightmares differentially predict change along a negative–neutral continuum of affect. For up to 21 days, 191 adults reported online about whether they dreamed and, if so, what type of sleep mentation they had. They also reported their negative affect (NA) level each day. As predicted, results revealed a statistically significant decrease in NA following good/neutral dreams, but contrary to expectations, there was no impact of bad dreams or nightmares on NA change relative to reportedly dreamless nights. Good/neutral dreams may serve an evolutionarily adaptive function of reducing negative affect overnight to promote next-day emotional equilibrium.



# JUNE 3<sup>RD</sup>

## SESSION VII: FEMINIST EVOLUTIONARY PSYCHOLOGY SOCIETY (FEPS) (2:30 – 3:15PM)

### **FemaLe Intrasexual Competition In Popular Romantic Fiction**

*Ania Grant, University of Auckland (ania.grant@auckland.ac.nz)*

Jane Austen's novels have been extremely popular for over 200 years in many different parts of the world. They have also been the subject of insightful analyses by biocultural literary critics and evolutionary psychologists alike. I examine female intrasexual competition by comparing competitive strategies of Austen's female protagonists and antagonists. Antagonists derogate, humiliate, and exclude their rivals, manipulate and exploit their chosen mates and other characters. Protagonists rely on displaying their physical, emotional, mental and moral superiority, and end up attracting better quality mates. Such happy endings have often been disparaged as unrealistic fantasies but cross-cultural empirical research confirms that the most sought-after mates are those who possess traits conducive to creating and maintaining cooperative partnerships and social cohesion.

### **The 'Bless Her Heart' Effect- Is Apparent Concern Advantageous For Gossipers?**

*Tania Reynolds, Kinsey Institute, Indiana University Bloomington*

Although a wide body of research supports that women use gossip to undermine their same-sex mating rivals, women deny their use of reputation defamation. I hypothesize that women deny their involvement in gossip because they believe they are concerned about their gossip targets. That is, women are self-deceived to believe they are benevolently motivated when they gossip about rivals and these beliefs grant an advantage in social competition. In Study 1, 663 individuals reported their motivations for their most recent and general gossip conversations. I examined whether compared to men, women endorsed more concern over malicious motivations. Study 2 examined the efficacy of gossip phrased with concern. 382 participants evaluated 3 gossip statements, phrased with concern, with malice or neutrally. I predicted that perceivers would more favorably evaluate female gossipers when they phrased their gossip with concern, revealing that ostensibly beneficent gossipers are inoculated against the social costs of gossip.

### **She Works Hard For The Money: Competitive Tactics Among Camgirls**

*Laura L. Johnsen, Binghamton University (ljohnse1@binghamton.edu); Isaac Cormier, Saint Mary's University; Maryanne L. Fisher, Saint Mary's University*

*Twitter: lauraljohnsen*

Camgirls are women who perform erotic behaviours over the Internet for payment. The performers live-stream their activity and viewers "tip" tokens to control sexual devices or to request specific actions. Camgirls also earn money through "private" shows where a user pays to view the show with partial or full exclusivity. The number of camgirls is staggering; LiveJasmin.com reported over 2000 models at any given moment, with 35-40 million daily visitors in 2017. Given that there are numerous websites, and therefore tens of thousands of camgirls, there is competition amongst the performers to solicit interest from viewers. Here we examine the various behaviours camgirls use to obtain viewers, and explore whether traditional perspectives of women's intrasexual competition apply to this arena.





# POSTER ABSTRACTS

Poster Session: Monday, June 3<sup>rd</sup>  
3:30-5:00pm

## POSTER 1

### Adaptation, Byproduct, or Something In-Between? Metamemory Phenomena and Their Evolutionary Origins

*Christopher S. Tripoli, American University (ct9900a@student.american.edu); Joshua Tatz, American University; Zehra Peynircioglu, American University*

The present report examines metamemory – the ability to monitor and control one’s own memory traces and operations – from an evolutionary perspective. We propose a number of evolutionary predictions of metamemory functioning – for example, that evolutionarily pressing items are more likely to evoke a “tip-of-tongue” metamemory state. We also examine previous literature with a focus on its endorsement of metamemory’s classification as an adaptation or byproduct. Most prior work conducted from a developmental angle supports the adaptation hypothesis; comparative literature is inconclusive; and miscellaneous literature supports the byproduct alternative. We propose methods of using dissociations to investigate such matters further.

## POSTER 2

### Observers Can Accurately Assess Self-reported Male Health From Facial Photographs

*Zeynep Senveli, Boston University (senveli@bu.edu); Graham O. Albert, Boston University; Jessica K. Hlay, Boston University; Brian M. Bird, Simon Frasier University; Steven A. Arnocky, Nipissing University; Carolyn R. Hodges-Simeon, Boston University*

Faces may serve as a cue of health and condition. However, little research has been conducted to determine if individuals can accurately assess men’s health from their face. The purpose of the current study was to investigate whether observers could accurately assess men’s health when they were presented with facial photographs. We hypothesized that observers would rate faces of men who reported better health as being healthier. Furthermore, we predicted that women would rate the faces of men with better health as more attractive and men would rate them as more dominant. Faces of men who reported better physical health received higher health ratings. Women rated these faces as appearing more attractive and men rated them as appearing more dominant.

## POSTER 3

### Walk The Line: Is Border Bias Evidence Of An Environmental Threat Response Mechanism?

*Allison Bernique, Bridgewater State University (abernique@student.bridgew.edu); Michael J. Root, Bridgewater State University*

Researchers propose the existence of evolved psychological mechanisms that humans use to respond to environmental threats. Border bias seems to be a product of this kind of mechanism. Border bias is the mistaken belief that abstract boundaries provide protection against environmental threats. Evidence from several studies suggests that border bias is a maladaptive variant of the successful strategy of seeking a protective barrier in the face of an oncoming environmental threat. The current study changed how border bias was measured and analyzed. Results support our hypothesis that if border bias is analyzed as a continuous rather than dichotomous variable, border bias disappears, thus serving as a cautionary tale about hypothesizing about evolved mechanisms without converging methods of analysis.



## POSTER 4

### The Influence Of Self-perceptions Of Attractiveness On Substance Use: Sex Differences In Predictors Of Alcohol Consumption In College Students

*Alison M. Brenman, Bucknell University (amb055@bucknell.edu);  
T. Joel Wade, Bucknell University*

A survey was implemented in order to ascertain how mate value, attractiveness, and sexual behavior influence alcohol consumption in men and women. Lower ratings of attractiveness, or mate value, were expected to be predictors of increased alcohol use. Sex differences occurred. However, the results were consistent with the hypothesis. For women, perceptions of mate value was a negative predictor of the alcohol score. For men, perceptions of sexual attractiveness and physical attractiveness were negative predictors of the alcohol score. Also, in both sexes, greater promiscuity, and engagement in more risky sexual behaviors was associated with greater alcohol consumption habits. These findings are discussed in terms of prior research.

## POSTER 5

### The Effect On Lingerie Color And Ornamentation On Perceived Attractiveness

*Samantha Luzietti, Bucknell University (sel022@bucknell.edu); T. Joel Wade\*, Bucknell University. \*Presenter*

This research explored the relationship between the color and style of lingerie that a woman was wearing on peoples' perception of attractiveness. Three types of lingerie were used in this study: black lingerie, red lingerie, and white lace lingerie. These images were presented to a group of 95 men and 111 women. Each participant was presented with one of the three image options. They then completed Wade, Auer, and Roth's (2009) questionnaire regarding evolutionary traits. The results of this study suggested that the overall lingerie type did influence the perception of the woman's attractiveness. The results also indicated that, overall, the sex of the participant influenced the perception of the woman's attractiveness. There interaction between the sex of the participant and the lingerie type was not significant.

## POSTER 6

### How Does Contracting A Sexually Transmitted Infection Alter Attitudes Towards Casual Sex In Male And Female College Students?

*Samantha Dreier, Florida Gulf Coast University (sjdreier1656@eagle.fgcu.edu); Maria Koroleva, Daniela Aladro, Lesley Cruz, Francesca W. Valdez, Robbi Coltune, Julia Chachere, Dylan Sessa, Jennifer Lewis, R. Nathan Pipitone\*, Florida Gulf Coast University (npipitone@fgcu.edu). \*Presenter*

Previous work shows that men, on average, are more likely to pursue opportunistic mating strategies if given the opportunity, compared to women. One component of this strategy is risk taking, and men have been shown to take more risks than women in a variety of contexts. The goal of this project is to determine the extent to which sex differences exist considering casual sexual encounters involving sexually transmitted infections (STIs). University students will rate their willingness to engage in casual sex with someone as a function of varying attractiveness levels and varying percentages of contracting STIs.

## POSTER 7

### Right Wing Authoritarianism, Life History And Response To Threat

*David R. Widman, Juniata College (widman@juniata.edu);  
Philip T. Dunwoody, Juniata College*

It has been suggested that Right Wing Authoritarianism (RWA) evolved as a means to address threat. Many labs have found, for example, that threatening environments lead to greater endorsement of RWA attitudes and that RWA leads to greater perceptions of threat. However, many of these reports, similar to the above, only examine paper and pencil measures of threat. Our goal here is to utilize a behavioral measure of threat. Men and women were first assessed for their RWA and life history. Following this, they were given a threat popout task. Our results replicated the correlation between life history and RWA but did not find enhanced threat detection in those high in RWA. Future work needs to include different threat.

## POSTER 8

### Women Competing With Other Women Do Not Financially Discount The Future

*David R. Widman, Juniata College (widman@juniata.edu); Rebecca Weldon, Juniata College*

Others have found that men, competing with other men for mates showed financial delayed discounting. That is, they selected to receive a smaller immediate financial gain more often than a larger delayed gain. They found that women did not. The purpose of the present studies are to investigate this lack of effect. We exposed women to articles of clothing, either casual shoes or lingerie modeled by an attractive woman or had women read vignettes that either indicated that their mate was showing interest in another woman or a similar story about a different couple. We then had them complete a delayed discounting task. Results indicated that the women in the competitive conditions did not discount any more than those in the non-competitive conditions.

## POSTER 9

### Sex Differences In Online Dating Deception: Attractiveness, Job Status, And Altruism

*Megan Mackinnon, Nipissing University (memackinnon748@community.nipissingu.ca);  
Jessica Desrochers, Benjamin Kelly, Steven Arnocky, Nipissing University*

This study investigated sex differences in response to deception in online dating. Using a hypothetical dating paradigm, participants were randomly assigned to one of three deception conditions (attractiveness, altruism, or job status) and reported their degree of upset along with how likely they were to cancel the date (Study 1). Results showed females were more likely than males to cancel the date if deception involved job status and volunteerism. Study two used the same scenario but with a forced choice paradigm ranking each deception from most to least upsetting. Results showed similar relationships to study one in that females ranked job status deception more upsetting than males, whereas males ranked attractiveness deception as more upsetting than females.



## POSTER 10

### Nation-based Thought And Behavior

*Michal Fux, Northeastern University (fux.michal@gmail.com)*

This project is aimed at establishing a Standard Model for the Cognitive Science of Nationalistic Behavior (CSNB), modeled on the “Standard Model” in Cognitive Science of Religion (SM-CSR) which unified the scientific study of religion across disciplines by identifying structural components of religious systems that although seemingly different (i.e. attire, rituals), are strikingly similar in their underlying cognitive components. I will identify cross-culturally shared elements of nationalistic behavior, match them with cognitive systems from cognitive science literature, and propose a model predicting when and which nationalistic ideas would gain traction. Potential elements include: symbols; shared narratives/myths of common ancestry; preoccupation with stranger-danger; claim to land; appeal to socially constructed categories; and boundary demarcating idioms such as “Motherland”.

## POSTER 11

### Potential Adaptivity Of Honest Signals Of Psychosocial Stress

*Anna Szala, Department of Psychology, Oakland University (szala@oakland.edu); Katarzyna Pisanski, Institute of Psychology, University of Wrocław, Poland, Mammal Vocal Communication and Cognition Research Group, School of Psychology, University of Sussex, Brighton, UK; Aleksander Kobylarek, Luba Jakubowska, Kamil Błaszczyszki, Amelia Walter, Magda Kasprzyk, Krystyna Lysenko, Irmina Sukiennik, Institute of Psychology, University of Wrocław, Poland; Judyta Nowak, Department of Human Biology & Institute of Psychology, University of Wrocław, Poland*

Although psychosocial stress can have adaptive short-term benefits, in the long-term it can lead to health problems. We analyzed covariation in voice, polygraph, and hormone measures under experimentally induced stress. Psychosocial stress was shown to increase voice pitch and its variability, cortisol levels, and to decrease body temperature and hand movement. These measures covaried with one another. Thus, the results show that nonverbal vocal cues can, to some degree, honestly signal activation of the sympathetic nervous system and hypothalamus-pituitary-adrenal axis. These results imply two possibilities regarding honest vocal indices of stress. Increased pitch and variability may either be a product of adaptive selection operating on the voice to honestly indicate stress, or a byproduct of the body's reaction to stress.

## POSTER 12

### Tinder Vs Harmony: An Assessment Of Sociosexuality Across The Sexes, Online Dating Users, And Online Dating Platforms

*Richard H. Holler, Oakland University (holler@oakland.edu); Kayla Shephard, Oakland University; Lisa Welling, Oakland University*

Despite perhaps being the most vexing and controversial subject matter within the field of evolutionary psychology, psychological sex differences remains a popular topic among dating and mating strategies. Not only have sex differences in mating behaviors emerged in face-to-face (i.e., physical) speed-dating experiments (Finkel & Eastwick, 2009), these differences are also emerging in virtual (i.e., online) dating environments. This correlational study assesses sociosexuality among online dating users as well as online dating platforms. Results suggest that sociosexuality may not only predict who participates in online dating, but also which type of online dating platform, such as tinder (short-term dating platform) or eHarmony (long-term dating platform).

## POSTER 13

### Rape Avoidance Across The Menstrual Cycle Using A Virtual Paradigm

*Jenna M. Lunge, Oakland University (jmlunge@oakland.edu), Virginia E. Mitchell, Anna Wysocki, Adam E. Tratner, Lisa L. M. Welling, Oakland University*

Rape has been a recurring problem for women throughout evolutionary history. Because rape circumvents female mate choice, it is particularly costly for women at high fertility due to the risks of allocating parental investment to undesired offspring of unknown genetic quality. Consequently, women may have evolved psychological mechanisms to motivate behaviors that would reduce risk of rape, particularly at high fertility. Indeed, previous research has identified a suite of rape avoidance behaviors (e.g., avoiding strange men, defensive preparedness) that are more common at high fertility compared to other points in the ovulatory cycle. In addition to the Rape Avoidance Inventory (RAI), the present study used a virtual reality (VR) task to assess within-subject differences (N=23) in threat-assessment and rape avoidance behaviors at estimated points of high and low fertility. Preliminary analyses suggest that participants assessed more threat in their virtual environment (indicated by heightened perceived presence of non-existent agents during the VR task) at high versus low fertility, although this effect fell short of significance. Participants reported less avoidance of appearing sexually receptive subscale of the RAI at high versus low fertility, which may indicate a general increase in sexual motivation. Presented results are preliminary and data collection is ongoing.

## POSTER 14

### Have You Seen The Malefica Effect?

*Maryanne L. Fisher, Saint Mary's University (mlfisher@smu.ca); Ana Maria Fernandez, University of Santiago, Chile; Elisabeth Oberzaucher, University of Vienna*

We define the Malefica Effect as a socially subtle mechanism used by intelligent women to disguise that they are directing a harsh message to another person that they are behaving poorly within a social group but who is in a powerful position within that group. The goal of the Malefica Effect is to cause the group member to become realigned with the group's goals and other members. It is a motivated meanness that is intended to keep potentially misbehaving members in reign. The user may rely on sarcasm, but ultimately aim to appear nice, confident, and charming, such that they are seen in a positive light. We propose it is highly strategic and group-oriented, and only employed by dominant, fearless, respected women.

## POSTER 15

### Implications And Applications Of Evolutionary Thinking In Clinical Psychology Practice

*Nando Pelusi (neanderthink@gmail.com)*

Evolutionary theory is established science and is ripe for employment in psychological pursuits. Clients seek to emerge from depression, anxiety, anger, shame, and self-destructive behaviors, and the various challenges encountered in big cities. Evolutionary considerations add an ultimate perspective to proximal ones. Explicit implications of the science of evolutionary psychology are used in common psychotherapeutic challenges. These include dating, mating, relationship and challenges, as well as affiliations, career fears, circadian dysregulation, and overeating. Emotions such as jealousy, anger, loneliness, shyness, guilt, and shame, avoidance or compulsion, are frequent clinical topics—and evolutionary science has much to offer clients interested in both proximal and ultimate motivators. Evolutionary thinking reintroduces “unconscious” processes in discussions with a more useful and practical application. Evolutionary thinking eradicates mysteries and solvable trade-offs for problems often emerge in this context.

## POSTER 16

### Mothers In Music: Exploratory Evolutionary Thematic Analysis Of Songs Including “Mother”

*Melanie MacEacheron, University of Western Ontario, Canada (mmaceacheron@gmail.com); Maryanne L. Fisher, Saint Mary's University, Canada; Ashley Tiller, Saint Mary's University, Canada; Haylee MacCallum, Saint Mary's University, Canada; Caroline Luszawski, University of Western Ontario, Canada*

How are mothers represented in popular music? Given that human artefacts reflect evolved motives, cognitions, and emotions, songs about mothers may contain evolution-relevant themes. English-language songs from “OfficialCharts.com” released in 2018 and containing “mother”, “mom”, and/or “ma” will be sampled and subjected to thematic analysis (Braun & Clarke, 2006). The lyrics will be independently rated for valence (positive, negative, or neutral), and subjected to thematic analysis. To be presented: valence-type tallies, themes and their frequencies, and discussion whether themes are predicted under aspects of evolutionary (e.g., parental investment theory), other social psychological theory (e.g., Empathy-Altruism Theory), or neither.

## POSTER 17

### Feelings Of Relative Deprivation And Involvement In High-pressure Decisions

*Amanda Rotella, University of Guelph (arotella@uoguelph.ca); Sandeep Mishra, University of Regina*

*Twitter: @AMRotella*

Inequality has been associated negative outcomes at the societal level; however, there have been few investigations of individual-level mechanisms. One mechanism is relative deprivation, which refers to subjective feelings of anger, resentment, and frustration when comparing oneself to a similar (and competing) other. To date, relative deprivation has not been investigated in groups. We hypothesize that in decision-making groups, feelings of personal relative deprivation will be associated with less participation. Students (N = 150) in groups of 4–6 had to come to a decision despite having roles with competing interests. Results indicate that relative deprivation predicted 9% of variance in participation over and above demographic and situation-related variables, such that more relative deprivation was related to less participation.

## POSTER 18

### Multilevel Analysis Reveals Differential Functions Of Good/Neutral Dreams, Bad Dreams, And Nightmares On Change In Negative Affect

*Olivia H. Tousignant, Suffolk University (otousignant-pienkos@su.suffolk.edu); Daniel J. Glass, Southfield Center for Development; Michael K. Suvak, Suffolk University; Gary D. Fireman, Suffolk University*

The current study examines how good/neutral dreams, bad dreams, and idiopathic nightmares differentially predict change along a negative–neutral continuum of affect. For up to 21 days, 191 adults reported online about whether they dreamed and, if so, what type of sleep mentation they had. They also reported their negative affect (NA) level each day. As predicted, results revealed a statistically significant decrease in NA following good/neutral dreams, but contrary to expectations, there was no impact of bad dreams or nightmares on NA change relative to reportedly dreamless nights. Good/neutral dreams may serve an evolutionarily adaptive function of reducing negative affect overnight to promote next-day emotional equilibrium.



## POSTER 19

### Clogged Ears And Loud Mouths: A Review

*Zach Rausch, State University of New York at New Paltz (SUNY New Paltz) (n02569346@hawkmall.newpaltz.edu); Kanji Rodriguez\*, SUNY New Paltz; Jeremy Weintraub, SUNY New Paltz. \*Presenter*

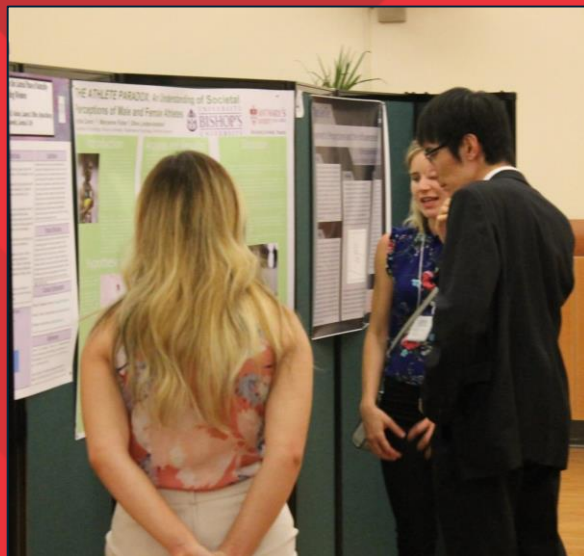
This is a critical review of the recently published book, *The Ape that Understood the Universe* by Steven Stewart-Williams. He used accessible language and modern-day examples regarding evolution as a means to invite non-academics into the field. Overall, *The Ape that Understood the Universe* is particularly useful in educating readers about complex ideas and debates regarding evolution. In this regard, Stewart-Williams' book finds its niche in the field, while at the same time inviting non-academics into the mind of an evolutionist. While the reviewers conclude that the book was well written, highly engaging, and intellectually fascinating, they argue that Stewart-Williams' writing style may alienate and unnecessarily push away those with conflicting viewpoints.

## POSTER 20

### Hot Stuff! The Evolutionary Psychology Behind The Attractiveness Of Volunteer Firefighters

*Nicholas J. Primavera, SUNY New Paltz (primaven1@hawkmall.newpaltz.edu); Glenn Geher, SUNY New Paltz; Daniel J. Kruger, University of Michigan; Tabitha Holmes, SUNY New Paltz; Rachael Purtell, SUNY New Paltz  
Twitter: @glenngeher*

Historically, research has demonstrated a clear relationship between riskiness and reported levels of attraction. Additionally, research has also explored altruistic behaviors and reported levels of attraction. However, no previous study has examined if these same findings apply to members of the volunteer fire service. This current study seeks to examine this question, by providing participants with pictures and biographies of volunteer firefighters in order to measure their levels of attraction. The pictures will either show the model in the traditional gear of the firefighter, the dress uniform, or plain clothes. The biography paired with these pictures will either depict a risky firefighter, a community focused firefighter, or simply include that they are a firefighter. Multiple 3x3 ANOVA's will be used to determine which group has the highest reported levels of attraction. The basic prediction is that the firefighter in the turnout gear, when paired with the risky biography will be rated the most attractive for short-term relationships, while the firefighter in the dress uniform, when paired with the altruistic biography, will be rated as most attractive for long-term relationships.



## POSTER 21

### Exploring Hate Sex: Who Is Having It And Are There Evolutionary Advantages/Disadvantages In Engaging In Hate Sex?

*Jacqueline M. Di Santo, SUNY New Paltz (disantoj1@hawkmail.newpaltz.edu); Glenn Geher, SUNY New Paltz*

*Twitter: @glenngeher*

Hate sex is a popular topic in the media, but has yet to be defined by psychological research. The aim of this project is to explore hate sex by looking at the nature of hate sex and who is having it, with aims to define the construct of hate sex itself. The predictions of this study are that engaging in hate sex will correspond to a faster life history strategy, higher mating success, and higher scores on measures of the dark triad, sociosexuality, extraversion, openness and neuroticism, along with hate sex being rougher in nature than average sexual encounters. Study 1 evaluates perceptions of hate sex to define the construct. Study 2 assesses personal engagement in hate sex followed by measures to investigate whether there are any evolutionary advantages/disadvantages in engaging in hate sex. This project aims to define hate sex and help develop our understanding of hate sex.

## POSTER 22

### Resilience, Persistence, And Life History Strategy: Linking Academic And Clinical Practices

*Graham Thomson, Visiting Scholar (22gthomson@gmail.com); Genevieve Durso, Visiting Scholar; Glenn Geher, SUNY New Paltz*

*Twitter: @glenngeher*

This study attempts to link social work with evolutionary psychology. This amalgam of disciplines could in turn induce a knowledge base that could be utilized within clinical and academic settings. Resilience and persistence, both grounded within psychology, are characteristics that involve adapting and following through within difficult circumstances. Life history strategy, grounded within evolutionary psychology, is a method of living quantified upon how an organism allocates their energy along with to what degree they take risky actions. As a previous study concluded, an association between resilience and life history exists (Gibbons et al., 2012). This study will attempt to gain further data upon these associations, concurrently with additional measurements. The results may thus enlighten both clinicians and academics, resulting in a more complete knowledge base that could be utilized to benefit society. In addition to the initial study, the incorporation of an interactive measurement of persistence would occur upon which the creators of the study would synthesize themselves.



## POSTER 23

### Differences In Reactions To Infidelity Based On Sex And Sexuality

*Alec R. Goldstein, SUNY New Paltz (Goldstea2@hawkmil.newpaltz.edu); Julie A. Planke, SUNY New Paltz (PlankeJ1@hawkmil.newpaltz.edu).*

Sex differences in mating psychology, particularly reactions to infidelity, have been well documented by Buss and colleagues (1992), and replicated by Howard and Perilloux (2017) with heterosexual and homosexual individuals. Exclusively assessing homosexual and heterosexual participants, these differences were found to be the result of one's biological sex, rather than sexual orientation. Assessing both reactions to various types of infidelity and other mating behaviors. Better accounting for the inherent fluidity of human sexuality, participants self-identified using the 7-point Kinsey-scale, A total of 438 (M = 101, F = 337) college-aged adults participated. Although results generally aligned with previous research, only 37.4% of the sample identified as exclusively heterosexual, and 4.6% identified as exclusively homosexual - showcasing the fluidity of human sexuality.

## POSTER 24

### Examining Sexual And Gender Fluidity In College Students: An Exploratory Investigation Of Gender Barriers Within Psychological Research And Clinical Practices

*Mariah A. Griffin, SUNY New Paltz (griffinm6@hawkmil.newpaltz.edu); Julie A. Planke, SUNY New Paltz*

Some researchers have recently adopted an awareness that sex and gender not synonymous constructs, sparking the need for progressively-informed gender-based research in the behavioral sciences. The notion that gender is an exclusively binary construct is now rejected in many cultures (Towle & Morgan, 2002). This exploratory investigation of the gender/sexual fluidity, biological sex, and general mental health outcomes of college students utilizes self-report assessments and tests salivary testosterone levels. The primary objective is to obtain a true understanding of the relationships among these complex biological and social constructs. Such findings will not only inform our evolutionary understanding of gender and sexual fluidity but also improve the competency of psychologists and mental health professionals working with LGBTQ+ and gender fluid clients.

## POSTER 25

### Abusive Men Are Driven By Paternal Uncertainty

*Rebecca L. Burch, SUNY Oswego (rebecca.burch@oswego.edu); Gordon G. Gallup, Jr., University at Albany, SUNY*

This study examined paternal assurance tactics and differential investment in children in a sample of 258 men in a court mandated abuse treatment program. Sexual jealousy was cited more often than any other factor in the instigation and escalation of conflict. Sexual jealousy also triggered increases in mate guarding and sexual violence, but not physical violence. Mate guarding behaviors nearly doubled, while sexual coercion tripled and rape more than quadrupled. Violence shifted away from sexual coercion to physical violence when the male knew his partner was pregnant. The presence of children was not only correlated with increased aggression against partners, but also with physical punishment of those children. Sexual jealousy motivated behaviors and physical punishment of children were also correlated.



## POSTER 26

### Smells And Sexual Strategy: The Relationship Between Olfactory Acuity, Disgust, And Mating Strategy

*Zachary Airington, Tulane University (zairington@tulane.edu); Marjorie L. Prokosch, Tulane University; Damian R. Murray, Tulane University*

Although smell (olfaction) is one of the central sensory modalities through which people evaluate both potential threats and potential romantic partners, its role in social cognitive processes remains grossly understudied and poorly understood. Given olfaction's close relationship with disgust, variation in olfactory acuity may be associated with variation in disgust and disgust's corollary disease-avoidant responses—such as more restricted sociosexuality. In the current study (N=162), using a validated physiological olfactory acuity battery, we tested the hypothesis that greater olfactory acuity is associated with higher disgust sensitivity and greater sexual restrictedness. Results revealed that higher olfactory acuity positively predicted greater sexual disgust—but not pathogen or moral disgust—and negatively predicted short-term mating orientation. Further analyses revealed that relationship was most strongly driven by scent discrimination ability. Further, the relationship between olfactory acuity and short-term mating orientation was mediated by sexual disgust.

## POSTER 27

### Romantic Jealousy And Attachment As A Persistent Link In A Chilean Sample

*Carmen Gloria Baeza, Universidad de Santiago de Chile (psi.carmengloria@gmail.com); Ana M. Fernandez, Universidad de Santiago de Chile*

This study examines the link between romantic attachment anxiety and avoidance and three types of jealousy (reactive, anxious and preventive). The hypothesis derived from a life history perspective is that attachment style is related to the mating strategy later adopted by individuals, with anxiously attached individuals being more likely to experience negative (anxious/preventive) jealousy which is a defensive strategy to retain a mating partner, while avoidant individuals should be more prone to a positive form of reactive jealousy, which is dependent on real disruption of relationship exclusivity. We tested these predictions in a sample of men (44%) and women from Chile finding that anxious attachment was found to underlie all kinds of jealousy, but particularly the negative type.

## POSTER 28

### Individual Differences In Understanding The Mating Strategies Of Sex And The City Characters

*Ania Grant, University of Auckland, New Zealand (ania.grant@auckland.ac.nz); Maryanne L. Fisher, St. Mary's University, Canada; Ana María Fernández, University of Santiago, Chile; Oriana Figueroa, University of Santiago, Chile; Cristina Acedo Carmona, University of León, Spain; Patricia MacEachern-Fee, St. Mary's University, Canada*

This study examines participants' preferences for four types of female characters based on the protagonists of the hit television series *Sex and the City* in a range of hypothetical situations. We investigate how various individual characteristics of the participants, including their sex, relationship status, sociosexuality, attachment style, time orientation and self-monitoring affect understanding of, and identification with, the four characters who display a range of personality, mating, and relationship styles. (NB: A preliminary version of this study was presented at NEEPS 2017. We now have a much bigger sample from two different countries, Spain and Canada, and are conducting a more detailed analysis of the data, in some cases yielding different results from those reported in 2017.)

## POSTER 29

### Can Mating Market Competition Shift Socio-Political Attitudes?

*Francesca R. Luberti (f.luberti@unsw.edu.au), Khandis R. Blake, & Robert C. Brooks  
The University of New South Wales, Australia*

Socio-political attitudes, such as preferring progressive or conservative social norms, markedly vary among individuals. Here, we investigated whether these attitudes are influenced by the characteristics of the mating market one is engaged in. In two studies, we manipulated the attractiveness or income of same-sex competitors in an individual's local mating market. In Study 1, a between-subjects design randomly allocated single participants (N = 151 women and 229 men) to experimental conditions where the same-sex peers in their local county were attractive, average-looking, or unattractive, or to a control group. In Study 2, a between-subjects design randomly allocated single participants (N = 173 women and 234 men) to experimental conditions where the same-sex peers in their local county had high incomes, average incomes, or low incomes, or again to a control group. Results showed that same-sex competitors' attractiveness influenced women's, but not men's, attitudes concerning traditional gender roles. Same-sex competitors' income affected both men's attitudes towards wealth redistribution, and women's attitudes towards traditional family values. We interpret these results in light of the costs and benefits of holding specific socio-political attitudes given the degree of romantic competition in the local mating market.

## POSTER 30

### Experimenting With Makeup: How Cosmetic Application Affects Women's Agency And Competitiveness, As Well As Others' Perceptions

*Dax Kellie (d.kellie@unsw.edu.au), The University of New South Wales, Australia*

Makeup is known to elevate women's perceived attractiveness and femininity. It also associates with negative consequences of sexualisation such as low self-esteem, unfaithfulness and promiscuity. It remains unclear whether makeup can benefit women by increasing their self-perceived traits or the perceptions made by others. In a two-part study we investigate the effects of makeup on a) women's self-perceived agency and competitiveness and b) other's perceptions of women's mental capacity and moral status. In Study 1 (N = 229), women were asked to imagine one of 4 scenarios (e.g., a romantic date), and half were asked to apply makeup to suit that scenario, before answering questions measuring self-perceived agency, humanness, intrasexual competitiveness and mate guarding resistance. In Study 2, 422 men and 422 women rated images of the women's faces from Study 1 on perceived mental capacity and moral status. We find little evidence that applying makeup affects women's self-perceived traits. However, women wearing moderate to high amounts of makeup were attributed less mental capacity and moral status by other men and women. This suggests that although there exists cultural and competitive pressure on women to appear attractive, negative stereotypes of makeup may lead to detrimental perceptions of women wearing makeup.



## POSTER 31

### Femme Fatale: Examining Women's Homicidal Ideations

*Madison Green\**, University of Central Arkansas ([mgreen18@cub.uca.edu](mailto:mgreen18@cub.uca.edu)); *Lindsay Meins\**, *Kerbie Karr*, *Laura Lefevre*, *Lora Adair*, University of Central Arkansas. \*Presenters

The majority of people have fantasized about killing another person in their lifetime (Kenrick & Sheets, 1994). These homicidal fantasies, while common, vary greatly between men and women. While existing research explains gender differences in the frequency and targets of homicidal fantasies, little exists to identify the variation of particular themes of these fantasies. The current research aims to identify specific themes in individuals' homicidal fantasies, such as possible triggers, subjective reactions to these fantasies, weaponry preferences, and whom the targets of these homicidal fantasies are. Qualitative data are being coded on several dimensions, identified by two independent raters (e.g., self-defense, accidental death, regret, threat to relationship, emotional satisfaction, harassment, infidelity, sexual abuse).

## POSTER 32

### Would You Like A Side With Your Main Course? Differential Motivations For Engaging In Extra-pair Affairs

*Lora E. Adair*, University of Central Arkansas ([ladair2@uca.edu](mailto:ladair2@uca.edu)); *Brett Andersen*, University of Central Arkansas; *Katie Dick*, University of Central Arkansas

Two leading hypotheses on the evolved functions of female infidelity are the dual-mating hypothesis and the mate-switching hypothesis. Studies of predictors of female infidelity have not differentiated between these types of infidelity. Participants will be recruited from online forums and a large Southern University. Participants will answer a series of surveys regarding their demographics, socio-sexual orientation, mate value, and their partners' (committed and extra-pair) personality traits and mate value. Women engaged in mate switching strategies will be more likely to have higher mate value than their current partner and have a partner low in "dad" traits. Women engaged in dual-mating strategies will be more likely to report unrestricted sociosexuality and report high levels of Dark Triad traits.

## POSTER 33

### Handedness And Pathogen Prevalence: An Exploration Of Social Conformity

*Kilian James Garvey* ([kiliangarvey@gmail.com](mailto:kiliangarvey@gmail.com))

While handedness is considered to be largely genetically determined (Armour, Davison, & McManus, 2014; Brandler, et al., 2013; Brandler & Paracchini, 2013), there is some evidence that environment conditions also play a part (Hopkins, Adams, & Weiss, 2013). In this study, handedness measurements of college aged students from a high pathogen region and a low pathogen region were compared, and while the two are significantly different. It is unknown whether pathogens play a biological role or a social role, however, as individuals in high pathogen regions are known to display more conforming behavior, it will be suggested that these differences are social and not biological.



## POSTER 34

### Internet Trolling And Pathogen Prevalence

*Kilian James Garvey ([kiliangarvey@gmail.com](mailto:kiliangarvey@gmail.com))*

While a number of studies have identified psychological characteristics of individuals more prone to internet trolling, this study looked at environmental factors. 12 state-level life history related measures (life expectancy, child deaths, infant mortality, high school graduation, bachelor's degrees, per capita income, unemployment percentage, percent living below poverty, percent who identify as very religious, percent who attend church at least once a week, percentage of daily religious activities, and pathogen prevalence) were entered into a multiple regression with state level measures of frequency of internet trolling. While pathogen prevalence, low high school graduate rates, high unemployment, and curiously, frequent daily religious activities were statistically significantly correlated with state level internet trolling, only pathogen prevalence significantly explained the model.

## POSTER 35

### Vocal Parameters And Physical Formidability

*John Adams, Wayne State University; Toe Aung, The Pennsylvania State University; Joey Cheng; Stefan M.M. Goetz, Wayne State University; Calli Hess; Clinton C. McKenna; David Puts, The Pennsylvania State University; Samuele Zilioli*

Animals that experience the most reproductive success are marked by the development of sexually dimorphic traits, both in behavior and physiology. Evolution of sexually dimorphic traits can occur in various ways; Fisherian runaway selection in which direct choice by the opposite sex results in dimorphic traits, or the sensory exploitation hypothesis, proposing that reproductive success operates by one sex capitalizing on pre-existing and varied sensory development in the opposite sex. The existing link between voice and perceptions of dominance suggests voice as a genuine indicator of formidability. This led to the sensory exploitation hypothesis, which proposes that biased perceptions are responsible for evolution of male voice. The behavioral and physiological relevance of these cues are well-examined across species and contexts. Studies have not, however, explored how the components of these cues relate to physical formidability. We provide evidence for the former hypothesis by using a large, randomized sample ( $N = 493$ ) of mixed martial arts fighters. Variables of interest are fundamental frequency, fundamental frequency variability, formant dispersion, and formant position. Videos were obtained from YouTube® and statistics were extracted to control for confounding variables such as age and total number of fights. The “three loss limit” for MMA fighters is representative of formidability in the sample. The “survival” component will be analyzed using said vocal parameters predicting whether fighters retired within a five-year window.



# EMERGENCY & TRANSPORTATION

## Nearby Hospitals

Tufts Medical Center  
800 Washington St  
(617) 636-5000

Massachusetts General Hospital  
55 Fruit St  
(617) 726-2000

## Police

Boston Police Department  
40 Sudbury St  
(617) 343-4240

Massachusetts State Police Dept  
250 Leverett Cir  
(617) 727-6780

## Transportation

### Massachusetts Bay Transportation Authority

Subway:

<https://www.mbta.com/schedules/subway>

Bus: <https://www.mbta.com/schedules/bus>

Commuter Rail:

<https://www.mbta.com/schedules/commuter-rail>

Customer Service: (617)-222-3200

Transit Police Emergency Line: (617)-222-1212

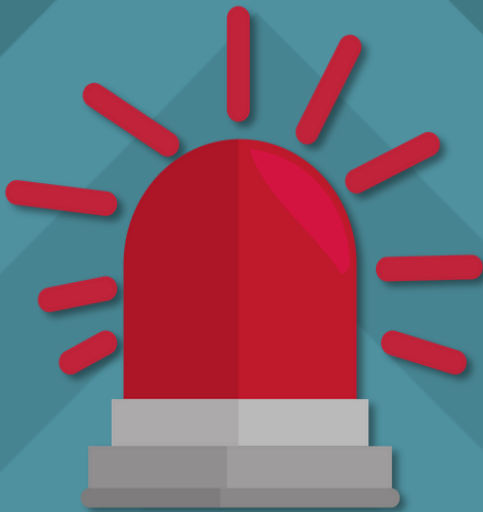
### Taxi Companies

Logan Airport Taxi and Car Service  
(617) 997-4777, [loganairportcar.com](http://loganairportcar.com)

Boston Airport Shuttle  
(617) 301-8900, [bostonairportshuttle.com](http://bostonairportshuttle.com)

Boston Cab Dispatch  
905 Massachusetts Ave  
(617) 536-5010, [bostoncab.us](http://bostoncab.us)

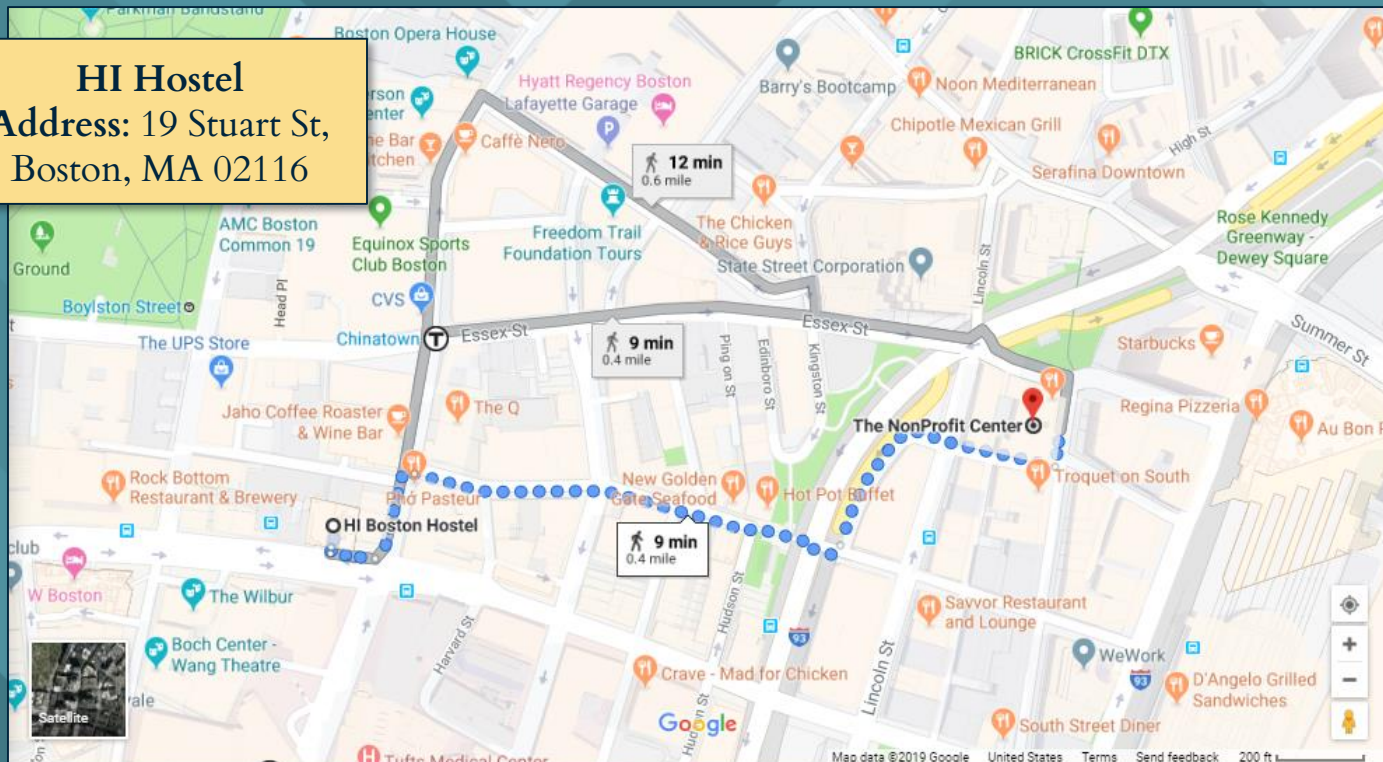
Uber & Lyft



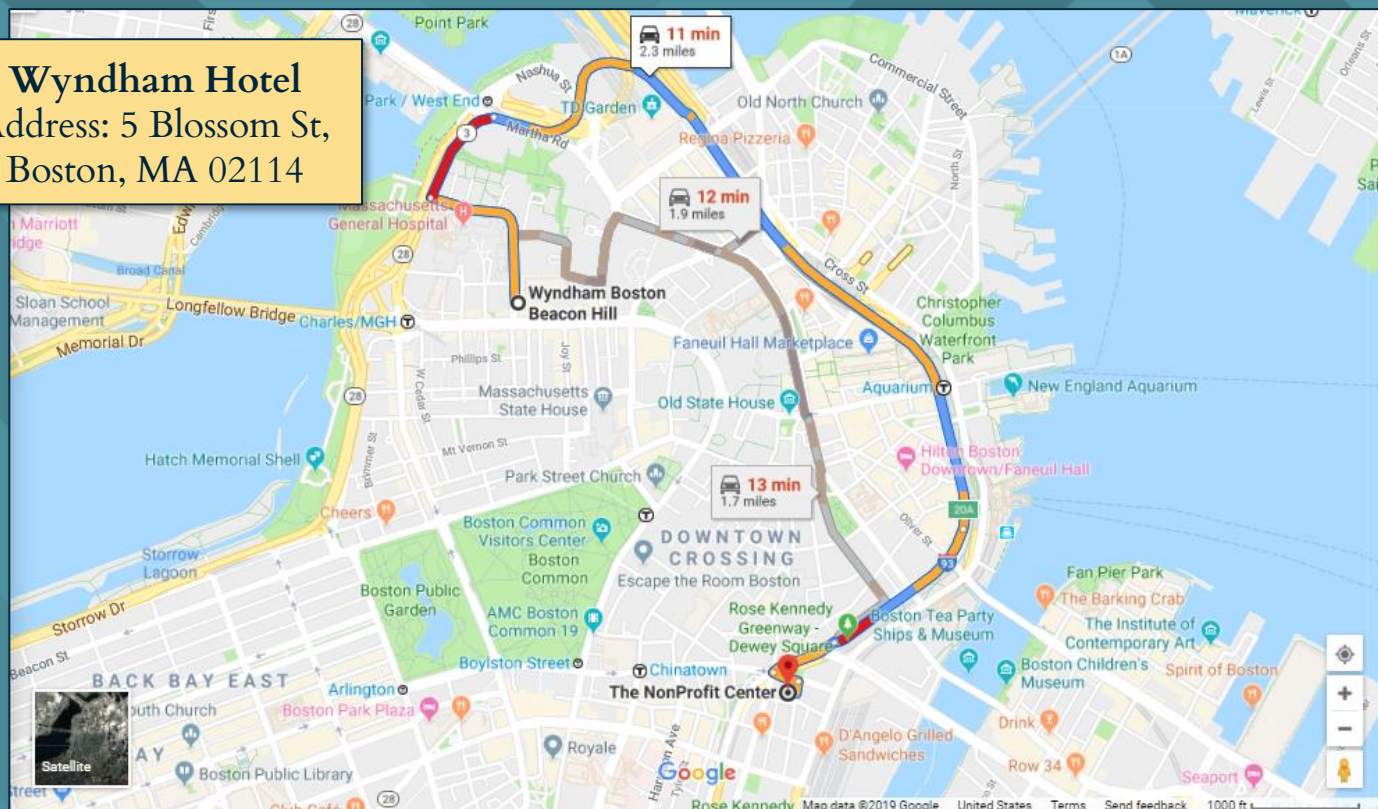


# HOTEL & CONFERENCE MAPS

**HI Hostel**  
Address: 19 Stuart St,  
Boston, MA 02116

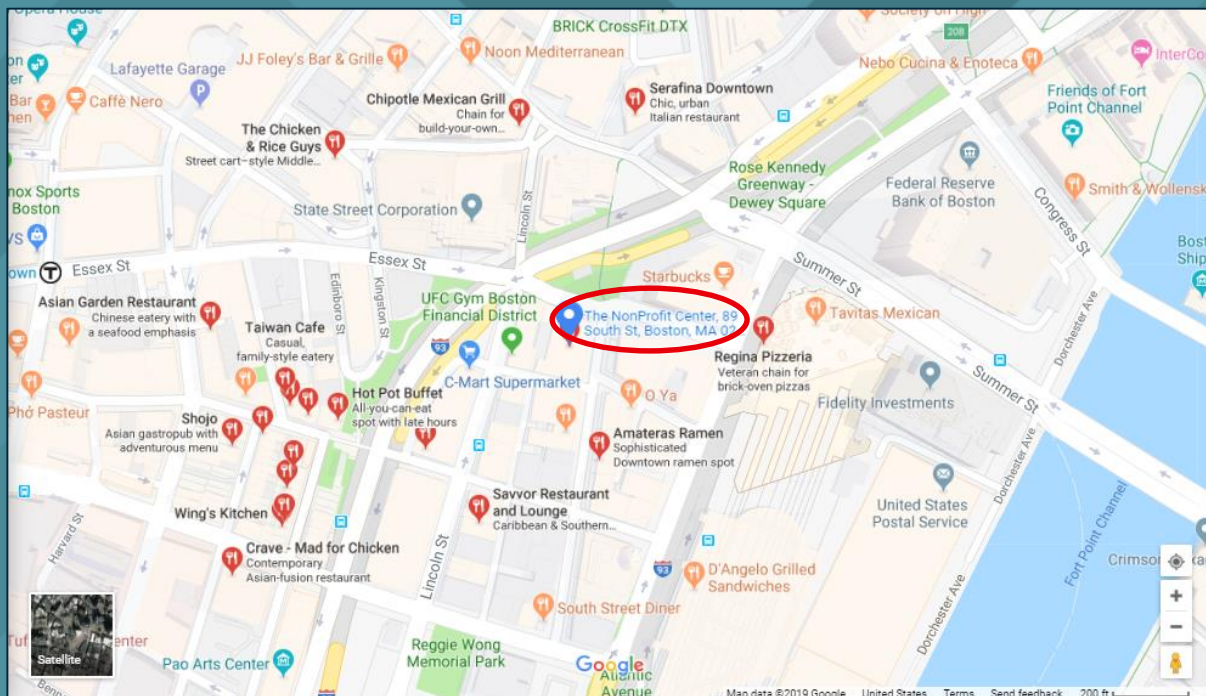


**Wyndham Hotel**  
Address: 5 Blossom St,  
Boston, MA 02114





# CAFÉS & RESTAURANTS



## *American*

**Society on High**  
99 High St, \$\$  
(857) 350-4555

**South Street Diner**  
178 Kneeland St, \$  
(617) 350-0028

**Tavern in the Square South Station**  
Train Terminal,  
640 Atlantic Ave, \$\$  
(857) 233-4717

## *Asian*

**Hot Pot Buffet**  
70 Beach St, \$\$  
(617) 338-0808

**Shojo**  
9 Tyler St, \$\$  
(617) 423-7888

## *Caribbean*

**Savor Restaurant and Lounge**  
180 Lincoln St, \$\$  
(857) 250-2165

## *Coffee & Pastries*

**Au Bon Pain**  
640 Atlantic Ave, \$  
(617) 345-0427

**Starbucks**  
One Financial Center, \$  
(617) 428-0019

## *Italian & Mediterranean*

**Café Nero**  
560 Washington St, \$\$  
(617) 936-3432

**Noon Mediterranean**  
95 Summer St, \$  
(617) 482-0198

**Regina Pizzeria**  
700 Atlantic Ave, \$  
(617) 261-6600

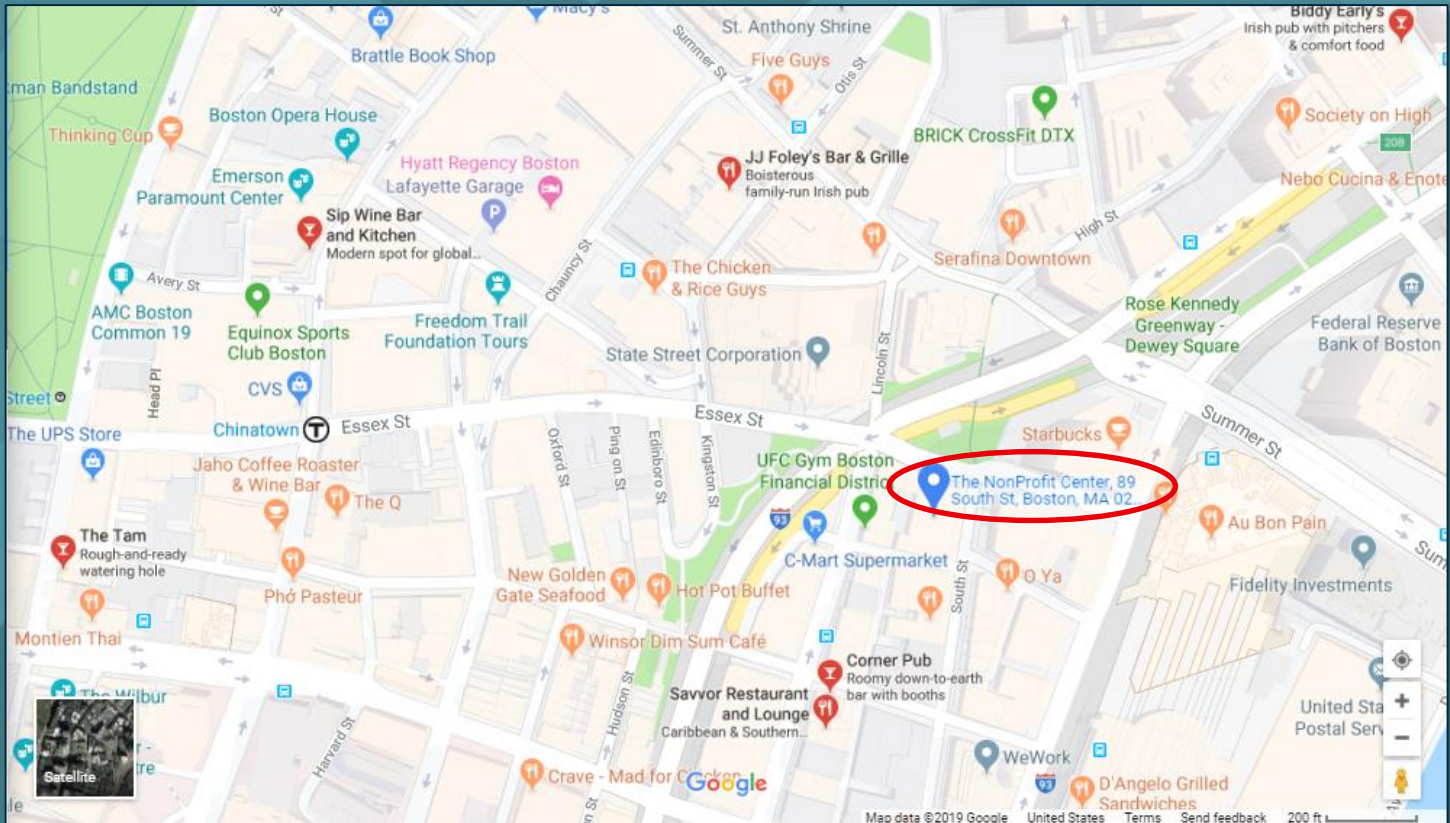
**Serifina Downtown**  
10 High St, \$\$  
(617) 426-1234

## *Mexican*

**Chipotle Mexican Grill**  
101 Summer St, \$  
(857) 244-6579



# BARS & PUBS



## Corner Pub

162 Lincoln St, \$  
(617) 542-7080

## JJ Foley's Bar & Grille

21 Kingston St, \$  
(617) 695-2529

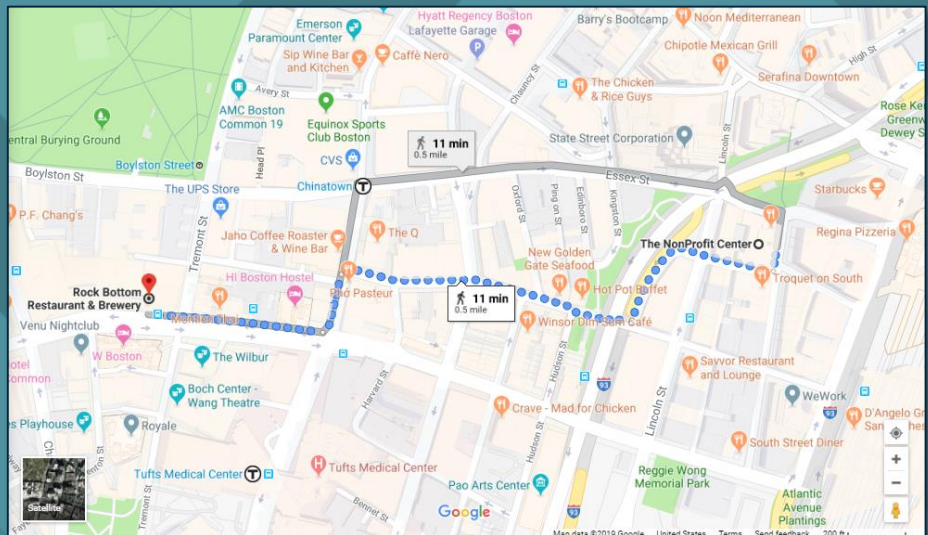
## Sip Wine Bar and Kitchen

581 Washington St, \$\$  
(617) 695-2529

## Rock Bottom Brewery

115 Stuart St, \$\$  
(617) 742-2739

*Monday, June 3<sup>rd</sup> from 6-11pm, 10% off drinks with presentation of with NEEPS Badge!*



# NOTES





**WICKED REVOLUTIONARY**