Evos summit

Expanding Darwin's Reach across the Ivory Archipelago



October 26th, 2012

www.evostudies.org

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Welcome to the EvoS Summit! October 26, 2012 – at SUNY New Paltz

On behalf of the Evolutionary Studies (EvoS) Consortium and the EvoS program at SUNY New Paltz, welcome to the EvoS Summit! Since first being implemented at Binghamton University nearly a decade ago – per the inspiration and guidance of David Sloan Wilson – the idea of evolution as an integrating theme in a university curriculum has caught on, paying extraordinary educational dividends.

As David points out in his now-classic *Evolution for Everyone* (2007), the core principles of evolutionary theory, focusing on issues of variation and differential selection, provide an extraordinary lens through which we can understand phenomena across all areas of an academic curriculum. From anthropology to computer engineering to geology to political science to psychology – and, of course, to biology – and more – Darwin's big idea has the capacity to provide a transformative educational experience for both students and faculty.

In 2007, the nation's second undergraduate EvoS program started here at New Paltz. A strong and diverse group of faculty on campus shaped the nature of our program and, working closely with the administration, the program has steadily grown in enrollments and scope. Over the years, our program has become a central part of New Paltz's intellectual community. The cornerstone of this program is the EvoS Seminar Series (modeled after a similar series at Binghamton) which has hosted some of the most important minds on the topic of evolution across a wide range of topics. Speakers in our series have included Niles Eldredge, Robb Wolf, Richard Wrangham, Marlene Zuk, and many more.

In 2008, the National Science Foundation agreed that EvoS is a landmark educational event. The NSF awarded a \$500,000 grant to Binghamton and New Paltz to expand EvoS across the landscape of higher education. With key figures including David Sloan Wilson along with Jennifer Waldo, Rosemarie Sokol Chang, and myself, this grant led to (a) the creation of evostudies.org – a comprehensive website dedicated to facilitating evolution's role in higher education, (b) the addition of eight courses to the SUNY New Paltz undergraduate curriculum, (c) the support of several seed grants to benefit the creation of EvoS programs at many other institutions (such as Albright College and the University of Alabama), (d) the launching of the peer-reviewed *EvoS Journal*, dedicated to issues that are relevant to evolution in higher education and to publishing high-quality undergraduate work related to evolution, (e) the development of an online database of EvoS-related talks, (f) the support of several undergraduate research projects related to evolution, and (g) lots more!

Since then, EvoS has expanded to a full international consortium, including membership by more than 40 colleges and universities that represent multiple educational levels and multiple nations. And we have joined forces with the formidable program at Stony Brook which, under the leadership of Paul Bingham and Joanne Souza, offers the *Biology of Being Human* to hundreds of undergraduate students each year – at Stony Brook and beyond.

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Current EvoS initiatives include work on multiple new grant proposals to bolster our programs and expand the reach of EvoS to help make an EvoS education accessible to more students across the globe. We also are in discussions of proposing a SUNY-Wide EvoS curriculum, which has potential to serve as the deepest, broadest, and most diverse undergraduate education in evolution that the world has ever seen. And more.

To this point, Darwin's big idea has only been partially realized across the academic archipelago. The Summit is dedicated to helping scholars and students in this area (a) take stock of the current state of affairs regarding evolutionary studies in higher education and (b) connect with others who share different aspects of the vision of EvoS as we move forward in shaping the future of evolution's place in higher education. The presentations at the Summit are designed to provide a sense of what an interdisciplinary evolution education has to offer (thanks Gordon Gallup of Albany!), where EvoS is heading in the future, and more.

With strong and constant resistance from various political fronts, the future of EvoS is unclear. The burden of fostering Darwin's big idea across the islands of the ivory archipelago is on the shoulders of you and me. Working together, with shared vision and purpose, we can help shape this future to the benefit of students for decades to come. And that means shaping the future of education to help our descendants have a more complete understanding of the world and everything in it.

Welcome to New Paltz.

Genuinely,

Glenn Geher, Director of EvoS, SUNY New Paltz

Brief Timetable

Time	Event	Location
9:30-11:30	Business Meeting	JFT 1010
11:30-12:30	Lunch	SUB/Town
12:30-1:30	Introductory Remarks by Glenn Geher & Don Christian / Keynote Address by Gordon Gallup	LC 100
1:30-2:15	Evolutionary Studies in Higher Education: Into the Gray and Out Again (Rosemarie Sokol Chang; Jennifer Waldo; Glenn Geher)	LC 100
2:15-2:45	Building EvoS Programs is not Always Easy (Rebecca Burch & Kristina Gage)	LC 100
2:45-3:00	Break	
3:00-3:30	Evolutionary Studies from the Student Perspective (Rachael Carmen, Daniel Glass and Amanda Guitar)	LC 100
3:30-4:00	EvoS Online: Deep History Meets the Future (Kevin Sheridan and Hadassah Head)	LC 100
4:00-4:30	Evolution and Human Health: EVO 201 and Connections with Robb Wolf's Paleo Solution (Hamilton Stapell)	LC 100
4:30-4:45	Break	
4:45-5:30	The Biology of Being Human (Paul Bingham and Joanne Souza)	LC 100
5:30-6:15	Capstone Address: EvoS, The Binghamton Neighborhood Project, and the Future of Evolution in Higher Education (David Sloan Wilson)	LC 100
6:15-7:30	Poster Session/Mingle	LC South Lobby
7:30	Conference Ends/Unofficial follow up	Bacchus (4 South Chestnut Street)

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Poster Abstracts

An Overview of Evolutionary Principles in Human Computer Interaction

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Bryan R. Kern (The State University of New York at Oswego)

Dr. Rebecca L. Burch (The State University of New York at Oswego)

Computer and digital technologies, over the years, have been criticized as being insufficient from the standpoint of humans. How can this be when Cosmides and Tooby (1999) stated that "our brains are many quantum leaps ahead of the most advanced of modern computers, robots, or any other cutting edge technology existing today, and we cannot yet duplicate most of their computational powers or feats." If our brains are so much more evolved than other technologies, then we should be able to understand that computer technologies do not work because of this. We should be able to fix the problem, or not create the problem in the first place. As we know, this is not the case (see: Windows Vista). By looking at how computers and digital technologies are created, one can see how a technology is not fit for human use, and an intervention between users and programmers must take place. To make a program better usable for humans, integrating evolutionary principles into human computer interaction approach can be taken.

The Effects of Ancestral Nutrition on Type 1 Diabetes

Email: pranapt@gmail.com Ann Wendel, PT, ATC, CMTPT David Wendel

25.8 million children and adults in the United States—8.3% of the population—have diabetes (ADA, 2011). The cost of diabetes treatment is staggering and the numbers above represent only diagnosed cases of diabetes. Most patients,lay people and clinicians are familiar with how nutritional changes can help in the treatment of Type-2 Diabetes; however, most are unfamiliar with nutritional changes for effective treatment of Type-1 Diabetes. The current dietary recommendations given to patients newly diagnosed leave patients woefully unprepared to manage this condition. Our case study shows how adopting the Paleo lifestyle was effective in the treatment and management of Type-1 Diabetes in a 37 year old male, utilizing data collected from an insulin pump over the course of one year.

Evolutionary Attitudes and Beliefs: A Survey of New Paltz Students

Email: mguitar16@gmail.com Amanda E. Guitar (State University of New York at New Paltz) Spencer M. Mass (State University of New York at New Paltz) Stephen Lawrence (State University of New York at New Paltz)

Evolution is an emotionally charged topic in the United States, and discourse is frequently colored by belief systems and cultural war politics. Undergraduates come to college with a diverse set of attitudes and beliefs about evolution which are informed by disparate educational backgrounds in the factual basis for knowledge about evolution, and cultural, religious and other value systems. As part of our Evolutionary Studies Program, SUNY New Paltz teaches a natural science general education course entitled Evolution for Everyone. This course is taught every semester and each summer, is taken by nearly all members of the EvoS program as well being a popular natural science course for the general student population (~150 students per year). To better understand the background of the students enrolling in this course, we began administering a survey to assess educational demographic background and pre-existing attitudes and beliefs about evolution in 2010. This poster will include the highlights of the results from six semesters of data.

The EvoS Blogs: Global Outreach for the EvoS Consortium

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Megan Geher (New Paltz Middle School)
Glenn Geher (SUNY New Paltz)

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

The Fashionable Troglodyte: Dress and Adornment as an Evolutionary Artifact

Email: vargaa @newpaltz.edu Andrea Varga (SUNY New Paltz)

The practice of dress and adornment is a human behavioral adaptation that has both survival and reproductive value and may be an important factor contributing to the success of Homo sapiens. It is a complex set of behaviors that is part of symbolic culture and not shared by any other species. Our clothes and accessories do not simply cover us or make us pretty, they also carry meaning within a given culture - meaning which is handed down to successive generations, thus perpetuating the culture. Yet, in spite of this seemingly central role, this is an area of study in which much remains unexplored, particularly with regard to its relationship with human evolutionary science. Dress is crucial to the understanding of self-awareness, the ability to think symbolically, and the creation of cultural systems. Early humans may have developed the adaptation for dress and adornment to help organize social units, establish rules for behavior, reward social cohesion, and to define relationships and roles. Human evolution and dress are clearly linked and can be studied and taught together to illuminate human behavior, communication, and adaptation. Using dress history as an introduction to evolution can be an approachable and personal method through which to establish the importance of evolutionary principles in the humanities & social sciences.

HDV, IST, and EvoS: Creating a dynamic global program

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Human Development (HDV) can easily be explained in an evolutionary context (EvoS), particularly when discussing the lifespan development of the human species. International Studies (IST) is part of the new world awareness learning outcome that has become a SUNY wide goal and is important to education in and of itself. Stemming from discussions at the last NEEPS conference, new courses are being developed at SUNY Oswego to blend these three concepts; an international studies course that examines humans as a species, emphasizing the human universals we all share (metaculture), while exploring the individual ways different cultures practice/display/legislate these universals (evoked culture). These courses will serve as upper division HDV electives, fulfill the "world awareness" general education category, and infuse the curriculum with evolutionary principles. The courses also have the potential to serve as EvoS minor electives and create study abroad opportunities.

Increasing the accessibility of evolution through integration with creative fields of study Email: n02330254@hawkmail.newpaltz.edu Elan Abreu (SUNY New Paltz)

Traditional methods of increasing the acceptance of evolution among the U.S. population have typically focused on increasing scientific literacy, and emphasizing its factual accuracy, predictive ability, and relevance in fields such as genetics, medicine, agriculture, and computer science. As has been suggested by Psychologist Dan McAdams, however, the widespread rejection of evolution may be due in part to its lack of adherence to a typical narrative template, thereby hindering its ability to register with others on a creative or emotional level. Evidence indicates that scientific literacy (a skill which requires creativity and cognitive flexibility) is a contributing factor to the acceptance of evolution, whereas cognitive rigidity and poor critical reasoning contributes to its rejection—a trend which may lend credence to the above notion. Moreover, evolutionary psychology seems to be one of the more popular fields of evolutionary biology, perhaps further illustrating how the availability and appeal of evolution can be increased by combining it with highly creative venues of study (such as the humanities). If so, then such a trend may suggest that expanding evolutionary studies beyond limited sectors of higher education may be achieved through increasing its integration with the arts, humanities, and other creative majors and focuses within schools.

Interactive Evolutionary Computation: Combining Computers and Humans into Evolutionary Systems

Email: benjaminjamesbush @gmail.com Benjamin James Bush (State University of New York at Binghamton) Hiroki Sayama

Interactive Evolutionary Computation (IEC) combines the data processing power of computers together with the perceptions, preferences, and intuitions of human beings to create evolutionary systems that have a vast array of applications. Originally developed as an educational tool for the teaching of evolution by Richard Dawkins in 1986, researchers are now developing IEC applications for art, music, robotics, healthcare, political redistricting, law enforcement, and many other areas. We will give an overview of IEC theory, using biological evolution and artificial selection as a starting point, before describing several interesting IEC applications. We will then describe our own research, in which we improve upon the traditional IEC architecture to create Hyperinteractive Evolutionary Computation (HIEC), which we designed to be more controllable, more fun, and more satisfying than traditional IEC. Finally, we will describe how we are using HIEC as a research tool for studying human creativity from an evolutionary perspective.

Media Naturalness Theory: Putting human-computer interaction in an evolutionary context

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Aaron Gehan (State University of New York at Oswego) Dr. Rebecca Burch (State University of New York at Oswego)

The evolved human predisposition to anthropomorphize objects and to interact with them socially is, ironically, often met with the mechanomorphism of the human when designing human-computer interfaces. Media naturalness theory strives to place human-computer interaction in an evolutionary context and asserts that interfaces should accommodate the evolved characteristics of the users and not the other way around. Human-computer interfaces should be as intuitive as possible, and web-based interfaces often have the additional hurdle of attaining global appeal and usability across cultures, making an understanding of both evolved human intuition and cultural universals vital. Humans evolved to be very social, emotional creatures, whereas computers operate by formal logic and are governed by strict rules which are ambiguous and inaccessible to most users, causing many to form an inaccurate mental model of the system's abilities and characteristics. Either the system images of interfaces must be changed to evoke more accurate mental models of the systems, or the interfaces must be made to more accurately reflect the average user's, often socio-cognitive, mental model of those systems. Optimal solutions will most likely involve a combination of both, and will be informed by evolutionary psychology and biology.

Olfactory Ability to Detect Ovulatory Cues: A Function of Biological Sex, Sexual Orientation, or Both?

Email: gtrouton98@hawkmail.newpaltz.edu Grant Trouton (State University of New York at New Paltz)

For two decades, psychologists studying ovulation have successfully employed a series of "Tshirt studies" supporting the hypothesis that men can detect when a woman is most fertile based on olfactory detection of ovulatory cues. However, it is not known whether the ability to detect female fertility is primarily a function of biological sex, sexual orientation, or a combination of both. Using methodologies from previous T-shirt studies, we asked women not using hormonal contraceptives to wear a T-shirt for three consecutive nights during their follicular (ovulatory) and luteal (non-ovulatory) phases. Male and female participants of differing sexual orientations then rated the T-shirts based on intensity, pleasantness, and sexiness. Heterosexual males were the only group to rate the follicular T-shirts as more pleasant and sexy than the luteal Tshirts. Near-significant trends also indicated that heterosexual men and non-heterosexual women consistently ranked the T-shirts, regardless of menstrual stage, to be more intense, pleasant, and sexy than did non-heterosexual men and heterosexual women. Recommendations for future research, including suggestions for methodological changes, are

discussed.

Pedestrians traveling in groups, but not alone, respond to the emotional gaze-cues of passersby

Email: agallup @bard.edu Andrew C. Gallup (Bard College) Andrew Chong (Princeton University) Alex Kacelnik (University of Oxford) Iain D. Couzin (Princeton University)

The evolved mechanisms contributing to group vigilance in humans remain unclear, though recent research indicates that within crowds nearby pedestrians use the gaze direction by others to acquire environmentally relevant information, and that additional social cues may enhance this transmission. Extending upon previous field studies, we investigated whether averted gaze-cues paired with emotional facial expressions (neutral, happy, suspicious and fearsome) modulate gaze-following in a bi-directional pedestrian corridor. Our results showed no effect of emotional expression for individuals walking alone, while pedestrians traveling in groups did respond these cues. In particular, members of groups were more likely to follow the gaze of suspicious and fearful expressions, and less likely to respond to neutral gaze-cues. These findings suggest that, similarly to other animals, being in a group helps humans to effectively respond to social cues of disturbance/threat while filtering out environmental noise.

Perceptions of Romantic Partners

Email: rebecca.newmark@gmail.com Rebecca L Newmark (SUNY New Paltz) Melvin M. Philip (SUNY New Paltz) Glenn Geher (SUNY New Paltz) Laura Johnsen (SUNY Binghamton)

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

PsychTable.org: A Proposed Taxonomy of Human Evolved Psychological Adaptations

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Niruban Balachandran

This paper discusses the need for a comprehensive taxonomy of human evolved psychological adaptations (EPAs). The Web-based classification system tentatively proposed here, PsychTable.org: A Functional Table of Human Evolved Psychological Adaptations, can be used to classify and explore hundreds of evolved psychological adaptations (EPAs), as well as to connect directly with a worldwide community of scientists, educators, students, contributors, and the general public. Collaborators can propose empirical evidence and studies that support the existence of individual EPAs using Schmitt and Pilcher's interdisciplinary diagnostic criteria for evaluating evidentiary breadth and depth. Researchers worldwide can help compile individual dossiers that profile individual EPAs' neurolocalizations, neurochemical substrates, crosscultural presence, elicitors, outputs, and so on. PsychTable.org can also be used to nominate hypothesized EPAs that may be substantiated or appear in the future via emerging research, gain rapid insight into which areas of evolutionary social scientific research are open to further empirical inquiry, and provide a Web-based study tool for students. The hypothesis-generation and didactic functions of this taxonomy are also discussed.

Sex and Marriage Strategies: An Investigation into the Punishment of Non-monogamous Mating Strategies

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Homo sapiens produce altricial offspring that require significant levels of investment to reach sexual maturity. Because of the care that parents must provide in order to successfully raise offspring, monogamy characterizes the majority of long-term human mating strategies (Trivers, 1972).

However, both polygamy and infidelity have been widely practiced across human history. These strategies can be viewed as forms of cheating because they improve the reproductive success of some individuals while stagnating that of others. People may be motivated to prevent the proliferation of such strategies. For example, previous research has shown that individuals become distressed when confronted with infidelity (Buss, Larsen, Westen, & Semmelroth, 1992; Hughes, Harrison, & Gallup, 2004). Based on the level of distress, it is possible for group members to enact punishments in order to reduce undesirable behaviors (Boyd, Gintis, & Bowles, 2010).

This study will examine the punishments that individuals will ascribe to hypothetical targets who engage in polygamy and infidelity. The survey will also collect data about the participants' reproductive strategies, religiosity, sexual histories, sex, sexuality, and age in order to control for these factors.

Ultimate Answers to Proximate Questions: The Evolutionary Motivations Behind Tattoos and Body Piercings in Popular Culture

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Haley Dillon (Kansas State University)

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

Cool Things to Know

SUNY New Paltz Wi-Fi

A special guest-access account for conference-goers has been created. When you are prompted for an ID and password, please use the following:

Guest ID: guest38 Password: newpaltz

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Bacchus – offering conference-goers (with proof of registration / badge) \$1 off not-already-discounted drinks. Walking distance from campus – great pool tables!

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E-mail: bacchus462@aol.com



Follow-Up 5K:

Saturday morning, 10/27, in Rosendale – EvoS Team will be represented in UlsterCorps Zombie Escape 5K – starts at 11:15. This race is optional but encouraged! There will be prizes for best time and for best costume!

Details here: http://www.ulstercorps.org/?page_id=5103&event_id=427



Check Out These Journals Related to EvoS!

Journal of Social, Evolutionary, and Cultural Psychology (JSEC) is a peer-reviewed, open-access journal publishing articles that incorporate multiple disciplinary views to examine and explain aspects of human behavior, emotion, and motivation. **JSEC** is the affiliate journal of the NorthEastern Evolutionary Psychology Society (NEEPS).

JSEC publishes quarterly, ending the year with a special issue featuring Proceedings of the Annual Meeting of NEEPS. JSEC publishes empirical and theoretical works on psychology that incorporate multiple sub-disciplines of psychology or other fields of study, including sociology, anthropology, biology, and economics. In addition, we consider reviews of books that take an interdisciplinary approach to the study of human psychology.

JSEC is edited by Rosemarie Sokol-Chang, PhD, and Associate Editors Becky Phillips-DeZalia, PhD, Daniel T. O'Brien, PhD, Satoshi Kanazawa, PhD, Andrew Gallup, PhD, and Aurelio José Figueredo, PhD.

To read articles and learn more about submitting your manuscript, visit *JSEC* at http://jsecjournal.org.

EvoS Journal: The Journal of the Evolutionary Studies Consortium is a peer-reviewed, open-access journal focused on the instruction of evolutionary theory in higher education, and student-authored articles that highlight the evolutionary perspective. **EvoS Journal** is published bi-annually and features many articles arising from teaching and research at schools with Evolutionary Studies (EvoS) programs.

EvoS Journal is proud to serve as an outlet for underrepresented areas in evolutionary studies, including humanities and the arts. The journal also welcomes student authored empirical and review manuscripts, often that emerge from courses in evolutionary studies. These manuscripts are reviewed by student editorial board members in conjunction with faculty mentors. The next issue of *EvoS Journal* is a special issue on evolutionary theory in the classroom, primarily featuring articles on pedagogical techniques. The journal is edited by Rosemarie Sokol-Chang, PhD.

To read the articles and find details on submitting manuscripts, please visit *EvoS Journal* online at http://evostudies.org/about-the-journal

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