



Book of Abstracts

International Congress
July, 12 - 16, 2024

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Code of conduct

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ISHE is dedicated to diversity, equity, inclusion, and the free expression of ideas. The Society seeks to provide an environment in which diverse participants may learn, network, and enjoy the company of colleagues in an environment of mutual human respect. We recognize a shared responsibility to create and hold that environment for the benefit of all. Some behaviors, therefore, are specifically prohibited:

- Harassment or intimidation, including but not limited to that based on gender, race, ethnicity, sexual orientation, gender identity, gender expression, disability, age, appearance, religion, or other group status.
- Sexual harassment or intimidation, including stalking (physical or virtual) and recurring unwelcome sexual attention or physical contact.
- Sustained disruption or threatening presenters (verbally or physically).

All participants are asked to frame discussions as openly and inclusively as possible and to be aware of how language or images may be perceived by others.

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References

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Geek Feminism wiki:

http://geekfeminism.wikia.com/wiki/Conference_anti-harassment/Policy

American Library Association code of conduct: <http://alamw14.ala.org/statement-of-appropriate-conduct>

Friday, 12 July 2024

THE EMERGENCE OF EMOTIONALLY MODERN MINDS

Sarah Hrdy

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ABSTRACT

No other ape displays so much interest in what others think as humans. And no other ape cares so much about what others think about them. From an early age, little humans are also more reflexively eager to cooperate and share. Such prosocial emotions laid the groundwork for bipedal apes in the line leading to the genus Homo to develop unprecedented levels of cooperation and food-sharing, making it possible for brains as large and inter-connected as those of modern humans to evolve. But long before hominin brains evolved to be the size of “anatomically modern” Homo sapiens, our peculiarly prosocial ancestors must have already been more other-regarding, in this sense already “emotionally modern”. Drawing on new information from behavioral ecology, developmental psychology and social neuroscience, this lecture will highlight the role that a life phase not ordinarily associated with mentalizing and social evaluations – namely infancy – played in the evolution of these large brains with their distinctively human prefrontal cortex.

Saturday, 13 July 2024

ADAPTIVE BASES OF DISTRIBUTIVE JUSTICE: RAWLSIAN MAXIMIN RULE OPERATES AS A COMMON COGNITIVE ANCHOR IN ALLOCATION AND RISKY DECISIONS

Tatsuya Kameda

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ABSTRACT

Distributive justice concerns moral principles by which we seek to allocate resources fairly among the diverse members of society. Although the concept of fair distribution is one of the fundamental building blocks of human societies, the lack of clear consensus on how to achieve “socially just” distribution often leads to fruitless disputes and bitter divisions between social sectors. Inspired by anthropological fieldwork on hunter-gatherer societies, this talk argues that people’s allocation decisions for others are closely related to their risky decisions for themselves through a cognitive focus on the minimum, worst-off position. I also argue that, although often confused, people’s robust “inequality-averse” preferences in social distribution are separable into two elements: (a) an egalitarian concern about variance and (b) a maximin concern for the poorest (maximizing the minimum), and that the latter is more important to our allocation decisions than the former. I support these arguments with a series of behavioral and neurocognitive experiments combined with computational modeling. Specifically, these experiments reveal that:

- (1) People commonly exhibit spontaneous perspective taking of the worst-off position in allocation choices, irrespective of their distributive ideologies (utilitarian, egalitarian, or Rawlsian);*
 - (2) The dominance of this perspective emerges at a very early stage of decision making, suggesting that the maximin concern operates as a cognitive anchor almost instantaneously;*
 - (3) Such focus is facilitated by group deliberation, yielding more coherent and long-lasting attitude changes.*
- These results suggest that Rawlsian maximin concern may serve as common ground for formulating distributive policies in society.*
-

CAPTURING DEVELOPMENTAL DYNAMICS: EXPLORING CULTURAL PERSPECTIVES ON COOPERATION THROUGH YURAKARE CHILDREN OBSERVATION

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ABSTRACT

As an ultra-social species capable of cultural learning (Legare & Harris, 2016) and even overimitation within our community (e.g., Clay & Tennie, 2018), humans acquire the skill to navigate social life by embedding cultural meanings (e.g., Nielsen & Haun, 2016) into their understanding. Thus, children develop not only by observing the behavior of others but also by actively participating in social activities with partners (Rogoff, 2003), providing a rich context for understanding and describing children's behaviors.

In our presentation, we suggest that the collaborative dynamics of indigenous communities, which are observed on a broader scale, are apparent in even the briefest interactions, including those occurring during childhood. We introduce a conceptual "toy model" (Beer, 2020) elucidating the interplay between culture and behavior to support this claim. Additionally, we provide descriptive empirical evidence based on fieldwork conducted in the small-scale Bolivian community of Yurakare.

We provide data related to different timescales. Firstly, we present data gathered through a focal-follow analysis conducted over weeks, thus depicting a broader timescale of development. Secondly, we offer a microanalysis of quasi-natural cooperative interactions among peers and siblings within playful contexts (i.e. shorter timescale).

The exploration of the connection between the LOPI social model (Rogoff, 2014; Rogoff & Mejia-Arauz, 2022), observed through focal-follow sampling, alongside the analysis of the cooperative atmosphere at the molar level, and verbal and non-verbal collaboration among children analyzed at a microscopic level, reveals the dynamic nature of cultural patterns unfolding in children's interactions.

EXPLORING RESOURCE ALLOCATION DYNAMICS IN COLLABORATIVE TASKS: INSIGHTS FROM TWIN CHILDREN

Timon Lebaron-Khérif^{1,2} (SFA), Tania Lucci¹, Rana Esseily², Emma Otta¹

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ABSTRACT

Cooperative behaviors in collaborative tasks remain under-researched, particularly regarding resource allocation. We conducted a microanalysis of 31 videos featuring Brazilian twin siblings (n=62, 61% females, 55% dizygotic, mean age=10 years) engaged in a 5-minute collaborative drawing task at the laboratory. Twin pairs collaboratively draw their house on a single sheet of paper using five markers. Our previous analyses highlighted the impact of both biological (sex, age, zygosity) and psychological factors (conflict, dominance, collaborative habit, assessed by the Twin relationship Questionnaire) on drawing behaviors. Here, we specifically examined paper sheet monopolization as a measure of resource allocation. Results indicate that twins with higher rivalry or dominance scores in relation to their cotwin monopolized the sheet more times than ones with lower scores ($p < 0.02$, Cohen's $d = 0.64$; $p < 0.03$, Cohen's $d = 0.71$, respectively). Moreover, an intriguing sex dynamic emerged: female-male twin pairs exhibited lower frequencies of sheet monopolization compared to male-male pairs ($p < 0.01$, Cohen's $d = 0.91$), suggesting differential patterns of leadership or dominance within the collaborative context. However, we found no significant effect for female-female pairs in comparison to other sex groups, indicating a need for further exploration into sex-specific cooperative dynamics. Overall our results highlight the interplay between biological and psychological factors in resource allocation during cooperative tasks, offering insights into human group dynamics and enriching our understanding of twin relationships. Further research in this area promises to illuminate the nuanced mechanisms underlying cooperative behaviors and their broader implications for social interactions.

DIFFERENCES IN BLOOD DONOR PROFILES: A COMPARATIVE STUDY BETWEEN PUBLIC AND PRIVATE BLOOD BANKS

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ABSTRACT

Despite the relatively recent practice of blood donation in our species' history, its analysis from the perspective of evolutionary cooperation reveals its prosocial nature, involving costs for the donor in exchange for benefits for the recipient. In Brazil, this practice occurs in public blood banks, serving patients from the public healthcare system, and in private blood banks, serving patients in private institutions. Given the costliness of blood donation, it is necessary to evaluate whether the profiles of donors from public and private blood banks differ in sociodemographic characteristics and their propensity for the type of donation to be made. Thus, the aim of the study was to compare the profiles of blood donors in public and private banks, investigating sociodemographic differences and donation patterns. We interviewed 577 donors at two different times: 311 from a public bank in 2012 and 266 from a private bank in 2017, using questionnaires. Data were analyzed using the chi-square test. Donors from the private bank had higher levels of education, more first-time donors, and more voluntary donations overall compared to donors from the public bank. This result appears to be associated with socioeconomic stratum. Given the costly nature of the behavior, individuals from lower socioeconomic stratum may require greater motivation to engage in this behavior, such as when it is linked to directed donations to known individuals. In summary, reducing a country's inequality indices may indirectly lead to an increase in the number of donors and voluntary donations.

THE INFLUENCE OF SOCIAL BONDS, EMOTIONS AND PERSONALITY ON PUNISHMENT ATTITUDES

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ABSTRACT

From an evolutionary point of view, different emotions such as jealousy and attitudes of trust seem to have influenced close and affective bonds, and cooperative behaviors respectively, being both of them key pillars that contribute to guaranteeing, at different levels, the maintenance of the social bonds that form human groups. However, although punishment attitudes have been widely used in the analysis of the evolution of cooperation, they does not seem very relevant to explain cooperation and, therefore, the motivations that induce punishment attitudes remains unclear.

In this study, carried out on 174 participants, questionnaires and economic games were combined, the former to try to know aspects of the participants' personality that may affect their interpersonal relationships, and the latter to try to induce different emotions and punishment behaviors, which allow us to advance to know more about the factors that promote these punishing attitudes.

The results of the study provide different information about the emotions that are generated when presenting an unfavorable situation for the individual in different types of relationships, about how these induced emotions are related to each other and to different types of personality, and about what effect all these combinations may have to cause punishing attitudes. We try to test the hypothesis that punishment will depend on the type of relationship, which generates different emotional levels that, together with individuals' personality, will explain the different levels of punishment.

**PARENTS ARE LESS DISGUST SENSITIVE THAN CHILDLESS
INDIVIDUALS, AND A CHILD'S PRESENCE HAS NO EFFECT ON DISGUST
SENSITIVITY OF A PARENT**

Amelia Ciniawska (SFA)

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ABSTRACT

A child's immune system is underdeveloped, and compensatory mechanisms are needed to protect a child from pathogen threat. Increased disgust sensitivity in a child's parent could be such a mechanism. We tested whether parents are more disgust sensitive than non-parents. Subsequently, we sought for a child presence effect, i.e., that disgust sensitivity in parents increases when their offspring is nearby. In a sample of N=995, we found women to be more disgust sensitive than men, and parents to be less sensitive to generalized pathogen disgust than childless individuals. We found no support for the child presence effect. Persistent sex differences in disgust, and underdeveloped immune system in children need other explanations in terms of their origins and compensatory adaptations, respectively.

ATTENTIONAL AND PHYSIOLOGICAL RESPONSE TO DISGUST- ELICITING STIMULI

Iveta Štolhoferová, Markéta Janovcová, Tereza Hladíková, Daniel Frynta, Eva Landová

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ABSTRACT

Over the course of evolution, humans have developed complex cognitive, physiological, and behavioral responses to cope with various types of threats. For stimuli representing imminent physical danger, such responses might include prioritized attention towards the threat, intense fear evoked by the stimulus, and activation of sympathetic nervous system in preparation for “fight or flight”. Conversely, responses to threats such as contamination or pathogens are mediated through the emotion of disgust and activation of the behavioral immune system. In our study, we focused on several categories of disgusting stimuli, including spoiled food, parasites and other disgusting animals, symptoms of airborne diseases, and environmental pollution, and examined how they affected participants’ attentional and physiological response. In an eye-tracking experiment, the stimuli were used as task-irrelevant distractors during a visual search task, and their distracting properties were compared with pictures of leaves. The physiological measurement focused on changes in skin-conductance after exposure to pictures of disgusting and control (leaf) stimuli. Additionally, participants ranked the stimuli according to elicited disgust. Preliminary results show that participants exhibit higher skin conductance and are more distracted (longer searching time) by stimuli that are ranked as highly disgusting. However, there is a significant difference between the stimuli categories. While most pictures of spoiled food and parasites affect participants’ attention and skin conductance, only a few specific pictures representing airborne diseases and environmental pollution differ significantly from the leaf control stimuli. This suggests limited transferability of adaptive responses to potentially poisonous substances to modern threats such as toxic waste.

SYMPOSIUM: APPLIED HUMAN ETHOLOGY

Elisabeth Oberzaucher^{1,2}, Hidenori Komatsu³, Maryanne Fisher⁴, Pia Marlena Böhm^{1,2}, Kathrin Masuch^{1,2}

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ABSTRACT

One of the main strengths of human ethology is that it provides an immediate understanding of humans through the direct measurement of actual behaviour. Facing current challenges of globalisation, climate crisis, and urbanisation, this knowledge is essential to create behaviour settings that facilitate behaviours counteracting potentially arising problems.

In this symposium we will not only discuss how academic research can serve the development of solutions for societal and global problems, but also show how integration of human ethology in industry and governmental research creates new possibilities for academics to pursue their research interests within and outside academia.

Individual contributions will be followed by a podium discussion.

Contributions:

Elisabeth Oberzaucher "Change the World with Human Ethology – Science Outside Academia"

Hidenori Komatsu et al. "Nudging Can be Sophisticated with Evolutionary Insights: From Plastic Recycling to Energy Conservation"

Maryanne Fisher et al. "Mimicry in Mating: An Analysis of Postural Mirroring in Mating and Non-Mating Contexts"

Pia Marlena Böhm et al. "Art and Green Improve Urban Public Space"

Kathrin Masuch et al. "How Applied Ethology Helps to Change Mobility Behavior"

CHANGE THE WORLD WITH HUMAN ETHOLOGY – SCIENCE OUTSIDE ACADEMIA

Elisabeth Oberzaucher^{1,2}, Kathrin Masuch^{1,2}, Susanne Schmehl²

¹University of Vienna, Vienna, Austria

²Urban Human, Vienna, Austria

ABSTRACT

Academics focussing on Human Ethology seem to be limited to a career within academia, unlike scholars from more technical fields. This perception leads to a limitation of communication of scientific insights to stakeholders who might benefit from them – from political, administrative, professional to the individual level. In addition, young scientists are often unaware of job opportunities outside of academia. The challenges humanity is faced with currently ask for a stronger integration of science in all aspects of our lives. Science communication reaching a variety of people – from children to old age, industry and governmental decision makers, etc. – is one way to make scientific insights available to the general public. With citizen science, an understanding of how scientific insights are generated and thus how they are based on a more solid fundament than personal perceptions is fostered. By collaboratively working with stake holders and addressing their questions in a scientific fashion, science-inspired solutions take the step from theory into real-life. We will provide examples of our activities and share knowledge about practical issues in how to do science outside and alongside academia – and make a living of it.

NUDGING CAN BE SOPHISTICATED WITH EVOLUTIONARY INSIGHTS: FROM PLASTIC RECYCLING TO ENERGY CONSERVATION

Hidenori Komatsu¹, Nobuyuki Tanaka², Hiromi Kubota², Kenji Asano³, Yu Nagai³, Mariah Griffin⁴, Jennifer Link⁵, Glenn Geher⁴, Maryanne L. Fisher⁶, Takahiro Ueno⁷, Hiroto Takaguchi⁸, Masaya Tachibana⁹, Kazuyoshi Nasuhara⁹, Kimiya Murakami⁹

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ABSTRACT

Nudging is a term coined in the context of Behavioral Economics to softly motivate people to make better choices without forbidding any options. Although this concept emphasizes people's intuitive decision-making relevant to human evolution, there has been no consistent theory for designing nudges, and the applications have been based on trial and error. Evolutionary insights may provide a meta-theory that can help to design interventions more efficiently. To specify this new concept of what we call "Evolutionary Nudging," we developed a messaging method to promote the acceptance of technologies that might potentially be perceived to have risks, using insights obtained from simulation models of altruistic evolution. The messages highlighted the indirect kin support of older generations incurred in establishing these technologies for environmental sustainability. Significant intervention effects were identified in multiple countries (i.e., Japan, Canada, and the US) for topics such as plastic recycling and offshore wind power, suggesting the universality of these new nudging messages. We are currently planning to expand these applications from attitude levels to the promotion of actual energy conservation behaviors, with preliminary results also being discussed.

MIMICRY IN MATING: AN ANALYSIS OF POSTURAL MIRRORING IN MATING AND NON-MATING CONTEXTS

Allison Dyer, Megan Doyle, Maryanne Fisher

Saint Mary's University, Halifax, Canada

ABSTRACT

We conducted an observational study on the occurrence of postural mirroring in mating-relevant and non-mating-relevant contexts, focusing on its implications for flirting behaviour. Postural mirroring, defined as the mimicry of another individual's nonverbal behaviours, has been shown to signal engagement, openness to interpersonal connection, likability, persuasiveness, and similarity. We hypothesise that postural mirroring would be more prevalent in mating-relevant contexts, such as bars, compared to non-mating-relevant contexts, such as libraries. The mating-relevant context was a popular urban bar known for facilitating mingling among young adults, while the non-mate-relevant context was a university library. We created an ethogram and examined 10 behavioural units. Observations revealed a significantly higher frequency of postural mirroring in mating-relevant contexts compared to non-mating-relevant contexts, supporting our hypothesis. These findings have significant implications for understanding non-verbal communication in flirting scenarios and largely replicate past work. By shedding light on the prevalence of postural mirroring in mate-relevant contexts, this research contributes to the academic discourse on human ethology and provides valuable insights for interpersonal communication research. We will also discuss challenges to performing such research in public locations.

ETHOLOGY AS A TOOL IN URBAN PLANNING

Pia Marlena Böhm^{1,2} (SFA), Margot Dehove³, Helmut Leder^{3,4}, Jan Mikuni³, Mona Magloth^{1,2}, Katharina Prager^{1,2}, Sabine Tebbich¹, Elisabeth Oberzaucher^{1,2,3}

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ABSTRACT

In this talk we present results of the interdisciplinary WWTF project "Urban Art and Green". One of the key measures to mitigate climate crisis is urbanization, therefore it is crucial to understand how cities affect people's perception and wellbeing. Understanding our evolutionary nature can advise successful design of urban public spaces that facilitate acceptance and usage by citizens and create favorable social environments. The benefits of urban vegetation and greenery, not only for the city's climate but also for the wellbeing of inhabitants are well-studied – nature makes us calmer, more social, and healthier. However, recent studies indicate that artworks could have similar positive effects on human wellbeing. Despite this, the effect of art in urban settings has received little scientific attention. Our project investigates effects of art and greening interventions on humans in public space. Throughout a series of field studies, we directly compared art and green using two spatially flexible and temporarily available parking-lot sized 'interventions', decorated with different artistic stimuli and plants through A) observation of pedestrians' behaviour around the various interventions, B) physiological measurements of arousal (HR; HRV; SC; ST), C) participants' eye-movements and D) self-assessed wellbeing.

Behavioral observations and physiological measurements did not yield any differences between the art and green conditions. Reported wellbeing seemed to be affected by the perceived relevance and beauty of artworks.

Our results highlight the importance of natural and aesthetically stimulating elements for appealing urban landscapes and are actively communicated in urban planning committees, resulting in direct application in ongoing design processes.

HOW APPLIED ETHOLOGY HELPS TO CHANGE MOBILITY BEHAVIOUR

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¹Faculty of Life Sciences, University of Vienna, Vienna, Austria

²Urban Human, Vienna, Austria

ABSTRACT

Motorised private transport accounts for about 10% of the yearly global CO₂ emissions. Mitigation of the climate crisis requires a substantial reduction of traffic emissions. One way to make mobility more sustainable is to increase the use of public transport. To change people's mobility behavior, a combination of multiple approaches is needed: Availability and accessibility of public transport as a basic prerequisite, and the affordability and true costs of different modes of transport need to be addressed on a societal and political level. Designing behaviour interfaces centred on human behavior tendencies and preferences addresses the individual level. Attractive design of public transport needs to be inspired by knowledge about evolved human behaviour. We will show examples of applied human ethology in mobility research and illustrate its impact on passenger experience and acceptance. Projects include: A) Integrating train stations into everyday life through multifunctional design, B) Adaptations in platform design for improved passenger flow, C) Information gathering along a journey with public transport, D) Interior design of vehicles to improve passenger experience and functionality, E) How to improve sleep-quality and experience on the night train. The projects are funded by national and international railway operators, communes and the Austrian government (Austrian Federal Railways (ÖBB), Deutsche Bahn AG, Wiener Linien GmbH & Co KG, Austrian Research Promotion Agency (FFG) Projects 887695, 886066 and 893964).

Sunday, 14 July 2024

DARWINIAN BIOPSYCHOSOCIAL APPROACHES TO MATERNAL-CHILD HEALTH

Jennifer Hahn-Holbrook

University of California Merced, Merced, USA

ABSTRACT

Pregnancy and the postpartum period are times of incredible transition during which environmental factors can exert enduring phenotypic impacts on both mothers and children. In this talk, I will present a biopsychosocial evolutionary approach to understanding maternal-child health outcomes, including pubertal timing, growth, and postpartum depression. A key takeaway will be the idea that perceptions, attitudes, and feelings (e.g., subjective stress) often function as intermediaries through which aspects of the environment direct human phenotypes and transmit experience across generations. For example, I will discuss current models of the role of the environmental sensitivity of the hypothalamic-pituitary-adrenal (HPA) axis on prenatal programming. Finally, I will discuss how mismatches between the modern world and the ancestral past can lead to negative health consequences.

NEUROTICISM, NEGATIVE EMOTIONAL STATES, AND FOOD CHOICE MOTIVATIONS: A PERSPECTIVE FROM HUMAN ETHOLOGY

Lucas Schirmer (SFA), Jean Natividade

PUC-Rio, Rio de Janeiro, Brazil

ABSTRACT

Psychological factors such as depression, anxiety, and stress (DAS) play a significant role in shaping eating behavior, reflecting both evolutionary adaptations and modern influences. A hypothesis for the preference for high-calorie foods (i.e., rich in fats and carbohydrates) suggests these were more sought after and consumed by ancestors during stressful situations. This preference for calorie-dense foods during periods of emotional distress may similarly manifest in individuals with higher propensities towards negative emotions, leading to unhealthy food choices. This study explores the correlation between neuroticism, negative emotional states, food behavior, and food choice motivations. For that, 449 Brazilian adults, predominantly women (85.3%), mean age of 35.4 years ($SD = 12.4$), completed a questionnaire with instruments to assess the Big-5 factors of personality, DAS, eating behavior, and food choice motivations. Results showed negative correlations between neuroticism, DAS, and fruit/vegetable consumption. Our findings align with the evolutionary perspective, suggesting that our eating behaviors are influenced by factors shaped throughout human evolution. However, they may lead to less healthy eating choices in contemporary environments, reflecting a mismatch between evolutionary demands and modern challenges. Also, negative relationships between neuroticism, DAS, and food motivations related to natural content and ethical concerns were observed. This suggests these emotional states are related to less ethical and health-driven food choices. This research emphasizes the importance of considering the evolutionary perspective when investigating the relationships between personality, emotions, and eating behavior. By better understanding these connections, we can develop effective interventions to encourage healthy eating habits and emotional health.

CAN WE QUANTIFY LONELINESS?

Nicholas Gray (SFA)

University of Stirling, Stirling, United Kingdom

ABSTRACT

With well-established loneliness scales, such as the UCLA-Loneliness Scale (Version 3), existing, gauging loneliness should be straightforward. However, there is a lack of research in establishing where on these scales an individual is "lonely". There are multiple studies using benchmarks, but with no explanation of their origins. Other studies base loneliness off an arbitrary grouping of scores (i.e. in a scale with the highest total being 10, scores of 7.5 – 10 are very lonely, 5 – 7.5 are moderately lonely, and so on). Finally, some studies use the mean. However, the mean changes over time, among groups, and studies. The need for a study specifically focussing on finding where an individual is lonely is apparent. This study will look at multiple scales stemming from the UCLA-Loneliness Scale, including a 20, 10, and 3 item version. This will also allow for categorical data from different versions of the scale to be loosely compared. Capturing the subjective aspects of loneliness is important in indicating any loneliness benchmark. This can be done through self-reporting as feeling lonely, although this is often biased. Additionally, a text analysis of how individuals describe loneliness and their experiences may correlate with specific scores. Finally, components of the biological happenings of loneliness have been identified and can be monitored. Such happenings include cortisol, which could rise more in lonely individual when socialising than non-lonely individuals. Overall, using subjective reporting, text analysis, and biomarkers, the benchmark for loneliness should be applicable across multiple scales.

EXAMINING PARENTAL INVESTMENT DYNAMICS IN TWIN FAMILIES: INSIGHTS FROM A TRIADIC EXPERIMENTAL TASK

Isabella Ferreira (SEA), Flavia Ito, Briseida Resende, Emma Otta

Department of Experimental Psychology, Universidade de São Paulo, São Paulo, Brazil

ABSTRACT

We aim to investigate differential parental treatment (DPT) in families with twins aged 7-14 years. A Triadic Experimental Task was created to simulate everyday situations in which twins sit side by side, each one with a puzzle in front of them, and mother/father stays between the twins and can choose to help them or not. A total of 180 seconds out of 10 minutes of recorded interaction were analyzed. The interobserver reliability was above 0.9. Parental treatment for each twin was assessed by combining the durations of the behavioral categories "observation without interference", "interference with the puzzle", and "oral communication" and DPT score was calculated by subtracting the parental treatment for twins 1 and 2. In these preliminary interpair analyses with 7 monozygotic (MZ), 5 dizygotic of same-sex (DZSS) and 4 dizygotic of opposite-sex (DZOP) pairs, we tested the hypothesis that zygosity and sex predict DPT. No significant DPT differences were observed among the groups ($U= 1,497, p = 0,473$). We also performed an exploratory analysis with 5 triads to examine DPT in twins with dissimilar health conditions. There is a favoritism towards the more vulnerable twin ($T= -2,02, p = 0,04$), which can be explained by the Contingent Model of Parental Investment. The study of twin families provides an opportunity to explore the nuances of parental investment and can contribute to parental practices and child development. Further analyses will be conducted with a larger sample and taking into account other variables such as children's birth weight and parents' socioeconomic status.

TWIN RESEARCH IN NATURALISTIC AND SEMI-NATURALISTIC CONTEXT

Nancy L. Segal

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ABSTRACT

Twins reveal a wealth of information about human behavior just by acting naturally. Comparative analyses of monozygotic (MZ) and dizygotic (DZ) twin pairs set within naturalistic and semi-naturalistic contexts will be described. A semi-naturalistic study that incorporated virtual twins (i.e., pairs of same-age unrelated children reared together since early infancy) offers additional perspectives. The unique feature of these studies is that the unit of analysis is the joint behavior of the pairs, rather than the degree of similarity between the co-twins. Ethological studies of human behavior using twins have reported findings on fear of strangers (comfort vs. discomfort), joint puzzle completion (cooperation vs. competition), social closeness (physical proximity/interaction vs. physical distance/lack of interaction), prisoner's dilemma (cooperation vs. defection), social preference (cotwin vs. peer), empathy (twin vs. stranger), maternal favoritism (healthy vs. sickly infant), tacit coordination (coordinated vs. uncoordinated choices), and reunions of young separated twins (interest/attraction vs. disinterest/little attraction). Some studies were completed by the presenter, while others come from the extant literature. These studies will be described, and new empirical data from ongoing research on tacit coordination will be presented. The relative infrequency of ethologically-based twin studies will be considered, compared with the wealth of experimental twin research. Twin-based projects for future investigations will be suggested. Genetically and environmentally informative twin and "twin-like" kinships, that would add to what we know, and can know, from naturalistic studies of twins include unrelated look-alikes and adult reared-apart twins.

DO STEREOTYPES SHAPE OUR PERCEPTIONS OF MEN AND WOMEN? A LARGE CROSS-CULTURAL STUDY

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ABSTRACT

In a number of previous studies, authors have argued that gendered stereotypes shape how we perceive men and women, with men typically seen as more aggressive, dominant, and intelligent than women, and women more caring and trustworthy than men. In a large study, over 11,000 participants from 43 countries around the world rated 120 faces on 13 different traits. Using linear mixed modelling, I examine differences in how men and women are perceived from their faces in different countries, and discuss how these biases are associated with gendered stereotypes and gender equality.

THE IMPACT OF FACIAL MALFORMATIONS ON VISUAL ATTENTION TO INFANT FACES

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ABSTRACT

Infant faces have been shown to readily capture adult visual attention, likely due to their importance evolutionarily in facilitating bonds with caregivers and allocation of parental resources. Cues of low health are associated with a lower degree of parental attention and care and the presence of facial malformations, such as cleft lip/palate, negatively impact early interactions between children and their caregivers. However, it remains unclear how such facial malformations may impact early visual attention and processing. The current study used eye tracking to investigate adults' visual attention to infant faces with cleft lip/palate as compared to unaffected infant faces (study 1) and the impact of palate repair surgery on visual attention (study 2). The mouth region of infant faces was found to capture and hold visual attention to a greater degree for infants with cleft lip/palate compared to unaffected infants, at the expense of visual attention to the eyes. Similarly, visual attention was captured and held by the mouth region for infants before palate repair surgery compared to after palate repair surgery. These results demonstrate a significant decrease in early visual attention to the eye region for infants with cleft palate, while increased visual attention is registered on the mouth region and further suggest that palate repair surgery may restore more normative visual attention. These processing differences may contribute to several important aspects of development (e.g., joint attention) and may play a vital role in the previously observed difficulties in mother-infant interactions.

THE PROSOCIAL EFFECTS OF WATCHING EYES EXTEND TO SHOPPING CART RETURN BEHAVIOR

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ABSTRACT

Watching eyes are powerful stimuli—they quickly capture attention and evoke physiological arousal. Humans are particularly adept at perceiving another’s gaze, and can even be affected by watching eyes that they are not consciously aware of. Recent research suggests that watching eye cues can promote a variety of low-cost prosocial behaviors, inside and outside lab settings. The presence of eye images may alter behavior by reducing feelings of anonymity and cueing reputation maintenance concerns. The current study investigated whether the presence of watching-eye images affected how frequently shoppers returned carts to designated return areas. A poster stand displaying images of watching eyes (or a control image of shopping carts) was placed just outside the exit of a local grocery store, and the frequency of shopping cart returns was observed and recorded. The results demonstrate that shoppers (N = 409) were significantly more likely to return their carts when the eye image was displayed, in comparison to the control image. Shoppers returned their carts about 64% of the time when the control image was displayed, compared to 78% when the eye image was displayed. These results support the external validity of watching-eye cues when applied to a commonplace behavior such as returning a shopping cart.

EVOLUTION OF "PSYCHIATRIC DISORDERS" AND AN ETHOLOGICAL APPROACH FOR TREATING PATIENTS WITH "PSYCHIATRIC DISORDERS"

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ABSTRACT

This presentation provides evidence that psychiatric symptoms may have evolved as adaptations to an omnivorous way of life rather than representing psychiatric disorders. It also introduces a novel ethological approach for treating people with these kinds of "symptoms".

*In caged groups, white-faced monkeys (*Cebus capucinus*) tend to develop highly individual, peculiar, habitual behavior patterns different from the usual white-faced monkey repertoire of signals. Moynihan has labeled these peculiar behavior patterns "quirks". A comparative study with other New World monkeys in caged groups suggests this propensity is much greater for white-faced monkeys, an omnivorous species, than for other species which are not omnivorous. While the tendency to develop quirks appears to be general, the propensity for each species correlates with the social structures evolved for inhabiting each niche.*

Informed by the study of the white-faced monkey quirks, I have effectively employed an ethological approach in my psychiatric practice for treating patients with a variety of "psychiatric disorders" including obsessive-compulsive patterns, anxiety, panic, and depression. Combined with the white-faced monkey study, these results suggest that these behavior patterns have evolved in humans as adaptations to an omnivorous way of life rather than representing disorders. The implications of this conclusion for psychiatry and for us as humans will also be discussed.

AN ADAPTATIONIST PERSPECTIVE FOR TRYPHOBIA: WHY CONTEXT MATTERS

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ABSTRACT

Trypophobia is the discomfort that some people have when viewing small clusters of objects (often holes) and is a relatively new phenomenon known to the scientific community. Recent research suggests that this seemingly irrational response may function to avoid evolutionarily-relevant situations, and two adaptive frameworks currently exist in an attempt to explain this response. First, we will briefly review our work which tests what visual characteristics lead to the biggest changes in trypophobic visual discomfort. Then, we will review recent work which shows how avoiding skin disease / parasitism may be the likely culprit to this response. Last, we will discuss how image context plays a pivotal role in manifesting these outcomes, with an examination of our recent project which investigates how viewing trypophobic imagery among three different manipulated scenarios (contexts) impacts discomfort levels, and how individual levels of trypophobic tendencies, as measured by the Trypophobia Questionnaire (TQ), impact judgements.

BEHAVIORAL AND PHYSIOLOGICAL RESPONSES AS A FUNCTION OF DENTAL ANXIETY AMONG BRAZILIAN CHILDREN

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ABSTRACT

Dental anxiety (DA) is a prevalent emotion experienced by children worldwide, with potential implications for their oral health due to avoidance of dental treatment. Individuals experiencing DA often exhibit behaviors associated with fight-or-flight responses. Aiming to investigate the influence of anxiety and sex on reactions to the dental environment, we observed 20 twins (aged 10 ± 3.3 years) divided into Low (LA) and High Anxiety (HA) groups, equally distributed by sex, during their first dental appointment. We employed the Modified Child Dental Anxiety Scale (MCDASf) and captured one facial thermographic image before treatment, focusing on three areas of interest: nose, ear, and forehead, and recorded their behavior for one minute. The observed behaviors included touching—either their own body or equipment—smiling, talking, and displaying tension. Regardless of sex, frequency of behaviors was different between HA and LA children, $X^2=17.439$, $p=0.004$. As expected, HA children exhibited greater awareness of their surroundings, more frequently looking around and talking. Conversely, LA children were more focused on touching parts of their bodies, such as hair, hands, arms, or equipment. Additionally, HA children displayed lower nose and forehead temperatures compared to LA children, and the same pattern was observed when comparing males to females. Further analysis will involve a larger sample size to compare twin siblings and assess the influences of zygosity and previous experiences on their reactions to dental treatment. This study provides insights into behavioral patterns in HA and LA children and identifies factors that may influence DA, contributing to more effective clinical practice.

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SEASONAL CYCLES IN HUMAN COGNITION AND BEHAVIOR

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ABSTRACT

Like many other animals, humans are affected by seasons. I will provide an illustrative summary of the variety of effects that seasons have on people, including effects on behavioral decision-making (e.g., mating behavior, helping behavior), subjective preferences (music preferences, color preferences) and basic cognitive processes (attention, memory). These effects result from a variety of underlying causal mechanisms, reflecting not only seasonal changes in the weather, but also seasonal changes in the natural and social ecologies that humans inhabit. As a further illustration of humans' susceptibility to seasonal cycles, and the potentially important consequences, I will describe new research documenting seasonal cycles in prejudices and moral values.

THE ROLE OF INDIGENOUS KNOWLEDGE AND FOLK NARRATIVES IN HUMAN/WILDLIFE CONFLICT MANAGEMENT

Okechukwu Iroegbu (SFA)

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ABSTRACT

Folkloric elements in Igboland play a significant role in shaping social history and informing the negotiation of environmental, local, and national values. The interplay between expressive and non-expressive aspects of the culture(s) makes possible connections between individuals, individuals and groups, and between groups. In this investigation, I explore whether the presence or absence of folklore forms such as proverbs and moonlight folktales help younger generations develop a sense of value, belonging, identity, and concern for the environment. Does this apply to the Igbo youth of today? In short, how does folklore contribute to enculturation on different scales, from the local to the national, and for other generations, and how does that inform environmentalism at various levels?

EVOLUTIONARY PERSPECTIVES ON PREGNANCY AVERSIONS AND FOOD TABOOS

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ABSTRACT

Food aversions during pregnancy are quite common and are hypothesised to work as a protective mechanism for both the mother and the developing foetus. While these aversions manifest as physical sensations, they also intersect with cultural practices. In various societies, there are specific food taboos during pregnancy, where expectant mothers are discouraged from consuming certain foods. These taboos stem from beliefs that such foods could negatively impact the labour process, the health of the baby, or even influence the child's personality. I will present a theoretical exploration of pregnancy food aversions and taboos through an evolutionary framework. This includes an analysis and summary of scholarly articles from countries including Nigeria, Ethiopia, Ghana, Kenya, Fiji, and South India. The study seeks to understand whether these dietary practices during pregnancy-reflected through both biological aversions and culturally specific taboos - can be interpreted as evolutionary adaptations designed to protect the mother and developing foetus from potentially harmful substances. By synthesizing existing literature, this research explores the potential relationship between biological phenomena and cultural practices, assessing their support for adaptive hypotheses. This analytical approach offers valuable insights into the intersection of biological phenomena and cultural practices, setting the stage for discussion and future empirical studies to test these theoretical predictions.

UNEARTHING THE FOUNDATIONS: TESTING THE UNIVERSALITY OF MORAL FOUNDATIONS THEORY IN THREE NON-INDUSTRIALISED POPULATIONS

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ABSTRACT

The Moral Foundations Theory (MFT) stands out as a leading contemporary framework for understanding morality, proposing five categories found across human cultures: Care, Fairness, Loyalty, Authority, and Purity. Despite claims of universality, most of the evidence supporting MFT comes from rich and democratic societies. This study steps into previously unexplored territory by examining MFT in non-industrialised populations: the Hadza hunter-gatherers, Datoga pastoralists, and Iraqw farmers. Confirming the presence of these five moral foundations in such populations could bolster claims of cultural universality. To address the challenge of studying illiterate individuals, we devised a novel method—Moral Foundations Boards—employing pictorial representations of moral violations. Our research encompassed both non-industrialized populations and, for comparison, US citizens. While our findings did not align precisely with MFT's proposed structure of morality, they allowed us to notice important cross-cultural variation. For example, individuals from non-industrialised populations exhibited a greater sensitivity towards violations of the Purity foundation. Our results do not fully support the structure of the Moral Foundations Theory, but the study provides clues for further research on the cross-cultural determinants of morality.

FEAR OF SNAKES IN THE CRADLE OF HUMANKIND: VIPERS VS COBRAS

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ABSTRACT

Snakes are recognized as highly fear-evoking animals, eliciting preferential attention and fast detection in humans. This phenomenon is typically attributed to the evolutionary experiences of human ancestors with snakes. We focused our research on the cradle of humankind and conducted our investigation in the Horn of Africa. This region is characterized by occurrence of various snakes, including deadly venomous viperids (adders) and elapids (cobras and mambas). As the snake fauna of the region has remained stable since the late Miocene, local people face similar threats to those encountered by early humans. As a control, we included respondents from a WEIRD population with little experience with African snakes, namely Europeans (Czechs). Here, we summarize the results of a series of experiments evaluating fear of (1) local snakes, (2) vipers, cobras, sand-boas, and colubrids, (3) their silhouettes, (4) New World snakes, and (5) threatening snakes. To compare the subjective fear of individual stimuli, we employed a well-established picture-sorting approach. The high subjective fear was confined to certain categories of snakes (taxa or morphotypes), rather than to species locally representing the highest danger. In both African and European data sets vipers occupied the highest positions according to the reported level of subjectively perceived fear. The high fear of vipers strongly contrasts with the fear ranking of deadly venomous elapids (if not hooding), which were in lower positions. The best morphological predictor of the evoked fear was the body width of the snake. We discuss the evolutionary, cultural, and cognitive aspects of the results.

ADAPTIVE SIGNIFICANCE OF EPIDEMIC STORIES AS A PROTECTION OF INDIGENOUS PEOPLES AGAINST INFECTIOUS DISEASES

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ABSTRACT

Epidemics, like the recent COVID-19, are humanity's deadliest disasters, impacting societies across health, psychology, social, and economic domains. A unique legacy of devastating infectious diseases, found across cultures, are epidemic stories explaining disease ethology and providing behavior guidelines during outbreaks. This aligns with the theory that storytelling, a universal human behavior, serves as an adaptation increasing chances of group survival by transmitting fitness-relevant information. We tested this premise among indigenous Asmat people in SouthPapua, Indonesia ($n = 100$, $M_{age} = 43.38$, $SD_{age} = 15.42$). The relationship between knowing stories of past infectious diseases and being afraid of the COVID-19 was assessed only for participants aware that there was a COVID-19 in Papua and in the world ($n = 87$). Knowledge of epidemic stories was positively associated with both: (1) being afraid of the COVID-19, $r(85) = .38$ [.18, .55], $p < .001$, and (2) social isolation, $r(85) = .25$ [.04, .44], $p = .020$. Next, social isolation was compared between participants who knew stories with isolation recommendations when facing contagious diseases ($n = 11$) and participants who knew stories about contagious diseases but without isolation recommendations ($n = 76$). On average, participants knowing isolation stories ($M = 4.50$, $SD = 0.39$) declared higher social isolation during COVID-19 than participants who did not know stories with isolation recommendations ($M = 3.20$, $SD = 1.80$), Welch's $t(74) = 5.48$, $p < .001$, Cohen's $d = .999$. The outcomes support the hypothesis that epidemic stories may function as an adaptation for survival.

THE IMPRINT OF ANCESTRAL AND MODERN THREATS IN THE HUMAN MIND - THE EXPERIENCE OF FEAR, DISGUST AND ANGER

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ABSTRACT

Threats to human life are often posed by the environment in which humans have evolved or live today. Animal and human ancestors developed complex physiological and behavioural response systems to cope with two types of threats: immediate physical harm from predators or conspecifics, triggering fear, and the risk of infections from parasites and pathogens leading to the evolution of the behavioural immune system (BIS) with disgust as the key emotion. Previously, we explored the emotions (disgust and fear) evoked by snakes representing the ancestral threat in the human mind. Here we asked whether BIS has adapted to protect us today from pandemic risks or poisoning by modern toxic substances.

We have developed a survey comprised of 60 vignettes describing threats evoking fear and disgust belonging to one of the three main categories of threats: (1) ancestral, (2) modern, and (3) pandemics of airborne disease. Each vignette was evaluated on a 7-point Likert scale based on fear, disgust, and anger.

The results show that the strongest fear is triggered by modern threats (electricity, car accidents), while the highest disgust is evoked by ancient threats (body waste products, worms). Disgust does not respond to modern threat stimuli such as toxic substances or radioactivity as these evoke mainly fear and anger. Finally, distinct response pattern was found for pandemic threats, in which both fear (disease and death) and disgust (used face masks) are employed. Ancestral threats are not always more powerful stimuli than adequate threats of the modern type, but they function specifically.

DOES TRIGGERING THE BEHAVIOURAL IMMUNE SYSTEM INFLUENCE SPATIAL PROXIMITY?

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ABSTRACT

The behavioral immune system is thought to reflect a series of psychological mechanisms to detect and avoid potential sources of pathogens. When individuals perceive cues associated with potential pathogens, they often experience feelings of disgust and aversion, which motivate them to avoid contact with the source of contamination. For example, people may avoid sick individuals or environments that seem unclean. Here we investigated whether exposure to such cues would influence social proximity in interactions between uninfected people. In two experiments (n = 143 and 180; both conducted pre-COVID), we asked people to look at images that manipulated pathogen threat and then measured how closely they approached a confederate in a subsequent interaction. We will show that, in both studies, triggering disgust increased subsequent social distancing. We will also examine the potential effects of participant sex, perceived vulnerability to disease, and women's contraceptive use on social distancing.

EMPIRICAL VERIFICATION OF ART AS AN ADAPTATION HYPOTHESIS: A CASE STUDY OF WOODCARVERS IN ASMAT (PAPUA)

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ABSTRACT

Archeological studies provide evidence that art was a well-known activity even 400,000-500,000 years ago. This has not changed with time – people spontaneously create artistic works from an early age. Some even master artistic skills to such proficiency that they are called artists. Considering the ubiquitous nature of art, many evolutionary-oriented scholars have pondered over the potential role of art, coining the art-as-an-adaptation and by-product of adaptation hypotheses. Surprisingly, very few have attempted to verify this empirically. We addressed this issue and checked whether art can be an adaptation, whether it is a by-product of an adaptation (also known as a spandrel), or whether it is not related to adaptability. We collected data from indigenous inhabitants of Papua (Asmat and Kamoro society), including 101 self-described carvers (artists) and 130 non-artists. The results showed that 1) artists did, indeed, have higher reproductive success (measured by the number of their children) than non-artists, but 2) this relationship could be fully explained by artists' higher conscientiousness and creativity (but not visuo-motor coordination). In other words, conscientiousness and creativity could be driving forces behind artists' better reproductive outcomes. To our knowledge, our study is the first to empirically test one of the most pressing evolutionary aesthetics conundrums, providing preliminary evidence that art might not be an adaptation but a by-product or spandrel of other adaptive traits.

THE COLLECTOR'S HYPOTHESIS: GREATER BENEFITS FROM ART IN SEXUAL SELECTION FOR COLLECTORS THAN FOR ARTISTS

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ABSTRACT

Human fascination with art has deep evolutionary roots, yet its significance remains a challenge for theory due to its universal presence across cultures despite a lack of apparent survival value. At the same time, art poses a major challenge for evolutionary theory (Davies, 2012; Tooby & Cosmides, 2001). On the one hand, it is as universal across human cultures as it is costly, which suggests it is an adaptation (Dissanayake, 2019; Dutton, 2009). On the other hand, it has no apparent value for survival (Miller, 2011; except for storytelling: Carroll, 2004; Mellmann, 2012).

One way evolutionary theory can tackle the mystery of art is to focus on art as a reproductive, rather than survival, adaptation (Miller, 2011). While paintings, sculptures, and other artistic works may have no practical use, they demand ingenuity, dexterity, and other features that signal fitness. It is perhaps surprising that, despite many publications in this area (e.g., Miller, 2001, 2011; Varela et al., 2022; Voland & Grammer, 2003), there is a lack of research explicitly testing the adaptive role of practicing art and its impact on an artist's potential reproductive success.

In this paper, we propose a new variant of the signaling theory, which we call the Collector's Hypothesis, suggesting that artworks serve as indicators of collectors' surplus wealth and social status, benefiting them more than artists in mating and reproductive contexts. Since very few have attempted to verify this empirically, further research in diverse cultural contexts is needed.

PRELIMINARY OF ETHNO-ARCHAEOLOGICAL RESEARCH IN THE STAR MOUNTAINS, INDONESIA

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ABSTRACT

Regions where traditional preliterate societies have come into closer contact with the global world only a generation or two ago are rare. Some parts of the interior of the large island of New Guinea belong to this category. The process of acculturation, triggered by whole communities accepting Christianity, has been and still is quite dramatic, probably faster than anywhere else. For some communities it took just one generation, 25 years, for Bahasa Indonesia to be widely used as a vernacular language. Despite profound socio-cultural changes, much of the life in the formerly remote mountain valleys has remained little altered. This is an ideal situation for ethno-archaeological research because the local inhabitants still know and master the traditional techniques of survival and subsistence. For example, the knapping of stone into adze blades is still going on, probably the only place in the world. For archaeological science, this represents a unique opportunity to not only document the different steps of lithic production, its chaîne opératoire and social aspects like the different roles of helpers, apprentices and master knappers, but also the distribution/exchange of the blades as well as symbolic and ritual behaviours connected to this activity. Ethno-archaeological research in the Star Mountain region of New Guinea can be conducted in close temporal and socio-cultural proximity to autochthonous life styles. This and other examples may help shed light on technologies, life styles and behaviours of the more distant past for which only archaeological traces remain.

HOW IMITATION DRIVES INNOVATION: AN EXPERIMENTAL STUDY OF THE CULTURAL EVOLUTION OF A MULTI-DIMENSIONAL ARTEFACT

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ABSTRACT

In an experiment in which participants had to place a dot exactly between two presented points we have shown that the precision decreases with the distance between the points.

Following this finding, it has become apparent that the way we think about the cultural equivalent of biological inheritance needs to be restructured to consider the question of variance proportionality. Our aim is to examine whether a parental variability-dependent model of cultural inheritance more accurately represents how human innovation and imitation works.

In order to apply these findings to wider contexts and to test their ecological validity, we devised a novel experimental paradigm that allows us to parametrize and monitor changes in multidimensional cultural artefacts within a standard transmission-chain experiment. Using an intuitive graphical user interface, participants are tasked with generating a model, based on one of three tasks. Here we focus on a task that resembles the above mentioned midpoint estimation generalized to multidimensional artefact. The model is then printed on a 3D printer, and its physical form can serve as a “cultural parent” of the next generation.

We revealed that most findings do generalize from 2 to 8 dimensions. The imitation error is proportional to parental variance. However, when there is no parental variance along some of the dimensions, participants do not imitate precisely, but explore the unexpressed dimensions.

Imitation - even when precision is the goal - can therefore generate unexpected novelty.

Tuesday, 16 July 2024

THE MOTORIC AND COGNITIVE MECHANISMS OF EVOLVING DIALECTICAL DIFFERENCES

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ABSTRACT

Language, like all tools, must evolve and be shaped to fit the need(s) of the user(s) and the demands of the environment in which it is being used. During these “language evolutions”, we observe numerous dialectical shifts and differences within language behaviors. Such differences refer to variations of language and communication across geographic regions, social groups, and cultural backgrounds. They include variations of language behaviors related to articulation/pronunciation, grammar/syntax, lexicon/vocabulary, and the use of nonverbal communication such as gestures and body language. First I will focus on the underlying cognitive mechanisms that support each of these language behaviors and their role in directing and guiding them as they shift to meet both the demands of the linguistic environment and goals of the speaker. Next I will discuss the motor system, within the context of perception and action, as it relates to the social cognitive aspects of language as a synchronized interaction between speakers. Finally, I will explain the role of embodied cognition on these language behaviors as they shift over time and the importance of engaging in it in order for a successful dialectical transition to occur.

THE INTERPLAY BETWEEN ROMANTIC LOVE AND CULTURE AND ENVIRONMENT: DATA FROM 61,065 INDIVIDUALS FROM 82 COUNTRIES

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ABSTRACT

Love accompanies humans from early childhood to late adulthood, permeating almost all aspects of human life. Love manifests in various forms and shades, including parental, sibling, friendship, and romantic love. The present project focused on the latter—romantic love, measured with the short version of the Triangular Love Scale (TLS-15). Our goal was to explore the potential influence of cultural and environmental factors operationalized through indexes of gender equality, individualism, and historical pathogen prevalence on experiences of romantic love. We relied on the Triangular Theory of Love, which posits that love comprises three components: intimacy, passion, and commitment. Drawing from a vast cross-cultural sample of 118,715 participants spanning 175 nations, among whom 61,065 individuals from 82 countries were in romantic relationships and were included in the analyses, our findings offer intriguing insights into the interplay between romantic love and cultural and environmental factors, both on a country- and individual-levels. For instance, we observed a nuanced relationship between individualism and commitment, with individuals from more individualistic countries reporting higher levels of commitment (country-level), yet paradoxically, individuals holding less individualistic viewpoints (individual-level) reported higher commitment. These findings highlight the importance of studying romantic love experiences within cultural and environmental contexts both at the country- and individual-levels. Also, while the foundations of love are commonly believed to be rooted in human physiology, cultural and environmental conditions might, to some extent, influence love's experiences.

INSIGHTS FROM JEALOUSY NON-VERBAL EXPRESSIONS FOR IMPROVING INTERPERSONAL RELATIONSHIPS

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ABSTRACT

Human ethology provides profound insights into understanding interpersonal relationships and prosocial behavior, with foundational contributions from scholars like John Bowlby and Mary Ainsworth. Bowlby's work on early mother-infant attachment laid the groundwork for interpreting ethological principles underlying attachment behaviors. Ainsworth's "strange situation" methodology further refined observational paradigms, enabling the systematic categorization of attachment styles. Building upon this foundation, our lab has extended the scope of human ethology by investigating jealousy responses in children. Utilizing Sybille Hart's jealousy induction paradigm, we have characterized facial, behavioral, and affective responses to perceived threats, offering valuable insights into the early manifestation of jealousy. Expanding from childhood to adult relationships, our research examines jealousy within romantic partnerships and friendships. By analyzing facial and postural cues of jealousy in laboratory contexts, we elucidate its significance in navigating complex human interactions and fostering positive social dynamics. In the realm of interpersonal relationships, human ethology holds practical implications for communication enhancement, conflict resolution, and bond strengthening. Recognizing the evolved mechanisms governing jealousy behavior enables individuals to cultivate understanding, leading to greater interpersonal satisfaction and harmony. In conclusion, human ethology offers invaluable insights into navigating the intricacies of human relationships and promoting prosocial behavior. Integrating evolutionary perspectives into research and practice allows us to harness the potential of human ethology for positive social change and the enhancement of individual and community well-being.

PROXIMITY AND TOUCHING: OBSERVATIONAL RESEARCH ON MATE GUARDING IN HUMANS

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ABSTRACT

Mate guarding behaviors are strongly selected for in species that suffer from infidelity and cuckoldry. Two forms of mate guarding behaviors that have been found in self-report studies on humans are proximity and touching. Proximity actively prevents infidelity through the physical act of being present. Touching indirectly prevents infidelity by signaling to any potential rivals that their partner is taken, as well as signaling to the partner that they are being watched. More observational research of mate guarding behaviors is needed though. With this in mind, we hypothesize that proximity and touching will be used as forms of mate guarding when in the presence of a potential romantic rival. Couples participating in the study interacted with an attractive confederate and their proximity and touching behaviors were recorded. Results show that proximity and touching behaviors increased while in the presence of the confederate. When an attractive confederate was present, couples sat closer to and touched each other more often than they did when they were alone, showing that humans engage in these forms of mate guarding.

EJACULATE ADJUSTMENT IN RESPONSE TO SPERM COMPETITION RISK IN HUMANS

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ABSTRACT

Previous research suggests that human males, like males of many mammalian and avian species, adjust their ejaculate quality in accordance with sperm competition risk. Specifically, men who spend less time with their regular female partner since the couple's last copulation produce ejaculates with more sperm at the couple's next copulation (Baker & Bellis, 1993). We conducted a conceptual replication of this research to investigate whether sperm competition risk predicts ejaculate adjustment in human males using additional measures of sperm competition risk (e.g., perceptions of partner infidelity, presence of potential sexual rivals) and updated laser-optic semen analysis technology. We collected data from 34 heterosexual couples (individuals aged 18 to 32 years) who completed self-report surveys on their relationship dynamics and provided six ejaculate samples (3 copulatory, 3 masturbatory) across a 45-day period. Time spent together since the couple's last copulation was not associated with ejaculate quality. However, sperm concentration for copulatory ejaculates was higher for men who perceive that their partner has more male friends and coworkers (i.e., potential sexual rivals). Discussion situates the current results within the literature on human sperm competition and suggests several directions for future research.

DOES ESTRADIOL POTENTIATE THE ANXIOLYTIC EFFECTS OF OXYTOCIN IN FEMALES AND MALES FOLLOWING INTRASEXUAL COMPETITION?

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ABSTRACT

Sex-differences in stress-responses may reflect an adaption that aids reproductive success, however, research into the regulatory mechanisms is limited. Here, we examine how oxytocin (OT) impacts the stress-response among human males and females during intrasexual competition, assessed whether estradiol potentiates OT's effects on stress. Using a randomized double-blind design, 76 healthy adults received intranasal OT or placebo before engaging in an aggressive encounter with a sex-matched confederate. Markers of physiological stress (heart rate, heart rate variability, blood pressure) and psychological stress (Positive and Negative Affect Schedule) were measured post-task. Hierarchical regression showed significant three-way interactions between OT condition, sex, and baseline estradiol concentrations for heart rate variability, positive and negative affect, but not heart rate or blood pressure. Simple slope analysis revealed significant effects for females with low and high estradiol concentrations, but not in males. High estradiol females experience significantly higher heart rate variability, positive affect, and reduced negative affect, supporting the potentiating role of estradiol. Conversely, low estradiol females demonstrated the opposite (lower heart rate variability, positive affect, and higher negative affect). Given estradiol concentrations often correlate with the likelihood of fertility, we speculate that our study captured varying female behavioral strategies during intrasexual competition related to the odds of reproductive success. These findings contribute to a growing body of research on sex differences to OT administration in humans.

TESTOSTERONE REACTIVITY AND PARENTAL CARE MOTIVATION IN MEN AS A FUNCTION OF PARENTAL STATUS

Nathan Boone (SFA), Amanda Hahn

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ABSTRACT

Paternal investment and caregiving quality have lasting impacts on children's well-being. Children with sensitive, involved fathers typically develop more secure attachments and have fewer behavioral and psychological problems than children with less sensitive and involved fathers. While the importance of fathers' engagement with their children is well established, the biological mechanisms that underpin paternal behavior are not fully understood. Previous research has found that baseline testosterone levels and testosterone reactivity to infant stimuli are both relevant predictors of paternal sensitivity. Short-term decreases in testosterone in nurturant contexts, and short-term increases in testosterone in challenging contexts have both been linked to sensitive paternal caregiving. The current study investigated the relationship between parental care motivation and testosterone reactivity in fathers and non-fathers after simulating a nurturing caregiving interaction or observing infant distress. The RealCare Baby 3 doll was used as an infant simulator in both conditions. The nurturant interaction was expected to lower participants' testosterone levels, and the infant distress was expected to raise participants' testosterone levels. Men who were more motivated to care for infants were expected to have larger testosterone responses to both simulated interactions. Fathers were expected to have greater parental care motivation and testosterone responses than non-fathers. The within-subjects design (all participants completed both conditions) enables the analysis to examine whether the same men tend to have large testosterone responses to each interaction, and whether these men tend to be high in parental care motivation. Results to be discussed (data collection concludes May 15th).

DO WOMEN'S BODY ODORS REVEAL THEIR OVULATORY TIMING?

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ABSTRACT

Prior research suggests that scent samples collected from women during the fertile window of the menstrual cycle are rated as more attractive than scents collected at other times, and that men exhibit both reactive testosterone increases and psychological priming effects after exposure to peri-ovulatory scents. Such findings have led some to suggest that scent cues may reveal women's ovulatory timing. Here, 46 women each provided overnight scent samples (both axillary and genital) on six nights spaced five days apart, and completed luteinizing hormone tests to determine ovulatory timing. A sample of 61 men rated axillary scent samples collected within the estimated fertile window as significantly more attractive than scent samples collected at other times. Importantly, however, signal detection analyses showed that attractiveness ratings of fertile and non-fertile samples overlapped so much that raters essentially exhibited no ability to diagnose ovulatory timing from scent attractiveness. A second sample of 182 men was tested for hormonal and psychological responses to either plain water or to axillary or genital odor stimuli drawn from the same scent donors (but using samples from the arm that was not used in the attractiveness rating study). Planned comparisons between reactions to fertile window and other stimuli found no significant effects for changes in testosterone or cortisol, or for measures of sexual desire, inferred arousal of the donors, the priming of sexual concepts, or the desire to approach others. Together, these findings provide strong evidence against the idea that odor cues can reveal women's ovulatory timing.

NOSEWITNESS IDENTIFICATION: A REPLICATION STUDY

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ABSTRACT

Recent studies have introduced the idea of nosewitness identification as a potential aid to criminal identification in cases where a victim has close contact with an assailant. Nosewitness identification requires both the ability to discriminate individuals using their body odour and olfactory memory for that odour. Alho et al. (2015) suggest that this is more likely to be possible when people experience negative emotion. Here, we attempted to produce a replication of their study, by investigating whether people could identify a criminal from a mock odour lineup at rates above chance. Participants watched a neutral interaction video and a video of a violent crime. They smelled a donated body odour and were instructed this was either the man (neutral condition) or the criminal (violent condition) from the video. After a 15-minute interval, the participants sampled a lineup of five body odours and were asked to identify which they thought to be the odour presented during the video. Results found that participants could identify the target body odour in both conditions above rates of chance, but that the rate of correct identification was higher in the violent video condition. Furthermore, female participants outperformed male participants for accuracy in the violent condition. Our findings suggest that nosewitness evidence could be considered as supplementary evidence in criminal investigations.

UNCERTAINTY REDUCTION AS AN UNDERLYING MOTIVE FOR OPTIMAL DISTINCTIVENESS

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ABSTRACT

Following the emergence of uncertainty identity theory (Hogg, 2007), the popularity of optimal distinctiveness theory (Brewer, 1991) has dwindled somewhat. While there's been expansive evidence in favor of each theory, little work has investigated the relationship or impact between the two. More specifically, the needs for assimilation (belonging) and differentiation (uniqueness) as postulated by the optimal distinctiveness model may be better understood as derivatives of the desire to reduce self-uncertainty. It's this in-progress proposal's aim to address the overlap between these two theories by experimentally testing the mediating effect of uncertainty on the relationship between the need for assimilation and differentiation and social identity. Participants will be sampled from the American population (N = 400) through the crowdsourcing platform MTurk. They will be administered one of four randomly assigned need conditions and be placed in either a minority or majority group following a dot estimation task. Feelings of uncertainty and level of group identification will be measured at the study's conclusion. It's predicted that participants will only identify with their respective group when experiencing feelings of uncertainty. Additionally, participants experiencing uncertainty and a need for belonging will identify more strongly with the majority than the minority group. The inverse will be true for participants experiencing uncertainty in the need for uniqueness condition. The findings from this in-progress experiment will demonstrate the mediating effect of uncertainty on the optimal distinctiveness model.

SOCIAL NETWORKS IN CHILDREN FROM PRESCHOOL TO ADOLESCENCE, BASED ON BEHAVIORAL OBSERVATION AND PEER NOMINATION METHODS

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ABSTRACT

From early childhood, individuals are part of peer social networks. Sex differences and age shifts in social network parameters are considered to reflect sex differences in relationship functioning, and consequences of social development, respectively. However, social networks can be modelled both from behavioral and sociometric data, possibly leading to different sex and age shifts. In our methodological study, we compared network parameters and social network structure obtained from two methods: behavioral observation and friendship nomination in 235 children from four preschool, four middle school and four adolescent classes. We observed behavioral interactions during two 45 mins unstructured activities and in interviews, asked children to nominate their friends. We calculated network parameters strength, transitivity, Eigenvector- and closeness centrality for each child, and assortativity and Gini index for each class. We found pairs of network parameters based on behavioral interactions and friendship nominations to be weakly correlated with each other. In linear mixed effects models, both methods of data collection lead to similar associations of strength of ties between peers with sex and age, and to similar age differences in assortativity according to sex. However, the association of transitivity with sex and age, and the associations of Eigenvector centrality, closeness centrality and the Gini index with age differed between the methods of data collection. Friendship nomination and behavioral observation are thus not interchangeable methods. We interpret these differences in terms of the developing understanding of the concept of friendship in preschoolers and its less strong link to direct social interactions in adolescents.

UNIVERSAL EMPHRONESIS/TOM AS SHOWN IN THE LIFE AND LANGUAGE OF THE EIPO, MOUNTAIN PAPUANS OF WEST-NEW GUINEA

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ABSTRACT

One of the questions keeping anthropologists busy is why our ancestors developed brains capable of the manifold amazing performances typical for our species, among them symbolic communication, semantic language and emphronesis, the ability of reading another person's mind (so called "Theory of Mind"). Primates and other mammals, especially dogs, have a capacity for primordial emphronesis, i.e. they are able to guess and understand the thoughts, aims etc. of another individual, even of a different species. Tests involving "false belief" are used to identify the onset of this ability in children. One avenue to explore the extent of emphronesis is to look at respective terms reflecting, on an emic meta-level, the forms of this cognitive power in a given language. I will present results of analyzing the Trans-New-Guinea Papuan Eipo language, unknown until 1974 and laid down in a dictionary in 1983 (Heeschen & Schiefenhövel), as well as documents of everyday behaviour to discuss the Eipo concept and usage of emphronesis.

"Mind" (kanye), in the sense of knowing, understanding, reflecting, assessing, thinking..., is a concept very prominent in the Eipo language: it comprises virtual representations of real things, like "shadow", and "echo", and, in particular, various mental processes. Other words, like teneb-, usually verbs, describe the functions of gaining insight, thinking things through, understanding another person. The most convincing proof of mutual emphronesis was the process of learning, monolingually, the Eipo language. Reading each other's mind turned out to be relatively easy - disproving the Sapir-Whorf hypothesis of cultural relativism.

Poster Session

Monday, 15 July 2024

ESTABLISHMENT OF FRIENDSHIPS AMONG BRAZILIAN TWIN CHILDREN: DIFFERENCES AS A FUNCTION OF SEX AND DEPENDENCE

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ABSTRACT

Twin children are commonly raised with the full-time company of a same-age peer, their co-twin. This peculiarity is also present in the establishment of friendships, since co-twins usually share the same environments (e.g. school). It has been hypothesized that the twin situation could result in a dependency on the co-twin, thereby leading to difficulties in forming new relationships beyond relatives. Additionally, it was hypothesized that the presence of an opposite-sex co-twin in dizygotic pairs could increase the proportion of opposite sex friends the child has. We aimed to test these hypotheses in a sample of 60 Brazilian twin children - 28 monozygotic (MZ), 20 dizygotic of same-sex (DZss), 12 dizygotic of opposite-sex (DZos) - aged 8-14. Dependency and zygosity were assessed using, respectively, the validated versions of the Twin Relationship Questionnaire and the Zygosity Questionnaire, both completed by children's parents. To assess the number and sex of friends, a Pictorial Representation of Friendships was administered to the children. A negative correlation was found between an individual's number of friends and their dependence on their co-twin ($r = -0.321$; $p = 0.012$). We did not find any difference between the proportion of friends of the opposite sex among male DZss and DZos children or between female DZss and DZos children, as determined by an Independent Samples Kruskal-Wallis test. Our data suggest that the establishment of friendships is influenced by co-twin dependence. Also, the sex composition within twin pairs has no effect on the sex proportion of each child's friends.

EXTRAVERSION, WELL-BEING, AND FOOD CHOICE MOTIVATIONS: AN EVOLUTIONARY PERSPECTIVE

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ABSTRACT

Psychological well-being is related to the consumption of fruits/vegetables (FV). An evolutionary hypothesis for the interplay between these variables suggests that the consumption of these foods promotes optimal physical health, which might be valuable for survival and reproductive purposes. Thus, it is expected that their intake also promotes well-being on a psychological level, as a reward mechanism. Extraversion is also related to psychological well-being. This personality trait is related to an inclination towards seeking social interactions and positive experiences, valuable characteristics in evolutionary terms. This study explores the correlation between extraversion, well-being, food behavior, and food choice motivations. For that, 449 Brazilian adults, predominantly women (85.3%), mean age of 35.4 years ($SD = 12.4$), completed a questionnaire with instruments to assess the Big-5 factors of personality, well-being, self-esteem, eating behavior, and food choice motivations. Results showed relationships between extraversion and all aspects of well-being, self-esteem, and four motivations for food choices: health, mood, natural content, and ethical concerns. Also, the consumption of FV showed correlations with all well-being components, self-esteem, and food choice motivations. However, there was no relationship between FV intake and extraversion. These findings indicate that extraversion contributes to shaping well-being and decision-making on food choices. The lack of a connection between extraversion and FV intake highlights the complexity of preferences influenced by factors beyond personality traits. Taking an evolutionary perspective enhances comprehension of how behaviors may have evolved to meet specific needs and can also help develop effective interventions toward promoting healthier eating habits and well-being.

BOOSTING NUDGING EFFECTS BY MESSENGER IMPRESSION TO PROMOTE CARBON RECYCLING TECHNOLOGIES

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ABSTRACT

Previous studies have revealed that messages highlighting kin support, which we call 'familial nudging,' are a universal intervention to moderate risk-averse attitudes toward a wide variety of topics in multiple cultures. However, it is still unclear if this type of intervention can have larger effects when messages are sent by messengers who are attractive to receivers. To tackle this problem, we designed messages to moderate risk-averse attitudes toward carbon recycling technology, which reuses CO₂ emitted through industrial activities to reduce carbon emissions in the atmosphere. We then added virtual messengers with their face pictures and profiles next to the descriptions of the technology and performed randomized controlled trials to measure the message effects with more than 4,000 responses obtained from Canada, Japan, Norway, and the US. A linear regression analysis showed that our designed messages successfully moderated risk-averse attitudes toward carbon recycling technology. Moreover, additional intervention effects were observed when messenger biological sex and respondents' sexual orientations were matched. This effect was observed only in unmarried respondents and for the perceived impact of the technology on themselves, but not on future generations, suggesting the possibility that messages to single people should be provided by messengers of opposite sexes. We also discuss the causality of these additional effects.

IMPACT OF RESOURCE-LIMITED GESTATIONS ON THE PHYSICAL DEVELOPMENT OF BRAZILIAN TWIN CHILDREN: A STUDY OF ZYGOSITY AND CHORIONICITY

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ABSTRACT

Monochorionic twins generally experience resource-limited gestation, and the developmental impacts need to be determined. Our aim was to longitudinally investigate the physical developmental trajectory of Brazilian twins based on zygosity and chorionicity, a pioneering effort in Brazil and part of the USP Twin Panel Research. The sample consists of 156 twins: 70 monozygotic (MZ) (49 female), 40 same-sex dizygotic (DZss) (24 male), and 46 opposite-sex dizygotic (DZos) twins. Based on chorionicity, it includes 112 individuals - 86 dichorionic (DC) (44 male) and 26 monochorionic-diamniotic (MCDA) (16 female) twins. These twins were evaluated at birth and between ages 7-13. Using the Kruskal-Wallis test, a significant difference was found in the Z-Score percentiles for initial weight (between ages 7-13) among female individuals of the different zygosity groups (KW-Stat = 7,16; p-value = 0.0278) - with a higher concentration of samples in Z-Score percentiles close to or below 0.5 for DZss, and for DZos and MZ, close to or above 0.625. Additionally, a significant difference was found between the Z-Score percentiles for Body Mass Index (BMI) in female individuals of different chorionicity groups (KW-Stat = 3.88; p-value = 0.0489) - with a higher concentration of samples in Z-Score percentiles close to or below 0.5 for DC, and close to 0.80 for MCDA. Our analysis revealed that during the development of female twins, weight and BMI were significantly related to zygosity and chorionicity. Our study is still in progress, and further analyses are programmed, including additional measures.

HOW IS LOVE RELATED TO JEALOUSY?

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ABSTRACT

Love is interpreted in two dimensions: as lifelong attachment to important people and as emotional reliance. Generally, romantic love and jealousy, seemingly contradictory, share evolutionary roles in sustaining relationships. Love enhances bonding, teamwork, and offspring safeguarding, while jealousy emerges when valuable bonds are at risk. In our research with couples (n=332), we observed a strong link between attachment and jealousy, yet a minimal connection between attachment and love as dependency. This indicates a need for deeper exploration of these feelings as interrelated aspects in human connections.

RETHINKING BEHAVIOURAL OBSERVATIONS – A DIRECT COMPARISON OF SAMPLING METHOD PERFORMANCE

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ABSTRACT

Reliably and efficiently generating social networks is an essential part of the research of the evolution of social relationships. The challenge of capturing a full record of all social interactions among individuals emphasizes the need to systematically sample behaviour through standardized observation methods. Traditionally, researchers have relied on continuous focal sampling assuming it provides the most accurate results. However, recent simulation studies suggest that instantaneous scan sampling might be more effective to generate social networks.

In this project we are comparing the performance of focal continuous sampling with an adapted version of scan sampling by recording social interactions (proximity, body contact, grooming and agonism) and constructing social networks of a group of semi-free ranging Japanese macaques (*Macaca fuscata*) at the Affenberg Landskron, Austria. For three months, two observers simultaneously collected social interaction data on 30 target females. One observer used focal sampling, while the other used scan sampling, with a daily alternation of observer-method.

From these data we will generate networks using BISO_N [Bayesian Framework for Inference of Social Network], which estimates edges with explicit uncertainty based on observation effort. We will compare the scan and focal networks in their similarity, confidence in the edge weights and robustness of estimated network metrics at individual, dyadic and global network levels. These analyses will allow us to examine the impact of lower observation effort on the estimated network metrics, providing an indication of which method provides a more reliable and representative estimation of the true behavioural rates and underlying network structure.

JEALOUSY IN THE DIGITAL AGE AND SEXUAL DIFFERENCES, NEW PERSPECTIVES IN THE CHILEAN POPULATION

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ABSTRACT

Human emotions have an adaptive origin that has been evidenced in current research, however, it has not been integrated into the study of more complex emotions that are based on affective phenomena, such as romantic jealousy. Jealousy is a recurring theme when investigating interpersonal relationships and can manifest itself in various ways, however, it can be modulated by the new digital environment in which we develop.

In this investigation, predictions will be addressed from an evolutionary point of view on how digital jealousy is presented in the Chilean population as opposed to classical jealousy will be addressed through an online study of 154 people.

It is postulated that in the hypothetical situation of sentimental infidelity it is exacerbated in women, while in men it is associated with sexual infidelity, as occurs in Buunk's jealousy.

The results with the evolutionary approaches allow us to generate current knowledge of the way in which jealousy is currently articulated in each sex, as well as how these have adapted in response to adaptive problems of the past. The findings resulting from this research would allow us to describe how jealousy has adapted to the new digital age, suggesting this measure as a useful tool for measuring the intensity of jealousy within heterosexual couple relationships in future research.

IS ANNOYANCE RELATED TO JEALOUSY EVOKED USING AN ALLOCATION GAME?

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ABSTRACT

Jealousy is a recurrent topic in interpersonal relationships research and has a clear adaptive function of protecting valued bonds. In this work we identify and evoke the mechanisms that drive the elicitation of jealousy, following the predictions of an evolutionary perspective regarding the role of jealousy for protecting a valued relationship from potential rivals, through economic games, where partners play an allocator in two conditions: they can either invest in their respective partners or a rival or receive amounts from the third party and these outcomes are exaggerated. Preliminary results from this study (n=40) indicate that although participants report feeling annoyed when their partners invest resources in other people, not all identify this or report these feelings as jealousy at the time they participate in the games. This phenomenon raises significant discussion about the very definition of jealousy, as well as the social and moral complexity involved in reporting such feelings in spontaneous or unforced contexts. Given this finding, we analyzed the relationship between jealousy reported by game participants and the game condition that most upset them in order to deepen our understanding of participants emotional responses. This approach aims to contribute to the broader discussion of human emotions and their expression in complex social contexts.

INVESTIGATIONS INTO CO-WIFE AGGRESSION AND COMPETITION ACROSS CULTURES

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ABSTRACT

Here I examine the dynamic of co-wife aggression through the lens of ethology, utilizing empirical evidence drawn from the eHRAF World Cultures database. My goal is to elucidate the underlying causes and strategies of competition among co-wives, who represent multiple women engaged in intense mating competition for the limited resources from one man. I propose that co-wife aggression is an adaptive response stemming from resource competition, specifically over male investment in one's offspring, and directly impinges on wives' reproductive success and inclusive fitness. Given the prevalence of polygyny in societies represented within the eHRAF database, the data set provides a fertile ground for the exploration of these dynamics. I employ a mixed-methods approach, combining quantitative analysis of eHRAF data with qualitative examination of ethnographic records. Searches were limited to records containing the terms polygamy and wives, with cohabiting, aggression, violent, or fight. Preliminary findings indicate a complex interplay of strategies used by co-wives that range from direct physical aggression to more subtle forms of manipulation (e.g., gossip, social exclusion, altering husband's perception), and alliance formation (i.e., to increase status and reputation), reflecting a nuanced understanding of social dynamics within polygynous households. In rare instances children are used to foster (and presumably win) competition. Further, they may also compete via differential reproduction, attempting to bear more children, thereby securing a larger portion of the husband's resources for their offspring. Mediation tends to involve the husband, the acknowledgement of hierarchy, and inclusion of sororal rather than unrelated co-wives. Directions for future research into women's intrasexual mating competition will be presented.

DOES SURVIVING PAIN LOWER YOUR RISK AVOIDANCE?

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ABSTRACT

Risk taking and risk avoidance have been extensively studied in evolutionary behavioural sciences. Previous studies suggest that people wearing tattoos are more likely to engage in risk-taking behavior and sensation seeking than people without tattoos. This study set out to explore the immediate effects of obtaining a first tattoo on risk-taking behavior among women. Thirty female participants underwent treatment across two consecutive days, receiving a small tattoo and engaging in a casual 20-minute conversation. The sequence of treatments was randomized. Participants opted for a predetermined design for their tattoo, professionally applied to their arm. Arousal physiology (heart rate, skin conductance, & skin temperature) was measured throughout the interventions. Questionnaires (risk-taking tendencies, impulsivity, and sensation-seeking) and pain thresholds measurements were taken before and after each intervention. A control group of thirty women, who were not interested in getting tattoos, completed identical questionnaires to control for self-selection bias.

This study's findings enhance comprehension of the correlation between tattooing and risk-taking behavior among women, offering insights into the immediate aftermath of obtaining a tattoo and potentially directing future investigations into lasting behavioral impacts of tattoos. Enduring an uncomfortable to painful, and potentially dangerous experience might result in lowering avoidance behavior therefore making it more likely to engage in similar behavior in the future. From an evolutionary viewpoint, adjusting risk avoidance based on individual learning appears to be adaptive to find the optimal approach to exploit environmental affordances.

REVISITING THE FIVE FINGER DISCOUNT: SHOPLIFTING AS A REPRODUCTIVE STRATEGY FOR INCREASING MATE VALUE

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ABSTRACT

Using social media to conduct human ethological research, this study seeks to replicate previous findings showing that online displays of shoplifting are driven by reproductive strategies to increase mate value. Shoplifting, or taking an item from a store without paying for it, is commonly shared on social media platforms. A previous study by Bourgeois et al. (2019) found that shoplifting, displayed by users on the social media website Tumblr, is used as a strategy to increase perceived mate value; they found that 70.3% of items were mating relevant items, whereas only 29.6% were unrelated. The current study utilized similar methods to collect 150 photographs from Tumblr users featuring a total of 1744 stolen items. Two different coders then categorized these items into one of 17 different categories which were then grouped as either mating relevant (fragrance, hair care, jewelry, makeup, skin care, lingerie) or non-mating relevant (arts and crafts, clothing, entertainment, food, home decor, pet supplies, school supplies, technology, toys, and other). Results show that 58.8% of stolen items were mating relevant, while 41.2% were non-mating relevant. These findings are consistent with previous work showing that a significant number of stolen items showcased online are related to appearance enhancement. These results support the notion that reproductive strategies aimed at increasing mate value are a primary underlying factor driving the online display of shoplifted items.

NECKS OF KIN: DISCRIMINATING RELATEDNESS USING ODOUR

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ABSTRACT

Evidence suggests that humans can discriminate relatedness using only olfactory cues. In light of recent studies on the possibility that humans use odour during handshaking to assess others, we compared the efficacy of hand odour to communicate information about relatedness. Specifically, we investigated whether humans could correctly discriminate an unrelated female from a pair of biological sisters using olfactory cues from the hand, neck and axilla areas of the body. We recruited three different triplet sets, each containing a different pair of sisters and a different unrelated female of a similar age. Odour donors wore cotton pads for 24 hours in the three different locations (hand, neck and axilla). Participants were asked to smell these pads and identify which of the odours for each location they thought smelt the most different ('odd one out'). We found that the location where participants were able to correctly identify the unrelated female most reliably was the neck area. Differences in the results between odour triads highlighted the influence of individual differences in body odour and consequently olfactory communication. If odour is important in greetings, our results suggest that a greeting involving a hug may be more effective at communicating relatedness than a handshake.

HOW DOES POSTPARTUM DEPRESSION AFFECT RESPONSES TO INFANT CUES? (PREREGISTERED PROJECT PROPOSAL)

Caitlin Harp (SEA), Amanda Hahn

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ABSTRACT

Infant cues (facial cuteness in particular) are linked to evolutionary adaptations to motivate caretaking and protective behaviors (Kringelbach et al. 2016). Previous neuroimaging work has demonstrated that the infant cuteness activates reward-related regions in the brain (Glocker et al, 2009) and behavioral work suggests that the reward value of cuteness is linked to maternal tendencies (Hahn et al., 2015). It is estimated that 15% of mothers in the U.S. experience postpartum depression (PPD) (Wisner et al., 2013), which impacts the mesolimbic system and is linked to anhedonia (i.e., reduced ability to experience pleasure). Given that infant stimuli are rewarding, it is possible that PPD reduces the reward value of infant stimuli. Previous research has linked anhedonia to reduced reward responses to positive infant emotion expression in mothers with PPD (Morgan et al., 2017). This project aims to determine whether PPD symptomatology negatively impacts the mother-infant bond through blunted reward-related responses to infant facial cuteness.

INDIVIDUAL DIFFERENCES IN THE COORDINATED BEHAVIOURAL AND PHYSIOLOGICAL IMMUNE RESPONSE TO PATHOGENIC THREAT

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ABSTRACT

The Behavioural Immune System (BIS) describes psychological mechanisms that bias our cognitions and behaviours to facilitate pathogen avoidance before they make contact with the body. Research suggests that when the behavioural immune system detects a pathogenic threat, it facilitates an array of aversive emotional, cognitive, and behavioural responses that help us avoid pathogenic threats. The current study investigates whether the functional flexibility of the behavioural immune system impacts the link between physiological and behavioural immune responses as demonstrated by a previous study that merely viewing images of pathogen-relevant stimuli can trigger a physiological immune response. Participants (N = 12) saliva was collected to measure interleukin 6 (IL-6) levels, chemical messengers of the physiological immune system, before and after exposure to pathogenic cues. The Perceived Vulnerability to Disease Questionnaire (PVD) was used to measure participants' perceptions of susceptibility to illness or disease. While the participant completed the PVD, a researcher assistant displayed a contagion cue (fake sneezing). After completing the PVD, participants watched a slideshow of disease-relevant images. Although the analysis revealed a non-significant difference in means, $t(11) = -1.78$, $p = 0.10$, Cohen's $d = -0.51$, it is worth noting that $p = .10$ reflects a trend in the data whereby IL-6 levels elevated after exposure to a pathogenic threat (pre-test $M = 2.42$, post-test $M = 2.84$). The current study did not corroborate previous findings that behavioural immune system activation can trigger a physiological immune response and that individual differences in perceived vulnerability to pathogenic threat moderates this response.

THE EFFECTS OF CLEFT LIP/PALATE AND SUBSEQUENT REPAIR ON THE PROCESSING OF INFANT FACES

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ABSTRACT

Infant cues, and facial cues in particular, serve an important evolutionary role in facilitating caregiver bonding. Given the biological salience of infant faces, it has been suggested that they may be processed differently than other faces. Research using a variety of neuroimaging techniques (fMRI, MEG, EEG) has demonstrated that Infant faces do indeed elicit enhanced neural processing relative to adult faces. Facial malformations have been shown to impact early infant-caregiver interactions negatively. However, it remains unclear how such facial malformations may impact the early neural processing of these faces. Across two studies, we used electroencephalography (EEG) to investigate adults' early neural processing of infant faces with cleft lip/palate as compared to unaffected infant faces (study 1) and the impact of cleft repair surgery on these neural responses (study 2). The N170 response was significantly larger for infant faces with cleft lip/palate as compared to unaffected infants and infants after repair surgery. The P200 response was significantly reduced for infant faces with cleft lip/palate as compared to unaffected infants and infants after repair surgery. These results suggest that infants' faces with cleft lip/palate are processed differently very early in the perceptual process, particularly with respect to configural processing (N170) and face typicality (P200). These processing differences may contribute to several important aspects of development (e.g., joint attention) and may play a vital role in the previously observed difficulties in mother-infant interactions.

REDUCED RELIANCE ON CONFIGURAL PROCESSING FOR INFANT FACES: EVIDENCE FROM THE THATCHER ILLUSION

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ABSTRACT

Face perception is a highly specialized skill in humans. Decades of research have demonstrated that face perception is reliant on configural processing strategies, thought to develop with experience. However, these studies have almost exclusively with adult stimuli. Interestingly, behavioral work suggests adult faces and infant faces elicit different responses. Infant facial cues have been shown to trigger different affective responses, neural activity, and even caretaking motivation. The current study investigated the use of configural processing in infant faces as compared to adult faces using the Thatcher Effect (TE). The TE is a robust configural disruption which occurs when local featural changes are harder to detect in inverted faces. For each infant and adult face identity, a normal unedited version and a Thatcherized version was shown in both an upright and inverted orientation. Participants rated faces using a 1 (not grotesque) to 7 (very grotesque) scale. The data showed a significant interaction between face type and orientation which indicated that the TE was more prominent for adult faces than infant faces in the upright condition. That the TE, a configural disruption, impacted infant facial processing less than adult facial processing would suggest that infant faces may be processed less configurally than adult faces. This finding is in line with work suggesting that the own-race bias in face processing may not extend to infant faces. Given their critical role in parenting and caretaking behavior, more research may be needed to better understand the underlying differences between infant and adult face processing.

HOW DOES CUTE BABY STIMULI AFFECT PROSOCIAL BEHAVIOR VIA DONATIONS IN AN ETHOLOGICAL SETTING?

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ABSTRACT

Cuteness has been found to increase prosocial behaviors such as donation intentions (Shin & Mattila, 2021). These findings often attribute the prosocial effect of cuteness to baby schema features such as big eyes, round faces, and large foreheads, thought to elicit more empathetic emotions which increase prosocial behaviors (Glocker, 2009). However, these effects are often observed in laboratory settings, where the intent to donate may not necessarily translate to an actual donation (Yang et al., 2022). Research that has been conducted outside of the laboratory has focused far more on cute animal stimuli (Guéguen, 2013; Shin & Mattila, 2021; Wang et al., 2017), and does not necessarily extend to human infant stimuli. The current research seeks to fill this gap by asking the question: does infant cuteness increase monetary donations in an ethological context? Adapting the honesty box paradigm (Bateson et al., 2006), researchers installed a black donation box alongside a call for donations advertisement with a picture of either a baby, or the control stimuli (flowers) at a local grocery store. Prosocial behavior was examined via the amount donated when each stimulus was present. We hypothesize that the infant stimuli will significantly increase donations in comparison to the control stimuli. Data collection is currently ongoing (planned end date June 1st); results to be discussed.

EXPLORING THE ROLE OF INTEROCEPTIVE AWARENESS IN BREASTFEEDING

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ABSTRACT

Breastfeeding is an embodied task intertwining physical and emotional aspects that profoundly impact both parents and infants. This study sought to investigate experiences of milk let-down among breastfeeding parents, an aspect regarded as crucial for successful breastfeeding yet lacking substantial documentation in existing literature. We recruited 193 breastfeeding parents via social media and employed a mixed-methods approach including quantitative measures of breastfeeding self-efficacy (BF-SE), duration, and general interoceptive awareness (MAIA2), alongside a novel measure of interoceptive awareness focussing on the experience of milk let-down (BF-IA). Additionally, participants provided written responses detailing their breastfeeding experiences. Our findings indicated duration and BF-IA significantly predicted breastfeeding self-efficacy scores, but MAIA2 score did not. Initial qualitative analysis has revealed a range of positive and negative physical and emotional experiences during breastfeeding & milk let-down, and most interestingly a group of participants reporting an absence of sensations. The qualitative exploration continues, but these preliminary analyses offer intriguing insights into the interplay between mind and body during breastfeeding, with potential implications for maternal and infant well-being.

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