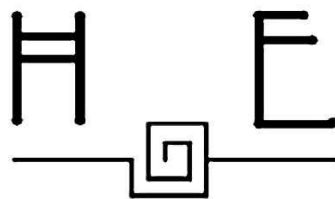


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WOMEN SPEAK AND MEN TYPE?—AN EVOLUTIONARY ENCOUNTER ON SEX DIFFERENCES IN CHANNEL CHOICE IN MOBILE INSTANT MESSAGING

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ABSTRACT

Female same-sex friendships should contain “dyadic intimacy” (Geary et al., 2003, p. 455). Intimate talking might indicate a person’s investment into a relationship (Shackelford & Buss, 1996).

Sex differences were investigated in two mobile instant messaging (MIM) channels: text (TM) and voice messages (VM). VM were assumed as more suitable for natural, authentic intimacy especially within high-intimate conversations and for women.

N = 92 ($n_m = 39$) imagined low-/high-intimate scenarios and indicated in which channel (VM/TM) they would tell their best same-sex friend about it and the probability of VM/TM use. Then they left the message in their previously chosen channel within a MIM app. Messages were further analyzed for sex differences in linguistic markers of self-disclosure.

Women chose VM more often than TM to tell their same-sex friend about high-intimate topics, $\chi^2 = 19.07$, $p < .001$, $\phi = -0.46$.

For the probability of sending VMs, 2 (sex) \times 2 (intimacy) ANOVA showed effects of sex, $F(1, 71) = 28.89$, $p < .001$, $\eta_p^2 = .289$, and intimacy, $F(1, 71) = 23.53$, $p < .001$, $\eta_p^2 = .249$, and an interaction, $F(1, 71) = 6.57$, $p = .012$, $\eta_p^2 = .085$. Men and women differed in the low-intimate, $F(1, 71) = 5.76$, $p = .019$, $\eta_p^2 = .075$, and high-intimate condition, $F(1, 71) = 39.28$, $p < .001$, $\eta_p^2 = .356$.

VM might be more suitable for intimate MIM conversations; particularly for females. Less evident findings on linguistic markers will be presented at the conference.

YOU HAVE A NEW (VOICE) MESSAGE—A CROSS-CULTURAL STUDY ON SEX DIFFERENCES IN MOBILE INSTANT MESSAGING USE IN GERMANY AND NORTH AMERICA

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ABSTRACT

Evolved sex differences (e.g., female “emphasis on dyadic intimacy”, Geary et al., 2003, p. 455) are evident in media use (e.g., female higher sent-received ratio in WhatsApp; Rosenfeld et al., 2018).

Sex differences in mobile instant messaging (MIM), differentiating between text (TM) and voice messages (VM), were observed within two cultures (Germany = G, North America = NA).

Online surveys (G: $n = 247$, $n_f = 200$, $n_m = 46$, $n_{no\ answer} = 1$; NA: $n = 172$, $n_f = 105$, $n_m = 66$, $n_{other} = 1$) including questions on MIM use (Lepp et al., 2015), liking of sending TM/VM (7-point scale) and how often they use it (Fahr & Stevanovic, 2018) were filled out.

2x2 ANOVAs showed for MIM use main effects (sex: $F(1, 409) = 13.00$, $p < .001$, $\eta_p^2 = .031$; culture: $F(1, 409) = 4.05$, $p = .045$, $\eta_p^2 = .010$), and an interaction, $F(1, 409) = 10.46$, $p = .001$, $\eta_p^2 = .025$. For TM use, Type II sums of squares ANOVA was calculated (Langsrud, 2003). For VM/TM use, significant effects of sex (TM: $F(1, 409) = 4.12$, $p = .043$, $\eta_p^2 = .010$; VM: $F(1, 395) = 14.88$, $p < .001$, $\eta_p^2 = .036$) and culture (TM: $F(1, 409) = 6.74$, $p = .010$, $\eta_p^2 = .016$; VM: $F(1, 395) = 93.77$, $p < .001$, $\eta_p^2 = .192$) emerged. Overall, females surpassed males, but only significantly within G. Further findings will be presented at the conference.

EMPATHIC SIGNALING AND SOCIAL CAPITAL AMONG WOMEN WITH LABOR MIGRANT HUSBANDS IN BANGLADESH - PROPOSAL

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ABSTRACT

Individuals endure costs in the process of supporting others, but such burdens can signal the social value of the provider and in turn bring benefits including social assets and cooperation (Bliege Bird et al., 2012; Morelli et al., 2015). Empathic response has been shown to be a proximate mechanism in altruism (De Waal, 2007) and a driver of support provisioning (Davis, 1996; Morelli et al., 2014). Based on signaling theory, the current project seeks to understand the social signal value of empathic response during daily interactions and whether their perceived value is associated with the formation of the signaler's social network.

Specifically, I will examine links between emotional signaling and social capital among women with labor migrant husbands in Matlab, Bangladesh. The signal value of empathy is useful in understanding the formation of dyadic bonds by communicating the trustworthy intentions of the signaler. Further, empathic signaling has the potential to subserve the social strategies among women, whose use and acquisition of social status and power may be limited in male-centric societies. The patrilocal and patrilineal norms in Bangladesh provide an opportunity to test the effect of empathic signaling in the formation of women's social capital. Moreover, variation in residency patterns among the wives of out-migrating men in Bangladesh creates variation in the extent of women's social interactions (Uddin, 2022). Such a context is ideal for testing whether women strategically use social signals according to their social niche to navigate their social world.

FACIAL EXPRESSIVITY AND FRIENDSHIP FORMATION DURING ONLINE SOCIAL INTERACTIONS

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ABSTRACT

Facial expressions are an integral part of interpersonal communication. Facial expressions can display our internal states, change in response to the actions of others and influence others' perceptions and behavioural tendencies. Therefore, facial expressivity has the potential to impact first impressions and friendship formation. The current study aims to explore the influence of facial expressivity and the understanding of display rules of emotions in the formation of first impressions and interpersonal connections in an informal, online group setting. Participants (N = 256) will meet in groups of four to test the hypothesis that more expressive individuals are more likeable and form better first impressions. We predict that individuals displaying higher overall expressivity will be perceived more favourably by others during first encounters (H1a – person perception, e.g. warmth, competence, trust; H1b – behavioural interaction intentions). Further, we also expect that higher overall facial expressivity will be associated with having bigger and more densely connected social networks in real life (H2). Following research reporting that greater understanding of display rules for both positive and negative emotions links with better social outcomes, we expect that individuals who have more precise perception of display rules to be rated as more popular by their group members (H3). The findings have implications for how individuals engage with professional and personal social interactions in both online and face-to-face settings.

MAKEUP INCREASES ATTRACTIVENESS IN MALE FACES

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ABSTRACT

Makeup is commonly attributed with increasing attractiveness in female faces, but this effect has not been investigated in male faces. We therefore sought to examine whether the positive effect of makeup on attractiveness can be extended to male faces. Twenty men were photographed facing forward, under constant camera and lighting conditions, with neutral expressions, and closed mouths. Each man was photographed twice: once without any cosmetics applied and another time with subtle cosmetics applied by a professional makeup artist. Two hundred participants then rated those 40 images on attractiveness. The male faces were rated as higher in attractiveness when presented wearing makeup, compared to when presented not wearing makeup. This was true for both male and female raters, and whether analyzing the data using a by-participant or a by-face analysis. These results provide empirical evidence that makeup increases attractiveness in male faces. Following work on female faces, future research should examine the effect of makeup on several other traits in male faces. The market for male cosmetics products is growing and evolving and this study serves as a meaningful first step in understanding the effect of makeup on the perceptions of male faces.

THE EFFECT OF COMPETITION OUTCOME ON COOPERATION UNDER INTERGROUP CONTESTS

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ABSTRACT

The Male Warrior Hypothesis (MWH) establishes that men's psychology has been shaped by intergroup competition to acquire and protect resources and status. In this context, sex-specific selective pressures would have promoted cooperation with the in-group members while increasing hostility toward outsiders. However, intergroup conflicts do not occur in isolation and the outcomes of previous competitions may influence group cooperativeness to outcompete other groups. Since this phenomena is not well understood, we aimed to shed light on the effect of previous competition on later cooperative behaviour under intergroup conflicts. In line with the MWH, we predicted that a repeated contest between groups may enhance in-group cooperation regardless of the outcome of the previous contest because status is at risk. We formed random groups of six men (N = 246), and we measured cooperation through the threshold repeated public goods game in two rounds, manipulating the outcome in the first round to create groups of winners and losers. Our results showed that intergroup conflict scenarios promoted cooperation in both victory and defeat conditions; whereas, in the control scenario only losers increased their cooperation. Winners under the presence of this external threat may enhance in-group cooperation in order to assure their status; whereas, losers may be attempting to regain it. In future studies it may be interesting to consider whether individual differences related to the MWH may modulate this relationship.

TO BE OR TO BECOME RED. WHAT IS MORE IMPORTANT IN SOCIAL BLUSHING? STUDY PROPOSAL

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ABSTRACT

Facial color displays a range of characteristics (e.g., dominance or health) in both humans and animals. However, humans can blush (i.e., involuntary, and uncontrollable fast onset and fading facial redness) in various social situations, usually involving unwanted social attention. Previous studies found that blushing affects social evaluation, and perception, including emotions. However, the mechanism of blushing perception remains unclear. The main aim of the current study is to test whether the final state (i.e., being red) or the process (i.e., becoming red) plays a more critical role in the perception of attractiveness, trustworthiness, and health. We acquired standardized front-view facial photographs of 64 women (range 18-35y; mean 21.2y; SD 2.6y) and 50 men (range 18-34y; mean 21.5y; SD 2.8y). Further, we will manipulate the redness of neutral faces in static photographs and animated gifs. Gifs allow us to capture the process of change in the level of redness. At least 35 raters per stimuli will evaluate the perceived attractiveness, trustworthiness, and health online. Consequently, we will test whether ratings differ between the setups (photos and gifs). We hypothesize that photos will be rated as healthier (redness was repeatedly found to positively correlate with perceived health), but less attractive and trustworthy (blushing facilitates the perceived authenticity of emotions) than gifs. The proposed study will bring new insight into the perception of social blushing.

HUMANS PERCEIVE THE DISPLAYED DIFFERENCES BETWEEN EXTREME POSITIVE AND NEGATIVE AFFECTS MOSTLY BY CHANCE WHILE AI ALGORITHMS CAN DISTINGUISH THESE DISPLAYS ACCURATELY

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ABSTRACT

It is considered vital for humans to distinguish between the different affective states of others. It has been found that the more intensive the affect, the less likely the perception is accurate. In our study, 800 raters (the signal receivers) focused on their perceptions of basic emotion expressions (laughter, fear), and two affective states (sexual pleasure, pain) expressed by actors and actresses (the 10 senders). We presented the visual and the acoustic scenarios in isolation and then both modalities together. By using Bayesian statistics, we were able to test rating consistencies. Several findings were surprising; those related to the extreme affective states contradict published findings. Affective states were occasionally consistently, correctly identified. Also, laughter was consistently, correctly identified; while fear was not. Furthermore, sex-differences are observed. To evaluate whether these inconsistencies can be ascribed to the senders or the receivers, we used Artificial Neural Networks to mimic the human categorization for the same stimuli sets used for previous studies and extended stimuli sets. The result not only provides us with certainty that the expressions are different for the extreme positive and negative affective states (and therefore the difference is on the side of the rater) but also that the perception is not fine-tuned enough to differentiate the affective expression (because of the noise in the signal provided by the sender). The presentation will provide an overview of the results of studies comparing these two approaches.

CONNECTING BELIEFS IN SUPERNATURAL EVENTS WITH RANDOM STIMULI: CONSIDERING APOPHENIA AND PAREIDOLIA IN AN EVOLUTIONARY PERSPECTIVE

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ABSTRACT

Traditionally, a strict dichotomy between religion and science is expected. In the last decades, a shift in the perception of religion by cognitive scientists conducting scientific studies of these complex phenomena occurred. It has been hypothesized that cognitive and perceptual processes have been under evolutionary pressures that ensured an amplified perception of patterns, especially when in stressful and harsh conditions. This, it is claimed, led to the emergence of a cognitive bias to perceive patterns in visual stimuli that are manifestly random, as well as in random human and animal behavior. This putative bias leads to the by-product hypothesis, one of the main tenets concerning evolutionary studies of religion. Apophenia (tendencies to perceive the meaningfulness of unrelated events) and pareidolia (the perceptions of visual patterns) are therefore of utmost interest. We used a suite of questionnaires probing the tendency to perceive coincidence as a meaningful demonstration of the presence of higher, supernatural powers. We also developed two types of stimuli sequences: (a) one in which several patterns are present, but hidden by a varying opacity of a random overlay, and (b) dot-line graphs displaying random as well as non-random (chaotic) progressions (some naturally occurring). Because the questionnaire responses are ordinal, not numerical, we used Correspondence Analysis. For the emergence of patterns, we used logistic regression and associated clustering algorithms of the derived numerical scores. We find various degrees of strength in beliefs in the existence of supernatural 'explanations', even when the presented stimuli are truly random.

SPONTANEOUS EYE-BLINK BEHAVIOR AND HEART RATE DURING VIEWING OF A SUSPENSEFUL VIDEO STORY

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ABSTRACT

During reception of suspenseful media narratives, viewers should focus their limited attentional resources on evolutionarily relevant aspects of the media content (Fisher & Weber, 2020). Further, suspenseful events in the narrative and co-occurring narrative transportation lead to a narrowing of the recipients' attentional focus (Bezdek et al., 2015; Bezdek & Gerrig, 2017). Therefore, indicators of attention processes may show inter-individual synchrony in audience members.

The present study combined observational measures (spontaneous eye-blink behavior and heart rate) with self-report data (narrative transportation) and content analysis (defining suspenseful scenes) to investigate inter-individual synchrony in attention indicators during reception of a suspenseful media narrative.

Thirty undergraduate students individually watched a 33 minutes long excerpt from a TV show. Recorded eye-blink and heart rate data was used to compute inter-individual synchrony in both blinking behavior (analysis of ISI distance; Kreuz et al., 2007) and heart rate (windowed cross-correlation; Ramseyer, 2020). Suspense in each scene was rated by ten trained coders.

Suspense ratings of scenes show low, non-significant correlations with blink synchrony ($r=-.21$, $p=.31$) and heart rate synchrony ($r=-.12$, $p=.58$). With participants grouped by low and high transportation, a comparison of within-group synchrony shows no significant difference for blinking (Welch's $t=-0.57$, $p=.57$) and heart rate (Welch's $t=-.69$, $p=.49$).

The results suggest that analysis on the level of scenes may not be sufficient, and that a more fine-grained focus on "moments of impact" (Suckfüll & Unz, 2016) could offer more detailed insights into the recipients' processing of a mediated narrative.

THE INFLUENCE OF MORTALITY THREAT ON MEN'S WAIST-TO-HIP RATIO AND BODY MASS INDEX PREFERENCES

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ABSTRACT

Previous research indicates that waist-to-hip ratio (WHR) and body-mass index (BMI) appear to be used by males to evaluate female attractiveness, health, and fertility. However, proximal situational cues (i.e., resource security/hunger level) are shown to influence heterosexual men's preferred female WHR and BMI. Here, we tested whether priming for mortality threat also shifted heterosexual men's WHR and BMI preferences. To test this, three groups of heterosexual men (n=50), were asked to rate 25 female bodies (pre-validated computer morphs) for their perceived attractiveness, health, and fertility. The bodies simultaneously varied in two dimensions, WHR (0.6, 0.7, 0.8, 0.9, 1.0) and BMI (Emaciated, Underweight, Average, Overweight, Obese) and were presented individually, in a randomised sequence. Before presenting the stimuli, Group 1 were given a mortality threat (fear of death) prime, Group 2 were given a control (leisure activity) prime and Group 3 received no prime. We found that bodies with a 0.7WHR and average BMI were rated as significantly more attractive, healthy, and fertile than other body types, whilst bodies with a 1.0WHR and emaciated BMI were rated as significantly less so. There was no effect of priming. Thus, whilst mortality priming did not appear to influence men's body shape preferences relative to control and no prime conditions, our online sample did show a robust adaptive preference for bodies within a given WHR and BMI (0.7WHR, average BMI) range and an aversion to bodies that deviate away from this preferred range (1.0WHR and emaciated BMI).

MATE RETENTION BEHAVIOR AND EJACULATE QUALITY IN HUMANS

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ABSTRACT

Males of some species use mate retention behavior and investment in ejaculate quality as anti-cuckoldry tactics concurrently while others do so in a compensatory fashion. Leivers, Rhodes, and Simmons (2014) reported that men who performed mate retention less frequently produced higher-quality ejaculates, suggesting that humans use these tactics compensatorily. We conducted a conceptual replication of this research in a sample of 41 men (18–33 years; $M = 23.33$; $SD = 3.60$). By self-report, participants had not had a vasectomy and had never sought infertility treatment. We controlled for several covariates known to affect ejaculate quality (e.g., abstinence duration before providing an ejaculate) and found no statistically significant relationships between mate retention behavior and four components of ejaculate quality: sperm velocity, sperm concentration, slow motility, and ejaculate volume. The present results provide little support for the hypothesis that human males deploy mate retention behavior and ejaculate quality investment compensatorily. We discuss the limitations of this study and highlight the need for research to address questions about the nature of anti-cuckoldry tactic deployment in humans, especially concerning investment in ejaculate quality.

DISGUST SENSITIVITY DURING PREGNANCY AND THE EARLY POSTPARTUM – LONGITUDINAL CHANGES AND THE EFFECT OF HEALTH PROBLEMS

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ABSTRACT

Disgust is an emotion that triggers an avoidant reaction to objects or people that could be potential carriers of harmful pathogens. Therefore, it is considered an essential part of the behavioral immune system, where it acts as the affective component. The Compensatory Prophylaxis Hypothesis (CPH) states that an individual's disgust sensitivity should be elevated when an individual is immunosuppressed. An important area of research on the CPH is pregnancy. In a prospective longitudinal study, from 2018 to 2020, levels of disgust sensitivity were measured using the Disgust Scale-Revised in 94 women, repeatedly each trimester of pregnancy and after birth. The potential effect of recent health problems on the levels of disgust sensitivity was also observed. The results of linear mixed models showed that disgust sensitivity, specifically the overall disgust ($F=3.06$, $p=0.029$) and the animal reminder disgust ($F=5.97$, $p<0.001$), increased throughout pregnancy and after birth. We also observed an effect of fetus sex on the changes in disgust sensitivity. Finally, we observed that women who had recent health problems had higher disgust sensitivity, specifically in the core ($F=6.40$, $p=0.013$, $\eta^2=0.067$) and contamination ($F=5.64$, $p=0.020$, $\eta^2=0.064$) subscales, in the first trimester of pregnancy, which is considered the most vulnerable time of fetus development and could therefore require the most protection. Overall, changes in the levels of disgust sensitivity throughout pregnancy and in postpartum seem to relate to a complex mix of physiological and psychological changes that occur during these periods and can also be affected by the sex of the fetus.

GRASPING THE CULTURAL DIVERSITY IN FINGER COUNTING

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ABSTRACT

The human ability to count and express numbers displays great diversity. Numeral systems vary not only across cultures but also across modalities. For example, numerals can be manifested via symbolic notation (e.g., “1”, “2”, “3”), number words (e.g., “one”, “two”, “three”), and material objects (e.g., abacus, knotted strings). The last two decades have turned the spotlight on a previously underestimated modality - body-based numeration, which represents numerals as finger configurations, gestures, or reference to body parts. The close connection between fingers and counting raised the idea of considering fingers as an embodied cognitive tool.

Finger counting systems differ from each other with respect to many aspects: structure (e.g., dimensionality, the value of the base/sub-base, dimensional representation of the base), form (starting finger, the transition between hands), function (counting, montring), and others. These parameters can affect how we understand and process numbers. For example, differences in how numbers are instantiated in hands can affect working memory, cognitive load, the efficiency of number encoding, learning efforts, etc. Structural mismatches between notational, verbal, and finger counting habits may impair the acquisition of other number systems and calculation methods.

The poster presents our approach to systematizing the massive cultural diversity of finger and body counting. The proposed methodology is based on representational analyses done for numerical systems in other modalities. Additionally, the poster also offers a discussion of the cognitive implications of specific properties of body-based numeral systems.

SEX DIFFERENCES IN HUMAN JEALOUSY FROM AN EVOLUTIONARY PERSPECTIVE – AN EMPIRICAL ANALYSIS OF CROSS-SECTIONAL QUESTIONNAIRE DATA FROM 1986 TO 2008

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ABSTRACT

The assumption of sex differences in jealousy with men being more sexually jealous and women being more emotionally jealous belongs to the strongest classical predictions of the evolutionary behavioral sciences that received convincing empirical support (e. g., Daly, Wilson, & Weghorst, 1982; Pietrzak, Laird, Stevens, & Thompson, 2002).

In the research presented here, we tested the temporal stability of this sex difference using different age cohorts. From 1986 to 2008, each year except for 1998 and 2005, German university students of the lecture „Introduction to Psychology“ (N = 4,737; 3,134 women) filled out a questionnaire presenting a forced-choice item with two scenarios from which one had to be chosen: A (emotional fidelity): If anything, I would prefer my partner to sleep with someone else, but be with me with thoughts and ideas. B (sexual fidelity): If anything, I would prefer my partner to sleep with me, but be with another person with thoughts and ideas.

At all measurement points, men reported a higher preference (%) for sexual over emotional fidelity. On average across all measurement points, 17.4 % of the female, but 34.1 % of the male participants reported a preference for sexual fidelity. In sum, our results demonstrate the robustness of sex differences in jealousy across time. However, we also found evidence of an overall increase of the preference for sexual fidelity over time for both sexes.

PARENTAL INTERFERENCE IN THEIR OFFSPRING'S MATE CHOICE: NOT AS DISRUPTIVE AS ONE MAY THINK?

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ABSTRACT

Prior research indicates that parents may have an extensive impact on offspring's mate choice and relationship quality. However, previous portfolios of parental interference actions in their offspring's relationships were primarily based on very young individuals and parents of prepubertal children with little or no relationship experiences.

The main aim of the current study was to map portfolios of parental actions from both parental and their offspring's perspectives. In particular, we focused on parental actions toward the offspring and their partners. Further, we mapped whether and to what extent parental actions differ regarding the target person.

We conducted semi-structured interviews targeting parental actions applied within current and previous offspring's relationships. The sample consisted of total 20 offspring (mean age = 31,4y; SD = 5,46) and their 20 parents (mean age = 58,05y; SD = 7,63).

We identified 32 parental actions classified as disruptive, ambivalent, or supportive, however, the most frequently reported by both parents and offspring were ambivalent and supportive ones. Thematic analysis revealed that parents often interfered also toward both offspring and their partners at once, i.e., the couple. Parental actions differed regarding the target person: toward the offspring the most numbered and most disruptive, whereas toward the couple the least numbered and least disruptive. Our findings show that real-life interactions might not give rise to extreme actions contrary to prior findings based on hypothetical scenarios. Moreover, the necessity to attain extremely disruptive behavioural patterns might slowly decrease with the offspring's age as parental influence weakens with offspring's independence.

TESTING EFFECTS OF PARTNER SUPPORT AND USE OF ORAL CONTRACEPTION DURING RELATIONSHIP FORMATION ON SEVERITY OF NAUSEA AND VOMITING IN PREGNANCY

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ABSTRACT

A recent study focusing on dietary predictors of nausea and vomiting in pregnancy (NVP) found that women with higher levels of partner support, and those who had used oral contraception (OC) when they met the father, both tended to report less severe NVP compared with previous non-users or those with less supportive partners. We provide a further test of these factors, using a large sample of women from four countries who retrospectively scored their NVP experience during their first pregnancy. We recruited women who had at least one child to participate in a retrospective online survey. In total 2321 women completed our questionnaire including items on demographics, hormonal contraception, NVP, and partner support. We used ANCOVA and path analysis to analyse our data. Women who had used OC when they met the father of their first child tended to report lower levels of NVP, but the effect size was small and did not survive adding the participant's country to the model. There was no relationship between NVP and partner support in couples who were still together, but there was a significant effect among those couples that had since separated: women whose ex-partner had been relatively supportive reported less severe NVP. Additional analyses showed that women who were older during their first pregnancy reported less severe NVP, and there were also robust differences between countries. This study adds further evidence for multiple factors affecting women's experience of nausea and vomiting in pregnancy, including psychosocial factors such as partner support.

FRATERNAL BIRTH ORDER EFFECT AND KIN FERTILITY OF CZECH AND SLOVAK GAY AND STRAIGHT MEN AND WOMEN

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ABSTRACT

Researchers have proposed several explanations both for the etiology of male homosexual orientation and for possible evolutionary mechanisms that can offset the lower biological fitness of homosexual individuals. We aimed to replicate results confirming the so-called fraternal birth order effect (FBOE), a well-known excess of older brothers in gay males. We also tested the sexually antagonistic gene hypothesis (SAGH), i.e., the notion that maternal female relatives of gay men are more fertile than maternal female relatives of straight men, a state that allows the genetic variants associated with male homosexuality to be maintained in the human population. Based on an online collected sample, we analyzed fertility and sibship sizes and compared fertility of biological relatives of 693 gay men, 843 straight men, 265 gay women, and 331 straight women from Czechia and Slovakia. We, once again, demonstrated the FBOE among gay men (logistic regression OR = 1.28 for maternal older brothers) and also recorded the effect among gay women (OR = 1.46). Non-maternal older brothers had no influence on their younger brothers' sexual orientation. Our data, however, did not show the FBOE is specific to gay men with bottom anal erotic role orientation (AERO). Speaking of the SAGH, we documented non-significant trends for the higher fertility of many classes of straight men's relatives, hence the opposite of what the SAGH would presume. In comparison with straight individuals, gay men and gay women themselves produced significantly less offspring. Altogether, our results indicate a further refinement of the theory may be desirable.

EMOTIONS TRIGGERED BY ARTHROPODS: A CROSS-CULTURAL STUDY

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ABSTRACT

Throughout its evolutionary history, human mind had to face a huge diversity of animal species as well as other potentially dangerous stimuli and our ancestors successfully dealt with this task. Cognitive abilities as well as human emotions have helped us solve this uneasy task quickly and efficiently. Dealing with huge variability of animal stimuli via emotional reaction which helps us decide whether we should avoid or approach the stimulus, has been neglected in the current psychological research. To decide whether emotional reaction to spiders and other chelicerates has an evolutionary root we need wider cross-cultural as well as developmental data.

In Czech respondents, we assessed authentic emotions elicited by arthropods, either live or their photographs. We found a strong correspondence between emotional evaluation of live arthropods and photographic stimuli. The set of photographs was evaluated also cross-culturally by Azerbaijan, Baka and Somali respondents. According to the Czech respondents, spiders, scorpions, and other arachnids scored the highest in fear and disgust, while beetles and crabs scored the highest in beauty.

We hypothesize that the often (self-)reported strong fear of spiders might be triggered by a much broader strong fear of chelicerates. Among the chelicerates, emotional reaction to spiders and scorpions is really specific in Czech respondents, however cross-cultural agreement on fear evaluation is weak due to variable evaluation of other invertebrates like crabs.

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COALITIONAL FORMIDABILITY ASSESSMENT: A COMPUTATIONAL APPROACH FOR PROVIDING DISTINCTIVE EVIDENCE OF HUMAN ADAPTATION TO WARFARE

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ABSTRACT

Has human psychology been shaped by a deep history of warfare, or does warfare have shallow historical roots, only having emerged since the beginning of the holocene concomitant with the transition to a more sedentary lifeway? This question has generated major interdisciplinary debate, drawing in primatologists, archeologists, anthropologists, economists, psychologists, and political scientists, but remains unsettled. Here, I propose that, as with evidence for dyadic formidability assessment mechanisms, evidence of a coalitional formidability assessment mechanism may provide a distinctive answer. I briefly review the literature supportive of an evolutionary history of warfare from comparative, primatological, archeological, ethnographic and anthropological sources and discuss the shortcoming of each. I then discuss a computational model of a coalitional formidability assessment mechanism that, if can be shown to operate in diverse modern human populations, would provide a strong test for a deep history of selection for psychological mechanisms integral for surviving in a world populated by warring tribes. The talk will focus on the likely settings and patterns of hostile coalitional contact, computational considerations, and design methodology.

DIALING OUT: A STUDY ON OVERCOMING LONELINESS THROUGH CALL AND TOUCH

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ABSTRACT

As a social species, humans deprived of contact find loneliness a distressing and difficult condition. Recently, touch has been found to reduce feelings of neglect, a subscale of loneliness. Affectionate touch, which demonstrates care or affection has been previously linked to wellbeing in couples. However, neither the speculation that increased access to physical contact in relationships lowers loneliness nor the effect touch through video calls has on loneliness have been investigated. To investigate this a survey and experiment were designed. Participants answered a survey about home, social and romantic relationships, including frequency of touch and feelings of loneliness. A Zoom call with no video, video, or video with 'touch' was then applied with another measure of loneliness after the call. Findings suggest that touch plays a significant role in relationships, yet does not appear to significantly lower feelings of loneliness in video calls. The frequency of touch in a relationship was found to significantly influence feelings of loneliness, with individuals in low touch relationships having loneliness scores more comparable to single participants than to those in high touch relationships. Additionally, extraversion played a major role in moderating the effect of touch in relationships. Furthermore, there was no significant difference in reduction of loneliness across, a call with no video, video or video with touch, but overall loneliness scores were reduced. These results emphasize the importance of physical contact in lowering feelings of loneliness within relationships and the ability of calls to lower feelings of loneliness regardless of touch or video.

THE INFLUENCE OF WEARING A FACE MASK ON PERCEIVED ATTRACTIVENESS AND SEX-TYPICALITY: STUDY PROPOSAL

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ABSTRACT

Wearing a medical face mask during the COVID-19 pandemic meaningfully affects facial perception. According to the sanitary-mask effect, the perceived attractiveness of mask-wearing faces is underestimated, whereas studies conducted during the pandemic found that mask-wearing faces are rated as more attractive. Thus, the main aim of this study is to test the perceived attractiveness of masked and unmasked faces just after the pandemic. Further, we will measure the sex-typicality in facial shape with geometric morphometrics (GMM). We hypothesize that perceived attractiveness will not differ between masked and unmasked faces in highly attractive and sex-typical faces. While in less attractive and less sex-typical faces, the masked faces will be rated as more attractive than unmasked faces. According to holistic face processing theory, we assume that in less attractive and less sex-typical faces, raters will imaginarily complete the face as more average, which will raise the perceived attractiveness. In more attractive faces the completion will be similar to reality and will not change the attractiveness rating. In total, we acquired standardized front-view facial photographs of 62 women (range 18-35y; mean 21.2y; SD 2.6y), and 48 men (range 18-34y; mean 21.4y; SD 2.7y). Consequently, the perceived attractiveness and trustworthiness will be rated online (each face by at least 35 raters). To the best of our knowledge, this is the first study where masked faces were photographed instead of created artificially. The proposed study will shed more light on face processing and perception.

RELATION BETWEEN LATENT TOXOPLASMOSIS AND DEPRESSION IN PEOPLE WITH AND WITHOUT FERTILITY PROBLEMS

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ABSTRACT

*Latent infection with the globally spread parasite *Toxoplasma gondii* in humans has been associated with changes in personality and behavior. Numerous studies have investigated the effect of toxoplasmosis on depression, but their results are inconsistent. Adverse effects of latent toxoplasmosis on human fertility have been repeatedly observed. Infertility is also known to be associated with increased depression. Our study focused on the effect of latent toxoplasmosis on depression in men and women related to their fertility problems. In 2016–2018, we recruited clients (677 men and 664 women) of the Center for Assisted Reproduction and asked them to complete a standardized Beck Depression Inventory-II.*

*In women without fertility problems, we found higher depression scores in *Toxoplasma*-positive than in *Toxoplasma*-negative women ($P = 0.010$, Cohen's $d = 0.48$). On the other hand, *Toxoplasma*-positive infertile men had lower depression scores than *Toxoplasma*-negative infertile men ($P = <0.001$, Cohen's $d = 0.48$). While latent toxoplasmosis could be a risk factor for increased depression in women, it could play a more protective function in men. Our results are consistent with previously described effects of latent toxoplasmosis, which seem to go in opposite directions concerning the impact on the personality and behavior of men and women. These findings could be explained by gender-contrasting reactions to chronic stress associated with lifelong infection.*

DOES FLOWER PREFERENCE DIFFER ACROSS CULTURES? A STUDY OF CZECH AND KENYAN POPULATIONS

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ABSTRACT

Despite the ubiquity of floral themes and motifs in art, culture, and everyday situations, human aesthetic responses to flowers remain an unexplored area of research. Our previous studies revealed that Czechs, irrespective of gender, age, education, or level of expertise, display similar aesthetic responses to flowers of diverse shapes and colors, i.e., they like and dislike the same flowers. This might indicate that flower preferences might have evolutionary origins, as some authors suggest. The next logical step was to explore further to what extent are these findings culturally or ecologically dependent. This study compares the flower preferences of the inhabitants of two culturally, geographically, and ecologically highly distinct countries – Czechia ($n = 54$ and $n = 48$) and Kenya ($n = 54$). We asked each subject to rank photographs of 40 species of Czech flowers from the most liked one to the least liked one. We then computed the mean ranking of each flower species in the Kenyan and both Czech samples and compared them. We found a strong positive correlation ($r = 0.79$ and $r = 0.77$) between the samples, suggesting that Czechs and Kenyans prefer the same flowers. This concordance was unexpected, especially given the small sample sizes and the large differences between them. Moreover, the Czech flower species used as stimuli were probably familiar to Czechs but unknown to Kenyans. Thus, our results suggest that cultural and individual factors might play only a minor role in flower preference, whereas more general inborn preferences may be more important.

SOME LIKE IT HOT (BUT MOSTLY THEY DON'T): GENITAL AND SUBJECTIVE SEXUAL AROUSAL IN RESPONSE TO THE COPULATORY MOVEMENTS OF DIFFERENT ANIMAL SPECIES

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ABSTRACT

Studies have reported sex differences in genital response and subjective rating of arousal while exposed to erotic video. Men show category-specific sexual responses, while women do not. A possible explanation is that for men, the key features eliciting arousal are cues relating to the preferred sex, whereas for women the crucial cue are copulatory movements (CM). Although women's subjective arousal is category-specific, they react also to stimuli of non-preferred sex and even to other animal species (Chivers & Bailey, 2005). In this study, we use vaginal and penile plethysmography to test the level of sexual arousal in response to the CM of different nonhuman species. The heterosexual participants (21F, mean age = 27.59±7.91) were randomly presented with eleven 1-minute soundless videos depicting copulation (human female-female, female-male of humans, bonobos, gorillas, lions, zebras, rabbits, guinea pigs, budgerigars, crickets, and lizards). Mixed-design ANOVA revealed the effect of stimulus type ($\omega^2 = 0.35$). The largest responses were for heterosexual and lesbian stimuli. They differed from other stimuli but not from each other. All other stimuli were indistinguishable from each other. There was no difference in genital responses between men and women ($\omega^2 = 0$). For subjective arousal, we found the effect of stimulus type ($\omega^2 = 0.72$). Again, heterosexual and lesbian stimuli were the most arousing. Men rated human stimuli as more sexually arousing than women. Our results suggest that CM displayed in non-human species is not a sufficient cue for eliciting genital or subjective sexual arousal.

ON CAUSES AND CONSEQUENCES OF TOOL USE: WHAT WE LEARNED FROM WILD CAPUCHIN MONKEYS

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ABSTRACT

*The long-term research on bearded capuchin monkeys (*Sapajus libidinosus*) from Fazenda Boa Vista, Brazil has advanced our understanding on tool use by non-human primates and how traditions might affect biological processes. In behavioural studies, we showed that nut-cracking with tools arise from the opportunity to encounter available fruits and hard stones. Nut-cracking skills are acquired through a long process of socially mediated individual learning. A series of experimental studies demonstrates that learning this skill affects cognitive processes such as perception, attention, and memory. In addition, nut-cracking affects social patterns of bearded capuchin monkeys. Nut-cracking on anvil sites generates a high level of direct competition among group members, increasing the steepness of the female dominance hierarchy and decreasing the connectivity of association networks of capuchin monkeys. Finally, a nutritional ecology assessment showed that the nuts obtained through the use of tools substantially increases the diet quality of these monkeys. In summary, the tradition of nut-cracking with stone tools significantly impacts the life of this population of bearded capuchin monkeys. Unfortunately, our more recent studies show that this tradition is at risk due to habitat anthropization, particularly climate change and the transformation of land cover to agriculture. We must take action to protect these monkeys and their culture.*

SMALL ANIMAL DATABASE: NEW SET OF INVERTESBATES PHOTOS FOR HUMAN-ANIMAL STUDIES

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ABSTRACT

In addition to vertebrates, research on human-animals interaction has recently focused on invertebrates. However, the availability of suitable photographs is still insufficient. We created a new set of own photos that contains 62 species of animals including spiders, scorpions, other arachnids, cockroaches, centipedes, millipedes, beetles and other insects. All species were photographed in a standardized form and evaluated by respondents according to 5 dimensions (fear, disgust, beauty, valence, arousal). The results show that positive valence correlates with the perceived beauty of these animals (Spearman's $r = 0.712$, $p < 0.0001$). The color green contributes to the positive relationship, but it is not tied to a specific morphotype. In contrast, negative valence is correlated with fear ($r = 0.747$) and even more strongly with disgust ($r = 0.942$). In the case of arousal, there is a strong correlation with fear ($r = 0.884$) and partly with disgust ($r = 0.522$), not with beauty ($r = 0.167$, $p = 1946$). Animals with a complex body contour and longer legs (spiders, scorpions and other arachnids) are the most scary, while humans are the least afraid of species with a more compact body, such as cockroaches or beetles. The transition between these morphotypes is formed by centipedes and millipedes. Animals with a complex body contour (spiders and arachnids), but also with a longer body (centipedes and millipedes) arouse the greatest disgust. The least disgusting are again species with a compact body (cockroaches, beetles), in contrast to fear, scorpions form a transition between these extremes.

CONSPECIFIC CARE AND HEALING: ARCHAEOLOGICAL AND ETHNOGRAPHICAL VESTIGES OF A HUMAN UNIVERSAL

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ABSTRACT

A fundamental human behaviour is to take care of group members who are wounded or ill. Beyond historical accounts, how far back in time can we trace empirical evidence for this behaviour and can we verify if it evolved in a specific way? Nonhuman primates and other animals successfully utilize herbal remedies. Traces of medicinal plants have been found in Neanderthal dental calculus. Long-term care for a disabled infant is observed among chimpanzees. Early Homo skeletal remains show evidence of pathologies, healed lesions or long-term severe handicaps; such patients may not have survived without loving care and therapeutic knowledge. But there may be additional archaeological evidence to be found: a cross-survey of traditional healing practices suggests that medicinal plants are known and used by most group members and that healers additionally use a set of specific, “magically charged” objects which have common characteristics that might well be recognised in archaeological cultural remains. In particular, the ethnographic record shows that the healer’s tools are unusual objects or correspond to objects linked to religious items thought to convey healing power. Ethnography also shows that often these tools are in use for a long time. Some of them are rubbed against the patient’s body. Here we provide a detailed contextual ethno-archaeological analysis of a traditional healing tool (a carapace piece of a Pelochelys bibroni turtle) used in several ethnic groups in Highland West-New Guinea to identify criteria for the interpretation of archaeological finds that could have had the same function.

DIFFERENCES IN DISGUST SENSITIVITY IN EARLY PREGNANCY AND DURING THE MENSTRUAL CYCLE

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ABSTRACT

Disgust is an emotion that constitutes the affective part of the behavioral immune system, acting to protect against diseases. Disgust sensitivity has been shown to increase and negatively correlate with immune system activity in early pregnancy, a time of significant hormonal and immunological changes. Similarly, in the luteal phase of the menstrual cycle, a time of progesterone-linked immunosuppression, disgust sensitivity should be increased. However, the results of previous studies are inconsistent. In a prospective study running between 10/2020–2/2022, we collected data from 113 women in the first trimester of pregnancy and 264 non-pregnant women without children (100 of them in follicular and 164 in the luteal phase based on ultrasonography). All women completed the Disgust Scale-Revised (including Core, Animal Reminder, Contamination disgust subscales) and the Three Domains of Disgust Scale (TDDS; including Pathogen, Sexual, Moral domains). The results of analyses showed that pregnant women reported higher Core ($U=12154$, $p=0.013$, Rank biserial correlation= 0.163) and Contamination disgust ($U=11328$, $p<0.001$, Rank biserial correlation= 0.220) than controls, but not Animal Reminder, Pathogen, Moral and Sexual. In controls, only Core disgust was higher in the luteal phase compared to follicular ($U=6776$, $p=0.018$, Rank biserial correlation= 0.174). Our results are in line with the Compensatory Prophylaxis Hypothesis, which states that one's disgust sensitivity should be adjusted to the extent of an individual's immunosuppression. The results also indicate that the Pathogen domain of TDDS is not sensitive enough to measure differences related to women's reproduction.

THE FACE IN SOCIAL INTERACTION: AN EXPLORATION OF SOCIAL CORRELATES AND OUTCOMES OF FACIAL BEHAVIOUR

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ABSTRACT

Facial behaviour is a central component of social interaction, and it varies widely across individuals. Examination of this variation and associated cost and benefits can provide valuable insight into the evolution of facial communication. However, previous research is limited in ecological validity, as facial data is often restricted to posed emotional expressions or facial perception, with little focus on facial production embedded in social interaction. In a naturalistic experiment, we measured the production of facial behaviour in 53 participants interacting via video call with a confederate across a range of contexts, including a conflict over dividing a monetary reward. Participants also completed self-report questionnaires, and were rated by the interacting confederate and 150 third party observers on various traits. We measured facial production using facial action coding scheme (FACS), and found that facial expressivity varied considerably across participants, but little across behavioural contexts, and that it also predicted self-reported personality traits. This points towards facial expressivity being a relatively stable individual difference. We also found that facial expressivity affected the likeability of participants, and interacted with personality to affect the amount of reward secured in the negotiation conflict. Together, our results indicate that facial expressivity proffers social advantages to individuals, and that such advantages may vary depending on personality. These findings are discussed in light of social niche hypothesis, which could explain the maintenance of stable individual differences in facial expressivity in the population.

TRIALLING AN INTERVENTION TO IMPROVE PARENT-INFANT CAREGIVING FOR THE IN-PATIENT BIRTH CENTRE STAY

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ABSTRACT

Previous ethological studies of the in-patient postnatal period have demonstrated the importance of environments that allow mother and baby to have unhindered contact to support evolved mother-infant biology. Birth centres differ from traditional clinical environments as they are designed to support the biopsychosocial health of the birthing parent, however little is known if these environments support the development of the parent-infant relationship in the postnatal period. A randomised trial was conducted to compare two different infant care devices; a standalone bassinet and an in-bed bassinet on breastfeeding duration and frequency, parent-infant contact, maternal sleep, and maternal responsiveness during the birth centre postnatal stay. Video was used to observe families using their randomly allocated bassinet following the birth of their first infant whilst staying in an alongside birth centre in the UK. Thirty-one families participated in the study, with 17 allocated a standalone bassinet and 14 allocated an in-bed bassinet. Mann-Whitney U tests indicated that bassinet allocation did not significantly influence breastfeeding, maternal sleep, visitor presence or time that either parent spent holding the infant. However, mothers allocated an in-bed bassinet spent significantly more time touching their infant. Regression analyses indicated that the duration of breastfeeding in the in-patient period was predicted by antenatal intention to breastfeed, maternal education and time infant spent in any bassinet. The time spent breastfeeding in the in-patient period was also significantly influenced by visitor presence, indicating that unrestricted visiting in the postnatal period may hinder maternal-infant bonding and feeding success more than environmental factors.

CONDUCTING LARGE-SCALE CROSS-CULTURAL STUDIES: INSIGHT FROM LEADING A PROJECT ON PHYSICAL ATTRACTIVENESS BEHAVIORS WITH 404 SCHOLARS FROM 145 COUNTRIES

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ABSTRACT

For more than a decade, scholars have raised awareness that most studies are being conducted on WEIRD (Western, Educated, Industrialized, Rich, and Democratic) populations. This substantially limits drawing any general conclusions about the humankind because WEIRD people represent only 12% of the world's population, while the rest derives from different cultural and social backgrounds (Arnett, 2008; Henrich et al., 2010a, 2010b; Klein et al., 2021; Thalmayer et al., 2021). To address this issue, it has been advised to conduct more studies on diverse and heterogenous samples from more (especially non-West) countries. That is where large-scale cross-cultural studies might come in help. Many such projects have already been successfully initiated and conducted (e.g., PSA, COVIDiSTRESS, Many Labs). My goal is to provide insight from personal experiences of leading a large-scale cross-cultural project on (among other things) physical attractiveness enhancing behaviours, which resulted in collecting data (between April-August 2021) from 107,715 participants from 175 countries, with the help of 404 scholars from 145 countries. I would like to discuss each step of this journey, including the invitation of potential collaborators, setting effective means of communication, setting up the questionnaire translations, implementing translations, fixing resulting translating issues (which almost always happen), proceeding with the recruitment of participants, disseminating the invitation to participate in the survey, monitoring the participant's inflow, closing the survey, cleaning the data, and proceeding with the statistical analyses. Although the whole endeavour had many bumps in the road, the main takeaway is encouraging others to join such projects.

TRIUMPH AND PRIDE EXPRESSIONS AS REACTIONS TO SUCCESS IN ELITE HIGH JUMPERS

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ABSTRACT

Darwin (1872) proposed the existence of universal emotion expressions, which Ekman (Ekman, Sorenson & Friesen, 1969) supported by showing cross-culturally substantial recognition rates of six emotions. Tracy and Robins (2008) added pride as “new” non-verbally recognizable basic emotion. Matsumoto and Hwang (2012) separated from pride a triumph expression also based on recognition studies. However, until now no study showed by coding of non-verbal behavior that triumph occurs substantially often and compared it with pride frequency.

We filled this gap with an analysis of 68 elite high jumpers reactions to success, failure and baseline. Triumph signs show expansion, but especially aggressiveness, whereas pride signs show partly other types of expansion and smiles. Behavior was coded by the Facial Action Coding System (FACS, Ekman, Friesen & Hager, 2002), including added gesture and shout codes.

Two types of data analysis were done: Whole-body interpretation as triumph and/or pride and analysis of each type of movement (gesture, shout, facial Action Units according FACS). The results support the display of triumph being a characteristic success-related signal based on both, relative frequencies of whole-body responses (greater than in baseline) and separate movements (e.g. fist, shout). Pride behaviors, too, constituted significantly more expressions after success. However, triumph signs accompanied pride signs usually.

The present results suggest that triumph behaviors serve typical responses to success in competitions, whereas expressions of pride play a subordinate role at least directly after success. Data show that triumph is a meaningful amendment of Darwins’ and Ekmans’ categorization of emotions with typical expressions.

ASSOCIATION BETWEEN SELF-REPORTED AND THIRD-PARTY RATED ATTRACTIVENESS IN BODY ODOUR

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ABSTRACT

Human mate choice is driven by various characteristics including body odour attractiveness. The estimation of own attractiveness modulates one's self-perceived mate value and consequently mate choice. Previous studies tested self-assessment of various characteristics such as facial attractiveness, but similar data on body odour attractiveness is missing.

We focused on the association between self-reported and third-party rated body odour attractiveness (BOA) in women and men. We included data from nine different studies. In total, the body odour samples were provided by 277 men and 249 women. Participants also reported the estimation of their BOA, body hair density and perspiration intensity on 7-point Likert scale. Each sample was evaluated at least by 14 raters (105 men and 965 women in total) for attractiveness. The results showed a significant correlation between self-reported and third-party rated BOA in women ($r = 0.22$; $p < 0.001$), but not in men ($r = 0.09$; $p = 0.15$). Interestingly, self-reported BOA was negatively modulated by the self-reported perspiration intensity, but it did not influence the third-party ratings of BOA. Both men and women tended to overestimate their BOA ($est. = 0.85$; $p < 0.001$).

Our results are in line with previous studies in other modalities which reported correlation between the self and third-party rated attractiveness around $r = 0.2$. However, we found a significant association only in women. This could be due to the better olfactory abilities in women or higher social pressure on women's physical attractiveness.

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THE EFFECT OF EMOTIONAL RECOGNITION AND THEORY OF MIND ON ADAPTIVE FUNCTIONING IN ROMANTIC RELATIONSHIP

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ABSTRACT

It is generally assumed that the adaptive function of human theory of mind and emotional recognition is effective and complex cooperation. The human romantic pair bond - a complex cooperative unit with division of labour and resource sharing - could be a context in which these social-cognitive skills are specifically advantageous. We studied theory of mind, emotional recognition, conflict communication and relationship adjustment in 147 long-term heterosexual romantic couples. Both partners filled in the Dyadic Adjustment Scale to measure relationship quality and the Romantic Partner Conflict Scale to assess communication styles. Emotional recognition was measured using the Geneva Emotion Recognition Test and the Reading the Mind in the Eyes Test, and the Faux Pas test was used to measure theory of mind. Statistical analyses were performed in APIM. Our results showed that men's, but not women's emotional recognition had a positive effect on their own ($\beta = .29, p < .001$) and their female partners' ($\beta = .25, p = .009$) compromising communication in relationship. Theory of mind did not affect relationship communication. In addition, compromising communication significantly predicted dyadic adjustment in women ($\beta = .34, p < .001$). Taken together, our results indicated that couple's compromising communication mediates the relationship between men's emotional recognition and women's dyadic adjustment. We conclude that human monogamous bonds might represent an important social context where the human ability of reading emotions from interpersonal signals and cues is of adaptive value.

EFFECTS OF DIVERSITY IN OLFACTORY ENVIRONMENT ON CHILDREN'S SENSE OF SMELL

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ABSTRACT

Diversity in children's everyday olfactory environment may affect the development of their olfactory abilities and odor awareness. To test this, we collected data on olfactory abilities using the University of Pennsylvania Smell Identification Test and on odor awareness, that was assessed with Children's Olfactory Behaviors in Everyday Life Questionnaire and Odor Awareness Scale (OAS), in 150 school-age children. Parents completed an inventory on children's exposure to a variety of odors and on their own odor awareness using the OAS. The effects of age and executive function on the children's performance were controlled for. It was found that the children's odor identification scores differed as a function of parental odor awareness. Although these effects were rather small, they were commensurate in size with those of gender and age. Future studies should consider the long-term impact of perceptual learning out of the laboratory and its consequences for olfactory development.

SEXUAL DEROGATIONS OF WOMEN ON THE ONLINE GOSSIP WEBSITE, THE DIRTY

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ABSTRACT

Gossip is a low-cost and highly effective way to compete with others. Gossip may involve many different topics, including information on others' reputations. Reputations are extremely important among women and are more vulnerable to tarnish, than men's reputations (Hess & Hagen, 2002, 2006; Reynolds et al., 2018). Here we examine a popular online gossip website, The Dirty, where readers email "the dirt" on others in their community, often supplemented by photographs and derogations. The Dirty represents a repository of derogations such as information about individuals' sexuality (but also personality, mothering qualities; see second related poster). Casual observation indicates the authors are typically women, so The Dirty may be one way women seek to lower potential rivals' mate value. We performed a qualitative analysis for the 25 most recent 'stories' about women for each of the 5 most populous Canadian cities and 5 most populous USA cities, totalling N=250. We found posts routinely included insulting sexual-based terms for women, derogated women for being overly promiscuous, having relations with multiple men simultaneously, infidelity, having children with multiple fathers, engaging in sex work, not taking precautions against STIs, or basic sexual insults. We examine these findings in light of women's mating rivalry, and concerns over reputation, particularly for unverifiable information that pertains to sexuality. We close with a discussion of the value of using existing repositories of real-world data to test predictions of evolved human behavior.

INTERPERSONAL PROBLEMS AND EMOTIONAL FACIAL EXPRESSION RECOGNITION

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ABSTRACT

Evidence suggests that interpersonal problems can cause deficits in emotional facial expression recognition (EFER). Our objective was to evaluate the relationship between interpersonal problems and the EFER in a sample of Brazilian adults, based on the hypothesis that greater reporting of interpersonal problems would correlate with poorer EFER. Participants (N=904, 575 women) were recruited via the intranet of a public university and responded online to the Circumplex Scale of Interpersonal Problems (ECPI), composed of 8 dimensions and to the emotional recognition task (26 computerized faces, 50% female, with 30% and 70% intensity, expressing anger, fear, joy, sadness, disgust and neutral face (Face-Gen Modeller 3.18)). Spearman's correlation analysis showed a significant and negative correlation between egocentrism problems and the identification of anger ($\rho = -.067$, $p = 0.04$). Interpersonal distance problems correlated significantly and positively with identification of sadness ($\rho = .076$, $p = 0.02$). Intrusiveness problems were significantly and negatively correlated with identification of joy ($\rho = -.100$, $p = 0.00$). Higher scores on the interpersonal problems scale correlated significantly and positively with identification of sadness ($\rho = .07$, $p = 0.01$). Our results indicated that, contrary to what was hypothesized, not all correlations between interpersonal problems and facial expression recognition were negative. They also returned few significant correlations. We concluded that the relationship between interpersonal problems and EFER is complex and may vary depending on the interpersonal problem trait and the emotion expressed.

UNPREDICTABILITY AND EMOTIONAL FACIAL EXPRESSION RECOGNITION

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ABSTRACT

Our objective was to evaluate family unpredictability during childhood and emotional facial expression recognition with the hypothesis that increased childhood unpredictability would be negatively related to and emotional facial expression recognition. 754 participants (493 women, 65.4%) were recruited through the intranet of a public university who responded to the Childhood Family Unpredictability Scale (EIFI), which assesses the unpredictability of care and support ($\alpha = .934$), food ($\alpha = .819$) and financial ($\alpha = .818$) and the emotion recognition task which comprised of 26 computerized faces, 50% female, with intensity of 30% and 70%, expressing anger, fear, joy, sadness, disgust and neutral face (Face-Gen Modeller 3.18). Spearman correlation analyzes showed a significant negative correlation between care unpredictability and correct identification of: expressions in general ($\rho = -.08, p = 0.02$), expressions in male models ($\rho = -.07, p = 0.02$), expressions of joy ($\rho = -.08, p = 0.02$). Financial unpredictability was significantly and negatively correlated with the correct identification of: expressions in general ($\rho = -.09, p = 0.02$), expressions with 70% intensity ($\rho = -.07, p = 0.02$), expressions in male models ($\rho = -.10, p = 0.02$), expression of surprise ($\rho = -.11, p = 0.02$). Food unpredictability was negatively correlated with the correct identification of expressions of joy ($\rho = -.07, p = 0.02$). These results indicate that, there was confirmation of the initial hypothesis. However, the absence of significant correlations between the dimensions of unpredictability and the correct identification of several of the emotions presented and the low values of the correlation coefficients of the significant correlations obtained may indicate that family unpredictability during childhood is not a strong predictor of the ability to recognize emotional facial expressions.

EFFECTS OF FACIAL SKIN PIGMENTATION ON SOCIAL JUDGMENTS IN A MEXICAN POPULATION

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ABSTRACT

Skin pigmentation is one of the most conspicuous traits among human populations. Although evidence suggests that these variations reflect selective pressures balancing cutaneous vitamin D synthesis with protection of the dermis from ultraviolet radiation, skin pigmentation may currently be subject to additional selective pressures. For instance, the colonial era in Latin America developed a highly stratified society based on ethnic origins, and light skin pigmentation became associated with social status. Skin pigmentation is also sexually dimorphic, with males tending to exhibit darker skin than females. To explore whether social learning or sexual selection represent additional selective pressures on skin pigmentation, we tested how this attribute influences fundamental social perceptions in a Mexican population (N = 700, 489 female). We sampled facial images of eight European American males with light facial skin pigmentation and eight males from an indigenous pre-Columbian community from Mexico, the Me'Phaa, with darker facial skin pigmentation and produced facial stimuli by interchanging skin pigmentation while preserving facial shape. Stimuli were rated on aggressiveness, attractiveness, trustworthiness, dominance, masculinity, and perceived health. We found that natural faces from European American males were perceived more attractive, trustworthy, and healthy, but less dominant and masculine than natural Me'phaa faces, and the interchange of facial skin color affected mainly attractiveness perceptions. These results partially support the hypothesis that dark facial skin color may aid in male-male contest competition, but they more strongly support the hypothesis that light skin pigmentation in this population became associated with favorable attributes related to pro-sociality.

DOES LINGUISTIC ALIGNMENT PROMOTE COOPERATION? – AN EXPERIMENTAL STUDY

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ABSTRACT

Language and cooperation are closely connected: linguistic similarities increase cooperative behavior between people, while linguistic differences can reduce cooperativeness, and even promote aversion towards outsiders. This may not only be true for sharing the same native language, but also for more subtle similarities such as using similar linguistic constructions. In this study, we tested the hypothesis that people are more likely to cooperate with individuals that align with them syntactically.

We conducted an experiment, in which 40 participants communicated with two interaction partners (which were in fact standardized chat bots), one of which syntactically aligned their language with the participants and one of which didn't. Afterwards, participants decided with which of the two partners they would like to play a cooperation game that determined the financial bonus that they would receive for participation.

Against our predictions, linguistically aligned communication partners were not preferred as cooperation partners (chosen in 47.5% of the cases) over non-aligned communication partners (chosen in 52.5% of the cases; confidence intervals include 50%). Also, there was no correlation between the attention that participants paid to the language used by their partners and their partner choices (chi-square test: $\chi^2 = 0.17$, $p = 0.68$, $\phi = 0.07$).

This suggests that formal linguistic similarity may be less relevant for the outcome of negotiations than previously expected, and has real-life implications for conflict resolution, especially in intercultural communication settings.

WHY MAINTENANCE MATTERS: NEW EVIDENCE ON DISORDER IN THE RESIDENTIAL BUILT ENVIRONMENT AND HEALTH USING BIOMARKER DATA

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ABSTRACT

Over the last decade there has been a renewed interest in identifying exactly how aspects of the residential built environment "get under the skin" and affect the health of not only of those who dwell within, but reside and commute among, disorderly and deteriorating buildings.

In parallel, across the different disciplines that constitute the neighbourhood effects literature, there is a growing acknowledgement that unpacking the "black box" of the phenomenon will require a principled theoretical approach that proposes plausible causal pathways between the area-level neighbourhood context and individual-level health; that is a concerted effort to answer not only the "why?" (ultimate) question, but the "how?" (proximate) question, too.

Building on Wilson and O'Brien's explicitly evolutionary construct of Community Perception, we introduce James Coan's Social Baseline Theory and Jos Brosschot's Generalised Unsafety Theory of Stress to propose and test a novel account of the causal pathway we believe residential maintenance plays between a place and its people.

We use C-reactive protein (CRP), a biomarker associated with infection and stress, alongside information relating to neighbourhood maintenance, demographic characteristics, and health behaviours, all drawn from the UK Household Longitudinal Study. Hierarchical linear regression models estimate CRP for exposure to poor maintenance conditions, controlling for confounders.

Results indicate that poor maintenance is associated with elevated CRP.

Residential maintenance matters to people's physical health. Future work will look to further elucidate the proximate mechanisms that underlie this pathway, in the hope that it will lead to impactful evidence-based policy proposals.

ETHOLOGICAL CONTRIBUTIONS TO THE THEORY OF PSYCHOLOGY

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ABSTRACT

Psychology is an interdisciplinary world with independent areas of basic research and many different fields of application (e.g. schools of psychotherapy). This calls for developing a common basis to enable and promote dialogue between the isolated sub-disciplines. One epistemological tool that helps to bridge the gap between the fields in a comprehensive manner is the (1) "Periodic Table of Human Sciences". Another contribution comes from (2) reconstructing behavioural phylogeny in relation to vertebrate systematics. These approaches help to better understand the interplay of phylogenetically differently aged brain regions. (3) Importantly, the periodic table framework enables incorporating the biomathematical approaches of sociobiology (as another cornerstone of the theory) – providing they have been empirically tested and integrated within ethological results. The (4) Zurich model of social motivation represents a further contribution to functional interrelationships at the psychological/mental level.

VERBAL AND NONVERBAL INFLUENCES ON SOCIAL INVESTMENT DECISIONS

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ABSTRACT

In order to avoid making sub-optimal choices in social decisions such as helping and investing resources in a relationship, people often use information gleaned from social signals displayed by the party at the requesting end of the transaction. In two experiments, we investigated the combined effects of smiling and verbal messages on helping decisions and social investments. Both experiments involved the judgement of videos of men and women displaying deliberate and spontaneous smiles, while at the same time 1) requesting help that involved three levels of costs to the helper, and 2) making verbal promises of selfish, egalitarian, and altruistic outcomes in a trust game. We hypothesised that social decisions are influenced by the type of smile displayed by the requester and by the level of cost associated with the request. Experiment 1 revealed that helping decisions are mostly influenced by the cost to the helper and signaller's sex (women receive more help) rather than by smiling. Interestingly, however, women showing spontaneous smiles could attenuate the effect of costly requests on helping. Experiment 2 revealed that both verbal intentions and smile type independently influenced investments in the trust game. In both experiments, verbal messages had a much stronger impact on social decisions than nonverbal behaviour, the influence of which appeared to be more indirect. These results will be discussed in the light of evolutionary approaches to multimodal communication, with a focus on the role of social and emotional skills in the collection of investment from other group members.

TALK ABOUT YOUR ALTRUISM, IT MAKES YOU COOL AND SEXY – COMPETITIVE ALTRUISM AS A REPUTATION ENHANCING COSTLY SIGNAL IN A REAL-LIFE SITUATION

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ABSTRACT

Altruism functions as a reputation-enhancing costly signal consequently communicating the cost of it affects the reputation of the actor. This phenomenon was studied in a real-life situation in a fundraiser community. The members enter running races and call upon their friends to donate through them to a therapeutic camp for ill children. The reputation of the fundraiser increases because of their costly act for a highly appreciated aim and their friends support the fundraisers by donating to the camp. The communication of the costs of the altruism for both the donors and the fundraiser, and also the reaction of the peers were studied. Donors preferred to follow egalitarian norms and communicate the cost of their altruism only in the case of an average donation but masked the cost if the donation was below or above average. To maximise their reputation increase, fundraisers signal honestly, matching the communicated cost with the objective cost, and draw attention to their subjective cost if they run a marathon or half-marathon. Fundraisers, who emphasize the subjective cost of running collect more donations, and this strategy works better for long-distance runners. Not just the communication of the cost but emphasizing the good goal of the altruism enhances the reputation of the fundraiser, as talking about how they work for the children results in more donations as well. We found that the communication of the cost of fundraising is under sexual selection, as fundraisers emphasizing their cost have a higher ratio of opposite-sex donors.

CAN SOCIAL RELATIONSHIPS BUFFER THE EFFECTS OF EARLY LIFE ADVERSITY IN GORILLAS?

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ABSTRACT

Social adversity in early life has detrimental effects on our health and survival, but this phenomenon is not unique to humans. It has deep evolutionary roots, having been shown across a wide range of animal taxa. One of the most common and often strongest sources of such early life adversity in mammals is maternal loss, with particularly stark consequences demonstrated in a number of primate species. We used over 50 years of long-term data to investigate the consequences of maternal loss in mountain gorillas who live in highly cohesive social groups which face little resource competition. We found no discernible fitness costs to maternal loss through survival, age at first birth, or survival of first offspring through infancy. Social network analysis revealed that relationships with other group members, particularly dominant males and those close in age, strengthened following maternal loss. This suggests that social relationships have the potential to buffer the detrimental consequences of early life adversity, particularly in societies with limited resource competition. In this talk, I will present our findings on maternal loss as well as ongoing research on the effects of other potential sources of early life adversity in mountain gorillas. I will discuss what long-term observations of this close human relative can tell us about the social, physiological and ecological pathways linking early life social adversity to later life outcomes and mechanisms for resiliency to early life adversity.

TWO INDEPENDENT ORIGINS OF COMPLEX BRAINS AND INTELLIGENT BEHAVIOR IN BIRDS AND MAMMALS

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ABSTRACT

Over the last 20 years, it has been shown that birds and mammals are startlingly similar in their cognitive repertoire. Even the most intelligent taxa from each group – great apes and large corvids and parrots – match each other in most domains of cognition. This functional similarity is remarkable considering that birds and mammals shared a last common ancestor about 325 million years ago. Moreover, avian brains are small and lack a cerebral cortex arranged in layers. My talk will focus on recent discoveries showing that birds and mammals independently evolved brains with dramatically increased neuron numbers in the telencephalon and cerebellum, brain parts associated with higher cognition. This surge of brain information processing capacity in birds and mammals is associated with elaboration of at least partly non-homologous neural circuitry. Moreover, similar functions are processed in different, non-homologous forebrain regions. Extreme neuron packing densities in birds partly explain why they have similar cognitive levels as mammals, but volumetrically much smaller brains. Astoundingly, phylogenetic analysis suggests that as few as four major changes in neuron-brain scaling in over 300 million years of evolution paved the way to intelligence in endothermic land vertebrates.

INDIVIDUAL DIFFERENCES IN FACIAL EXPRESSION PROCESSING ABILITY IN RHESUS MACAQUES

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ABSTRACT

*Facial expressions can convey information about an individual's emotions, motivation and future behaviour. The production and perception of facial expressions could, therefore, impact on individuals' social relationships, which can have profound effects on their health and survival. Despite this, individual differences in expression production and perception have been largely overlooked. This project will investigate the form, function and development of individual differences in rhesus macaque (*Macaca mulatta*) facial communication. Understanding how rearing environment is associated with adult facial communication is important to reveal differential adaptive responses to the social environment, shedding light on evolutionary origins. I will test the hypothesis that individual differences in rhesus macaque facial communication relate to an individual's rearing environment and that macaques that are more able to distinguish between different expressions will have a greater number and quality of social connections. My first study will address these questions using a captive population (N=100) of rhesus macaques. I am conducting looking time experiments to determine the facial expression processing abilities of each macaque and will analyse this in relation to data on mother-infant interactions (early rearing environment) and adult social network position. This examination of individual differences could provide important insights into which aspects of facial communication result in better social outcomes, and why facial expression has evolved to be so complex in human and non-human primates. Studying this question in macaques is important as cross-species comparisons can help us learn about the evolutionary roots of these traits in humans.*

SACRED VALUES APPLIED TO VOLUNTEERING BEHAVIOUR: AN INSIGHT INTO THE SACRED VALUES CONCEPT

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ABSTRACT

The concept of sacred values has been introduced as a means to better understand the resilience of groups in conflict situations (Atran and Axelrod, 2008), with a focus on sacred values as a motivation to engage in costly behaviour by drawing on moral and ethical principles (Hanselmann and Tanner, 2008). The application of sacred values has primarily taken the form of qualitative assessment, leaving open the question of its predictive value. In addition, it has not been clearly tested against alternative psychological metrics that might work as well while having a better theoretical grounding. In recent work, we have explored the antecedents of volunteering behaviour, both during and prior to COVID. We applied a range of psychological metrics known to relate to volunteering or to be relevant to understanding social behaviour. In addition, we included a measure of sacred values. Our analysis shows that sacred values have some value in understanding engagement with a socially valuable behaviour, but that other, established social psychological metrics have similar or better value, which also sheds some light on the sacred values concept as a psychological variable.

SEX AND CONTEXT-DEPENDENT DIFFERENCES IN VISUAL ATTENTION TO FACES

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ABSTRACT

Previous eye-tracking studies gave us insight into visual attention and visual processing of faces in general or in the context of memory and recognition. However, very little is known about whether the visual processing is context and sex-dependent.

110 women and 35 men aged 18-40 years viewed 80 facial photographs of men and women while their eye-gaze was recorded by eye-tracking. We focused on the visual attention to faces under the context of choosing a partner (opposite-sex attractiveness evaluation) and assessing a rival (same-sex dominance evaluation). We employed the number of fixations and fixation durations as a measure of visual interest and the cognitive load posed by the stimuli to the rater.

Women had fewer longer fixations when assessing potential rivals and a higher number of shorter fixations during assessing potential mates. Men showed no difference in the number of fixations and fixation duration under the two different contexts. This may suggest that the assessment of potential rivals might be a task that requires more attention and cognitive control for women. For men, both tasks were comparably demanding or interesting. Further, we found no differences between men and women when assessing a potential partner, possibly indicating this task was comparably demanding or engaging for both sexes. However, when evaluating a potential rival, women showed a longer mean fixation duration than men indicating signs of inhibition, control and effort. Overall, our results suggest that visual attention to faces might be sex and context-dependent.

NEGATIVE EMOTIONS ELICITED BY SPIDERS: A PSYCHOPHYSIOLOGICAL STUDY

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ABSTRACT

*Spiders often trigger strong fear and disgust, and arachnophobia belongs to the most common specific phobias. We analysed the psychophysiological pattern of human emotional response to spiders using three distinct spider morphotypes with different levels of potential threat – type tarantula (*Brachypelma vagans*), domestic house spider (*Tegenaria domestica*) and black widow (*Latrodectus mactans*). Spider stimuli were presented as photographs and short videos, on a neutral background or crawling on a human hand. They were presented to Czech and other European respondents (Erasmus+ programme) with different levels of fear of spiders.*

Quite surprisingly, the results showed that spiders form a rather uniform category based on skin resistance (SR) responses. There was a tendency for less intense reactions to a domestic house spider, but the reactions were highly variable. A black widow was evaluated as both, the most fear- and disgust-eliciting spider by the Czech respondents, and a tarantula was the top scoring spider in both emotions for the Erasmus students, however, the concordance in the self-reported evaluation was rather low. Thus, there seems to be no clear distinction which spider morphotype elicits the strongest negative emotions, and no clear distinction to spiders eliciting predominantly fear and predominantly disgust.

The video stimuli represented a stronger stimulation in physiological measures, but not in the self-reported evaluation. We also found a positive effect of spider fear level on the SR responses - high fear respondents had stronger and longer-lasting reactions to all spider stimuli. However, we found only a small effect of the stimulus background.

THE EVOLUTION OF NARRATIVE THINKING

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ABSTRACT

Human propensity to represent facts and their interaction with relevant elements of the physical and social environment around them using structured narratives is well documented in cognitive and social psychology. Narrative thinking is a human universal embodied in the architecture of our brains affecting perception, memory, language, and behavior, and therefore demands an evolutionary explanation. Since narrative thinking distorts the formation of rational inferences based on evidence and frequently assign incorrect roles, intentions and a stable moral character to specific agents or categories without acknowledging complex effects, it must lead to systematic biases and errors in decision-making. In this work I introduce a mathematical game theoretic model to account for the functionality and adaptive value of narrative thinking. I consider a simple type of narrative template that can be applied to different contexts, including competing political ideologies and cooperative personal relations and assume incomplete information about types of agents. When beliefs about the roles of the others are formed based on imperfectly observed behavior and a punishment strategy can be used against others, punishment emerges as a signaling tool of one's type that interferes with the objective of giving appropriate incentives to other types. This dynamic can cause inefficiently costly cycles of revenge and retaliation very difficult to reverse that block the informational value of behavior and condemns the situation to remain in an agonistic template. Political polarization phenomena could be explained using the results and a possible way to test the theory is also provided.

EVALUATING THE 'SKIN DISEASE-AVOIDANCE' AND 'DANGEROUS ANIMAL' FRAMEWORKS FOR UNDERSTANDING TRYPOPHOBIA

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ABSTRACT

Trypophobia refers to the extreme negative reaction when viewing clusters of circular objects. Two major evolutionary frameworks have been proposed to account for tryphobic visual discomfort. The skin disease-avoidance (SD) framework proposes that tryphobia is an over-generalised response to stimuli resembling pathogen-related skin diseases. The dangerous animal (DA) framework posits that some dangerous organisms and tryphobic stimuli share similar visual characteristics. Here, we performed the first experimental manipulations which directly compare these two frameworks by superimposing tryphobic imagery onto multiple image categories to evaluate changes in comfort. Participants from two countries (United States and Croatia) were evaluated on several measures, including general tryphobia levels, perceived vulnerability to disease, and generalised anxiety. Several analyses showed stronger changes in comfort in the human skin condition (hand, feet, and chest images) compared to the dangerous animal condition (snake and spider images). Furthermore, participants with higher levels of tryphobia showed significantly stronger changes in comfort in the skin condition than the dangerous animal condition, with comparable effects obtained across nationalities. Several variables entered as covariates failed to significantly account for this effect. The present work is the first to experimentally test both evolutionary frameworks of tryphobia, with results supporting the skin disease-avoidance framework.

WHEN THE RATED RATE THE RATERS: A NOVEL APPROACH TO UNDERSTANDING HUMAN SEXUAL DESIRABILITY

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ABSTRACT

Background: In most rating research, a (usually WEIRD) sample is asked to rate the presented stimuli (here: sexual desirability, called 'sexiness') on Likert-type scales. These ratings are then analyzed to identify features of the stimuli. One shortcoming is the assumption that the sample is sufficiently homogeneous to support the subsequent analyses.

Aim: Because sexiness is an important cue for potential reproductive mates, we question whether the assumption of homogeneity of the raters is valid; so we look for statistical structures in the samples of raters.

Materials and Methods: Images of 15 females posing nude were presented to 50 male and 50 female raters, who rated the nudes' 'sexiness' on a scale A–G. These images are actually 15 queries about the nudes' sexiness and the ratings are the responses. We used one-hot encoding and a 7-layer neural network to dimension-reduce the feature vectors. We then use DBSCAN and agglomerate clustering algorithms to find clustered preferences.

Results: We find that the male and the female raters do indeed cluster. Surprisingly, raters from some clusters strongly (significantly) disagree with the ratings in other clusters.

Conclusion: The signal of sexiness is important; it is directly related to subsequent successful copulation and to reproductive success. Women need not be 'sexy' for all males, but only for a subset, from which they can then choose a reproduction partner. Women do not homogeneously rate females as potential sexuality-driven rivals. Our research thus contributes to ethologists' understanding of how reproductively successful copulation partnerships are initiated.

DOMINANCE DYNAMICS IN LONG-TERM ROMANTIC COUPLES' INTERACTIONS

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ABSTRACT

A large part of everyday couple's communication involves dominance. Our research explores how long-term romantic partners behaviorally express their will and how the other partner responds. Traditional academic literature shows discrepancies in the dominance construct itself and also discrepancies in what behavioral cues are considered as dominant.

Transforming a psychotherapeutic method of psychodrama (a reenactment of a typical conflictual situation) for research purposes allowed us to see specific couples' authentic behavioral patterns in their most commonly appearing conflictual interaction of 67 heterosexual couples from CZ/SK aged 19-46 (M age = 24,87, SD = 4,78; M length of relationship > 3,5).

A qualitative behavioral analyses (coding and categorization) of couples' interactions were conducted and compared with an interview analysis reflecting the outcome of the interaction. Our focus was on communication cues, strategies of dominance, and overall dynamics in a long-term relationship conflict. We listed 15 behavioral strategies (e.g., kind reasoning, problem denial, attention shift), and compared the presence or absence with what the interaction partners perceived as dominant.

We further analyzed the quantitative data from our participants' power distribution, relationship satisfaction, or expressions of aggression, sexual activity initiation, and overall sexual satisfaction.

The use of mixed-method design allowed us to find novel insights into domineering strategies in conflictual situations during repeated interaction with a romantic partner and their influence on other aspects of the couples' interactions. The presentation will consist of an overview of multiple related studies conducted on the sample that constitute a doctoral project of the presenting author.

HANDSHAKING AND OLFACTORY COMMUNICATION REVISITED

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ABSTRACT

In many species, meetings between individuals are characterised by brief or even extensive olfactory investigation. Inter-individual assessments made in this way enable individual discrimination or recognition and perhaps shape appropriate responses in subsequent interaction, such as in decisions about escalating aggression or whether to accept a mate. A recent study claimed that in humans, handshake greetings might have a similar role: it suggested that people often smell their hands after a handshake. At a previous ISHE meeting, we presented results of a replication study; here we describe a further test of this idea with a new methodology. A total of 160 participants attended a session in which they were greeted by either a male or female confederate in a brief staged interaction. In half the interactions, the confederate shook hands with the participant during the greeting. The design enabled us to compare behaviour of male and female participants to both male and female confederates, and by covertly filming each interaction, we were able to assess whether handshakes were followed by a higher rate of hand-sampling. Our results are not consistent with the proposal that people routinely smell their hands following a handshake.

INTRODUCING MORE ETHOLOGY INTO EMOTIONAL ODOUR RESEARCH

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ABSTRACT

Alongside growing interest in diverse aspects of olfactory functioning, and the resulting recognition that the human sense of smell has been grossly under-estimated, a surge of evidence suggests that human emotions are expressed not just in the face and voice, but also through odour emitted from the human body. Studies indicate that emotion-associated changes in body odour are not only detected by others, but also induce physiological responses in these same others and affect their behaviour in contextually appropriate ways. However, these studies are all based on carefully controlled laboratory studies, and despite this, effect sizes are small. Here we outline some reasons for caution in interpreting these results for human behaviour in the real world and speculate on some study designs that would enable us to bring a little ethological realism to the study of emotional odours. Your input and ideas are welcome!

FACIAL BEHAVIOUR IN ONLINE AND IN-PERSON SOCIAL INTERACTIONS

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ABSTRACT

How does facial behaviour differ between online and in person social interactions? Facial expressions are important tools for communication: we can use facial expressions to convey intentions, emotions, and influence the behaviour of others. Due to advances in technology in recent years (as well as the requirement to socially isolate), many of us use virtual platforms to communicate at work and in our social lives, but we do not yet know whether this format alters how we use faces to interact. Another unique aspect of virtual communication is that we can now commonly see our own face during online interactions. This feedback is likely to increase self-awareness of our own facial expressions and may influence how we behave. In the present study, participants interacted with confederates in three counterbalanced conditions: in person, in an online video call (with their own face visible) and in an online video call (with their own face not visible). Each interaction was video recorded and subsequently coded using the Facial Action Coding System (FACS: Ekman et al., 2002). Type, frequency, duration, and variability of facial movement was compared between conditions. The preliminary findings of this research and implications for increasingly virtual social interactions are discussed.

DO SPIDERS RIDE ON THE FEAR OF SCORPIONS? A CROSS-CULTURAL EYE TRACKING STUDY

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ABSTRACT

A hypothesis based on recent studies suggests that fear of spiders might stem from a generalized fear of chelicerates or fear of scorpions. We conducted an eye tracking experiment using a spontaneous gaze preference paradigm, with spiders and scorpions as threatening stimuli and grasshoppers as control stimuli. 67 participants from Somaliland and 67 participants from the Czech Republic (mainly university students in both countries) were recruited and presented with a sequence of paired stimuli. Both Somalis and Czech people looked longer (duration of the gaze) and more often (number of fixations) on the threatening stimuli (spiders and scorpions) when presented with a control (grasshopper). When both threatening stimuli were presented together, Somalis participants focused significantly more on the scorpion, whereas we found no significant difference in Czech participants. Our results corroborate the hypothesis that fear of spiders originated as a generalized fear of chelicerates or fear of scorpions.

FELLOW LADIES, BEWARE! ANONYMOUS DEROGATIONS OF MEN ONLINE

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ABSTRACT

Reputations matter for human social interactions, especially when choosing a mate. One novel way that reputations are harmed is through public shaming, such as seen on websites where individuals are chastised for breaking social contracts. We explore the website "The Dirty" and specifically examine posts about men. On this gossip website, individuals anonymously submit "the dirt" about others. The posts are highly negative, reputation-damaging, and have been the subject of lawsuits. Casual observation suggests these posts are primarily authored by jilted lovers. Thus, we predicted that descriptions of men would align with women's mate preferences, such that these posts function to harm a man's mating access to future women. We performed a qualitative analysis for the 25 most recent posts about men for each of the 5 most populous Canadian and USA cities (N = 250). Our hypotheses were supported, as the majority of posts are framed as warnings to other women, with characteristics such as deception regarding resources, manipulating people, 'sleeping around,' and having children with multiple women. Negative traits (e.g., abusive, narcissistic, and being 'a predator') are prevalent. We propose that women are creating these posts to decrease their former partner's likelihood of gaining access to new mates via damaging his reputation. Further, women could be motivated to post due to feeling rejected, which is not only unpleasant, but can lead to depression, fear, reputation damage, and loss of self-esteem (Perilloux & Buss, 2008). We discuss the importance of real-world data for testing evolutionary-informed hypotheses.

SELF-REPORTED INFIDELITY: SEX DIFFERENCES IN CHEATING BEHAVIOURS

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ABSTRACT

Here we focus on the cheating behaviors of 94,943 (66.1% women, 33.9% men) individuals. The website, Truth About Deception, provides information about romantic and sexual relationships, and visitors may complete anonymous, short quizzes. We examined "Cheating Spouses" where participants are asked: "How different are men and women when it comes to infidelity? Please share your experience with cheating and see how your results compare with others." There is no demographic information collected, other than (dichotomous) sex. Analyses based on odds ratios show women are significantly more likely to say they had an emotional affair, cheat when bored with sex life, engage in cybersex, use online sources to cheat, cheat when there are problems in the relationship, cheat with someone their spouse knows, and consider leaving their spouse because of their infidelity. In contrast, men are significantly more likely to have sexually cheated, and cheated more than once. Six additional items dealt with how the spouse 'discovered the truth.' We present these for interest; they were not divided by sex. A total of 56.8% confessed on their own, 21.4% reported their spouse investigated, 8.3% confessed when accused, 8% said it was an accidental discovery, 4.5% stated a third party told them, and 1% reported unspecified other. We discuss these findings in light of evolutionary perspectives on infidelity, limitations with these data, and the value of using existing repositories of online data. To the best of our knowledge, these data represent an untapped source of information whereby evolutionary-based predictions may be tested.

REINVENTING THE ETHOLOGICAL WHEEL: RESEARCH ON THE PERCEPTION OF ODOURS BY MARGRET SCHLEIDT AND NEW „DISCOVERIES“

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ABSTRACT

In a recent paper (Arshamian et al., 2022, Current Biology 32) the authors state that their cross-cultural study in 10 different societies revealed that “... contrary to expectations... culture is not a major predictor of odor pleasantness. Instead, there is substantial global consistency...”. Their list of publications (44 quotes) does not include the seminal work of Margret Schleidt and her international colleagues. This early research on odour perception, also conducted in the cross-cultural approach typical for human-ethological fieldwork, showed the universality of many odours and explained them in evolutionary terms, e.g. in their function as guides to healthy environments, healthy foods and suitable (with regard to the Major Histocompatibility Complex) sexual partners. It is quite typical for modern research to disregard older scientific inquiries, especially when they are (in the case of M. Schleidt case only partly) not published in English and not easily accessible by digital search machines.

It is also noteworthy that Darwinian assumptions referring to the universality of central aspects of human perception, emotion, thought and behaviour have still not made their way into mainstream science. Publications on the alleged non-universality of facial expressions, on the cultural specificity of beauty or romantic love bear witness, despite the ground breaking work of Eibl-Eibesfeldt (textbook on human ethology 1984, English edition 1989), Brown (Human Universals, 1991) and others, of this still prominent trend: the power of culture is overestimated. I will exemplify these issues.

EFFECTS OF VARYING PATHOGEN THREAT ON ACTIVATION OF BEHAVIORAL IMMUNE SYSTEM

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ABSTRACT

The behavioral immune system, with disgust as its motivational part, serves as the first line of defense in organisms' protection against pathogens. Laboratory studies indicate that disgust sensitivity adaptively adjusts to actual circumstances but whether disgust levels similarly change in response to real-life threats is largely unknown. In a preregistered within-subject study, we tested whether the threat posed by the Covid-19 pandemic leads to increased perceived disgust, stress, and anxiety. The perception of threat was induced by testing during two phases of Covid-19 pandemic (periods of high vs. low pathogen threat). We found heightened moral disgust and stress during a "wave" of the pandemic but the effect was not observed in the domain of pathogen or sexual disgust. Moreover, the age of respondents and levels of anxiety as a trait were positively associated with the pathogen and moral disgust, which shows that disgust sensitivity may be based chiefly on stable characteristics.

EUGENICS, SCIENTIFIC RACISM, AND THE EVOLUTIONARY BEHAVIOURAL SCIENCES

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ABSTRACT

Eugenics – the ideology that the human species can be ‘improved’ through selective reproduction – was a widespread ideology in many parts of the world in the early 20th century. In this talk, I give a brief history of the early eugenics movement, illustrating how its success was partly due to support from academics. The ideology (apparently) lost popularity after the Second World War, but did hang on as a ‘fringe’ interest in academia throughout the later 20th century. Bringing the story into the present, I use two examples of ‘scientific racism’ to show that eugenic arguments are now emerging out of the shadows into ‘mainstream’ academic discussion again. This resurgence of eugenics – which, to be clear, is ideology and not science – poses a number of dangers, both to science and to society. The evolutionary behavioural sciences are implicated in this resurgence, and I end by discussing steps the discipline might take to counter it, in order to ensure the discipline thrives.

SOCIAL AFFECTIVE TOUCH AT THE ANTI-WAR DEMONSTRATIONS IN THE CZECH REPUBLIC: PRELIMINARY RESULTS

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ABSTRACT

Social affective touch is an important aspect of close relationships. Individuals can convey emotions, including empathy, and thoughts to each other via touch. Moreover, affective interpersonal touch has analgesic and calming effects. The main aim of the study was to explore the variability and frequency of dyadic touch in public space during the anti-war demonstrations. We hypothesized that people will more often and more intimately touch their partners right after the escalation of the conflict to comfort each other. Consequently, the frequency will decrease, and the way of touching will change as a result of habituation to the situation. We developed an ethogram consisting of 21 dyadic touches, which were later classified into individual segments (head, shoulders, hands, back, waist, whole body). We observed different-sex dyads at the three anti-war demonstrations (ca. 60k participants) in Prague in 2022 (third, fifth, and eight days after the invasion). In total, we collected 6 hours of observation per demonstration. In line with our hypothesis, preliminary exploratory analysis suggests that the absolute frequency of dyadic touching had a decreasing tendency with the course of time after the invasion. Similarly, the proportion of touching individual body parts significantly differs across the observations. In sum, we developed an ethogram for dyadic social touch in public spaces during demonstrations. Moreover, despite a number of limitations (e.g., different demonstration sizes), our preliminary results indicate that people touch each other more when they feel threatened, which suggests the soothing effect of social touch.

SCHEMAS WE LIVE BY - DISGUST SENSITIVITY IN MEN AND WOMEN EXPOSED TO COALITIONAL WARFARE AND HUNTING STIMULI

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ABSTRACT

Disgust sensitivity is a tendency to experience disgust. The existence of sex differences in disgust sensitivity is well established in literature, with women being more prone to experience disgust, but the reasons for these discrepancies remain obscure. Previous research suggests that activities like warfare or hunting, which involve exposure to potential pathogen vectors, such as dead bodies, severed limbs, or severe injuries, were historically performed predominantly by males. Thus, it is possible that due to selective pressures in humankind past males might have evolved to be less disgust sensitive. Here, a primary hypothesis that activating a schema of coalitional warfare or coalitional hunting decreases disgust sensitivity was tested. A secondary hypothesis stated that the aforementioned effect would be more pronounced in males than in females. A large sample of men and women (N = 500) watched videos showing either group fighting scenes, group hunting scenes, or people collaborating in a non-violent way (control group). Subsequently, the participants filled Disgust Scale-Revised to have their disgust sensitivity assessed. The results are discussed in light of evolutionary and social psychology theories.

FACIAL SHAPE PROVIDES A VALID CUE TO SOCIOSEXUALITY IN MEN BUT NOT WOMEN

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ABSTRACT

Existing work suggests that observers' perceptions of sociosexuality from strangers' faces are positively associated with individuals' self-reported sociosexuality. However it is not clear what cues observers use to form these judgements. Over two studies we examined whether sociosexuality is reflected in faces, which cues contain information about sociosexuality, and whether observers' perceptions of sociosexuality from faces are positively associated with individuals' self-reported sociosexuality. In Study One, Geometric Morphometric Modelling (GMM) analysis of 103 Caucasian participants revealed that self-reported sociosexuality was predicted by facial morphology in male but not female faces. In Study Two, 65 Caucasian participants judged the sociosexuality of opposite sex faces (faces from Study One) at zero acquaintance. Perceived sociosexuality predicted self-reported sociosexuality for men, but not women. Participants were also presented with composites of faces of individuals with more unrestricted sociosexuality paired with composites of faces of individuals with more restricted sociosexuality and asked to indicate which was more unrestricted. Participants selected the more unrestricted sociosexuality male, but not female, facial composites at rates significantly above chance. GMM analyses also found that facial morphology statistically significantly predicted perceived sociosexuality in women's and, to a greater extent, in men's faces. Finally, facial shape mediated the relationship between perceived sociosexuality and self-reported sociosexuality in men's but not women's faces. Our results suggest that facial shape acts as a valid cue to sociosexuality in men's but not women's faces.

TIMING OF SENSITIVE PERIOD OF SEXUAL IMPRINTING IN HUMANS

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ABSTRACT

People were found to prefer and choose partners similar to their parents in various traits (e.g., eye and hair color, face, body constitution). One of the suggested mechanisms of parental influence on mate choice is sexual imprinting. However, the sensitive period as a crucial assumption of sexual imprinting has not been identified in humans so far. In total, 227 women (18-66 y, mean 28 y, SD 8 y) who grew up with non-biological fathers from a particular age during childhood (0-1y, 1-2y, ... 14-15y), and 1684 women who grew up with a biological father until at least 15 years of age (18-62 y, mean 29 y, SD 8 y) as a control group, indicated demographic, personality, and physical characteristics of their father and long-term partner. By using a permutation test, we examined the level of father-partner similarity based on the age when women grew up with (non-)biological fathers. Results showed that out of 21 traits, 14 exhibited at least a short period promoting the learning of parental characteristics. Most of these sensitive periods were concentrated between 9 and 13 years of age. The sensitive period was most frequently exhibited in physical characteristics, followed by demographic characteristics indicating a sensitive period at the end of the studied period, while in personality traits was found no consistent pattern. In sum, the sensitive period for learning parental characteristics was present in most of the studied characteristics, however, probably later than expected by previous research.

FEAR OF SNAKES IN THE CRADLE OF HUMAN KIND

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ABSTRACT

When threatened, many well-protected animal species signal their dangerousness in a specific manner to repel a possible predator's attack. Therefore, on the receiver's side, a mechanism of early detection particularly sensitive to such threat display may be required by adaptive evolution. In the case of snakes, the warning is often signaled by a threatening posture. In this study, we aimed to explore whether human mind is fine-tuned for snake's intentional threat signalling rather than just unintentional cues of its presence. We investigated whether people pay greater attention to a snake in threatening posture as opposed to a snake in a relaxed posture and we compared the fear elicited by snakes in threatening and relaxed postures. We recruited participants from Somaliland in the Eastern Africa where modern humans probably evolved, and the Czech Republic. Ancestors of Somali people have never left the savanna environment while the people of the Czech Republic are a derived population that left both the geographic region and the environment of human origin. We found that both populations distinguished between the postures as snakes in threatening posture attracted more attention and elicited greater fear. This effect was especially pronounced in cobras but also in vipers. The mechanism of early snake detection mediated by increased fear could have already evolved in the common ancestor of modern humans.

THE ANTHROPOMORPHIC FORMULA: STEREOTYPES OF HUMAN REPRESENTATION, AND WHY THERE IS LITTLE VARIANCE SINCE NEOLITHIC ROCK ART FIGURES

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ABSTRACT

Rock art tends to a reduced style of representation, due to the cragged substratum and the scarceness of tools. For the depiction of items this implies the sampling of few features only that seem essential for the item to look. The question is, why a stereotypical set of features looks essential for the depiction of the human body and why these features look similar in cross-cultural comparison? From Spain, Italy, Sweden, Russia to North Africa we find a comparable human representation in rock art since the Neolithic: a stick figure in frontal position organized along a central axis with symmetrically outstretched paired limbs. Interestingly, the same human figure came about in first drawings of people in traditional cultures (New Guinea, Venezuela, Namibia). Contextual constraints of their working didn't parallel the ones in rock art. This suggests the existence of concepts of human figure independent of exterior conditions as neuronal patterns.

Reduction of environmental information is known as a strategy of visual perception in neuropsychology. For the human figure, perception seems to eliminate information disturbing the recognition of species-specific features. Symmetry is emphasized in the frontal body presentation and visibility increased in spread limbs. Frontality and enlargement of body size furthermore take part in human display behavior, especially in males. The display of the male sexual organ in some figures fits in to this assumption. Recurrence to imposing behavioral patterns and neuropsychological aspects of species-specific recognizability may explain the isomorphic concept of human figures in rock art and recent design.

THE CASE OF METAL MUSIC: AN APPLICATION OF SEXUAL SELECTION OR A COGNITIVE BYPRODUCT?

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ABSTRACT

There has been much debate about the ultimate explanation behind cultural displays such as music and art. There are two competing hypotheses that have often been applied to explain the function of music: sexual selection or simply a byproduct of a complex brain. While there is some evidence to suggest that playing music increases male attractiveness, the sexual selection explanation may not apply to extreme metal, which is a heavily male-biased genre not only among the individuals that play it but also among the fans of it. Therefore, it is unlikely that metal musicians are trying to increase their mating success through their music. However, musicians in this genre heavily invest their time in building technical skills (e.g., dexterity, coordination, timing), which leaves open the question of the purpose behind such investment. One possible explanation is that men engage in this genre for intrasexual competition purposes: to intimidate other males with their technical skills and speed and thus gain status. To examine the competing hypotheses of sexual selection and intrasexual competition, a sample of metal guitarists were surveyed on their guitar playing habits, sexual behavior, and feelings of competitiveness toward the same sex. The overall model for intersexual selection was not significant. However, the overall model for intrasexual selection was significant and showed that the perceptions of playing speed significantly and positively predicted intrasexual competitiveness. The discussion addresses how these results and the extreme metal genre relate to the three competing hypotheses for the evolved function of cultural displays.

THE INFLUENCES OF CENTRAL AND PERIPHERAL CUES ON THE JUDGMENT OF TRUSTWORTHINESS AND INTERVIEW CALLBACK RATE

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ABSTRACT

Individuals were found to use peripheral cues such as physical appearance when engaging in important decision making such as hiring decisions, and political elections. The aim of this study includes investigating 1) the existence of a cross-ethnic effect on perceived trustworthiness and 2) the influence of perceived trustworthiness and ethnicity on the interview callback rates. Two independent samples were recruited. Sample 1 (n=84, mean age=21.86, SD=1.45, 42 Malays and 42 Chinese) rated the trustworthiness of faces in Malaysia Chinese and Malay on Qualtrics, while Sample 2 (n=88, mean age=21.83, SD=3.95, 45 Malays and 43 Chinese) made interview callback judgments based on the same set of facial stimuli, along with randomly assigned educational levels and working experiences, on Psychopy. In both tasks, there was an equal distribution of stimuli from both genders and ethnicities (Chinese vs Malay). For the trustworthiness rating, the results of a mixed-model ANOVA showed a significant main effect for the ethnicity of the images and a significant interaction between the ethnicity of the images and raters. There was no significant difference between the judgment of the ethnicities of the rater. As for the callback judgment, there is a main effect on judgment for academic performance, working experience, and perceived trustworthiness. No significant main effects were observed for both the ethnicity of the images and the raters. The result of this study shows that individuals utilised both central cues and peripheral cues for important decision making.

DO WE SELECT A LEADER BY THEIR GENDER AND PHYSICAL OUTLOOK?

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ABSTRACT

The selection of good leaders is essential for the success of an organization. Research evidence, however, consistently shows that people do not always make use of reliable criteria when making such judgments – and that they may not be aware of the potential influences of peripheral cues (bias) such as one's gender and physical outlook. In this study, we examined the role of gender, facial attractiveness and body mass index (BMI) on perceived leadership. Two independent samples, each with 60 Malaysian young adults between the ages of 18 to 25 years old were recruited to rate the attractiveness (28 males, 32 females; mean age = 20.60, SD = 1.90) or perceived leadership (27 males, 33 females; mean age = 20.90, SD = 2.06) of 55 facial images respectively, on Psychopy. All images displayed neutral expressions and were captured in a standardized setting. The outcome of the analysis shows that individuals are more likely to select someone who is good looking as their leader. However, the analyses showed no influence of gender and BMI on such judgment. We also found a negative correlation between physical attractiveness and BMI which can be attributed to the influence of media and fashion trends.

WOMEN'S PROSOCIAL BEHAVIOR IN GROUPS: EFFECTS OF GROUP SEX COMPOSITION, MATERNITY AND RELATIONSHIP STATUS

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ABSTRACT

Prosocial behavior is defined as voluntary actions that benefit others and include behaviors such as helping, sharing, cooperating, etc. Despite its importance, prosocial behavior has been extensively studied in men but has been rarely focused in women. Since women mainly cooperate with a selected group of individuals to gain and reinforce social status in their social groups, it is expected that they should cooperate with some individuals of the group to increase the offspring caring support (alloparental care), or with a possible mate, by displaying prosocial behavior as a sexually attractive signal. This work aims to understand women's prosocial behavior in groups under an evolutionary and functional perspective. In a population of 384 participants (288 women and 96 men) from central Chile, we will study the effect of group sex composition (same-sex and mixed groups), maternity (mother and non-mother), and relationship status (single and partnered) over women's prosocial behavior from the use of a public goods game (PGG) in groups of six individuals playing on laboratory-controlled conditions. We expect that single mothers will cooperate more to attain social alliances and resources, partnered mothers will cooperate more in same-sex groups and non-mother single women will cooperate more in mixed group. We have data on 222 participants, and we will reach our previously established sample size in June 2022. The prosocial behavior of each participant will be measured as the individual contribution to the group. Data will be analyzed by generalized linear models (GLM) and t-student analyses on R.

BODY ODOUR CUES TO MEN'S PHYSICAL FITNESS

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ABSTRACT

People tend to make relatively accurate judgments about men's physical performance (e.g., strength) or fighting ability based on visual and vocal cues. Similarly, body odour quality has been shown to be associated with characteristics related to an individual's qualities, such as symmetry or health status. However, it is not clear whether human body odour can provide cues to physical fitness.

Here, we investigated the possible relationship between perceived body odour quality and selected aspects of physical performance in Czech Mixed Martial Arts (MMA) fighters.

We collected body odour samples from 44 MMA fighters (mean age 26.6, SD 5.9) (sampled for 30 minutes onto cotton T-shirts). Further, we obtained data regarding their physical (e.g., age, height, body composition) and performance (MMA score, muscle strength, lung capacity, anaerobic performance) characteristics. Obtained odour stimuli were subsequently rated on a 7-point scale regarding their pleasantness, attractiveness, and intensity by 65 women (mean age 23, SD 4.7).

Results from the linear mixed effect models showed that none of the physical performance measurements predicted perceived body odour quality. When looking at the physical characteristics, body weight significantly positively predicted pleasantness and with similar (but not statistically significant) magnitude attractiveness ratings. Moreover, body height was negatively associated with body odour pleasantness and age was negatively linked with attractiveness. Interestingly, we found a positive association between the intensity of body odour and the MMA score. Our findings thus suggest that body odour can provide cues to only certain aspects of men's physical fitness.

DOES THE DIFFERENCE IN ATTRACTIVENESS AND FORMIDABILITY AFFECT THE PROBABILITY AND SPEED OF SELECTION?

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ABSTRACT

Based on visual appearance, people assess and compare characteristics related to inter- and intra-sexual selection with high agreement and speed. People can assess traits of only one person (equivalent to rating one stimulus at a time) or compare multiple peers (in the forced-choice paradigm). These comparisons may enable greater context-dependent accuracy in judgments, considering inter-individual differences. Although raters can distinguish, for instance, winners from losers with above-chance accuracy, such studies test only dichotomic differences between stimuli pairs. The differences between individuals are less likely 'black-or-white' but more on a continuum. This study aims to test the degree of the difference in attractiveness and formidability between stimuli pairs on the probability of being selected and the speed of selection. We predict that the higher the difference within stimuli pair, the more frequently and faster will be the stimulus with a higher score on a given characteristic chosen. Participants will be presented (online) with randomly generated pairs (30 pairs of faces, 30 pairs of bodies) of stimuli to choose a more attractive or formidable target while recording reaction times. Previously collected and rated stimuli will be used. We will evaluate the posterior distribution of parameter values in multilevel models with weakly regularised unbiased priors. A planned sample size of 220 raters will reach power >80% for effects of absolute value 0.15 on a standardised scale (treating 90% Compatibility Interval not overlapping 0 as a conclusively positive/negative effect). We are currently finishing the preregistration; the results will be presented at the conference.

BIG BOYS DON'T CRY - AN ANALYSIS OF PHYSICAL STRENGTH AND ITS EFFECTS ON THE PREFERENCE FOR SAD FILMS

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ABSTRACT

Media use is primarily motivated by hedonism which means to avoid unpleasant states and to obtain pleasant ones. A paradox regarding this is the use of sad films which specifically aim to cause unpleasant states during reception. To explain this, recent theory in media research assumes that recipients of sad films are able to obtain positive feelings through a meta-appraisal of their movie reception (e.g., to recognize how deeply moving the film actually was). To obtain such a state, empathy is needed. Physical strength is (through different pathways) negatively correlated with empathy. For instance it is positively correlated with testosterone levels, which in turn decrease empathy in humans. Hence, in a re-analysis of a preregistered dataset, we evaluate the relationship between physical strength and the preference for different sad movie vignettes.

107 women and 80 men (Mage = 22.98; SDage = 6.02) participated in a laboratory assessment where, besides other psychophysical variables, their handgrip strength, height and weight were measured. Prior to their laboratory assessment they participated in an online questionnaire where different vignettes of sad movies were presented.

For men, the rating of the sad vignettes was negatively correlated with physical strength (e.g., $r = -.35$, $p = .001$). However, for women no significant relationship was found.

Psychophysical traits like body strength can affect even at first sight profane traits like movie preferences. However, these traits have to be viewed from a sex/gender perspective as different physiological traits seem to lead to different outcomes depending on participants' sex.

I WANT YOU TO WANT ME: VERBAL, NONVERBAL, COMPETITIVE, AND PANDEMIC FLIRTATION

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ABSTRACT

One of the adaptive problems men and women face is effectively signaling romantic interest to potential mates. An additional problem related to signaling romantic interest to potential mates involves effectively competing with others, deterring them from pursuing the individual you choose to signal romantic interest to. This talk will cover research that examines: how men and women effectively flirt, verbally and nonverbally, with others, how women competitively flirt with other women, whether culture affects effective male and female flirtation, and how the pandemic affects men and women's flirting behavior.

PHYLOGENY OF HUMAN FACIAL EXPRESSIONS

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ABSTRACT

Communicating with others via the face is crucial for navigating social interactions. Human facial expressions have clear counterparts in related species suggesting shared evolutionary history of these behaviours. Comparative analyses should therefore be fruitful to understand form and function. Facial Action Coding Systems (FACS) can make these comparisons anatomically based and standardised and can be integrated in a toolkit of methods to facilitate comparison across species. Using these methods there is evidence establishing a shared anatomical basis between the facial behaviour of some human and non-human primate signals, but not all. Likewise, the evidence suggests shared function of some signals, but not all. The varied picture has interesting implications for understanding the evolution of human communication.

PARANOIA AS DEFENSE AGAINST CONSPIRACY: AN EVOLUTIONARY TASK ANALYSIS

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ABSTRACT

An evolutionary psychological approach to understanding emotions and motivations posits that they function as coordinating mechanisms. The emotional or motivational mechanisms are thought to orchestrate and regulate various psychological and physiological programs with the purpose of solving specific adaptive problems. In this article, I propose that this viewpoint of emotions as coordinating mechanisms may be a fruitful way to approach the construct of paranoia, defined as a belief that some identified or non-identified conspirator(s) are secretly trying to cause one harm. The (potentially fatal) costs associated with being the victim of a conspiracy may constitute the adaptive problem that paranoia evolved to solve. Second, this paper conducts an evolutionary task analysis of paranoia, leading to new hypotheses derived top-down from theory. The hypotheses are supplemented by existing findings from the emotions literature, the trust and revenge literatures, and the clinical literature. These hypotheses and findings span many domains as they are about the coordinating effects of paranoia on various psychological processes such as motivational priorities, attention, information-gathering programs, imposed conceptual frameworks, memory, learning, and behavior.

IS PSEUDOREPLICATION AN ISSUE IN ETHOLOGY? AN EXAMPLE FROM THE PRIMATE COMMUNICATION LITERATURE

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ABSTRACT

Pseudoreplication is the statistical error of collecting numerous datapoints from single individuals and applying statistical methods that assume independence of data. Ten years ago, Waller et. al published a paper highlighting the prevalence of statistical pseudoreplication throughout the non-human primate communication literature. In this current study, we revisited this literature published between 2009 and now (347 papers) to assess whether pseudoreplication is still widespread, or if we are beginning to overcome these issues. We find that there was a significant decrease in pseudoreplication over past ten years (38.6% then, compared with 23.0% now). This reduction in pseudoreplication appears to be as a consequence of the increased usage of multi-level models (which allow for non-independent data to be nested appropriately). Pseudoreplication used to be more prevalent in research on wild (vs. captive) primates, and those using observational (vs. experimental) methods – however, these biases do not seem to exist in recent literature. This suggests that we are now less statistically constrained by methodology. Sample size on the other hand, appears to be a significant constraint, as those studies with a smaller sample size commit higher rates of pseudoreplication. We believe these findings are of interest to the broader field of ethology and highlights the importance of choosing the correct statistical approaches in behavioural research.

ARE ADAPTATION AFTEREFFECTS FOR FACIAL EMOTIONAL EXPRESSIONS AFFECTED BY PRIOR KNOWLEDGE ABOUT THE EMOTION?

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ABSTRACT

Accurate perception of the emotional signals conveyed by others is crucial for successful social interaction. Such perception is influenced not only by sensory input, but also by knowledge we have about the others' emotions. This study addresses the issue of whether knowing that the other's emotional state is congruent or incongruent with their displayed emotional expression ("genuine" and "fake", respectively) affects the neural mechanisms underpinning the perception of their facial emotional expressions. We used a visual adaptation paradigm to investigate this question in three experiments employing increasing adaptation durations. The adapting stimuli consisted of photographs of emotional facial expressions of joy and anger, purported to reflect (in-)congruency between felt and expressed emotion, displayed by professional actors. A validity checking procedure ensured participants had the correct knowledge about the (in-)congruency. Significantly smaller adaptation aftereffects were obtained when participants knew that the displayed expression was incongruent with the felt emotion, following all tested adaptation periods. This study shows that knowledge relating to the congruency between felt and expressed emotion modulates face expression aftereffects. We argue that this reflects that the neural substrate responsible for the perception of facial expressions of emotion incorporates the presumed felt emotion underpinning the expression.

CAN YOU TELL WHAT I'M FEELING? "UNMASKING" EMOTION RECOGNITION IN A CROSS-CULTURAL STUDY

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ABSTRACT

The ability to accurately recognise others' emotions and react accordingly enables effective social interactions. As face masks occlude lower facial features, it is possible that emotion recognition may be impaired.

This study aimed to examine if, and to what extent, face masks affect emotion recognition. A total of 208 participants (123 Malaysian Chinese, 85 White British) aged 18-30 years old were recruited for an online experiment. Participants were presented with Caucasian and Chinese faces showing the six basic emotions across four conditions (full faces, faces covered with a face mask, book, or mobile phone), and were asked to indicate the correct emotion shown on each face.

Overall, emotion recognition was better on full faces than covered faces. White British participants recognised disgust and fear better on full faces than covered faces, but the recognition of other emotions was not affected by face coverings. On the other hand, Malaysian Chinese participants recognised anger, disgust, happy, sad and surprise on full faces better than covered faces. Interestingly, while recognition of full faces was better for fear than masked faces, there were no differences between the full face, book and phone conditions, suggesting that surgical masks may carry negative health connotations such as pathogen disgust or the fear of getting infected with Covid-19 in the Malaysian sample.

Taken together, these findings suggest that despite the malleability of face processing mechanisms, lower facial features are still necessary for inferring emotional states, particularly for negative emotions such as disgust and fear.

DEPENDENTS AS DISPLAYS OF INVESTMENT CAPABILITIES: THEIR ROLE IN ONLINE DATING

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ABSTRACT

Humans adopt short- and long-term mating strategies, producing sex- and strategy- specific preferences for a mate's investment in the relationship. Investment includes financial and social status, as well as caring abilities, which women strongly desire – especially under long-term contexts. We propose children and pets (“dependents”) signal their carer has the ability and willingness to provide such investment. Online Canadian dating profiles (from 2020) were used to test whether men seeking long-term mates are more likely to display dependents than men seeking short-term, and women seeking long-term mates. Moreover, it was examined whether this pattern held for different types of dependents. The first prediction was supported while the second was not, indicating men and women seeking long-term mates use dependents to advertise their investment capabilities. Further, a sex difference among those seeking long-term relationships emerged: women were more likely to include references of children (and non-canines), while men were more likely to display references of dogs. We discuss why dogs in particular are displayed. Additionally, few women were found to seek short-term mates, thus were excluded from the main analyses (indicating women do not use such platforms to attain short-term mates). Future work can determine whether such findings are consistent across platforms, if daters honestly indicate their mating strategy on dating platforms, if displaying dependents improves mate acquisition, and whether such displays change with age.

This work has been recently published in Evolutionary Psychological Science; details withheld for blind review.

DEROGATIONS OF MOTHERING QUALITIES AND PERSONALITY: INTRASEXUAL COMPETITION AND THE CONTENT OF WOMEN'S GOSSIP

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ABSTRACT

Here we perform a qualitative examination of how women are derogated on the gossip website, The Dirty. We examine posts about 25 women in each of the most populous 5 cities in Canada and in the USA (N = 250). We document that posts are derogatory and often contain a warning to readers about the target. We argue that reputational gossip is an integral part of The Dirty. Reputation is extremely important among women; its usage integral in navigating same-sex alliances, accruing useful gossip, and competing with other women. Therefore, in the current study we sought to explore whether the posted information aligned with the literature on women's intrasexual competition. Namely, we hypothesize women will be derogated in terms of their mothering qualities and personality on The Dirty. We opted, for brevity, to examine sexuality separately, given it is such a large area of importance in the literature. It has been submitted as a second, independent poster. Our predictions were supported; the information in the posts align well with previous research on women's intrasexual mating competition (and men's mate preferences). Analyses also revealed derogations of resource extraction, mate poaching, substance use, and general warnings about the target were present. Indeed, there exists little else in the posts. We discuss the advantages of using an evolutionary framework to understand the function of gossip.
