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Poster

Genetic polymorphism of apolipoprotein E and lipid profile in older women

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Apolipoprotein E (ApoE) is involved in lipid metabolism. The ApoE is encoded by the polymorphic gene with three isoforms *ApoE2*, *ApoE3* and *ApoE4*. The *ApoE4* allele significantly increases risk of poor health, but at the same time is related to higher parity and higher levels of luteal progesterone among young women. It is hypothesised that detrimental for health *ApoE4* allele is maintained in human populations because it increases reproductive success. The aim of this study was to investigate the relationship between *ApoE* polymorphism and cholesterol levels among older women. Moreover we are testing if this relationship is also present in agricultural populations.

Data were collected from a Polish rural population at the Mogielica Human Ecology Study Site. The participants were 378 post-reproductive women aged 45–92. Following overnight fasting, venous blood samples were drawn from an antecubital vein. Cholesterol levels were measured and polymorphic discrimination of *ApoE* genotypes were detected with sequence-specific primers Polymerase Chain Reaction (PCR). We divided women into two groups: those who had at least one *ApoE4* allele (n=114) and those who had other genotypes (n=318).

Women carrying at least one *ApoE4* allele had higher total cholesterol (TC) levels compared to women who did not have this allele, after adjusting for age and education (p=0.026). The *ApoE4* carriers also had higher low-density lipoprotein (LDL) (p=0.026), while levels of high-density lipoprotein (HDL) did not differ between APOE genotypes (p=0.94).

In a group of women from small scale agricultural community *ApoE4* allele was related to elevated levels of cholesterol at older age. Older women with at least one *ApoE4* allele could be more susceptible to the harmful effects of cholesterol. This may lead to an increased risk of cardiovascular or neurodegenerative diseases such as Alzheimer's disease. Conversely, increased lipid levels may lead to increased progesterone levels associated with fertility.

*Speaker

Changing our mental model of culture: from viral transmission to organic deposition

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Mental models play a key role in science. They influence how scientists filter, process, and store information, and consequently their research programs, their methodologies and eventually their conclusion. Traditionally, culture has been viewed similarly to biological evolution, where ideas, norms, and beliefs are transmitted across generations like genetic inheritance. However, this model is limited, overlooking the innovative and non-replicative aspects of cultural practices and artifacts, as well as the active role individuals play in shaping culture.

This talk thus proposes a shift in understanding culture from a model of viral transmission to one of organic deposition. The organic deposition model sees culture as an accumulation of products from past generations, which are reshaped and repurposed by subsequent ones. Cultural elements are not merely transmitted for replication but are resources deposited in the human environment, akin to organic matter in ecosystems. This perspective emphasizes the creative reuse and adaptive transformation of cultural elements rather than their faithful transmission.

The process involves cultural deposition, extraction, and production. Deposition is likened to ecological legacies, where actions of past organisms modify the environment for future ones. Cultural elements like technologies and beliefs are similarly deposited in our environment. Extraction involves individuals actively interpreting and utilizing these deposits, requiring specific cognitive abilities. Finally, cultural production uses these resources to create new elements, an adaptive process shaped by individuals' evolved goals.

The ecological approach can better explain sudden cultural changes and discontinuities, which might appear anomalous within the standard cultural evolution framework. It notably explain why cultural changes can be rapid and driven by shifts in individual needs and environmental contexts. This ecological approach aligns with disciplines like economics and cognitive science, emphasizing individual decision-making and behavior. With the mental image of organic deposition and ecological recycling, we aim to change the standard view of culture.

*Speaker

How cultural distance can promote - or impede - group-beneficial outcomes

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Classic models of social interaction such as the Prisoner's Dilemma show that high between-group segregation (F_{st}) can promote the spread of altruism in cooperative dilemmas. Empirically, this has recently translated into the cultural F_{st} statistic to predict intergroup prosociality using the cultural distance between groups. Here, we ask how this result might change by including frequency-dependent game dynamics, as found in Stag Hunt, Hawk-Dove, Pure Coordination, etc. Drawing on recent work in the social evolution literature, we use mathematical models to identify general conditions under which F_{st} can impede, rather than promote, the evolution of group-beneficial outcomes. In simple coordination games, insular sub-groups can become 'stuck' on an inferior equilibrium, and in complementarity games high F_{st} (e.g. behavioral segregation) can prevent mutually-beneficial interactions. These mathematical results suggest a fuller understanding of the role of cultural or behavioral diversity in evolutionary systems beyond games like the Prisoner's Dilemma, and provide theoretical support for recent cross-cultural economic experiments that emphasize complementarity and coordination, rather than selfishness and altruism.

*Speaker

Morality as easing tool for inference and choice

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Moral principles are a set of behavioral guidelines that mandate how people ought to behave. They claim universality, advocate what is right and wrong, and autoreferentially justify it. In this paper, we investigate morality from a decision-theoretic point of view, taking the perspective of an individual facing the issue of deciding what to do in a social interaction. We propose that moral principles can be thought of as heuristics that facilitate inference and choice during decision-making. Specifically, in an interactive context populated by individuals aware of the moral guidelines commonly agreed upon by the shared social group, moral principles aid individuals infer how others would behave by reducing belief uncertainty about the partners' conduct. Thereby, the decision-maker can condition on a smaller belief state, disregarding a potentially infinite myriad of alternative models of behaviors the interactive partner might consider. Moreover, they further help individuals decide themselves how to behave by reducing action uncertainty about the admissible/appropriate actions to perform. Thereby, the decision-maker can curtail big portions of the decision tree during planning, considering only a smaller set of actions and consequences. We introduce toy examples that show how morality works as such facilitating heuristic and exemplify our decision-theoretic approach by re-interpreting some previous findings of moral behavior. We show not only that previous, surprising observations appear more coherent if understood under the light of this proposal, but we also discuss a series of predictions that can be derived from it.

*Speaker

Mind telling? Investigating variations in mind-mindedness across time and cultures using the medium of fictions

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Although Theory of Mind is thought to be a crucial adaptation for human cooperation, societies vary in the extent to which they discuss and consider mental states – their mind-mindedness. We sought to understand where, when and why humans get interested in knowing about the mind. By identifying the factors that favor mind-mindedness, we also aimed at contributing to identifying why and how explicit theory of mind first evolved. We used fictions to assess variations in mind-mindedness a) across time with a corpus of theater plays spanning two centuries in England and France b) across cultures with a corpus of folktales from 80 societies. As a proxy of mind-mindedness, considering fictions as ”cognitive fossils” reflecting how salient mental states were to tale-tellers and their audiences, we used two Natural Language Processing techniques on the fictions: a) a bag-of-words method, and b) a rating by a Large Language Model (GPT-4) (this last part is still work in progress) still work in progress). We find significant and robust correlations between mind-mindedness and cooperativeness, but also that interest for mental states does not always increase with time and affluence. We also highlight that higher sample size and higher quality of transcription will be crucial for future works investigating cross-cultural psychological variations through the medium of fictions.

*Speaker

Polygynous marriages are more efficient but less egalitarian than monogamous marriages: Experimental evidence from Sierra Leone

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Polygyny is often described as a harmful cultural practice, not only for the women affected but for the economic productivity and efficiency of the household, and more distal effects on the national economy. To investigate the legitimacy of these economic claims, we conducted a series of experiments with unmarried and married men and women in 14 randomly selected villages in Sierra Leone (N=728) to investigate the extent to which spouses in monogamous and polygynous unions maximize households gain, share resources equitably, and/or maximize personal gains. Using a within-subject design in which a series of dictator games is played against spouses, co-wives, and strangers (an anonymous co-villager), our data show that in both marriage arrangements men and women alike maximize resources more with their spouse than with a stranger, indicating that marriage of any type does produce a household-level public good. Second, this shift towards maximizing joint payoffs when playing with spouses is larger for polygynous than for monogamous couples. The latter instead are relatively more likely to choose egalitarian distribution than polygynous couples. Third, co-wives treat each other in ways that are intermediate between strangers and their husbands. Fourth, husbands treat all their wives similarly, and co-wives treat each other equally. This pattern points to the higher efficiency of economic decisions made within marriages, be they monogamous or polygynous, but different cooperative strategies: a willingness to burn resources to maintain egalitarian payoffs between some monogamous spouses and co-wives, a higher capacity to maximize overall household gains despite its unequal allocation between polygynous spouses.

*Speaker

Why do Grandparents Care?

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There is a consensus that grandparents providing grandchild care experience health benefits, however, some recent studies show inconsistent findings. Variations in frequency and intensity of grandchild care may explain these inconsistencies. Another, currently unexplored explanation, is that grandparents have different motivations (e.g., autonomy versus obligation) and these motivations may moderate the association between grandparenting and health. Employing a mixed methods design, focus groups explored grandparents' experiences of providing grandchild care. Participant surveys gathered grandparents' demographics, lineage, and childcare frequency. Grandparents reported enjoying grandchild caregiving and were autonomously motivated to help but acknowledged the role was challenging regardless of the childcare frequency. Grandparents discussed feeling appreciated and having control over the amount of care provided. Overall, grandparent health and wellbeing was good, however, a common physical challenge for grandmothers was feeling tired. Maintaining paid employment and caregiving was a challenge for grandmothers with many reducing their hours or retiring. Parent and grandparent cooperation was high and conflict was low. Exploring grandparent motivations provides insight into how grandparents balance healthy ageing with the challenges of providing childcare. This research highlights grandparents' motivations to provide grandchild care and how they negotiate the role as likely moderators of the relationship between caregiving and health.

*Speaker

”I believe in science, not my aunt’s opinion” vs ”Vaccination is one big conspiracy” - mothers’ views on immunization and the COVID-19 vaccination.

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Immunization is a reliable mean of protecting the body against infectious diseases. Studies indicate that pregnant women should be immunized, including vaccination against COVID-19, as advised by the American College of Obstetricians and Gynecologists. Pregnant women are at high risk of developing maternal-fetal complications if they contract SARS-CoV-2, which could result in hospitalization or intensive care unit admission.

Despite numerous scientific studies confirming the effectiveness of COVID-19 immunization and vaccination, there remains a concerning lack of information regarding the reasons why pregnant women opt out of vaccinating themselves and their babies, especially during the pandemic.

The objective of this study is to present the viewpoint of pregnant women regarding COVID-19 vaccination and understand the reasons for declining immunization. The study is based on a qualitative survey conducted among 318 mothers aged between 22 and 44 (Mean = 33.83, SD = 3.71) who were pregnant during the pandemic. After delivery, the vast majority (239 women) received COVID-19 vaccinations, while 79 women were vaccinated during pregnancy, according to preliminary descriptive statistics. The numbers for vaccinating children against COVID-19 are quite similar - only 25 pregnant women have vaccinated their child, while 95 plan to do so as soon as their child turns 6 months old. A detailed qualitative analysis will provide further insight into the reasons for vaccinating or not vaccinating against COVID-19 (also from a biological-evolutionary perspective), during the perinatal period, which will help propose potential solutions to the declining vaccination rate.

Keywords: immunization, pregnancy, well-being

*Speaker

Weddings are mass bonding events

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This talk builds on the previous results of Network Ecology of Marriage. This theoretical framework predicts that weddings are mass bonding events in which a large number of new social network edges are formed. The talk spells out the theory, and tests empirically the hypotheses that wedding traditions are more likely to be present in cultures and are more frequent when (i) families are large, (ii) the social group is important for basic economic functions, and (iii) for an ecological or other reason, maintaining cooperative stance within the group is difficult. The talk shows that weddings are present in all patriarchal systems, but rare or modest in gender equal or matriarchal systems, and that the more the factors (i-iii) are present the more important the investment into these new bonds is, and hence the more expensive weddings tend to be. The theoretical framework is part of the Structural Microfoundations theory of the society; the data comes from (a) a 7-language survey of mate choice and social networks; and (b) a cross-cultural survey of wedding practices.

*Speaker

Height preferences in mate choice and endorsement of gender norms

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Evolutionary psychologists have proposed that height preferences when selecting a potential mate reflect condition-dependent mating strategies, whereby tall height in men is deemed attractive due to its potential links with health and resource acquisition. Alternatively, height preferences could reflect a socially constructed ‘male-taller’ norm in Western societies. This possibility leads to the prediction that individuals who place greater importance on the height of potential partners would score higher on measures of sexist attitudes and lower on measures of feminist attitudes, and be less willing to contravene the ‘male-taller’ norm, compared to those who place low importance on height. Participants (N = 112 women, 110 men; heterosexual, UK-based) completed: i) a set of questions about their height preferences and own height, ii) three gender norm measures (*Liberal Feminist Attitude and Ideology Scale*, *Ambivalent Sexism Inventory*, *Traditional Masculinity and Femininity Scale*), and iii) two open-ended questions about why height might be important to them. On average, women reported a preference for a partner taller than themselves, and men reported a preference for a partner shorter than themselves. Female participants who placed greater importance on height scored higher on sexist attitudes and lower on feminist attitudes, and were less likely to find a partner shorter than themselves acceptable, compared to female participants who placed less importance on height. Male participants who were less willing to accept a taller partner placed more importance on height and were more likely to describe themselves as being traditionally masculine. Female participants who rated height as important wanted to feel ‘feminine’ or ‘protected’, whereas male participants wanted to feel ‘masculine’ or ‘dominant’ relative to their partner. These findings suggest that between-individual differences in height preferences in women and men are related to the extent to which individuals endorse traditional gender norms, particularly those related to protection and dominance.

*Speaker

The importance of face-shape masculinity for perceptions of male dominance depends on study design

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Dominance perceptions play an important role in social interactions. Although many researchers have proposed that shape masculinity is an important facial cue for dominance perceptions, evidence for this claim has come almost exclusively from studies that assessed perceptions of experimentally manipulated faces using forced-choice paradigms. Consequently, we investigated the role of masculine shape characteristics in perceptions of men's facial dominance (1) when shape-manipulated stimuli were presented in a forced-choice paradigm and (2) when unmanipulated face images were rated for dominance and shape masculinity was measured from face images. Although we observed large effects of masculinity on dominance perceptions when we used the forced-choice method (Cohen's d s = 2.51 and 3.28), the effect of masculinity on dominance perceptions was considerably smaller when unmanipulated face images were rated and shape masculinity measured from face images (Cohen's d s = 0.44 and 0.62). This pattern was observed when faces were rated separately for physical dominance, social dominance, and masculinity, and was seen for two different sets of stimuli. Collectively, these results suggest that shape masculinity may not be a particularly important cue for dominance perceptions when faces vary simultaneously on multiple dimensions, as is the case during everyday social interactions.

*Speaker

How does bride price evolve?

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In many societies, the groom's family pays bride price to the bride's family upon marriage. How does this practice evolve? In this poster, I review and synthesize models proposed in economics, behavioural ecology, and social and cultural anthropology. Explanations advanced by economists and behavioural ecologists have focused on marriage markets: bride price may be the result of bargaining over the future distribution of household resources under conditions where women's share of marital wealth does not reflect their market value. Bride price resolves this by compensating the bride's family for the loss of her labour, the use of her reproductive capacities by the husband's lineage, and/or the husband's control over resources. Its evolution may therefore be driven by kinship patterns such as patriliney and patrilocality (in particular, male control over heritable wealth such as land) and/or economic systems with substantial female contributions to subsistence production. Alternatively, bride price may signal the groom's mate quality (such as his family's political connections and ability to assemble wealth) in marriage markets with intense competition for brides, and may therefore be driven by polygyny. Social anthropologists recognize the importance of these factors, but they have also drawn attention to other functions of bride price, notably the politics of alliance formation and their role in the social reproduction of kin groups. Explanations for the evolution of bride price have therefore focused on the structural characteristics and political economies of different marriage systems. Notably, social anthropologists have debated under what circumstances balanced systems such as sister exchange (where the kin group who receives a bride must reciprocate by providing a bride in turn) can evolve into more asymmetric ones such as bride price, with female choice emerging as a potential driving force in the cultural evolution of such a shift. I then attempt to integrate these accounts.

*Speaker

Turnover Effects on Exploration and Exploitation: An NK Landscape Experiment

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In today’s business and technology landscape, organizations and their members often encounter complex problems involving numerous interdependent decisions (Simon, 1962). To tackle these challenges, individuals and teams must engage in a search process that alternates between exploration and exploitation. When solving problems in teams, individuals tend to quickly transition from exploration to exploitation (Giannoccaro et al., 2020). Furthermore, fully connected groups encounter difficulty in generating more complex solutions (Derex and Boyd, 2016). This experiment aims to determine if disruption, such as team composition or reference point changes, can offset these tendencies and facilitate the creation of more diverse solutions. In a lab experiment, participants engage in solving a complex NK landscape task. Some teams undergo team composition changes, while other teams remain stable. In the turnover conditions, turnover always involves the highest-performing member in the last rounds. However, some teams are made aware of this detail, while others will not. By making this information salient to some teams and not others, we aim to separate the effects of turnover itself from those driven by the team’s awareness of changing dynamics. Further, among teams that have not reached the highest-performing solution, some are informed that better-performing solutions exist, while others do not. Our goal is to alter individuals’ reference points by informing participants about the possibility of improving. This setup allows us to observe if changes in reference points can foster exploration, irrespective of team stability. Preliminary findings indicate that any disruption can increase search distance and foster exploration. However, team turnover shows no significant impact compared to most basic disruption—simply informing the team of their midway point in a sequence.

*Speaker

Growing Across Cultures

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What is the range of variation in magnitude and timing of growth trajectories in our species, and what factors drive this variability? Much variation is seen in height, weight and body shape and proportions within and across human populations worldwide; however, this variation is often perceived as ‘abnormal’ or pathological when many individuals within a population deviate from the existing global growth standards. Despite this, limited knowledge exists regarding the contributions of specific environmental adaptations, genetics, diet and lifestyle on human growth trajectories. In this study, we ask whether these standards represent the temporal and geographic range of population variation in size and mass to advance our understanding of global variation in growth and its potential mechanisms. To address this question, we applied a new causal parametric model of human growth to longitudinal and temporally-sparse data of height and weight growth from ~25 populations usually underrepresented in clinical assessments (i.e. Indigenous and admixed rural populations) from diverse ecoregions in order to make population-level comparisons of their growth trajectories. Preliminary results using this model show striking differences across growth phases in these populations, which we interpret in light of their differing cultural and ecological contexts. We posit that much of this variation may be attributed to differences in dietary composition and physical activity patterns, immune activation, age at weaning, age at first reproduction, and other population characteristics. This assessment aims to shed some light on the potential causes of human growth variation and prompt the testing of hypotheses linking particular socio-cultural and environmental factors with growth patterns. Simultaneously, we hope this effort constitutes a first step towards a further understanding of the evolution of human growth patterns, and that this information will prove valuable in shaping health and nutrition policies targeted at populations confronting apparent growth-related challenges.

*Speaker

Motivation to Provide Sexual Satisfaction to a Long-term Romantic Partner as a Way to Compensate for Perceived Lower Mate Value Among Heterosexual Men: Evidence from a Pre-registered Study

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Maintaining a romantic relationship has been and continues to be a significant adaptive challenge throughout human evolutionary history (Conroy-Beam et al., 2016). This challenge can be addressed through various strategies, such as selecting a partner with a similar mate value (MV) or monitoring potential differences in mate value (referred to as mate value discrepancy, MVD) between romantic partners (Buss & Shackelford, 1997; Goetz & Meyer, 2018). The aim of our study is to investigate whether the motivation to sexually satisfy a long-term romantic partner through active oral sex can function as a strategy for mate retention and compensation for MVD among heterosexual men with a lower MV compared to their long-term partner. Our pre-registered correlational study confirmed that differences in MV in favor of the partner predict the frequency of engaging in active oral sex among heterosexual men and showed that this relationship is mediated by the motivation to sexually satisfy the long-term romantic partner. However, contrary to predictions based on the premises of the Behavioral Immune System theory (Ackerman et al., 2018), the frequency of engaging in active oral sex (which carries the risk of exposure to health-threatening pathogens) predicted by MVD in favor of the partner among heterosexual men was not moderated by their subjective perceived vulnerability to disease (PVD) (Duncan et al., 2009; Tybur et al., 2020). The results obtained from this study enhance our understanding of the strategies employed by heterosexual men in long-term relationships characterized by MVD on both sides.

*Speaker

Modeling Socially Learned Fertility Preferences and the Demographic Transition: decreasing infant mortality increases fertility preferences, increasing horizontal transmission decreases it.

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In an agent based model of socially learning of fertility preferences, bias for low fertility preferences balances reproductive benefits of high fertility preferences. Contradicting previous modeling efforts (Wodarz et al 2020), this model demonstrates that decreasing infant mortality leads intuitively to higher fertility preferences, counter to the observed decrease in fertility preferences characteristic of the Demographic Transition. The decreases in mortality characteristic of the mortality transition phase of the Demographic Transition in conjunction with biased social transmission is therefore not an explanation of the fertility transition phase. It is further demonstrated how the counter-intuitive findings of previous modeling are actually a result of conceptual errors in model setup. Instead, this ABM demonstrates how either increased horizontal transmission or increased social learning bias do lead to the decrease in fertility preference characteristic of the later fertility transition phase of the Demographic Transition. While the results are somewhat intuitive, this modeling effort constructively demonstrates how previous non-intuitive findings are the result of inappropriate model construction rather than revealing non-intuitive evolutionary dynamics.

*Speaker

Intrasexual selection creativity.

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Creativity is considered one of the most desirable traits in a partner, regardless of gender, and may be an adaptation related to sexual selection. However, there is a lack of research focusing on women in this context, which appears to be a significant oversight given the likelihood of mutual mate choice among humans. Our previous research, exploring creative divergent thinking concerning intersexual selection, provided some evidence supporting this hypothesis. Firstly, our findings indicated an increase in creativity among women during the fertile phase of their cycle. Secondly, we observed that higher ratings of attractiveness in potential opposite-sex partners correlated with greater fluency and flexibility of thinking in women. Thirdly, we discovered that women exhibited more creativity when selecting long-term partners compared to short-term ones. Finally, we identified a mediator effect, indicating that choosing a long-term mate increased interest, subsequently leading to increased originality of ideas. Considering creativity as a potential signaling mechanism within intrasexual selection, we conducted a study to investigate how women (and for comparison, men) demonstrate creativity when facing competition from a rival.

*Speaker

Does the vaginal bacterial abundance change across the menstrual cycle phases?

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Magdalena Strus , Edyta Golińska , Kinga Słojewska , Anna
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Background

Vaginal microbiota are crucial for many aspects of female sexual and reproductive health. *Lactobacillus* spp. most abundant genus in human vaginal microbial communities. Their growth in the vaginal environment is suggested to be influenced by sex steroid hormones. Many reports suggest that higher levels of estrogens may promote *Lactobacillus* abundances. Therefore, we hypothesize that *Lactobacillus* spp. abundances should change across menstrual cycle phases because they differ in estrogens concentration.

Methods

We investigated differences in vaginal bacterial load between different phases of the menstrual cycle in naturally cycling, healthy 42 Polish women using the within-subject design. Vaginal samples were collected at three times during cycle (three days after menstruation, the day after a positive ovulatory test, and in the mid-luteal phase). *Lactobacilli* spp. were cultured on plated media. All colonies representing different morphotypes were counted on the plates showing appropriate colony density. Bacterial numbers were expressed as the log₁₀ number of colony forming unit per 1 ml (c.f.u/ml).

Results

There were no differences in *Lactobacilli* spp. abundances across the menstrual phases ($p > 0.9$ for all Tukey-adjusted pairwise comparisons). Differences in *Lactobacilli* spp. abundances were tested using generalized linear mixed models adjusting for vaginal pH and partial pooling by individual.

Conclusions

Although there was no effect found between general menstrual phases, individual estradiol levels should be measured to better explore whether there is an association between estrogen and vaginal *Lactobacillus* abundance.

*Speaker

Social advantages of religious celibacy

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It has been demonstrated that celibacy can emerge and enhance the inclusive fitness of their families, particularly when there is sibling competition for parental resources. Yet, the question of whether the close kin of celibates gain greater prestige and social status remains unexplored. In this study, we leverage data from reputational nominations and social support networks among residents of an agricultural Tibetan village to assess the potential link between being close kin of celibates and their perceived social standing, as well as their establishment of supportive relationships. Our findings suggest that the kin of celibates are acknowledged with a broader range of prosocial qualities beyond devoutness. Furthermore, the kin of celibates benefit from increased social acceptance, evidenced not only by a higher likelihood of establishing supportive relationships but also by more densely connected social networks among them.

*Speaker

Evo-devo dynamics of hominin brain size

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Brain size tripled in the human lineage over four million years, but why this occurred remains uncertain. To advance our understanding of what caused hominin-brain expansion, I mechanistically replicate it in-silico by modelling the evolutionary and developmental (evo-devo) dynamics of hominin-brain size. I show that, starting from australopithecine brain and body sizes, the model recovers the evolution of brain and body sizes of seven hominin species, the evolution of the hominin brain-body allometry, and major patterns of human development and evolution. Analysis shows that in this model the brain expands because it is “socio-genetically” correlated with developmentally late preovulatory ovarian follicles, not because brain size is directly selected for. The socio-genetic correlation causing the recovered hominin brain expansion is generated over development by ecology and possibly culture. Thus, in this model, direct selection that does not favour brain expansion provides a force that developmental constraints divert causing hominin-brain expansion.

*Speaker

Who informs childraising decisions? Cross-cultural variation in the sources of information parents value

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Background/Objective: Parents' decision-making around how to raise their children is likely influenced by numerous external sources including family and friends as well as religious, medical and educational institutions. However, previous research on decision-making has rarely accounted for the combined role of these social and institutional networks in informing childraising decisions, with a stronger focus on the role of the nuclear family. Here, we use novel qualitative data to explore parents' perceptions around childraising decision-making, and provide an in-depth exploration of how this process varies cross-culturally.

Methods: Focus group discussions were conducted separately with mothers and fathers, with at least one child under the age of 18 years, in the USA (mothers only, n=6), The Gambia (mothers, n=6; fathers, n=6) and Malawi (mothers, n=8; fathers, n=8). Standardized question guides asked parents who gave them advice about decisions regarding their children's health, education, jobs, and marriage, and whose advice they considered most valuable. Discussions were conducted in the local language, recorded, translated, and transcribed into English, and analyzed with NVivo 13.

Findings: US mothers relied on personal experience, their partners' opinion, and/or their own online research for decision-making around their children's health and education, and did not see themselves as involved in children's decisions around work or marriage. Contrastingly, parents in Malawi and The Gambia leaned towards a more communal approach to decision-making. They placed more weight on advice and guidance received from their religious leaders, medical providers, neighbors and community elders in decision-making around their children's health, education, religion, marriage, and work.

Conclusion: While parental decision-making was informed by several distinct sources across the three settings, US mothers had a considerably more individualistic approach compared to parents in The Gambia and Malawi. Understanding local sources of influence in decision-making is fundamental in designing culturally competent messages around community wellbeing.

*Speaker

The Effect of Tool-Use on Patterns of Aggression in Early Hominins Within the Framework of Self-Domestication

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Recent strides in hominin evolution research have extended beyond the archaeological record, instead delving into that which does not fossilise: behaviour. One theory that has emerged in this process is self-domestication. It hypothesises that hominins underwent a process of selection for reduced reactive aggression and increased social tolerance and was accompanied by a host of behavioural and physiological changes. I will be using this theory as a lens to study the evolution of hunting behaviours in early hominins, using non-human primates, with whom we share a common ancestor, as analogues to infer behaviours. Considering self-domestication predicts for the development and use of tools, and a reduction in reactive aggression and increase in proactive aggression, this will be done by comparing tool use, proactive aggression – using hunting as a proxy - and reactive aggression – using in-group aggression as a proxy. This will be conducted through the use of phylogenetic comparative methods (PCMs) in order to disentangle the potential evolutionary mechanisms underlying hunting evolution. There are three main questions I want to address with this research. 1) Are there observable patterns of tool use correlating with aggression across the primate order? 2) How can we extrapolate this into the theory of self-domestication? 3) Could this self-domestication have facilitated the decoupling of aggression and tool use in hunting in early hominins? Results are expected to indicate a relationship between tool use, increased hunting and decreased intra-group aggression. This relationship may be stronger in primates more closely related to humans i.e. catarrhines and weaker / not present in less related primates such as strepsirrhines.

*Speaker

How Group Cooperation Creates Intergroup Conflict

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Multi-level selection theories explain the evolution of cooperation and social organization as a function of conflict between groups. What explains the emergence of intergroup conflict remains unspecified, however, and that groups create and maintain public goods in absence of (histories of) intergroup conflict is unaccounted for. We addressed both issues by proposing a reverse pathway – from cooperation to conflict – and examine how cooperation geared towards maximizing in-group welfare and equality can create conflict with other groups. In two experiments, individuals organized in two groups invested in two club goods, one exclusively benefitting the in-group and one benefitting the in-group at some cost to the out-group. Across decision-rounds we varied the relative efficiency (Experiment 1, $N = 132$ in 44 groups) and distributional (in)equality (Experiment 2, $N = 210$ in 70 groups) of the two club goods, while holding constant the cost to the out-group. We find that individuals cooperated more on the relatively more efficient club good, even when this created a cost for the out-group, and more on club goods that gave equal rather than unequal returns, even when this created costs to the out-group. Beneficiaries of inequality cooperated substantially on an unequal club good, also when this created a cost for the out-group. Costs ignited cycles of retaliation and revenge, ultimately reducing welfare at the individual, group, and collective level. Intergroup conflict can motivate in-group cooperation, and it can be the unfortunate by-product of myopic cooperation within groups.

*Speaker

Preferences for, and exposure effects of, male body dimorphism across childhood and adolescence.

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Male body dimorphism, specifically in this case muscularity, is hypothesised to be subject to sexual selection. Prior studies have suggested that preferences for mating-relevant sexually selected traits emerge during puberty. There is also evidence that preference for muscularity can be manipulated through visual exposure and that visual experience can feed into facial and body preferences from mid childhood onwards. As such, preferences for male body dimorphism may arise from pubertal development or visual learning, or both. Here, three samples of children (102 male and 102 female 11- to 18-year-olds, 52 male and 49 female 6- to 11-year-olds, and 89 male 8- to 14-year-olds), indicated their preferences for high vs low muscularity images before and after viewing biased selections of stimuli (all hyper muscular or all low muscle mass). Significant preference for muscularity emerged at around 11 years of age in boys and girls. Viewing images of high (low) muscle mass men increased (decreased) preferences for muscularity in 15-18-year-olds, but not younger groups. These results are consistent with the prediction that sexually relevant traits become of interest during puberty, but suggest that visual learning of muscularity norms is not as simple and early emerging as other forms of body and face exposure effects. Results are further interpreted in light of qualitative data from participants.

*Speaker

Adverse childhood experiences and physical strength in adulthood

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Objective(s): Adverse childhood experiences (ACEs) negatively affect adult life. Experiencing ACEs has consequences both in the mental and emotional sphere, but might also result in physical problems. One of the markers that is a good indicator of physical health is hand grip strength. The aim of the study was to assess the relationship between adverse childhood experiences and hand grip strength in adulthood.

Methods: The study included 233 adult women aged 20-36, living in Poland. Data on early life adversity were collected using the Adverse Childhood Experience Questionnaire (ACE-Q). Hand grip strength was measured three times using manual dynamometer. Next, the average score of the dominant hand from three measurements was calculated. Linear regression analyses (including age of participants) were performed.

Results: There were no statistically significant relationships between adverse childhood experiences and hand grip strength ($p=0.47$). The associations between the examined characteristics remained non-significant after controlling for participants' age ($p=0.19$).

Conclusion(s): The analysis of the relationship between adverse childhood experiences and hand grip strength did not show any association in the group of young, healthy women. It is likely, that lack of correlations in this study may be due to the young age and good health of the participants, which could mask the negative impact of adverse childhood experiences.

*Speaker

Exploring Sociodemographic Dynamics: Introducing validated AFCS for Men's Attitudes on Fertility and Fatherhood

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Objectives:

Men reproductive plans are unrepresented in the pool of existing evidence and up-to-date literature. This study aimed to develop and validate the Male Attitudes toward Fertility and Childbearing Questionnaire (MAFCS) based on a sample of Polish non-parent men. The study will also explore the relationship between these attitudes and men's socio-demographic characteristics.

Material and Methods:

A cross-sectional, self-assessment study was conducted with 872 participants aged 18-49 across three groups (study 1 $n = 270$, $M=25.1$; $SD=4.5$; study 2 $n = 443$ $M=25.2$; $SD=4.4$, and study 3 $n = 159$ $M=24.5$; $SD=4.4$, respectively). Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) using structural equation modeling (SEM) were employed. In addition, Student t-tests and ANOVA were used to analyze associations between factors and socio-demographic traits.

Results:

EFA confirmed a robust three-factor structure, resulting in the final 14-item Polish MAFCS with components: "Child and fathering importance in the future," "Fertility as a masculine value," and "Child and fathering as a limitation of the present life," demonstrating strong internal consistency. Attitudinal differences were observed based on socio-demographic characteristics. Sexual orientation, employment status, residence place, and religiosity were significant factors for all of the components.

Conclusions:

Addressing fertility attitudes in the context of individual differences is crucial in societal discourse and sexual and reproductive health care. The MAFCS proved reliable and valid in assessing men's attitudes towards fertility and becoming a parent within the Polish context.

*Speaker

Additionally, findings highlighted the impact of age, occupation, residential area, and marital status on these attitudes.

Cruel Stories: An Experimental Examination of Cultural Transmission and Reception

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The consumption of cruel stories imposes psychological burdens, however their cultural universality is acknowledged, and their function is debated. According to the ordeal simulation hypothesis, it is believed that individuals can pseudo-experience real-life trials through stories. Stories featuring characters deviating from norms and encountering cruel outcomes serve as a deterrent against norm deviation. However, as observed in tales like Grimm's fairy tales, the cruelty in stories often diminishes over time. This trend may reflect a bias in the storytellers, such as parents, who tend to avoid brutality when conveying stories to children. To examine these issues, this study created stories manipulating both cruelty and normativity. Adult participants ($N = 153$) were asked to what extent they believed they would transmit these stories to adults and children. Additionally, regarding the reception aspect of cruel stories, participants were also asked about the extent to which the stories captured their attention. Participants were also asked about the extent to which the stories captured their attention. We obtained two results. First, cruel stories were rated as more attentive than non-cruel stories. Second, participants were less willing to transmit cruel stories to children than to adults, but such result was not found in non-cruel stories. The patterns of the results were consistent with the hypothesis. However, some inconsistency with hypothesis were also found. We discuss the potential role of cruelty of stories in cultural transmission of social norms.

*Speaker

Ritual behavior affects perceived objectivity of moral norms

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Prominent anthropological theories propose that rituals charge associated moral norms with objectivity such that moral norms are perceived as absolute and independent of time and space. Higher perceived norm objectivity strengthens internal motivation to adhere to norms thus stabilizing risky cooperation within the group. To test the relationship between attending collective religious rituals and the perception of moral norms as objective, we used two cross-sectional datasets and conducted five correlational studies with three culturally distinct populations. The results, supported by meta-analysis of our effect sizes, show a positive association. Moreover, increased saliency of the characteristic aspects of ritual form, namely the perceived invariance, and digitalizing and materializing potentials, was associated with increased reporting of moral norms as objective. Overall, we provide initial support for theories suggesting that ritual form affects perceptual mechanisms related to norm processing.

*Speaker

Biased cost and benefit estimations facilitate the effectiveness of cooperative costly signals in humans

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In this study, we investigate whether perceptual biases facilitate the effectiveness of cooperative costly signals in humans. Specifically, we propose that biased cost and benefit estimations of cooperative signals are used by automatic cognitive processes to determine the value of costly signals. The intuitive processes create a parameter space in which uncommitted people perceive the signal costs to be larger than, discouraging them from signaling and then taking advantage of the group effort.

To test this, we first measure participants' cooperative strategies and then offer them to play Public Goods Game (PGG) in a group either with or without a costly signal. The costly signal is an extra effort – transcribing a useless text. We manipulate the text length (1.5 min vs 10 min transcription) to manipulate signal costliness. Before selecting whether to signal or not, participants are asked about their perceptions of the signal cost and benefits and afterwards play PGG in the chosen group (with costly signal vs no signal). The main hypothesis states that participants with cooperative strategies will report A) larger benefits and B) smaller costs of the signaling group than individualistic strategies participants. This difference will be larger in the high cost condition.

In a pilot study ($n = 70$), we found that participants with individualistic strategies were less likely to choose a costly signal in the high-cost condition and were more likely to perceive the signal as more costly in the high-cost condition. Furthermore, the low-cost signal was perceived as less beneficial than the high-cost signal. Certainly, all these effects are unreliably estimated due to a low number of participants but are in the predicted directions. We are currently collecting data ($n = 400$) and will also conduct a follow-up study with religious/secular participants and religious signals. Both studies will be presented at the conference.

*Speaker

Assessing the roles of shape prototypicality and sexual dimorphism in ratings of the trustworthiness of faces

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Perceptions of the trustworthiness of faces predict important social outcomes, including economic exchange and criminal sentencing decisions. However, the specific facial characteristics that drive trustworthiness perceptions remain poorly understood. Here we investigated this issue by exploring possible relationships between ratings of the trustworthiness of face images and objective assessments of two aspects of face shape that researchers have previously argued are important for perceptions of trustworthiness: distinctiveness and sexual dimorphism. Here we report that faces with more distinctive shapes are rated as less trustworthy, but that sexual dimorphism of face shape is not significantly correlated with trustworthiness ratings. These results suggest that distinctiveness of face shape plays a more important role in trustworthiness perceptions than does sexual dimorphism and suggest that perceptions of trustworthiness may stem, at least in part, from the ‘anomalous-is-bad’ stereotype.

*Speaker

Using machine learning techniques to investigate conflict and harm in HRAF data

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For this project computer science methods, mainly machine learning techniques, were used to analyse data extracted from the Human Relations Area Files (HRAF), an ethnographic database. Much research has been conducted on other-directed harm (such as assault and homicide) and self-directed harm (such as self-harm and suicidal behaviors), but there has been little effort to model available data and predict future events using computer science methods. Other-directed harm and self-directed harm have been framed by evolutionary researchers as bargaining strategies to influence conflict outcomes. However, there has been little systematic research to investigate whether the social contexts of other-directed harm and self-directed harm vary. To investigate the differential causes and social contexts of other-directed harm and self-directed harm, we used the CRISP-DM method. The HRAF is coded at the paragraph-level for topics termed OCM codes, which stands for ‘outline cultural materials’. A datafile containing all the texts on Offenses Against Life (OCM code 682) was used to conduct analyses. We analyzed the covariation of OCM codes related to self-directed harm, other-directed harm, and types of conflicts, using machine learning techniques to target different OCM codes. Regression methods were used on one-hot-encoded data with various models such as Bayesian Ridge, Light Gradient Boosting Machine, and Extreme Gradient Boosting being the best models. Feature importance plots were then created, which indicate what variables are the most important for predicting the target variable (e.g., Suicide, War/peacemaking). Each feature importance plot shows the top 10 of most important predictor variables. For suicide the top 5 OCM codes were Mortality, Special Burial Practices and Funerals, Sexual Stimulation, Personality Disorders, Sexuality. For war and peacemaking the top 5 OCM codes were Agriculture, Military/armed forces, Territorial organization/state, Naming, Intergroup relations. We will report the results of analyses of OCM codes pertaining to conflict and harm.

*Speaker

The evolutionary origins of a teacher-innovator syndrome emerging from the joint evolution of learning and teaching strategies

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Human survival and reproduction depend strongly on socially learned information (e.g., locations of food sources, which food is safe to eat, how to build and use tools). Humans' traits increasing the accumulation of useful information (e.g. cognitive learning abilities, learning bias toward successful individuals) may thus enhance fitness and be promoted by natural selection. Several theoretical studies have focused on the evolution of learning strategies. However, these theoretical studies often assume a passive role of demonstrators during the transmission of social knowledge. Here, we investigate the evolution of within-family teaching. We develop a mathematical model to investigate the co-evolution of learning and teaching strategies. We show that natural selection can promote teaching because it increases the transmission of information to kin. We show that natural selection shapes trait associations within individuals characterised by lineages that (1) produce more new information, learn more within the family and teach more ("knowledge producer"), and others that (2) produce less new information, learn more outside the family and teach less ("knowledge scrounger").

*Speaker

Proceptive mindset mediates the effect of estradiol on women's increased sexual activity initiation in fertile phase

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Multiple studies show that women report increased sexual activity and desire during fertile phase of the menstrual cycle – when both estradiol levels and conception probability are the highest throughout the cycle. In this study, we analysed how one's psychological mindset affects the relationship between estradiol and sexual activity, with a special focus on the initiation of sexual contacts.

We analysed daily estradiol levels of 98 women in their fertile phase (fertile window based on the positive result of the LH test). Participants completed a survey on the frequency of sexual contacts, their initiation in the last 3 days and on their psychological mindset. We have used a subset of adjectives from Sexual Arousal and Desire Inventory that describe one's proceptive mindset, including general well-being, but also self-judges attractiveness and sexuality, namely: attractive, frigid, passionate, repressed, relaxed, unhappy, alluring, restrained, seductive, good.

Estradiol was not directly associated with the frequency of initiating sexual contacts among the measured women, $b = .003$, $CI = (-.038, .044)$. Interestingly, the relationship became significant when a proceptive mindset was added to the model as a mediator, $b = .020$, $CI = (.004, .042)$. Furthermore, the frequency of initiating sexual contact further translated into actual sexual activity.

Our study shows that increased sexual activity of women during fertile phase (when levels of estradiol are high) is fully mediated by her psychological state – a proceptive mindset, which is a mix of overall well-being and feeling sexual and attractive, and which leads to sex initiation. Therefore, we provide a missing link between estradiol and sexual activity.

*Speaker

Cooperation in the Helping Game: Image Scoring or Good Standing?

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In a lab experiment, we assess the effectiveness of reputation-based mechanisms in the decision to help strangers within the 'helping game,' a large group setting where cooperation is socially desirable. We compare 'good standing' (GS), a binary score with a recursive feature, and 'image scoring' (IS), a numerical score considering past actions. Two primary research questions guide our investigation: (i) In a homogeneous cost game, does GS better support indirect reciprocity than the IS structure? (ii) How do these mechanisms induce reciprocity in a heterogeneous cost game with two costs? We theorise that GS incentivizes discrimination between 'justified punishers' and 'unjustified non-helpers.' Analysing data from our lab experiment with 144 participants, we find that GS effectively discriminates, supporting reciprocal helping, particularly in the heterogeneous cost game. However, IS leads to higher cooperation rates, regardless of the subject's reputation in both game scenarios.

*Speaker

Ecological influences on testosterone-driven facial morphology: implications for sexual dimorphism and social perception

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Differential exposure to testosterone before and during puberty is the primary cause of the development of sexually dimorphic traits. These traits are thought as modulators of perceptions that play a role in human sexual selection, such as the perception of attractiveness or dominance. While extensive research has delved into the effects of this androgen on phenotypical differences between men and women, little is known about the relationship between testosterone levels and the intra-sexual variability of facial traits in men. Moreover, recent evidence suggests that this association may also be influenced by ecological context. Therefore, if testosterone levels do influence facial shape variability, we hypothesize that these effects will vary among males from populations with distinct ecological contexts, as well as the perceptions influenced by such traits. Using geometric morphometrics, we explored the relationship between salivary testosterone levels and the facial shape variance of 96 young males from 3 populations with different ecological contexts (Indigenous Mexicans, Mexicans from Mexico City and North Americans). We also examined the relations between the facial shapes that elicit the perceived dimorphism, attractiveness, and dominance perception. We found no significant effect of testosterone levels on facial shape in any of the three samples evaluated. Interestingly, we found that the facial shape that elicits the perceived dimorphism positively correlates with the one that elicits the dominance perception in all three samples, whereas the relation between perceived dimorphism and attractiveness facial shape was positive for the Indigenous Mexicans, negative for the Mexicans from Mexico City and not significant for the North Americans. These results suggest that testosterone is a weak predictor of facial shape variance among men regardless of the ecological context and the facial shape that elicits perceived dimorphism may also universally elicit the perception of dominance whereas its relationship with perceived attractiveness may be context dependent.

*Speaker

The Origins of Regional Psychological Variation in Japan

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The following abstract is for an ongoing master's thesis for which no data analysis has yet been performed. Cross-cultural psychology has been essential in transforming psychology away from a discipline focused on understanding the mindset of Western, Educated, Industrialized, Rich, and Democratic (WEIRD) peoples, towards a field committed to understanding the full complexity and diversity of the human psyche. Now, the emerging field of historical psychology has begun to go beyond documenting cross-cultural psychological variation and strives to uncover the origins of that variation. One historical psychology theory which has repeatedly been supported across studies is Thomas Talhelm's rice theory of culture. This theory hypothesizes that in comparison to other forms of subsistence, wet-rice farming fosters the development of more collectivistic cultures and their corresponding psychological traits. This study aims to determine whether the rice theory of culture can predict between-prefecture variation in the degree of collectivism/individualism in Japan. Utilizing agricultural data in conjunction with self-report data from 4,254 respondents to the Japanese Social Survey (JGSS), I tested whether the proportion of agricultural land set aside for wet-rice farming in each prefecture predicted cross-prefecture variation in collectivism. In a second analysis, this study assessed whether the historical duration for which peoples have been wet-rice farming predicts cross-regional variation in collectivism. In order to answer this question, this study introduced a novel methodology, incorporating archaeological data for the introduction of rice farming to various regions of Japan. As far as the author is aware, this is the first time a study has analyzed whether temporal "dosing" of exposure to rice farming practices predicts cross-regional variation in psychology. Through its use of archaeological and JGSS data, this work tests the rice theory of culture in previously unexplored ways and investigates the origins of regional psychological variation across Japan.

*Speaker

Wanna solve the climate crisis? End inequality. – The potential of unequal loss in a climate game kills trust and causes sinking together

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The main difficulty with climate change is coordinating an international action, where countries are also competitors in the global economy. The temptation of not investing enough makes climate change negotiations a good example of a common pool resource dilemma. Less wealthy countries and individuals suffer the consequences of climate change more pronouncedly. Monetary inequality and the competition caused by it could undermine the possibility of cooperation. Using a modified climate game, we studied how pronounced competition among group members modifies the willingness to contribute to the cooperative effort. To model the unequal consequences of unequal wealth in the treatment group if the threshold was not reached, participants lost different percentages of their funds: players with a higher amount of spare money lost less than players with the lowest sum in their pocket. In control groups, everybody's loss was the same in case of not reaching the threshold. If the threshold is reached, everyone receives 100% of their remaining endowment.

The competition resulted in less cooperation straight at the beginning of the game, after that the players reached the threshold with a lower chance than groups with no competition. Participants contributing more seem to be more altruistic in other situations as well. Even though the game did not mention the word "climate", participants who contributed more tend to believe in climate change and act against it more.

Overall, the potential of unequal loss kills the trust in your fellows and could cause sinking together.

*Speaker

Regulating Romance: The role of relationship satisfaction and perception of partner commitment in regulating mating-relevant behaviors

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Conroy-Beam et al. (2015) hypothesized that relationship satisfaction evolved as an "internal regulatory variable" (sensu Tooby et al., 2008) that monitors the value of one's romantic relationship and calibrates behaviors accordingly. Building on this, individuals should also calibrate behavior to their perception of their partner's commitment to the relationship, since this is likely to affect their partner's behavior. While past research indicates that relationship satisfaction and perception of partner commitment predict behavior between individuals in different relationships, if this "internal regulatory variable" view is correct, we should also see the same correlations within persons across time. Leveraging the unusual opportunity afforded by an existing data set of 216 participants in relationships assessed with seven weekly surveys, we used multilevel analyses to test whether week-to-week relationship satisfaction and perception of partner commitment predicted various mating-relevant behaviors within participants across time. All four of our pre-registered predictions received some support: Individuals exhibited more extra-pair behavior in response to partner rejection during weeks when they were less satisfied with their relationship and during weeks when they perceived their partner as less committed to their relationship. Further, individuals engaged in more aggressive mate-retention tactics (though notably, not more physical aggression) and more heavy mate-guarding in response to partner rejection during weeks when they perceived their partner as less committed to their relationship. This study provides empirical support for the view of relationship satisfaction and perception of partner commitment as internal regulatory variables, suggesting that individuals calibrate a diverse array of mating-relevant behaviors to them.

*Speaker

Facial features in relation to human health: a scoping review

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Introduction: Facial features such as fluctuating asymmetry and facial averageness are morphological indicators of a human biological condition and are suggested as proxy of developmental stability. So far, no review has been conducted that would comprehensively investigate the relationship between the degree of facial features and physical health. Our study fills this gap.

Aim: The purpose of this study was to evaluate the relationship between the degree of fluctuating asymmetries and facial averageness and general health.

Methodology: A search strategy was developed for electronic databases including Web of Science, MEDLINE PubMed, Scopus and Embase through August 2023 according to the keywords *health AND facial asymmetry OR facial averageness NOT paralysis*. Inclusion criteria contained observational studies and cross-sectional studies that examined facial features and compared them on oxidative stress and reproductive health by semen quality and estrogen, testosterone and progesterone levels. Exclusion criterion included study participants under 18 years of age. Facial features measured by state-of-the-art approach based on the Geometric Morphometric Method (GMM). The Preferred Reporting Items for Scoping Review (PRISMA) rule was applied.

Results: The initial search yielded 2215 articles. The title and abstract review resulted the 48 articles, which were included in the qualitative analysis. Based on predefined criteria, 11 observational studies were finally included for in-depth analysis. Two independent researchers achieved a sufficiently high level of agreement (97.7%). Four studies focused on oxidative stress levels of which all, except one, showed a negative correlation with facial features. Four studies presented a statistically significant correlation between facial features and reproductive parameters, e.g. semen quality or estradiol levels in women.

Conclusions: This review provides initial evidence, that facial features could serve as indicators of physical and reproductive health. The results deepen our knowledge of the relationship between facial features and health outcomes.

*Speaker

The evolution of cooperation and exit strategy in harsh environments

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Having opportunities to leave an economic relationship can be beneficial to prevent being exploited by an uncooperative counterpart. However, leaving a relationship is risky too. They may not be able to find a better partner after the exit or may lose the cumulative benefit from staying in the same relationship. The cost and benefit of leaving, and the concomitant pattern of social network rewiring, may depend on the interactions between individual decision-making, the population-level distribution of strategies, and the environmental conditions. We studied conditions under which exiting from exploitative economic partners is favored by natural selection. Previous research has suggested that human societies in historically and environmentally harsh environments have less relational mobility, having less freedom to choose relationships. Here we modeled the environmental harshness in two dimensions, namely, the frequency of the occurrence of natural disasters and the magnitude of a disastrous event. Using individual-based model simulations, we investigated how these factors might influence the evolution of cooperation and leaving behavior. We employed a dynamic state variable model where the state of individual energy level regulates the mortality of individuals in the following two ways:(1) individuals have to afford a constant cost they must pay for each time step, and (2) they must survive a natural disaster happening sometime. The constant mutual cooperative relationship can mitigate the damage incurred by a disaster. We will discuss how these conditions affect the evolution of cooperation and exit strategies and the persistence of populations.

*Speaker

Cultural evolution in populations with heterogeneous and variable preferences

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Theoretical and empirical work in cultural evolution often assume populations in which individuals all agree on the quality of a given cultural trait (i.e. they have homogeneous preferences), and where those preferences are stable in time. Yet, these assumptions are not always met: for example, an uneven distribution of information in a population could lead to heterogeneous preferences; moreover, in some cultural domains (e.g. aesthetic culture), diverse preferences may be the norm rather than the exception. We present an agent-based model in which we can control the heterogeneity of preferences, as well as the effect of cultural traits on the evolution of preferences. We find that assuming homogeneous or heterogeneous preferences leads to different predictions on several outcomes. First, populations with greater heterogeneity of preferences converge toward greater cultural diversity. Second, while we replicate the classical result that increasing opportunities to learn socially leads to less diversity in homogeneous populations, we find that this relationship is reversed in heterogeneous populations. We show that this happens because increasing social learning opportunities leads the distribution of cultural traits to converge toward the distribution of preferences. We also look at the consequences of allowing cultural traits to modify the preferences of individuals that possess them. This can for example capture self-reinforcing beliefs, or traits where the acquisition costs make individuals less likely to switch to another trait after possessing them for some time. We find that such "attractive" cultural traits naturally emerge in our model, and that they tend to decrease cultural diversity when preferences are not homogeneous. Overall, by showing that the effect of different parameters on cultural diversity are dependent on the assumed distribution of preferences, we highlight the importance of taking into account the possible heterogeneity of preferences when making predictions about cultural dynamics.

*Speaker

A Critical Appraisal of Morality-as-Cooperation

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Morality-as-cooperation (MAC) is a recent and empirically motivated scientific theory for explaining holocultural moral psychological phenomena. Its central claim is that morality functions as a set of evolved solutions to cooperation and coordination problems. MAC categorizes these solutions into 7 fundamental moral categories which its proponents claim to deduce from game theory. In this article, we critically assess the core of this theory. As it turns out, MAC makes many predictions, but its explanatory framework is ill-developed. Underlying its predictions there are many underdeveloped assumptions about the relationship between game theory and the workings of our norm psychology. We unearth some of these assumptions, making clear how the theory necessitates further foundational development if it is to be understood as explaining rather than as merely predicting. Considerations of its explanatory framework aside, we further argue that MAC faces yet other conceptual challenges regarding its definition of morality which spill over to its practiced methodology. As an example, and most obviously, MAC fails to distinguish between moral cooperation and coordination from non-moral cooperation and coordination. In particular, in their multiple empirical studies, its proponents have systematically conflated the positive valence of social norms with true moral value, thereby biasing their mining of ethnographic databases, their explorations of our cognitive architecture, and MAC's questionnaire. Finally, we argue that the framework is philosophically troubled too. MAC purports to be not just a scientific theory of morality, but a moral theory more generally understood, including a first-order normative ethics. However, its apparent (albeit poorly articulated) metanormative commitments are ill-motivated and potentially troublesome. Not least, MAC seems to equate moral goodness with the fitness value of cooperation. And although it claims that there are objective truths about morality, it seems to overlook that many game-theoretical solutions are purely conventional.

*Speaker

Reputation, exploitation, and cooperation: Evidence of direct and indirect reciprocity in network-structured economic games in rural Colombia

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The scale at which humans cooperate with genetically-unrelated peers remains a fundamental puzzle of human evolution. Some formal theoretical models propose that cooperation can be maintained through consideration of standing and reputation, and further highlight how important interactions between standing and exploitation behaviour can facilitate the emergence and maintenance of cooperation. Here, I will present recent research that empirically examines the predictions of models of positive and negative indirect reciprocity using a network-structured field experiment in four rural Colombian communities. We observe that, at a dyadic-level, individuals have a strong tendency to exploit and punish others in bad standing (e.g., those perceived as selfish), and allocate resources to those in good standing (e.g., those perceived as generous). These dyadic findings scale to a more generalised, community level, with reputations for being generous associated with receiving allocations, and reputations for being selfish associated with receiving costly punishment. These nuanced empirical results illustrate the role that both positive and negative indirect reciprocity, and costly punishment play in sustaining community-wide cooperation networks.

*Speaker

Mating behaviors and fame: A biographical analysis of French music icons

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In organizations where visibility and recognition are critical, intense competition to gain proximity to the "bigwigs" remains a recurring pattern. Previous studies indicate that individuals who can form strong and intimate bonds with influential individuals gain access to key positions and resources and are more likely to ascend the social ladder. The French music industry provides numerous examples of these interpersonal dynamics, with a multitude of collaborative couples readily apparent. In this study, we present the findings of a web-based investigation into the biographical data of 250 prominent French-speaking singers born in the 20th century. We focused specifically on the relationship between the emergence and consolidation of their success and their romantic relationship histories. The results suggest that hypergamy may be a common strategy employed to maximize short-term resource acquisition in pursuit of visibility. Indeed, singers who engage in romantic relationships with established celebrities, particularly well-known and experienced singers, are more likely to experience a swifter rise to fame compared to those who do not engage in such partnerships. Additionally, homogamy is found to be prevalent among renowned singers, and the proliferation of homogamous relationships may serve as an effective means to solidify their notoriety. Further analyses will be conducted to explore the potential combined influence of celebrity romantic affiliation and notoriety on their mating behaviors throughout their lives.

*Speaker

The occurrence rate of women's multiple partnerships in eHRAF

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Although monogamy is known as the primary human mating strategy, it is rare for societies to norm lifelong monogamy. Most human societies have allowed members to change or join additional unions after marriage. However, most studies have focused on men's post-marital strategies (e.g., transition to polygyny), while there has remained ignorance of how women's relationships change after marriage. This men-biased accumulation of research could hinder an accurate understanding of the human mating system.

To fill the current lack of knowledge gaps, this study used the eHRAF(Human Relations Area Files) to (1) calculate the occurrence rate of cross-cultural groups where women were allowed to have extramarital relationships after marriage as well as men and (2) classify the type of extramarital partnerships of women. At the same time, this research focused on populations that allowed women's extramarital relationships to investigate the extent of double standards in sexual norms (e.g., no penalties for extramarital relationships for men only) and the trade-offs between the costs and benefits of women's participation in extramarital relationships.

The results show that about half of the cultural populations in four of the eight continents (Africa, Asia, Oceania, and South America) publicly allowed women to have extramarital relationships after marriage. Besides, Major types of extramarital relationships depend on continents. These findings suggest that women getting extra partners after marriage is common, and future research related to the human mating system needs to scrutinize and note women's multiple partnership variations.

*Speaker

What Can Social Control in Small-Scale Societies Tell Us?

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Social control relates to how people in a group define and react to other's infractions (Back, 1983; Ross, 2017). Considering that humans are deeply social, in need to keep strong cooperation bonds with our pairs to survive throughout the ages (Sachs et al. 2004), how we identify and punish infractions is essential in groups (Axelrod & Hamilton, 1981), and has been pivotal for our survival for many years (Balliet et al. 2011). In a novel study using 800 samples of the Human Relations Are Files, the results indicate that measures of power are key facilitators of third-party punishment. Additionally, primary analysis has shown that gender, degree of punishment (high vs. low-cost), and relation to the infraction (third vs. second party) are all key factors for how punishment is given. The project was pre-registered and coded to ensure higher reliability, and the primary analysis has the potential of novel insight for social control theory. Given the recent interest with small scale societies (Glowacki & Lew-Levy, 2022), and what they can tell us about humanity as a whole (Bird et al. 2019), this study has the potential of empirically demonstrating how social control happens throughout societies that have no contact with each other, but that can show us how we behave in our core. Understanding social control has serious implications in cooperation, punishment, and interdependence, and in the current political climate with the increase of polarization (Jost et al., 2022), novel insights in social control are essential for further interventions.

*Speaker

Religious rituals as costly displays promoting cooperation

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1

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The ubiquity of apparently arbitrary and costly religious rituals in human societies seems puzzling from an evolutionary perspective. It has been suggested that rituals contribute to group cohesion by promoting parochial cooperation, but it remains debated how and why exactly this effect has come about. There are two recurring themes, though: 1) costs rather than content seem to have become relevant to the successful diffusion of ritual displays and their effectiveness as promoters of cooperation, and 2) intergroup competition might have driven and shaped the evolution of costly, religious displays. These two concepts in combination, however, have not been formalised yet. Here, we present a formal analysis of how religious rituals could have evolved as group-beneficial displays promoting intra-group cooperation in past human societies. First, by re-visiting a mathematical sketch by Gintis et al., we derive the conditions for an evolutionarily stable strategy (ESS) of costly displays as indicators for religiously motivated, cooperative quality, and for alternative systems. Second, we investigate whether cultural group selection might have driven and shaped the evolution of costly displays in religious contexts. Our analysis reveals that a system of honest signalling is stable if the costs of the display exceed the benefits of an alliance for less committed individuals given that the benefits of positive assortment of cooperators exceed those of random alliances; and that cultural group selection should, indeed, favour honest signalling systems and drive the evolution of more group-beneficial content of honest displays.

*Speaker

The Behavioral Immune System and Prosocial Behavior

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¹ SWPS University – Poland

The project aims to examine the theory of the behavioral immune system (BIS) in relation to prosocial behaviors. The BIS is a motivational system that works to reduce the risk of infection by altering perception, emotions, and actions. It is triggered when signals indicating potential pathogens are detected in the environment, causing a feeling of disgust and motivating avoidance of specific stimuli. However, living in social groups exposes individuals to a range of risks, including threats to physical health and infection. A well-functioning BIS should therefore balance the costs and benefits of avoiding social contact. This means that the decision to engage in helping behaviors may vary depending on the individual and the situation. In three experimental studies, we used visual or olfactory disgust stimuli to manipulate BIS and measured the willingness to provide direct and indirect help to kin or non-kin with or without signs of infection. The results support the flexible nature of the behavioral immune system in the context of prosocial behavior.

*Speaker

What is a father's role? Men's perspectives on their contributions to raising children in The Gambia and Malawi

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Background/Objective: The role of fathers varies considerably across societies. Fathers are commonly, though not universally, involved in childrearing, but what they do for children shows cross-cultural variation. These roles may involve direct childcare, but also other contributions to child development and wellbeing, such as resource provision, giving advice and guidance, or help transitioning to adulthood, through arranging rituals, marriages or jobs. While evolutionary researchers have shown considerable interest in the fathering role, relatively little research in this field has explored men's perceptions of fatherhood through qualitative research. Here we explore the childrearing roles that men describe for themselves across two societies.

Methods: We conducted focus group discussions with fathers who had at least one child under the age of 18 years, in the West Kiang region of The Gambia (n=6) and the Karonga district of Malawi (n=8). Standardized discussion guides asked about tasks that fathers might be expected to do for their children and tasks that would be considered strange if performed by fathers. Discussions were conducted in the local language, recorded, translated and transcribed into English, and analyzed using NVivo 13.

Findings: Fathers in both settings are expected to meaningfully engage in childrearing, particularly resource provision, supervision and encouraging moral/prosocial behaviour. While fathers are expected to engage less in physical childcare, i.e., washing or feeding, they are expected to facilitate maternal provision of such care, e.g., by taking on household chores mothers otherwise might perform. Some fathering roles vary culturally: Gambian fathers expect to take an active

*Speaker

role in arranging their children's marriage, while in Malawi this is considered a mother's or auntie's role.

Discussion: Fathers have a range of roles in children's lives in these two communities. These are similar for younger children across settings, but expected fathering roles towards adolescents and young adults shows some variability.

Humanity vs Climate Change: the evolutionary origins of national climate policies

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This article draws on wide multidisciplinary evidence, including evolutionary biology but also climate science, economics, history, political economy, archaeology, and social psychology to argue that rather than uniting humanity against a common problem, climate change will progressively acquiesce tensions between countries, and possibly also within them. In the face of climate-induced uncertainty, citizens will seek solidarity and protection from their in-group, which in all likelihood will be their nation state. A strengthening of this bond in turn will imply a broad tilt towards nationalism, rather than internationalism. As a consequence, thinking about policy implications, climate mitigation carried out in the pursuit of national interest is surely sub-optimal with respect to a concerted global response, and yet is likely to prove the most viable course of action. Scientific and technological innovation that will be successful in rapidly reaching carbon neutrality while avoiding resource scarcity, feelings of uncertainty, and losses associated with climate change, will reduce the likelihood of the conflictual scenario prospected above.

*Speaker

The role of behavioral immune system in shaping preferences for similarity to the ingroup members in potential mates

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From an evolutionary perspective, physical attraction is crucial when seeking a romantic partner, because of its functional aspects (Barber, 1995). However, the factors that make certain traits particularly attractive remain a perpetual topic. As each adaptive process is highly conditional (Harvey & Nee, 1997), attractiveness depends on situational and cultural contexts as well as on individual characteristics (Buss & Greiling, 1999). One of the universal qualities considered attractive is good health, which indicates good genes (Little et al., 2011). Despite universal qualities such as facial symmetry (Rhodes, 2006), more recent studies emphasize similarity-to-ingroup as an important but at the same time subjective health-related cue (Bresnan, 2021). Here, we investigated how the functioning of the behavioral immune system (BIS) influences individuals' preferences for physical similarity and dissimilarity in partner selection. While mating with closely related individuals (characterized by high similarity) can result in genetic disorders and miscarriage (Bittles, 2001), mating with genetically dissimilar individuals can disrupt gene complexes and suppress genes adapted to specific environments (Bateson, 1983). Hence, the balance between inbreeding and outbreeding becomes a complex trade-off, making an ideal partner neither too similar nor too dissimilar (DeBruine et al., 2008). To measure the preference for similarity in potential mates, we used the averaging faces technique in the WebMorph application (DeBruine, 2017) to create mixed-race morphs, a combination of two faces from two different ethnic groups, with one face of the same ethnicity as the participant (with a random proportion of characteristics from both source faces, named the similarity-to-ingroup index). As previous studies on BIS have shown that pathogen threat motivates people to be more conservative in casual social interactions (e.g., Szymkow et al., 2021), we discuss whether such an effect persists for intimate partner preferences. To the best of our knowledge, this issue has not yet been investigated.

*Speaker

Two Arguments for Variance Proportionality in Cultural Transmission

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When examining the transmission of continuous cultural traits – such as dimensions of manufactured artifacts or positions in an underlying ”culture space” that predicts the occurrence of ”discrete” cultural practices – we should anticipate a proportionality of variance. Homogeneous cultural inputs (such as role models or ”cultural parents”) are likely to produce homogeneous cultural outputs (like followers or ”cultural offspring”), and conversely, diverse inputs should yield diverse outputs. This statement can be justified by two main arguments:

- **A:** Estimating a ”mean” of mutually dissimilar behavioural manifestations is inherently more challenging.
- **B:** If the fitness landscape underlying the prestige of role models is inferred, it follows that homologous successful phenotypes are likely to ascend a narrow adaptive peak, which implies greater penalty for deviating from their mean.

While empirical evidence supports Argument A, Argument B largely remains in the realm of theoretical speculation.

What is particularly striking is that genetic inheritance, at least within the framework of Fisher’s approximations foundational to population genetics, does not lead to this kind of Variance-Dependent Inheritance and, therefore, cannot benefit from the implicit inference described in Argument B.

It appears that at the heart of different inheritance systems lies a varied resolution of the trade-off between the speed and security of successful adaptation. Only their combination, such as the gene-culture dual inheritance typical in humans, can surpass both pure types (variance-dependent and variance-independent), thereby transcending this trade-off.

*Speaker

Breaking the norm when breaking up: Intergenerational transmission of divorce among two ethnolinguistic groups in Finland

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Background: Individuals who experience divorce in childhood are more likely to divorce as adults. Notably, the magnitude of the intergenerational divorce transmission is stronger for groups among whom divorce is rare. This transmission may reflect differences in mating strategies passed from parent to child, or stem from differences in cultural norms between groups. Sociologists and demographers have struggled to disentangle socioeconomic and cultural factors, because groups that are less wealthy also tend to have higher divorce rates.

Data and methods: We use data from Finland, where two native ethnolinguistic groups with comparable socioeconomic characteristics – but different divorce risks – live side by side; Swedish speakers and Finnish speakers. Using register data on the entire Finnish population (N = 554,337 couples 1987-2020), we examine separation risk as a function of parental divorce.

Results: Data suggest that the intergenerational transmission is greater among Swedish speakers, who have an overall lower separation rate. Ethnolinguistic group differences in separation risk persist even after controlling for socioeconomic factors and each partner's experience of parental divorce. Finnish-speaking couples who reside in Swedish-dominated areas have both somewhat lower separation risk, and higher intergenerational transmission than their peers in Finnish-dominated areas.

Conclusion: These results point to a cultural transmission of separation, beyond strong socioeconomic factors. We discuss how different ethnolinguistic communities may contribute to this intergenerational transmission, and the evolutionary fitness outcomes of divorce in present day Finland.

*Speaker

Sleep across the menstrual cycle

Aleksandra Wachowicz * ¹, Andrzej Galbarczyk , Magdalena Klimek ,
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OBJECTIVE

Hormonal changes occurring during menstrual cycles might cause changes in behaviour including sleep. Especially progesterone levels, very low during follicular phase and elevated throughout luteal phase might affect sleep patterns. The study aimed to investigate the differences in sleep parameters between the follicular and luteal phases of menstrual cycle.

METHODS

A prospective study was conducted among 84 young, healthy, naturally cycling Polish women. The follicular and luteal phases of the menstrual cycle were determined based on menstrual calendar and urinary luteinizing hormone tests. Participants wore Fitbit Alta HR accelerometers which measured the following sleep parameters: duration of total sleep, rapid eye movement (REM) sleep, and duration of light sleep and deep sleep .

RESULTS

There were no differences in the total sleep time between the luteal and follicular phases ($p=0.10$). There were also no significant differences in the average duration of REM sleep ($p=0.49$), light sleep ($p=0.24$), and deep sleep ($p=0.054$) between the phases of menstrual cycle.

CONCLUSIONS

We did not show any differences in sleep patterns between the follicular and luteal phases of the menstrual cycle. Lack of the observed differences could be potentially attributed to the intraindividual variation in hormone levels and cycle irregularities, difficult to trace solely based on the timing of ovulation.

*Speaker

Failing to Attract a Female Partner – Individual Differences in Mate Value, Mate Access, and Anti-Feminist Attitudes in Men

Catharina Walldén * ¹

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We tested the hypothesis that individual differences in the capacity to attract female partners can partly result in the development of anti-feminist attitudes in men, as male members of groups with anti-feminist agendas (e.g., incels) state they are motivated by difficulties in finding female romantic or sexual partners. Building on evolutionary theories of female choice, we investigated if men with low (vs. high) mate value and low (vs. high) mate access, are more likely to hold anti-feminist attitudes. When women can freely choose their partners, men with low mate value and low mate access are at risk of ending up with no partner. Thus, we hypothesized that low-mate-value and low-mate-access men are prone to turn against sources, such as feminist movements, that have strengthened female choice. We also investigated individual differences in anti-feminist attitudes based on education, income, and socioeconomic status. We used self-reports of mate access, mate value and anti-feminist attitudes from 159 heterosexual individuals identifying as men. We examined associations between mate value, mate access and anti-feminist attitudes by using structural equation modelling. As expected, men with low (vs. high) mate value displayed more anti-feminist attitudes in terms of sexism. Interestingly, there were no associations between mate value and anti-feminist attitudes in terms of supporting restrictions on women's sexual freedom, nor between mate access and anti-feminist attitudes. We also found that men with a low income reported more anti-feminist attitudes compared to men with a high income. Interestingly, the difference in anti-feminist attitudes does not seem to be as clear cut between men with low and high education nor socioeconomic status. We also explore how individual differences in education, income, and socioeconomic status are associated with mate access and mate value in our sample. We discuss these findings further.

*Speaker

The decision making dynamics of interactive agents in static network structures

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Risk and payoff value play essential roles in both human and animal decision making. Typically, high payoff goes side by side with high risk. In the endeavor to optimize the accumulated payoffs, individuals may gradually develop adverse bias under risks and eventually get trapped to the suboptimal choices, the so-called hot stove effect. When introducing social networks into decision making, individuals can escape such traps with conformist social learning strategy and make intelligent unbiased choices. Subsequently, collective intelligence emerges from the individual level with the assistance of social information. However, how diverse social network properties, for instance, the informational efficiency and centralization influence decision-making dynamics on both individual-level and collective-level remains under-discovered. Our study investigates this question by using an agent-based simulation in a reinforcement learning task with a high risk high payoff setup. In a repeated two-armed risky bandit task, agents update choice probabilities through both individual trial-and-error learning and the frequency-based social learning by observing others' choices. The social information agents can observe is decided by the social network structures, which vary from a sparse network to a fully connected network with gradually increasing informational efficiency. The results showed that (1) the hot stove effect was mitigated even under the minimum social influence in the most sparse ring network, and that (2) informational efficiency did not qualitatively change the trend of collective behavioral rescue, although the informationally efficacious networks amplified the existing risk taking biases. Interestingly, the magnitude of the amplification of risk aversion was larger than that of risk seeking. (3) Most interestingly, the increasing social conformity bias on the individual level has a similar function to that of the increasing network density on the collective level.

*Speaker

Microaggressions as a form of inter-group aggression: the relationship between sexist experiences and mental wellbeing in women.

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Microaggressions are defined as verbal or non-verbal actions that communicate hostile, derogatory or prejudiced messages to individuals from minoritized or disadvantaged groups. Evolutionary psychological research has suggested that microaggressions are a form of intergroup aggression, whereby the dominant group seeks to remind individuals in the subordinate group of their relative power (Lindner and Krasnow, 2022. *Evolutionary Psychological Science* 8: 478-492). Microaggressions are suggested to have low cost to the microaggressor, as these behaviours are often subtle, indirect and ambiguous. However, microaggressions potential have large costs to individuals who experience them. The aim of this study was to investigate experiences of sexist microaggressions in women and examine the relationship with mental wellbeing. Participants (N=280 women, aged 18-39 years, UK-based) were recruited online and completed i) the Sexist Microaggression Experience and Stress Scale (Sexist MESS), ii) Depression, Anxiety and Stress Scale (DASS-21), and iii) Ambivalent Sexism Inventory (ASI). We predicted that individuals who report higher frequencies of experiencing sexist microaggressions would have lower mental wellbeing and that the relationship between these variables might be moderated by the extent to which they endorse gender norms. The results revealed a positive correlation between the frequency of sexist experiences (Sexist MESS) and women's mental distress (DASS-21), including when controlling for financial instability, and a negative correlation between sexist experiences and internalized sexist attitudes (ASI), indicating that participants who reported experiencing higher frequencies of sexist microaggressions scored lower on sexist attitudes. The moderating effect of internalized sexist attitudes on the correlation between sexist experiences and mental distress was not significant. These findings indicate that, although microaggressions might be a relatively low cost to the actor, the costs of microaggressions to recipients are potentially large, supporting the idea that these are aggressive interactions, and that microaggressions might be particularly apparent to those who challenge power dynamics.

*Speaker

The behavioral immune system and the willingness to avoid contact with people displaying signs of infection: the mediating role of disgust emotion (measured by fEMG) and the moderating role of perceived vulnerability to diseases.

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The Behavioral Immune System (BIS) is a set of mechanisms aimed at reducing the risk of infection with pathogens, primarily through the emotion of disgust (Ackerman et al., 2018). Previous studies have shown that visible signs of infection on the faces of other people can trigger disgust, leading to reduced willingness to engage in physical contact with these individuals. Thus, BIS is believed to be a defense mechanism that minimizes the risk of disease transmission (Fessler et al., 2005; Szymków et al., 2021). Our study aimed to examine whether signs of infection on the faces of other people predict a lower preference for physical contact and whether this relationship can be explained by the elicited emotion of disgust. Considering that previous studies focused on declarative measures of disgust, we measured it through activity of facial muscles (Corrugator supercilii + Levator labii superioris + Zygomaticus major), traditionally used to measure disgust (e.g., Vrana, 1993; de Jong, Peter, and Vanderhallen, 2002; Wolf et al., 2005; Neumann et al., 2014) with the fEMG Biopac 150 module. Additionally, assuming that not everyone always benefits equally from avoiding pathogens (Curtis et al., 2011; Murray and Schaller, 2016), we hypothesized that reduced willingness to engage in physical contact with individuals displaying signs of infection would be moderated by perceived vulnerability to disease (PVD; Duncan et al., 2009). Specifically, this relationship would be stronger in case of participants with a higher PVD because it is particularly advantageous for them to avoid pathogens (Tybur et al., 2020).

*Speaker

Registered Report: Examining the Predictors and Memory Consequences of Dating Decisions in a Dating App-Analogue Study

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Mating plays a central role in individuals' lives. With the rise of online dating apps, individuals now have access to a vast pool of potential partners across nations at their fingertips. The present study examined how various factors shown to influence mate preference would predict individuals' dating decisions in a dating app-analogue study. Participants ($n = 240$) first completed measures assessing their mating orientation, perceived mate value, and disgust sensitivity. Then they were presented with a set of photos varying in their level of attractiveness and mating orientation. Participants judged the attractiveness of each target and then decided to match with the target or not. On the second day, participants were asked to judge if the photos were presented in the first session's mock-dating task. First, we observed a pattern of assortative mating regarding sexual strategies. People who were more (vs. less) oriented toward short-term mating were more likely to match with short-term-oriented targets. We also found support that moral disgust sensitivity and sexual disgust sensitivity negatively predicted the matching with short-term oriented targets. Contrary to our hypothesis, we did not find support that people with higher (vs. lower) pathogen disgust sensitivity would selectively match with more attractive targets. Exploratory analyses found that the participant-rated attractiveness was a much stronger predictor of matching decisions than the normative attractiveness ratings by an independent sample. More importantly, people who were more (vs. less) short-term oriented, perceived themselves as having higher (v. lower) mate value, or being more (vs. less) sexually attractive, were more likely to match with individuals they considered as attractive. Finally, our data suggest that people have better memories of the faces they chose to match than to not match, even after controlling for attractiveness ratings. The results hold significance for mating research in an online era.

*Speaker

Clustered reproductive timing among relatives and non-relatives

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OBJECTIVE

Age at first birth (AFB) is a key life-history trait and is central to empirical studies of human behavioural ecology (HBE), especially those on varying effects of kin. However, AFB is also highly sensitive to cultural, political, and economic upheavals. In Poland, a well-known *tempo distortion* in AFB occurred when the country rapidly entered the market economy in the early 1990s following decades of socialist occupation, shifting AFB to later ages. Our study examines AFB clustering among relatives and non-relatives during this transition period.

METHODS

We analysed data from 1995 rural Polish women aged 18-91 (mean = 43.90, SD = 17.81), collected between 2009 and 2010. We examined similarities in AFB between genealogical, affinal relatives, and non-kin. Mean AFB was 23.74 for focal women (SD = 3.80), 23.79 for mothers (SD = 4.43), 24.37 for sisters (SD = 4.29), 23.46 brothers' wives (SD = 3.83), and 23.96 for non-kin (SD = 4.61). We used a series of two-sample t-tests in this exploratory analysis.

RESULTS

We found no statistically significant differences in the (mean) AFB between focal women and their mothers ($t = -0.36$, 95%CI: -0.32; 0.22), brothers' wives ($t = 1.28$, 95%CI: -0.15; 0.71), or non-kin friends ($t = -1.74$, 95%CI: -0.53; 0.03). However, there is a negative correlation between the AFB of focal women and their sisters ($t = -3.31$, 95%CI: -1.00; -0.26): the earlier a sister gives birth, the later the focal woman does.

CONCLUSIONS

As sisters are, on average, younger than the focal women, our result could indicate a competition effect, where women delay reproduction to assist older siblings. Alternatively, younger sisters were exposed to novel sociocultural and economic changes affecting their reproductive decisions. Further analyses using multivariate models are needed to disentangle different theoretical perspectives on AFB timing.

*Speaker

List of participants

- Abdul Kader Mohamed Ismail
- Balducci Marco
- Barclay Pat
- Ben El Maati Abdelkader
- Bollée Jeanne
- Borgerhoff Mulder Monique
- Brown Gillian
- Chaix Raphaëlle
- Cherisma Ygens
- Davis Arran
- Davis Connor
- Desir Erline
- Frost Karl
- Gałasińska Katarzyna
- Gul Deniz Salali
- Halimbekh Narhulan
- Hassan Anushe
- Jafarzadeh Amir
- Jelinek Petra
- Maaroufi Asmaa
- Macken Murphy
- Nila Sarah
- Obrochta Weronika
- Ogusu Natsuki
- Pazhoohi Farid

- Peña Jorge
- Pitt Benjamin
- Risa Teramoto
- Rosun Nachita
- Sarabian Cécile
- Savisaar Rosina
- Seabright Edmond
- Sear Rebecca
- Shenk Mary
- Szymkow Aleksandra
- Tognetti Arnaud
- Tolopilo Aleksandra
- Toyokawa Wataru
- Turecek Petr
- Varas Enriquez Pablo Jose
- Xie Jinwen

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