



INTERNATIONAL SOCIETY



FOR HUMAN ETHOLOGY

XXVIII INTERNATIONAL CONGRESS

BOOKLET WITH PROGRAMME & ABSTRACTS

„BUILDING BRIDGES:

D

A-



MAMMOTHS, ROUFFIGNAC CAVE

-LOGUES

BETWEEN HUMAN
ETHOLOGY & ARCHAEOLOGY"

JUNE, 21-27, 2026
LES EYZIES, FRANCE

MUSÉE NATIONAL DE
PRÉHISTOIRE



Reconstruction of a mammoth, baptised Félix („the Happy“),
in the Musée National de Préhistoire (MNP), Les Eyzies.

Human Ethology

ISHE's Open Access Journal

Free to read, free to publish



<https://human-ethology.org>

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Photos:

Wulf Schiefenhövel & Marian Vanhaeren
 MNHN & Archive H.L. Movius (p.33)

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Welcome

Bienvenue to the XXVIII Biennial Congress of the International Society for Human Ethology (ISHE) taking place in cooperation with the Musée National de Préhistoire (MNP) in Les Eyzies (Dordogne, France). This picturesque village nestled against rock cliffs at the shore of the Vézère is a cradle of archaeology and prehistory. Research carried out here presented proof that early humans lived in the area, who did not only leave traces of their lithic technology and mobile art, but created the world-famous paintings and engravings deep inside the nearby caves bearing witness of their daring minds and artistic prowess.

The conference is held in the museum, right under one of the abris where early humans lived and died. Visits to the Rouffignac Cave and Lascaux IV as well as to the rockshelter of Pataud and a kayak trip are planned. The symposium and the poster session will take place in the Pôle d'Interprétation de la Préhistoire by the little Beune river, tributary of the Vézère.

Invited speakers, internationally leading representatives of their field, will cover a range of topics relevant for a better understanding of the eternal question: Who are we?

Human Ethology, the evolutionary biology and biopsychology of human perception, emotion, thought and behaviour, and archaeology, prehistory, palaeoanthropology and palaeogenetics, discovering tangible data from the past, will engage in the effort, for the first time in such framework, to present their research and find ways to bridge results and ideas.

We hope that the congress will offer a unique opportunity for encounter and dialogue between our different disciplines and look forward to the future paths of joint adventures and discoveries.

On behalf of ISHE & the local organising committee:

Wulf Schiefenhövel (Max Planck Institute) & Marian Vanhaeren (CNRS)

Jan Havlíček (President of ISHE), Jaroslava Varella Valentova (Vice President of ISHE)

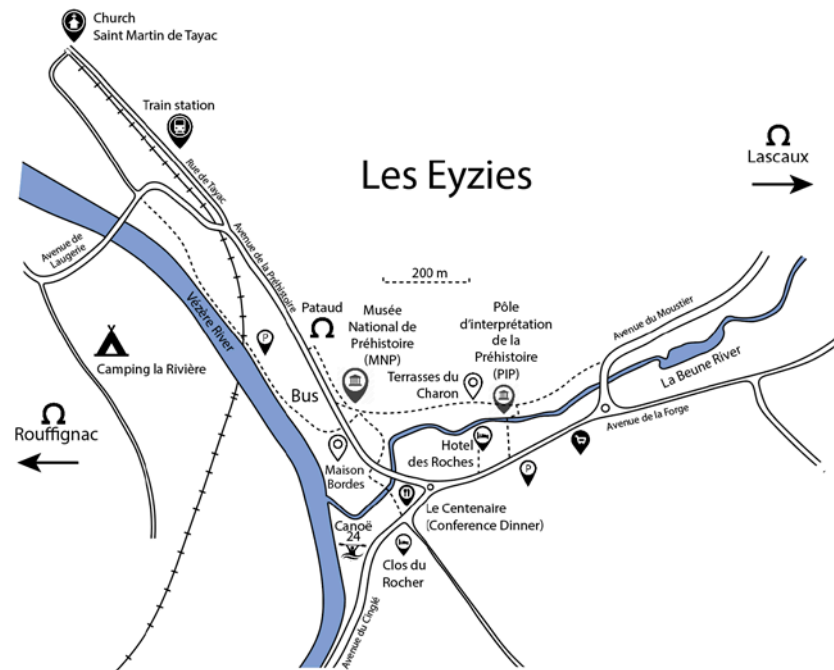
Nathalie Fourment (Curator of the MNP)

Roland Nespoulet (Muséum national d'Histoire naturelle)



Special thanks to local Sponsors

Map with Locations



Maison Bordes, House, Meeting Rooms & Garden

9 Avenue de la Préhistoire

- Registration
- Meetings Boards of Trustees & Officers
- Lunches (Monday, Tuesday, Thursday, Friday)
- BBQ Diner (Tuesday evening)

Auditorium & Rooftop of the Musée National de Préhistoire (MNP)

1 Rue du Musée

- Films & Welcome Buffet dinner (Sunday evening)
- Encounters
- Oral Presentations
- Special Exhibit "Gestes d'Éternité"

Pôle d'interprétation de la Préhistoire (PIP)

- Symposium on disgust
- Poster presentations & discussions
- Lunch (Wednesday)

Bus stop at the crossing Avenue de la Préhistoire, Rue du Musée & Place de la Mairie

- Start/end Bus ride to/from Lascaux IV (Tuesday) and Rouffignac Cave (Thursday)

Contact numbers

In an emergency, call **112** or **17**
If you have difficulty speaking or hearing, access
<https://info.urgence114.fr/>

Help contacts and security guidelines in France are available on the website:
<https://www.masecurite.interieur.gouv.fr/en>

- 112** Emergency in Europe
- 15** Medical emergency
- 17** Police emergency

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Complimentary test kits (influenza and covid) are available at the registration area.

Code of conduct

The International Society for Human Ethology (ISHE) holds annual meetings to enable its membership to present and discuss research findings, to share knowledge of techniques and skills, and to build professional networks. At both its Congress and Summer Institutes, ISHE is dedicated to providing a harassment-free event experience for everyone. We do not tolerate harassment of event participants in any form. Event participants violating these rules may be sanctioned or expelled without a refund at the discretion of the ISHE Board of Officers.

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

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

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

Critical examination of beliefs and viewpoints does not, by itself, constitute hostile conduct or harassment. Similarly, use of sexual imagery or language in the context of a professional discussion might not constitute hostile conduct or harassment if it is necessary to the topic of discussion and presented respectfully.

Enforcement

Participants who are asked to stop any harassing behavior are expected to comply immediately.

If a participant engages in harassing behavior, event organizers retain the right to take any actions to keep the event a welcoming environment for all participants. This includes warning the offender or expulsion from the meeting with no refund.

Event organizers may take action to redress anything designed to, or with the clear impact of, disrupting the event or making the environment hostile for any participants.

We expect participants to follow these rules at all event venues and event-related social activities.

Reporting

If someone makes you or anyone else feel unsafe or unwelcome, or if you believe a harassment problem exists, please report it as soon as possible to any member of the ISHE Board of Officers or event organizers.

References

This anti-harassment policy is adapted (with permission) from that drawn up by the Society for the Improvement of Psychological Science (<https://improvingpsych.org>), using language and concepts adapted from the following sources:

Geek Feminism wiki:

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

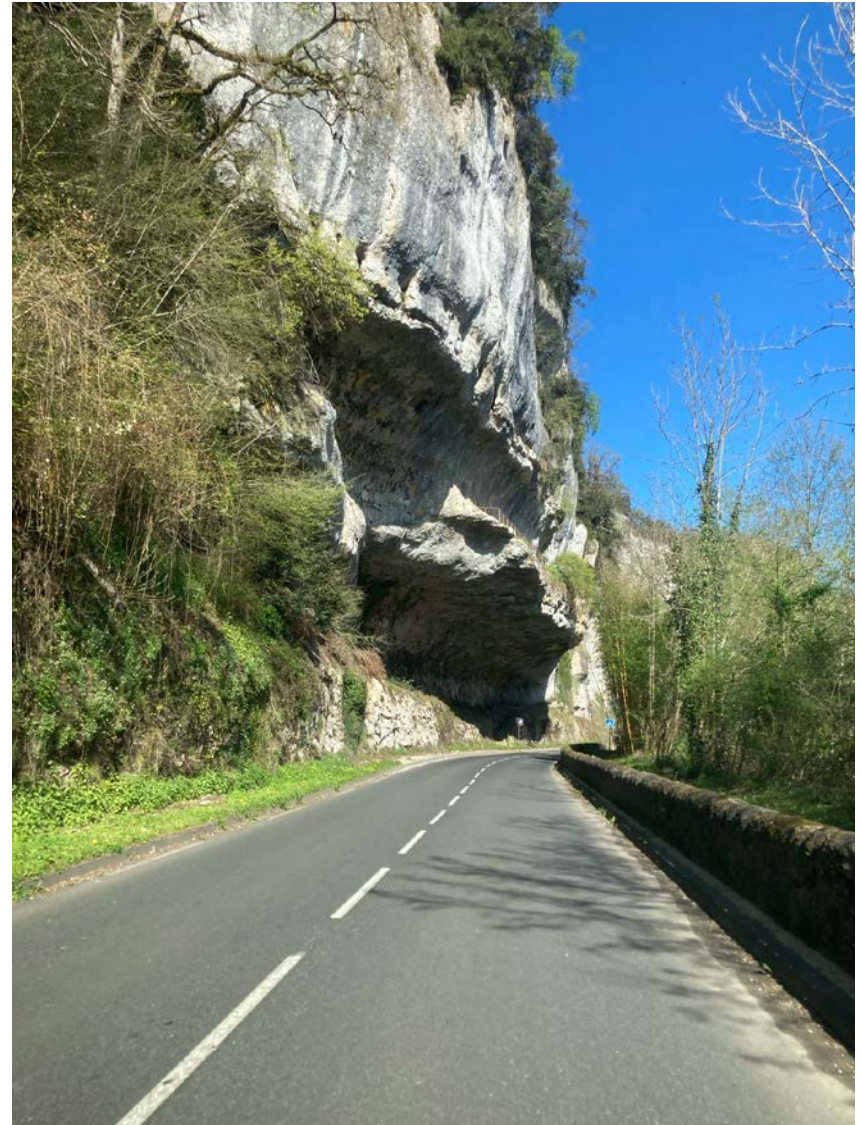
American Library Association code of conduct: <http://alamw14.ala.org/statement-of-appropriate-conduct>



Les Eyzies train station



“Stone Age” railway switch



Avenue de Laugerie with inhabited rockshelters



Avenue de la préhistoire, leading to the centre of Les Eyzies



Entrance to the Musée National de Préhistoire (MNP)



Maison Bordes



↑ View from the entrance of Résidence Clos du Rocher. ↓ Pôle d'Interprétation de la Préhistoire (PIP)



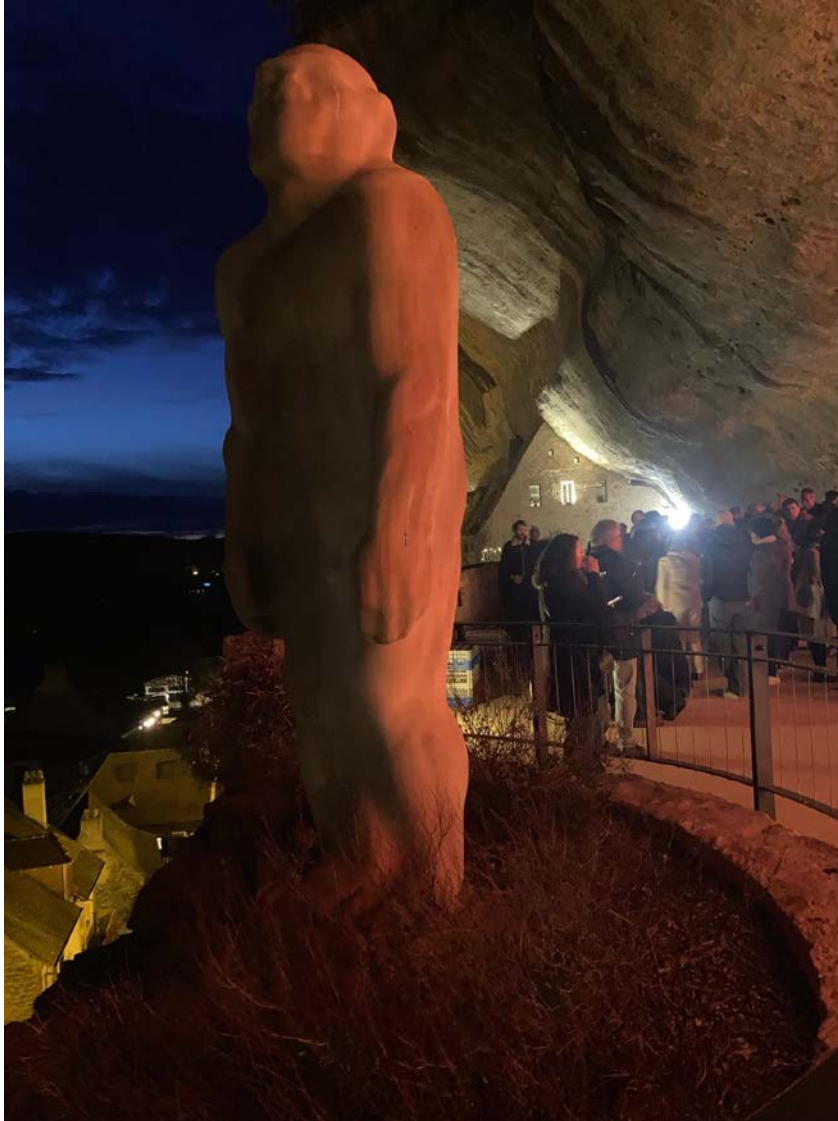
Programme Overview

underlined = presenter, [SFA] = Student First Author, [LMA] = Linda Mealey Award candidate



View from ↑ down and ↓ up the museum's rooftop





This is where we will have some of our gatherings

Sunday, 21st of June

13:00-18:00 Maison Bordes
(9 Avenue de la Préhistoire, 24620 Les Eyzies)

13:00-18:00 **Registration**
(welcome bag, useful information, name tags)

13:00-15:00 **Meeting Board of Officers**

15:00-17:00 **Meeting Board of Trustees**

18:00-20:00 Lecture Room National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)
Chair: Nathalie Fourment

Setting the scene (introduction & film projections)

Jean-Michel Geneste: Why rock art is important for archaeology? (p42)
Film: The last passage by Pascal Magontier (30 min)

Wulf Schiefenhövel: Cross-cultural human ethology: fieldwork in Melanesia (p43)
Film: Eipo. Rebuilding the sacred men's house by Gerd Koch & Wulf Schiefenhövel, Encyclopaedia cinematographica (30 min)

20:00-22:00 Rooftop National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)

Get together - Buffet Dinner

Monday, 22nd of June

8:00-9:00 Maison Bordes
(9 Avenue de la Préhistoire, 24620 Les Eyzies)

8:00-9:00 **Registration**
(welcome bag, useful information, name tags)

9:00-10:45 Lecture Room National Prehistory Museum (MNP)
(1 Rue du Musée, 24620 Les Eyzies)
Chair: Jaroslava Varella Valentova

Welcome & Announcements

Jan Havlíček & Jaroslava Varella Valentova (President & Vice-President ISHE)
Nathalie Fourment & Catherine Cretin (Director, Chief Curator of Heritage & Curator of Patrimony, in charge of the Upper Paleolithic collections MNP)
Wulf Schiefenhövel & Marian Vanhaeren (local organisers)

Keynote Dialogue 1 What makes us human? Insights from Prehistory & Biopsychology

Jean-Jacques Hublin: Energetic Constraints and the Emergence of Humankind (p46)

Martin Brüne: The Human Enterprise: Promises and Downsides (and why we need evolutionary medicine) (p47)

10:45-11:15 Rooftop National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)

Coffee & Tea

11:15-12:30 Lecture Room National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)
Chair: Michel Raymond

Adaptation/Mismatch

11:15-11:30 Ton Groothuis, Wulf Schiefenhövel, Sara Schaafsma, Nele Zickert, Reint Geuze: Exploring past and present Darwinian selection for human handedness (p56)

11:30-11:45 Ian Stephen, Kevin Brooks: Body size and shape misperception: A Tinbergian approach (p57)

11:45-12:00 Hana Hubová, Zuzana Kaňková, Jan Toman, Daniela Dlouhá, Šárka Kaňková: Disgust Sensitivity in Adolescence: Intersexual and Age-Related Differences [SFA] (p58)

12:00-12:15 Elahe Tavakoli-Berg, Jeanne Bovet, Mats Lekander, Mats Olsson, Joanna Vieira, Julie Lasselin, Arnaud Tognetti: Sick faces trigger social avoidance in humans (p59)

12:15-12:30 Lenka Martinec Nováková: Subjective Sensory Processing versus Acuity as Predictors of Picky Eating in Czech Adolescents (p60)

12:30-14:00 Maison Bordes
(9 Avenue de la Préhistoire, 24620 Les Eyzies)

Lunch

14:00-15:30 Lecture Room National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)
Chair: Ana Maria Fernandez

Reproduction

14:00-14:15 Katharina da Silva, Bruno Amaral, Marco Varella, Jaroslava Varella Valentova: Dark side of mate choice: Homogamy Drives Attraction to Dark Triad, but Desirability of Antisocial Traits and Criminal Behavior is Not Enhanced by Fame, Wealth, or Looks (p61)

14:15-14:30 Maximilian von Andrian-Werburg, Emilia Gögl, Frank Schwab: Dark desires? Which traits predict female use of Dark Romance, and how does the genre influence its audience? (p62)

14:30-14:45 Prapti Gohil, Gabriel Šaffa, Pavel Duda: Cultural constraints on reproduction: ecology, social organization, and post-partum sex taboo [SFA] (p63)

14:45-15:00 Hidenori Komatsu, Nobuyuki Tanaka, Benjamin J. A. Dickins, Catherine Salmon, Elisabeth Oberzaucher, T. Joel Wade, Leif Edward Ottesen Kennair, Maryanne L. Fisher, Ryoko Takikawa, Thomas E. Dickins: Perceived familial support as an overlooked driving force for fertility: a kin selection perspective (p64)

15:00-15:15 Ilmari Määttänen, Mehmet Mehmetoglu, Siiri Lehto: Social learning of human mating preferences (p65)

15:15-15:30 Yitzchak Ben Mocha: Advancing human evolution research with the Cooperative-Breeding Database (Co-Breed) (p66)

15:30-16:00 Rooftop National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)

Coffee & Tea

16:00-18:00 Lecture Room National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)
Chair: Marian Vanhaeren

Why Human Ethology?

16:00-16:30 John Richer: "Life can only be understood backwards, but must be lived forwards" Søren Kierkegaard, 1843. Why studying ourselves scientifically is difficult and why ethology is best placed to succeed (p67)

Keynote Dialogue 2

Fires & caves: centers of human creativity

Pauline (Polly) Wiessner: From Stories to Society: The Making of Imagined Communities (p48)

Nicholas (Nick) Conard: Paleo-human ethology and hominin evolution since the Middle Pleistocene (p49)

Dinner at own expense, advanced reservation recommended or picknick at the cliff (Terrasses du Charron)

Tuesday, 23rd of June

9:00-10:00 Lecture Room National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)
Chair: Roland Nespoulet

Funerary rites & grief: human hallmarks

Bruno Maureille: Mortuary behaviors and funerary practices in the Paleolithic: Current perspectives and research challenges (p68)

Wulf Schiefenhövel: Emotions driving funerary rites: examples from New Guinea (p69)

Marian Vanhaeren: Reconstructing emotions in prehistoric funerary contexts (p70)

Prelude to the Special Exhibit "Gestes d'Éternité"

Nathalie Fourment, Brad Gravina: Prelude to the Special Exhibit "Gestes d'Éternité" (p71)

10:00-11:00 National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)

Visit of the Special Exhibit "Gestes d'Éternité" with Nathalie Fourment, Brad Gravina and Maiwenn Courcelle

10:00 **Group #1**

10:15 **Group #2**

Coffee & Tea will be available on the Rooftop between 10:00 and 11:00

11:00-12:30 Lecture Room National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)
Chair: John Richer

Keynote Dialogue 3 On culture & cognition

Dietrich (Dietz) Stout:
The Evolution of Human Tool Use and Technology (p50)

Angela Friederici:
Language as a uniquely human cognitive trait (p51)

12:30-14:00 Maison Bordes
(9 Avenue de la Préhistoire, 24620 Les Eyzies)

Lunch

14:00-15:30 Lecture Room National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)
Chair: Catherine Cretin

Glimpses from the Past

14:00-14:15 Michael Brill, Maximilian von Andrian-Werburg, Frank Schwab: Still Painting the Same Stories: Human Universals from Prehistoric Caves to Modern Film (p72)

14:15-14:30 Nataliia Mykhailova: The Mariupol Phenomenon: Personal Ornaments and Social Identity (p73)

14:30-14:45 Irene Delval, Juan Manuel García-Ruiz, Tomás de la Rosa, Guillermo Bustelo: Crystal Allure: Why Apes and Humans Are Attracted to Crystals [SFA] (p74)

14:45-15:00 Marco Varela: The Nocturnal Evolution of Human Musicality: Solving the Adaptationist Puzzle (p75)

15:00-15:15 Edward Morisson: The origin of beauty (p76)

15:15-15:30 Cheng Liu: Sealed in stones: Toward a computational ethology of stone toolmaking [LMA] (p77)

15:30-16:00 Walk to the Bus stop on the Place de la Mairie
(Place de la Mairie, 24620 Les Eyzies)

16:00-16:35 Bus Les Eyzies → Lascaux IV
(Place de la Mairie, 24620 Les Eyzies)

16:35-16:50 Walk Bus stop to Lascaux IV

16:50-19:10 Visit of Lascaux IV
(42 Avenue de Lascaux, 24290 Montignac-Lascaux)

16:50 **Group #1** (max 40 persons)
17:00 **Group #2** (max 40 persons)
17:10 **Group #3** (max 40 persons)

19:10-19:30 Walk Lascaux IV to Bus stop

19:30-20:00 Bus Lascaux IV → Les Eyzies

20:00-22:00 Maison Bordes
(9 Avenue de la Préhistoire, 24620 Les Eyzies)

BBQ Dinner

Wednesday, 24th of June

9:00-10:00 Lecture Room Pôle d'interprétation de la préhistoire (PIP)
(30 Rue du Moulin, 24620 Les Eyzies)
Chair: Jan Havlíček

Les enfants dégoûtés: A symposium on development of disgust

9:00-9:15 Daniela Dlouhá, Hana Hubová, Jana Benešová, Kateřina Roberts, S. Craig Roberts, Šárka Kaňková: Disgust in preschool children: a cross-cultural experimental study [SFA] [LMA] (p78)

9:15-9:30 Jan Havlíček, Daniela Dlouhá, Marie Štěpánková, Lucie Jelínková, Dagmar Schwambergová: The development of olfactory-mediated disgust in preschool children (p79)

9:30-9:45 Markéta Janovcová, Šárka Peterková, Helena Vaňková, Kristýna Sedláčková, Daniel Frynta, Eva Landová: Negative emotions evoked by animals: Fear changes, but disgust remains the same (p80)

9:45-10:00 Symposium Panel discussion

10:00-13:00 Lecture Room Pôle d'interprétation de la préhistoire (PIP)
(30 Rue du Moulin, 24620 Les Eyzies)
Chair: Wulf Schiefenhövel

10:00-11:00 Poster Presentations 1-20*

11:00-11:30 Coffee & Tea

11:30-12:48 Poster Presentations 21-46*

12:48-16:00 Lecture Room Pôle d'interprétation de la préhistoire (PIP)
(30 Rue du Moulin, 24620 Les Eyzies)

13:00-14:00 Walking Lunch

13:00-16:00 General poster discussion session at the posters

16:00-16:30 Walk to the National Prehistory Museum

16:30-18:00 Lecture Room National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)
Chair: S. Craig Roberts

Keynote Dialogue 4
Art, Jewels & Beauty

Alison Brooks, John Yellen: Symbolic Behavior and Body Ornamentation: Beads, Pigments and 'Art' in Evolutionary Perspective (p52)

Sibylle Wolf: Materialising Identity in the Upper Palaeolithic (p53)

Dinner at own expense, advanced reservation recommended or picknick at the cliff (Terrasses du Charron)

Thursday, 25th of June

8:45-9:30 Bus Les Eyzies → Rouffignac Cave
(Place de la Mairie, 24620 Les Eyzies)

9:30-11:30 Visit of Rouffignac Cave
(24580 Rouffignac-Saint-Cernin-de-Reilhac)

9:30 Group #1 (max 30 persons)

9:45 Group #2 (max 30 persons)

10:00 Group #3 (max 30 persons)

10:15 Group #4 (max 30 persons)

11:30-12:00 Bus Rouffignac Cave → Les Eyzies

12:00-14:00 Maison Bordes
(9 Avenue de la Préhistoire, 24620 Les Eyzies)

Lunch

14:00-15:30 Lecture Room National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)
Chair: Ian Stephen

Olfaction

14:00-14:15 Lucie Jelínková, Dagmar Schwambergová, Žaneta Pátková, Anna Frank, Jan Havlíček: Male body odour attractiveness, but not the arousal state of the male body odour, influences sexual arousal in women [SFA] (p81)

14:15-14:30 Jitka Třebická Fialová, Natálie Folbergerová, Daniel Mazánek, Vojtěch Nesvadba, Jan Havlíček, Vít Třebický: Olfactory cues to winning and losing in a virtual reality game (p82)

14:30-14:45 Jeffrey Frederick, Jan Havlíček: Systematic review of body odor changes across the menstrual cycle (p83)

14:45-15:00 S. Craig Roberts: Breastfeeding, bonding, and olfaction: unlocking the potential of mother-infant odour exchange (p84)

Language & sound

15:00-15:15 Theresa Matzinger, Shiri Lev-Ari: The effect of aesthetic appeal on the cultural evolution of language (p85)

15:15-15:30 Daniela Lenti Boero, Laura Habegger: The emotional reactions to nature sounds agree with human evolutionary history (p 86)

15:30-16:00 Rooftop Museum
(1 Rue du Musée, 24620 Les Eyzies)

Coffee & Tea

16:00-17:15 Lecture Room National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)
Chair: Nancy Segal

Stress

16:00-16:15 Katelyn Lowe, Carol Weisfeld, Lee Eshelman: An Ethological Study of Nonverbal Behaviors in Posttraumatic Stress Disorder [SFA] [LMA] (p87)

16:15-16:30 Carol Weisfeld, Katelyn Lowe: What am I seeing? Novel displacement behaviors in patients with PTSD (p88)

16:30-16:45 Nathan Pipitone, Emmanuelle Legerme: Inclusive fitness...and puppy love? Investigating how phylogenetic relatedness, inclusive fitness, and sex of rater influence emotional distress levels when considering hypothetical assault scenarios (p89)

16:45-17:00 Agnieszka Zydorczyk: Amateur Ethologists in the Digital Age: How incels misinterpret evolution to rationalise misogyny [SFA] [LMA] (p90)

17:00-17:15 Serge Bahuchet: Tools, hands, and gesture: the necessary contribution of human ethology to understand material culture (p91)

17:15-17:30 Walk to Abri Pataud

17:30-22:00 Abri Pataud
(20 Rue du Moyen-Âge, 24620 Les Eyzies)

Visit of the excavated area of the Pataud Rockshelter with Roland Nespoulet

17:30 Group #1 (max 40 persons)

17:50 Group #2 (max 40 persons)

18:10 Group #3 (max 40 persons)

Pataud Museum freely accessible

Flint knapping

Buffet Dinner

Friday, 26th of June

9:00-10:30 Lecture Room National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)
Chair: Carol Weisfeld

Methods

9:00-9:15 Petr Tureček, Peter Kutsos, Petr Chlup, Pavlína Hillerová: Randomness in decision-making models and its role in integration of information from multiple sources (p92)

9:15-9:30 Adam Smith, Hidekazu Komatsu, Nobuyuki Tanaka, Hiromi Kubota, Osamu Kimura, Maryanne L. Fisher, Renan Koike, Takahiro Ueno, Hiroto Takaguchi, Kimiya Murakami: Familial Nudging as an Energy Conservation Method in the Workplace: Insights from AI-Driven Analysis (p93)

9:30-9:45 Gabriel Stoiciu: Interviewing Enheduanna. Exploring Artificial Intelligence's impersonation ability as methodological resource in archeological and anthropological research (p94)

Twins

9:45-10:00 Nancy Segal: Evolutionary Perspectives on Twinning: The Puzzle of Functional Significance (p95)

Attractiveness

10:00-10:15 Vít Třebický, Agáta Kolingerová, David Stella, Natálie Folbergerová, Vojtěch Nesvadba, Jitka Holubová, František Zahálka, Jan Havlíček, Jitka Třebická Fialová: Association between physical fitness and attractiveness in women (p96)

Child ethology

10:15-10:30 Natalia Siekiera: Play-Work Repertoires and Peer Relations in Yurakare Indigenous Children (p97)

10:30-11:00 Rooftop National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)

Coffee & Tea

11:00-12:30 Lecture Room National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)
Chair: Thomas Alley

Emotions

11:00-11:15 Catherine-Noémie Alexandrina Guran: Dogs are not for Eating: Attributing Affective Abilities to Animals (p98)

11:15-11:30 Pavína Hillerová: Keeping Solidarity Alive: Episodic Engagement and Visibility in Crisis Fundraising [SFA] [LMA] (p99)

11:30-11:45 Amelia Waliszewska: Jokes, Mischief, and Mayhem: Dark Triad Traits Meet Humor Styles? [SFA] (p100)

11:45-12:00 Ana Maria Fernandez: The evolved social mind in digital perspective: Adaptation, mismatch, and emerging social ecologies (p101)

12:00-12:15 Colin Hendrie, Alasdair Pickles: Avian alarm calls increase heart rate in anxious individuals (p102)

12:15-12:30 Daniel Frynta, Markéta Janovcová, Iveta Štolhoferová, Petra Frýdlová, Eva Landová: Pictorial stimuli can reliably substitute for live animals in studies assessing perceived beauty and elicited emotional responses (p103)

12:30-14:00 Maison Bordes
(9 Avenue de la Préhistoire, 24620 Les Eyzies)

Lunch

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(1 Rue du Musée, 24620 Les Eyzies)
Chair: Marc Mehu

Emotions (continued)

14:00-14:15 Bridget Waller, Jamie Whitehouse, Jerome Micheletta, Eithne Kavanagh: Universal facial expressions tell stories, not active states (p104)

14:15-14:30 Jitka Lindová, Linda Glajchová, Barbora Šipošová: When we push back or let go: emotions in conflict (p105)

14:30-14:45 Aitana García Arasco, Lorine Grangy, Laurène Gaillard, Agata Groyecka-Bernard, Piotr Sorokowski, David Reby, Katarzyna Pisanski: Human fear and aggressive vocalisations vary across diverse cultures: Evidence from Hadza, Darkhad and French populations [LMA] (p106)

14:45-15:00 Carole Tafforin, Coraline Tamponnet, Muriel Didier, Agnès Bégué, Nancy Segal: Behavior of women in space mission scenarios: ethological viewpoint and cross-view (p107)

15:00-15:15 Sojung Baek, Nurul Alam, Aasima Mowni, Mary Shenk: Empathy as a Mechanism of Social Capital Formation in a Patrilocal Society: Evidence from Women of Matlab, Bangladesh [SFA] [LMA] (p108)

15:15-15:30 Marc Mehu: Emotional experience in the face of threats and opportunities: Connections between emotion theories and the Fundamental Motives Framework (p109)

15:30-16:00 Rooftop National Prehistory Museum
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Coffee & Tea

16:00-18:00 Lecture Room National Prehistory Museum
(1 Rue du Musée, 24620 Les Eyzies)

General Assembly Meeting

20:00-24:00 Conference Dinner
(Restaurant Le Centenaire, 2 Avenue du cingle, 24620 Les Eyzies)

Saturday, 27th of June

8:30-12:00 Kayak on the Vézère river, Les Eyzies



↑ Special exhibit “Gestes d’Éternité” including the ↓ “Dame de Cavillon” from the collection of the Muséum national d’Histoire naturelle



↑ Path from the museum to the ↓ Pôle d’Interprétation de la Préhistoire (PIP)





← View of Pataud Rockshelter with its terrace and the house of the farmers Pataud as well as
→ a mammoth ivory bead and a *Homo sapiens* skull, both dated to $\approx 27,000$ before present

*Poster presentations at the Pôle d'interprétation de la préhistoire (PIP)

Wednesday, 24th of June

Reproduction

1. Wiktor Belicki, Dawid Mikulski, Oliwia Bąkowska, Paulina Puczek, Wiktoria Majewska, Aniela Dębowska, Julia Nosek, Nadia Paszyk, Aleksandra Tołopiło, Natalia Frankowska, Aleksandra Szymków: Winning the Mate Game: Mate Value as a predictor of rival's derogation [SFA] (p112)
2. Emilia Gögl, Maximilian T.P. von Andrian-Werburg: (Not) wearing the pants: The impact of gender norm conformity on the perception of female- and male-centric erotic stories [SFA] (p113)
3. Belen Zavalla Cordero, Ana Maria Fernandez, Maria Teresa Barbato: Dyadic trust and digital jealousy: sex differences in romantic relationships in the Chilean population [SFA] (p114)
4. Františka Jíchová, Jan Havlíček: Association between pornography consumption and own sexual activities in young adults [SFA] (p115)
5. Belen Zavalla Cordero, Carola Perez, Ana Maria Fernandez: Relational Insecurity, Mate Retention, and Destructive Conflict: A Theoretical Model of Parental Stress [SFA] (p116)
6. Petr Freudenfeld, Jakub Fořt, Dominika Benešová, Jaroslava Varella Valentova, Jan Havlíček: Coming Out Timing: The Role of Gender Nonconformity and Anal Sex Role Preferences [SFA] (p117)
7. Jennifer Leão Correia, Elisangela dos Anjos Paula Vieira, Fraulein Vidigal de Paula, Ricardo Prist, Tania Kiehl Lucci, Emma Otta: Early Touch in Twins: Chorionicity, Birth Weight and Sex Differences [SFA] (p118)
8. Pedro Henrique Dônola de Melo, Tania Kiehl Lucci, Lilian Cristina Luchesi, Isabella França Ferreira, Ricardo Prist, Emma Otta: The Fragile Male? Sex-Specific Pathways in the Early Biological Roots of Emotional Regulation in Brazilian Twins [SFA] (p119)

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9. Thays Machado da Cruz, Ian Stephen: Identity perception under extreme similarity: A proposed research programme using twin faces [SFA] (p120)
10. Dawid Mikulski, Wiktor Belicki, Oliwia Bąkowska, Paulina Puczek, Aniela Dębowska, Aleksandra Tołopiło, Natalia Frankowska, Aleksandra Szymków: Attractiveness in the Face of Threat: How the Sense of Danger Influences Women's Preferences for Male Faces [SFA] (p121)
11. Jamie Whitehouse, Clare Kimock, Eithne Kavanagh, Lauren Brent, Bridget Waller: Sex-specific benefits of facial expressivity in rhesus macaques (p122)
12. Rachel Robinson, Bridget Waller, Eithne Kavanagh, Annika Paukner, Jamie Whitehouse: Social environment moderates attention to play faces in bonobos (*Pan paniscus*) [SFA] (p123)

13. Zuzanna Szpak, Aleksandra Tyrzyk, Michał Parzuchowski: Look into my eyes: Attentional bias to facial expressions predicts mechanisms of gullibility [SFA] (p124)

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18. Kevser Batz, Wulf Schiefenhövel, Marian Vanhaeren: The Evolution of Altruistic Behaviour – Archaeological, Ethnographic and Human Ethological Perspectives [SFA] (p129)

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Eglise Saint-Martin de Tayac



Access to the cliffs at the Terrasses du Charron (23 rue du moulin)

Sunday, 21st June

Why Rock Art is Important for Archaeology?

Prof. Jean-Michel Geneste, PhD

(UMR 5199, PACEA, Université de Bordeaux, France)

[Contact: jeanmichelgeneste@orange.fr]

Rock art is the most important global visual record of our human history. It tells the story of the birthplaces of art, the dawn of our artistic endeavours. Its presence transforms natural landscapes into cultural landscapes.

Rock art murals provide extraordinary encounters with other animal species through connections to highly significant places in the world. It illustrates the passage of time through thousands of years of cultural and environmental change.

Rock art incarnates the essence of our human ingenuity and facilitates contact between different modern cultures. It is still artistically and graphically powerful, and always full of meaning.

This fragile and irreplaceable visual resource has worldwide resonance, contemporary relevance and for many Indigenous peoples is a part of their living culture.

Today protecting rock art as a non-renewable archaeological resource of knowledge about human past is important because disrespecting our history is devaluing our future.

The immersive film *The Last passage* by Pascal Magontier (2015) illustrates the power of visual cave records from European Pleistocene period.

Film: *The last passage* by Pascal Magontier (30 min)

Setting the Scene

Cross-Cultural Human Ethology: Fieldwork in Melanesia

Wulf Schiefenhövel,

(Max Planck Institute for Biological Intelligence, Starnberg-Seewiesen, Germany)

[Contact: schiefenh@yahoo.de]

Who are we? What is our essence? Why do we perceive the world, others and ourselves the way we do? Why do we feel, think and behave in particular, often universal ways? Questions most likely already contemplated by our early ancestors. Human ethology tries to answer these questions by focussing on our evolutionary history. Cross-cultural fieldwork (in my case since 1965 until today, mainly in Mainland and Island New Guinea), is one of the commonly used approaches in this endeavour. Long-term (emic) ethnographic data-collection, preferably in the local language, as well as audio/photo/film/video documentation provide the basis for analytical (etic) interpretations. Religiously charged, socially important rituals render good opportunities to understand a particular society. At such occasions, a culture exhibits its inner cores, which thus become visible in often spectacular, public displays. Sacred men's houses are characteristic for Papuan cultures. They fulfil functions of ancestor and other religious worship, political planning (e.g. warfare), social coherence and social action. In November 1975 the members of the most important of the three men's houses of the village of Munggon decided to rebuild their old *yoek aik*, which showed mild signs of deterioration. Gerd Koch, initiator of the DFG (German Research Foundation) Priority Programme "Humans, Culture and Environment in the Central Mountains of West-New Guinea" and myself, field-director of the programme, filmed this event with two spring-wound Bolex 16 mm cameras. The film exemplifies the co-evolution of genes and culture typical for our species.

Film: Eipo. Rebuilding the sacred men's house by Gerd Koch & Wulf Schiefenhövel, Encyclopaedia cinematographica (30 min)



↑ View from the rooftop of the Musée National de Préhistoire and ↓ Hotel des Roches in Les Eyzies



Monday, 22nd June

What Makes Us Human? Insights from Prehistory & Biopsychology

Energetic Constraints and the Emergence of Humankind

Prof. Jean-Jacques Hublin, PhD

(Department of Human Evolution, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany & Palaeoanthropology, Collège de France, Paris, France)

[Contact: hublin@eva.mpg.de]

Hominin evolution is characterized by an intensification of cooperative behaviors and by the construction of a niche that has led to a largely artificialized environment. These transformations are deeply rooted in energetic constraints. The increase in brain size, highly costly in metabolic terms, imposed a major reorganization of dietary strategies and, more broadly, of energy allocation and its externalization.

These constraints contributed to the emergence of a distinctive reproductive system. The birth of individuals with immature brains, followed by prolonged development, entails a lasting dependence of offspring on the social group. Relatively early weaning and reduced interbirth intervals favored a cooperative mode of reproduction based on the support of individuals other than the mother. This social organization, grounded in resource sharing and redistribution, constitutes a key aspect of human adaptation.

The extended postnatal development of the brain, largely shaped by the social environment, opened the way to specific cognitive capacities. Empathy, the understanding of others' intentions, and more elaborate forms of theory of mind emerge within this framework. These traits were likely accompanied by processes of self-domestication that reinforced group cohesion.

Human evolution thus appears as the product of close interactions between biological constraints, energetic dynamics, and technical and social innovations. It rests on the gradual emergence of complex cooperative systems, within which *Homo sapiens* represents an extreme form along a trajectory initiated well before its appearance.

Keynote Dialogues

The Human Enterprise: Promises and Downsides (and why we need evolutionary medicine)

Prof. Dr. Martin Brüne

(Clinic for Psychiatry, Ruhr-University Bochum, Germany)

[Contact: martin.bruene@rub.de]

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Monday, 22nd June

Fires & Caves: Centres of Human Creativity

From Stories to Society: The Making of Imagined Communities

Prof. Pauline (Polly) Wiessner, PhD

(School of Human Evolution and Social Change, Arizona State University, USA)

[Contact: pollywiessner@gmail.com]

In all non-industrial societies, humans master the control of fire and use firelight to extend the day into hours of social time filled with song, dance, and the storytelling that captivates humans from the very earliest years of life. Why this universal human engagement in storytelling? Why the burning fascination with the exploits and experiences of others? Here, I explore the ephemeral art of storytelling in the creation and maintenance of larger "imagined communities" within which our ancestors evolved --communities in which people who did not live contiguously in space employed symbolic means to forge cultural institutions that enabled social life and cultural transmission beyond the limits of immediate proximity. The implications of firelit storytelling for the evolution of human cognition, social organization, and communication are profound, though the time frame for the emergence of such symbolic behavior remains difficult to determine.

Paleo-human Ethology and Hominin Evolution Since the Middle Pleistocene

Prof. Nicholas J. Conard, PhD

(Early Prehistory & Quaternary Ecology, University of Tübingen, Germany)

[Contact: nicholas.conard@uni-tuebingen.de]

This paper addresses key thresholds in human evolution by presenting results from several important excavations. The presentation highlights the importance of a close reading of the record of material culture to establish the changing patterns of hominin behavior and technology using examples from my excavations in Africa, Southwest Asia and Europe. Without high quality excavations that provide reliable information from the past, researchers are left to speculate about many aspects of human evolution. Only archaeology and paleoanthropology produce empirical data about the lifeways of hominins and thereby the essential background for examining the deep past of human ethology.

Work at Schöningen provides unique evidence for the interconnectness of botanical, osseous and lithic technology, while examining subsistence and settlement dynamics in northern Europe during MIS Stage 9. The record from Sibhudu Cave in KwaZulu-Natal preserves a detailed record of changing technology and over the course of the Late Pleistocene, allowing researchers to examine potential causes of technological change. Ghar-e Boof and Chogha Golan in the Iranian Zagros document how late archaic hominins and modern humans systematically exploited plant and animal resources, illuminating the long path toward Neolithic economies. Finally, the caves of the Swabian Jura provide a highly contextualized record of modern human lifeways and the rise of fully developed symbolic cultural patterns immediately following the Neanderthal occupation of the region.

Tuesday, 23rd June

On Culture & Cognition

The Evolution of Human Tool Use and Technology

Prof. Dietrich (Dietz) Stout, PhD

(Department of Anthropology, Emory University, USA)

[Contact: dwstout@emory.edu]

Ever since Darwin, theorists have highlighted bio-cultural interactions between tools, brains, bodies, and social organization in human evolution. The scope of such “techno-organic” feedback models is both a strength and a challenge, as it encompasses phenomena ranging from object manipulation to social cognition and communication. This presentation develops a synthetic, multi-level (brain-body-behavior-development-evolution) approach focusing on technologies’ neurocognitive demands for material production, collaborative action, and social reproduction and drawing on evidence from my own lab’s experimental neuroarchaeology studies of stone tool making. The resulting account highlights: (1) bottom-up construction of the cognitive bases for technological reproduction and collaboration from anticipatory control mechanisms for material production, together with (2) resulting top-down influences from the behavioral, developmental, and socioecological contexts produced by technological systems.

Language as a Uniquely Human Cognitive Trait

Prof. Dr. Dr.h.c. Angela D. Friederici

(Max Planck Institute for Human Cognitive and Brain Sciences, Germany)

[Contact: friederici@cbs.mpg.de]

Language is the hallmark of human cognition. It is used to convey cultural ideas and beliefs. Every child learns any language they are born to suggesting a biological predisposition to language. Neuroscientific studies indicate that in the adult brain language is based on a general core neural network involving frontal and temporal brain regions connected by white matter fiber tracts. The development of this network follows a predetermined program but crucially depends on language input whereby particular features of a given language can modulate the network's brain structure. Looking across primates, comparative studies propose that those brain structures that support language in humans evolved through extension of preexisting structures. It is these brain changes that provide the basis of the human ability to use language which in turn enhances social interaction and learning throughout lifetime.

Wednesday, 24th June

Art, Jewels & Beauty

Symbolic Behavior and Body Ornamentation: Beads, Pigments and 'Art' in Evolutionary Perspective

Prof. Alison S. Brooks, PhD

(Department of Anthropology, The George Washington University, USA)

[Contact: abrooks@gwu.edu]

John Yellen, PhD

(National Science Foundation, USA)

[Contact: jyellen@nsf.gov]

Body modification with pigments or beads of shell, tooth, feathers or seeds or other attachments is often viewed as the first sign of symbolic behavior in human evolution. This "signal" may also have preceded or paralleled the widespread adoption of clothing the body in skins or fibers. Yet we are far from the only species to modify the body but share this feature with other animals including birds, crustaceans, insects and even other mammals. Most often this "costly signalling" in other species is explained in evolutionary terms as predator avoidance, but may have other useful outcomes: e.g. mate attraction, insect protection. We argue that in humans, these practices of body modification act as indicators of identity, linking the wearer to particular groups or networks, or to status (marital or other) within a group. We explore possible explanations for the emergence and spread of these practices in humans especially during the Middle and Upper Palaeolithic. as evidence of social networks, important to a hunting and gathering, lifestyle proliferates. The emergence of engraved or painted designs ("art"), whether geometric or figurative (images) has far fewer counterparts in nature, except perhaps for bowerbirds and others who decorate their nests to attract mates. But "art" also may be linked to identity signalling, especially where the depictions vary in style.

Materialising Identity in the Upper Palaeolithic

Dr. Sibylle Wolf

(Senckenberg Centre for Human Evolution and Palaeoenvironment, University of Tübingen, Germany)

[Contact: sibylle.wolf@ifu.uni-tuebingen.de]

The European Upper Palaeolithic (ca. 42,000–11,700 BP) is renowned for its abundance of personal ornaments, which appear in fully three-dimensional form from the very beginning of this period. These objects were carved from a wide range of materials, with mammoth ivory playing a particularly prominent role in the early phases. Palaeolithic ornaments are defined as small items worn on the body or attached to various supports for display. They likely conveyed diverse messages, including social rank, an individual's status within the respective community, group affiliation, or personal identity. However, their original arrangement, e.g. on clothing, can rarely be reconstructed; instead, research focuses on typology, manufacturing techniques, and use-wear analysis. Ornaments are among the few archaeological categories that offer insights into how prehistoric humans conceptualized identity. Strikingly, the earliest Upper Palaeolithic assemblages already display a wide variety of distinctive and sometimes unique forms not known from earlier periods in either Europe or Africa. Current evidence suggests that many of these forms emerged in Central and Western Europe without clear antecedents, with the notable exception of finds from the Denisova site in the Altai Mountains. Early ornaments range from figurative objects, likely worn as amulets or pendants by mobile hunter-gatherers, to highly elaborate pieces that stand out within larger assemblages. From the Aurignacian onward, the earliest techno-complex associated with *Homo sapiens*, personal ornaments are continuously attested. This continuity highlights a fundamental human impulse: the desire to adorn the body and communicate meaning through material culture, already clearly expressed at the dawn of the Upper Palaeolithic.



Path to the rooftop of the museum

Monday, 22nd June

Adaptation/Mismatch

Exploring past and present Darwinian selection for human handedness

Ton Groothuis (University of Groningen), Wulf Schiefenhövel (Max Planck Institute), Sara Schaafsma (University of Groningen), Nele Zickert (University of Groningen), Reint Geuze (University of Groningen)

[Contact: a.g.g.groothuis@rug.nl]

Oral Presentations

Humans worldwide differ from most other animal species in displaying extreme bias towards right handedness at the population level and some evidence suggests that this strong bias existed in Neanderthals and earlier hominids, but not in the current non-human primate species. Intriguingly, the factors that have selected or are selecting for this strong bias remain unknown. Nevertheless, its existence suggests that this bias has had and still has important fitness advantages. Despite a wide array of hypotheses about the relevant Darwinian selection forces for handedness, these selection factors are still an enigma. A crucial aspect of Darwinian fitness is reproductive success. We analyzed this in two human populations: First, in a pre-industrial society, the Eipo tribe in the highlands of Papua Indonesia, that have been living in the stone age until 1975, still not experiencing noteworthy birth control or medical care at the time of our investigation (2009). We assessed their handedness by a series of ecologically relevant tests and assessed their reproductive output via asking the names of their children born and still alive. Second, we applied an internet study in a Dutch population (n>22500), collecting data via a questionnaire and a computer based hand skill test. We found a relation between handedness measurements and number of offspring in both studies, but in different ways. Several hypotheses for these findings will be discussed, as well as the results of an additional study of learning by imitation, i.e the advantage of learning from a teacher with the same hand preference.

underlined = presenter, [SFA] = Student First Author, [LMA] = Linda Mealey Award candidate

Body size and shape misperception: A Tinbergian approach

Ian Stephen (Bournemouth University), Kevin Brooks (Bournemouth University)

[Contact: stepheni@bournemouth.ac.uk]

Large numbers of people over- or underestimate their body size. This is thought to be a significant risk factor for body image concerns and resulting negative health behaviours such as eating disorders (especially in young women), steroid abuse (especially in young men) and compulsive exercise. I will describe the work that my collaborators and I have performed to understand the perceptual and cognitive mechanisms behind body size and shape misperception, particularly visual adaptation and attention. I will also discuss how a Tinbergian approach has helped to guide this area of research that is not traditionally considered "evolutionary" in nature.

Disgust Sensitivity in Adolescence: Intersexual and Age-Related Differences

Hana Hubová (Charles University), Zuzana Kaňková (Charles University), Jan Toman (Charles University), Daniela Dlouhá (Charles University), Šárka Kaňková (Charles University) - [SFA]

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Disgust is one of the basic emotions and a key component of behavioural immunity. It gradually develops and undergoes various changes throughout life, affected by immunological, hormonal and environmental factors. Higher levels of disgust have repeatedly been observed in women compared to men, possibly reflecting greater reproductive investment, parental responsibilities, and an increased need for protection against pathogens. However, due to limited research on intersexual differences in children's disgust sensitivity, it remains unclear whether these differences are present early in development or emerge later, during adolescence. We tested whether adolescence marks the emergence of sex differences in disgust sensitivity and whether girls' sensitivity increases after menarche. Using the Child Disgust Scale (CDS) and the pathogen and moral domains of the Three-Domain Disgust Scale (TDDS), disgust was assessed in children (N=233, 136 girls) aged 10 to 15 years. Significant intersexual differences were found only in children aged 10 (for TDDS pathogen, CDS avoidance and CDS total score) and 11 (for TDDS pathogen, CDS affect, avoidance and total CDS), with girls reporting significantly higher disgust sensitivity. A significant decrease in disgust sensitivity with age was observed in girls (for TDDS pathogen, CDS avoidance and total score), but not in boys. No significant effects of pubertal stages (based on self-report questionnaire scores) or menarche in girls were found. Therefore, sexual maturity does not appear to be the key factor in the emergence of intersexual differences in disgust sensitivity. Their origin may lie in earlier development, shaped by biological predispositions and social learning.

Sick faces trigger social avoidance in humans

Elahe Tavakoli-Berg (Université de Montpellier), Jeanne Bovet (Université Paris Nanterre), Mats Lekander (Stockholm University), Mats Olsson (Karolinska Institutet), Joanna Vieira (Université de Montpellier), Julie Lasselin (Stockholm University), Arnaud Tognetti (Université de Montpellier)
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A behavioral defense against disease involves detecting sickness cues in others and responding adaptively, such as by avoiding social interactions. While studies have shown that humans can discriminate sickness cues above chance in faces after sickness induction, whether this discrimination affects approach-avoidance behaviors remains uncertain. Here, we investigated whether naïve observers maintain greater interpersonal distances – a relevant proxy for avoidance behaviour – from individuals displaying ecologically relevant inflammation-induced sickness cues. In a prior study, facial photographs were taken of 17 individuals when sick (two hours after an endotoxin injection causing a transient systemic inflammation) and healthy (following placebo injection). In the current study, 248 participants (mean age = 23.72; 134 women) viewed these faces while completing a computerized interpersonal distance task. Specifically, participants adjusted the apparent proximity of each face to indicate their preferred conversational distance, then rated each face for perceived health. They also completed questionnaires assessing personal health, immune status, and perceived vulnerability to disease. Preliminary analyses reveal that participants preferred greater distance from sick faces compared to healthy ones ($\beta = 0.519$, $p = 0.011$), and that preferred distance increased with perceived sickness severity ($\beta = -0.029$, $p < 0.0001$). In contrast, factors such as participant gender, self-rated health, and the actual immune status of the photographed individuals had little effect on avoidance behavior. These findings suggest that subtle facial cues of illness can prompt interpersonal distancing, supporting the notion that human behavioral immunity operates proactively to reduce infection risk.

Subjective Sensory Processing versus Acuity as Predictors of Picky Eating in Czech Adolescents

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Picky eating (PE) significantly impacts dietary intake and psychosocial well-being. While often triggered by food sensory properties, the specific mechanisms driving these behaviors in youth require further clarity. This study investigates the predictors of PE in 169 Czech adolescents (82 boys) aged 13-17 years, focusing on the interplay between sensory acuity, subjective sensory processing, and the alignment between adolescent self-reports and parental reports. Adolescent PE was measured via self- and parent-reports using the 16-item Adult Picky Eating Questionnaire (APEQ), which covers four domains: Food Variety, Meal Presentation, Taste Aversion, and Meal Disengagement. To identify sensory predictors, olfactory and gustatory acuity were measured (using the University of Pennsylvania Smell Identification Test [UPSIT] and Taste Strips [TS]), alongside subjective sensory processing patterns (using the Odor Awareness Scale [OAS] and Adolescent/Adult Sensory Profile [AASP]). Adolescent and parental reports of PE demonstrated only weak to moderate agreement ($\rho = 0.28$ to 0.55). UPSIT, TS, and OAS scores were not significantly linked to self-reported PE ($\rho \leq 0.17$). However, self-reported PE (all four dimensions) was significantly associated with AASP Sensation Avoiding and Sensory Sensitivity scores ($\rho = 0.21$ to 0.30). Parental reports of adolescent PE lacked significant associations with any sensory measures. While adolescent PE is best predicted by self-reported sensory processing patterns rather than psychophysical measures, this association may be partially inflated by the shared method variance of using questionnaires. The limited parent-child agreement underscores the necessity of utilizing self-reports when assessing adolescent eating behaviors.

Monday, 22nd June

Reproduction

Dark side of mate choice: Homogamy Drives Attraction to Dark Triad, but Desirability of Antisocial Traits and Criminal Behavior is Not Enhanced by Fame, Wealth, or Looks

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While individuals typically prefer prosocial traits in romantic partners, some are attracted to antisocial personalities and even criminal behavior. This study investigates two mechanisms behind this preference: homogamy (preference for self-similar traits) and the desirability by-product hypothesis (attraction to antisocial traits and behavior when paired with desirable characteristics). Participants (N = 391) reported their own Dark Triad traits (i.e., Machiavellianism, narcissism, and psychopathy), sensation-seeking, and impulsivity, and rated the attractiveness of hypothetical partners described in fictitious vignettes in one of six conditions: 1) prosocial traits (control), 2) Dark Triad traits without crime, 3) Dark Triad traits with crime, and Dark Triad traits with crime paired with either 4) fame, 5) wealth, or 6) attractiveness. Results supported homogamy: individuals with higher Dark Triad scores preferred partners with similar traits. Sensation-seeking and impulsivity did not predict Dark Triad preferences when entered in the same model with respondents' own Dark Triad traits. Further, the desirability by-product hypothesis was not supported by the experimental design: prosocial profiles were consistently rated as more desirable than antisocial profiles and criminal behavior, even when paired with desirable traits. This suggests that while in general individuals may be drawn to high-status or attractive partners, antisocial traits, especially when combined with criminal behavior, act as dealbreakers in mate preferences for both short-term and long-term relationships. The findings highlight the role of self-similarity in partner preferences and the limits of desirable traits in counteracting the undesirability of antisocial traits and behaviors.

Dark desires? Which traits predict female use of Dark Romance, and how does the genre influence its audience?

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Contemporary Western societies promote gender equality, criticizing masculine traits like competitiveness, physical dominance, and the suppression of one's emotions as toxic. Paradoxically, these traits are still common and sought after in women's erotic literature, especially in Dark Romance, which features stories of extreme male dominance, violence, rape, enemies-to-lovers stories, and/or murder.

Previous research shows that the internalization of stereotypes influences women's use of erotic media. Furthermore, some mate preferences might reflect evolved predispositions shaped by the violence in the environment of evolutionary adaptation. These are also common topics in dark romance. For example, men display traits that might have been selected for fighting other males (such as a muscular V-shaped upper body). Meanwhile, women display adaptations that may have been selected because they protected from physical injury during rape (lubrication without sexual arousal). Moreover, it's important to examine how such media influence women's views on dominance and submission, as well as how these dynamics appear in their own relationships.

To research what drives women's use of Dark Romance and its effects, we surveyed 393 women, mostly aged 18-29 years. Of these, 327 had used Dark Romance, while 66 had never engaged with it. Users reported higher sex drive and more chauvinistic beliefs (e.g., "women should behave passively"). Additionally, if users liked certain behaviors in the literature, they were significantly less likely to condemn these in real life (e.g., male dominance; $r = .47$).

Both the predictors of Dark Romance and its potential consequences will be outlined at the conference.

Cultural constraints on reproduction: ecology, social organization, and post-partum sex taboo

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Postpartum sex taboo (PPT), the prohibition of sexual activity following childbirth, is widespread across human societies, yet its duration varies from a few weeks to over four years, sometimes exceeding the average length of interbirth intervals. Existing explanations link this variation to ecological conditions and social organization, particularly factors affecting the duration of breastfeeding and/or age of weaning. These factors include subsistence strategy, lifestyle with high demands on mobility, available diet and nutrition, women's contribution to subsistence, presence of various types of polygyny, post-marital residence and presence of women's kin. These interrelated factors present significant challenges in disentangling their individual effects and the hypotheses explaining long PPT have never been tested within a comparative phylogenetic framework. This study formalized existing hypotheses using directed acyclic graphs (DAGs) and tested implied causal relationships through structural causal models, leveraging the data from D-PLACE database for all 372 societies in the Ethnographic Atlas (EA), while controlling for phylogeny. The results indicate that PPT duration is more strongly associated with aspects of social organization (marriage system) than with ecological variables. This suggests that PPT may be better understood as part of broader systems of social norms regulating sexuality, rather than as cultural adaptations to ecological constraints. It is important to examine the relationship between PPT and interbirth intervals (i.e. whether the taboo is actually observed), as well as its relationship to other norms regulating sexuality, rather than focusing primarily on ecological factors and subsistence strategies that were originally proposed as its main drivers.

Perceived familial support as an overlooked driving force for fertility: a kin selection perspective

Hidegori Komatsu (CRIEPI), Nobuyuki Tanaka (CRIEPI), Benjamin J. A. Dickins (Middlesex University), Catherine Salmon (University of Redlands), Elisabeth Oberzaucher (University of Vienna), T. Joel Wade (Bucknell University), Leif Edward Ottesen Kennair (Norwegian University of Science and Technology), Maryanne L. Fisher (Saint Mary's University), Ryoko Takikawa (Seigakuin University), Thomas E. Dickins (Middlesex University)
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Although population decline is a global trend across industrialized countries, to date, interventions have been unsuccessful in reversing low fertility rates. In parallel with a body of conventional population research, evolutionary perspectives have begun to provide new types of insights. However, kin selection provides an insightful perspective on reproduction in modern societies, yet its implications remain underexplored. Our present study focuses on how perceived familial support (e.g., grandparents helping to rear grandchildren) affects the number of ideal or actual children, using a cross-cultural comparison based on more than 16,000 responses from six countries. We performed multi-group structural equation modeling and identified that perceived familial support was positively associated with residing with or close to relatives, contributing to the actual or ideal number of children. This effect was more consistent across the six countries than other factors, such as education or household income, targeted by previous research. Living in a detached house was an objective attribute that was positively associated with fertility. These results suggest that policy discussions or interventions might need to shift from focusing on educational gaps or monetary incentives to kin-based lifestyles. Examples of potential interventions to counter population decline are considered.

Social learning of human mating preferences

Ilmari Määttänen (Norwegian University of Science and Technology), Mehmet Mehmetoglu (Norwegian University of Science and Technology), Siiri Lehto (University of Helsinki)
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Research on social learning and the copying of mating preferences exists across many nonhuman animal species as well as among humans. Typically, social learning in mating preferences involves an individual attracting the attention of several opposite-sex individuals, indicating its mate value. Previous studies suggest that the impact of social learning is particularly significant among females, as individuals not only learn about popular opposite-sex individuals who become more appealing but also generalize these preferences to others sharing similar traits.

In our study, we evaluate two key issues: (1) whether social learning tendencies can be measured using text-based questionnaires and vignettes, and (2) whether there are individual differences in social learning tendencies between sexes or among individuals with specific mating preferences.

Our findings indicate that social information significantly influences mate choice, particularly negative social information for women. For those seeking traits ideal in a long-term mate (e.g., compatibility, trustworthiness), mate choice was more affected by negative social information. Conversely, individuals seeking traits ideal for a short-term mate (e.g., appearance, humor) were influenced more by positive social information. Additionally, using vignettes, we discovered that both men and women showed less interest in a target who was popular among opposite-sex others. These results enhance our understanding of the interplay between innate and socially learned mating preferences.

Advancing human evolution research with the Cooperative-Breeding Database (Co-BreeD)

Yitzchak Ben Mocha (University of Hamburg)
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Alloparental care (i.e., cooperative breeding) has played, and continues to play, an important role in human social lives. Yet, human cultures are seldom integrated in cross-species comparative research on the causes and consequences of cooperative breeding. The Cooperative-Breeding Database (Co-BreeD) establishes a standardised framework for broad comparative research on alloparental care across human cultures, non-human mammals and birds. In this talk, I will present this new open-access database and results from comparative analyses on the prevalence of alloparental care, allonursing, and female reproductive output (N > 500 populations of 400 species, including 6 human cultures): (i) Systematic alloparental care was reported in 100% of the human cultures, 56% of non-human mammal species and 52% of the bird species studied. (ii) Alloparental care was often likely to be either ubiquitous or absent in mammals, but more facultative in birds. (iii) Alloparental care was associated with increased litter size in non-human mammals, but did not affect humans and clutch size in birds. Potential reasons behind these similarities and differences will be discussed. Attendees who could submit quantitative ethnographies on parental care would be invited to join as co-authors to the upcoming Co-BreeD manuscript.

Monday, 22nd June

Why Human Ethology?

"Life can only be understood backwards, but must be lived forwards" – Søren Kierkegaard, 1843. Why studying ourselves scientifically is difficult and why ethology is best placed to succeed

John Richer (Oxford Human Sciences)
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This is about a central reason why the scientific study of human behaviour is so difficult. The difficulty evidenced by the replication crises and theory crises that psychology continually experiences.

Humans have evolved an extremely successful way of thinking about themselves but it is not suited to scientific enquiry. What has evolved are concepts that are useful for individual and group success. They often embody the first-person perspective such that the individual can easily translate them into action. They are concepts of an action-oriented insider. Insiders learn, share and implicitly agree their meanings by a process of negotiation, those agreements can change. By contrast, the scientist is an outsider, observing and trying to understand. Certainly, scientists negotiate the meanings of their terms, but the science is about what can be agreed by demonstration - the facts to be explained. Such facts cannot be changed by re-negotiation.

People, the subjects of social sciences, have their own (insider's) language related to themselves. The "social sciences", have fallen into the trap of (mis)using insider's terms, rather than developing terms from direct observation, as is done in the natural sciences where the subject matter has no language of its own.

A scientist's terms are judged by whether they help generate understanding looking backwards. The insider's terms embrace the subjective and survive if they are useful to guide action going forward, not understanding looking backwards. Their (mis)use as scientist's terms makes psychology's twin crises predictable and a warning to human ethologists.

Tuesday, 23rd June

Funerary Rites & Grief: Human Hallmarks

Mortuary Behaviors and Funerary Practices in the Paleolithic:
Current Perspectives and Research Challenges

Bruno Maureille (CNRS, UMR 5199 PACEA, University of Bordeaux)
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In the early twenty-first century, what insights can be offered into current research on mortuary behaviors and funerary practices among Paleolithic human groups? A first point to note is that this field of inquiry attracts only a limited segment of the scholarly community, largely due to the scarcity of discoveries that can meaningfully inform interpretations of how the living treated certain of their dead. A second observation is that, despite the emergence of a CNRS school of archaeoethnology, based at Bordeaux University, a degree of intellectual separation persists - aside from a few notable exceptions - between scholars working on the Paleolithic and those focusing on more recent periods. Yet, the findings produced within these respective domains hold clear potential for cross-fertilization and would benefit from closer dialogue. Furthermore, ethnological research highlighting the extensive variability of human mortuary behaviors and funerary practices is rarely incorporated into Paleolithic studies. However, recent analyses of several Middle and Upper Paleolithic sites - to which we will return - demonstrate considerable variability in mortuary and funerary practices, irrespective of the human taxon involved. For us, such variability likely reflects the existence of diverse and complex practices shaped by chronological, cultural, and regional factors. For example, although primary burial appears to have emerged approximately 100,000 years ago, it did not persist as a continuous practices. Rather, it was reinvented different times by at least two human taxa, which do not seem to have treated some of their dead in a uniform manner.

Emotions Driving Funerary Rites. Examples from New Guinea

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Losing a significant other universally triggers psychic pain and grief, more severe than physical pain. Funerary rites range among the most elaborate and meaningful cultural events, usually joined by a large number of persons giving support to the ones who have suffered the loss. Body contact and other comforting behaviours are common.

The melody and general shape of mourning songs tend to follow the physiology of crying, e.g. with pauses of deep breaths in between, and have a falling melody, symbolising despair and depression. Their lyrics are powerful expressions of the deep pain of having lost a beloved person. Such emotions (and also romantic love) interestingly lend themselves to be universally expressed in poetry, not in prose.

Grief often leads to auto-aggression, damaging oneself, wearing unattractive attire, blackening one's skin, pulling out one's hair etc. A particular form of auto-aggression was common in parts of Highland-West-New Guinea: Relatives, especially women, cut off the end-phalanges of their fingers. Many of them had thus mutilated hands. Perhaps this custom can explain the stencils of seemingly mutilated hands in some of the ornated French caves. Grave goods are often destroyed or otherwise made unfunctional. I interpret this as a sign of aggression/autoaggression: the belongings of the deceased are made unusable for oneself.

Irreversibly losing a vitally important bond leaves us alone, depriving us from her or his future support. Our grief is basically egoistic, a sign how much we, animal sociale, depend on others.

Reconstructing emotions in prehistoric funerary contexts

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Abstract: Death of others, especially significant others like family members, are emotionally charged events where those affected experience a complex range of biopsychologically triggered emotions, including grief, sadness, shock, anger, regret, numbness and relief. Funerary rituals provide a structured framework for expressing these emotions verbally and non-verbally. Here we investigate whether such emotions can be traced back in "mute" prehistoric funerary contexts, or, in other words, if we can find archaeologically visible correlates of nonverbal communication of emotions in the past.

Human ethology usually studies the expression of emotions via facial displays, body posture, head movements, and vocalizations. These are unfortunately not preserved in the most ancient prehistoric contexts. In absence of expressive human figurative representations, one can turn to funerary contexts with skeletons and possibly grave goods to get a glimpse of emotions expressed by the ones who buried them. Especially double and triple primary burials provide contexts for emotionally expressive displays, e.g. affection. Furthermore, a preliminary overview suggests that some undisturbed prehistoric burials, beyond their dependence on the prevalent cultural norms of their time, can be linked to specific body postures, which can be interpreted as emotional gestures (e.g. of pride, fear, anger) equivalent to those studied in living humans. Our aim is to investigate if the posture of prehistoric skeletons and grave goods have emotional connotations.

Tuesday, 23rd June

Prelude to the Special Exhibit „Gestes d’Éternité”

The making of the Special Exhibit „Gestes d’Éternité”

Nathalie Fourment (Musée National de Préhistoire), Brad Gravina (Musée National de Préhistoire)
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The exhibition "Gestes d’Éternité" explores over 100,000 years of mortuary and funerary practices, revealing the emergence of the first symbolic thoughts in both *Homo sapiens* and Neanderthals. Through exceptional artifacts—ornaments, burial sites, and human remains—and thanks to remarkable loans from French and European institutions, it examines the diversity of gestures associated with death and what this reveals about the living: the structuring of groups, the status of sites, and their connection to territories.

Bringing together major collections and the results of recent research, the exhibition blends archaeology, anthropology, and immersive experiences. The drawings of illustrator Pierre Mortel, imbued with poetry and humor, accompany visitors on this sensitive exploration of the past and its traces.

Tuesday, 23rd June

Glimpses from the Past

Still Painting the Same Stories: Human Universals from Prehistoric Caves to Modern Film

Michael Brill (University of Würzburg), Maximilian von Andrian-Werburg (University of Würzburg),
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Do successful films resonate with diverse audiences because they reflect evolved human behavior? Building on Donald E. Brown's concept of Human Universals (HU), this study challenges culturally specific narrative theories by proposing an evolutionary alternative: widely successful films may encode cross-cultural regularities of human social life.

In this exploratory study, we use a language model to classify HU in plot descriptions of contemporary films (2004–2024) and examine whether narrative elements associated with success reflect adaptive problems such as kinship, conflict, cooperation, and mate selection. The dataset includes 698 films coded for 370 variables (year of release and 369 HU). German box office ticket counts serve as the dependent variable. To address high dimensionality and multicollinearity, we apply elastic net regression for regularization and variable selection.

The model identifies tentative predictors: risk-taking ($\beta = 0.22$), incest prevention ($\beta = 0.15$), and non-kin group structures ($\beta = 0.03$) are positively associated with success, while nepotism ($\beta = -0.04$), skill specialization ($\beta = -0.02$), and year of release ($\beta = -0.03$) show negative associations ($R^2 = 0.13$).

These findings suggest non-random clustering of universal themes, indicating that film narratives may engage evolved predispositions. This study serves as a methodological probe, highlighting both the potential and limitations of AI-assisted theory testing.

The Mariupol Phenomenon: Personal Ornaments and Social Identity

Nataliia Mykhailova (Ukrainian Academy of Sciences)

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Dating from the Late Mesolithic to the Neolithic (c. 7000–4000 cal. BC), the Mariupol-type cemeteries span a vast territory from the Prut-Dniester interfluvium to the Don River (Ukraine). Concentrated primarily along the Lower Dnipro rapids, these sites are distinguished by their rich burial assemblages, characterized by elaborate personal ornaments. Placed on semantically significant parts of the body, these adornments served as indicators of spiritual status (e.g., shamanic attributes), regional identity, or kinship. They also acted as markers of gender, age, and biological development.

The history of the Mariupol horizon is divided into two distinct stages: Early Stage (7000–5500 cal. BC): Primarily located in the Dnipro Rapids and Lower Dnipro regions. Burials ranged from individual to collective graves. The inventory was relatively modest, featuring ornaments made of shell, bone, stone, mother-of-pearl, carp teeth, and deer canines. Late Stage (5500–4000 cal. BC): This phase saw an expansion across the Dniester-Don region and a marked increase in the abundance and variety of grave goods. Assemblages included beads and pendants crafted from marble, jet, and bone. The most iconic ornaments of this period are perforated boar tusks.

This study proposes a comparative analysis of the materials, morphology, and functions of these adornments to trace their evolution from the Early to Late phases. By defining the symbolic role of these objects, we aim to outline future research trajectories, focusing on craftsmanship techniques, and the reconstruction of Neolithic social structures in the North Pontic steppe.

Crystal Allure: Why Apes and Humans Are Attracted to Crystals

Irene Delval (University of São Paulo), Juan Manuel García-Ruiz (Donostia International Physics Center), Tomás de la Rosa (Instituto de Investigación e Innovación Biomédica de Cádiz), Guillermo Bustelo (Rainfer) - [SFA]

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Archaeological evidence shows crystals were among the first non-utilitarian objects collected by hominins. As early as ~780,000 years ago, *Homo erectus* collected quartz crystals lacking practical use as tools or ornaments. While such findings are often linked to emerging symbolic behavior, the proximate and ultimate causes of this fascination remain largely unexplored. This study investigates whether specific physical properties of crystals are inherently attractive to our closest living relatives, providing insight into shared cognitive predispositions. We tested whether enculturated chimpanzees (*Pan troglodytes*) exhibit "crystal allure"—a spontaneous attraction to crystalline minerals. In a sanctuary setting, subjects were presented with crystals alongside visually comparable non-crystalline stones. In Experiment 1, apes showed a marked preference for a large quartz crystal over a similar-sized rock, actively transporting it and inspecting its morphology and, possibly, its transparency. In Experiment 2, small crystalline minerals (calcite, quartz, and pyrite) were mixed with ordinary pebbles. Chimpanzees reliably selected the crystalline objects while ignoring common stones, even sorting them into separate groups. Results suggest that proximate attractors, specifically transparency and polyhedral morphology, spontaneously engaged chimpanzees, as they probably did with early hominins. This points to an ultimately shared perceptual predisposition underlying early object-collecting behaviors. These unique material properties may have acted as catalysts for hominin cognitive evolution, facilitating the transition toward abstraction and symbolic thought.

The Nocturnal Evolution of Human Musicality: Solving the Adaptationist Puzzle

Marco Varella (University of São Paulo)

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Human musicality exhibits hallmarks of biological adaptation, yet existing evolutionary hypotheses such as mate selection, social bonding, conflict reduction, territorial defense remain conceptually disconnected. I propose the Nocturnal Evolution of Human Musicality and Performativity Theory, positing night-time as the missing adaptive factor of human musicality. The expansion of nocturnal activities throughout hominin evolution, tied to tree-to-ground sleep transition and habitual fire use, explains musicality's emergence from independent principles and integrates its diverse proposed functions. The nocturnal niche posed recurrent ancestral challenges: lack of luminosity, low temperatures, regrouping before sleep, peak tiredness, predation risk, and identity concealment. These pressures selected for evening-oriented individuals prone to acoustic communication, alertness, imagination, gregariousness, risk-taking, anxiety modulation, and disinhibition. Convergently, these dispositions enhanced protomusicality into human musicality, enabling it to assume multiple survival- and reproduction-enhancing roles corresponding to co-occurring night-time adaptive challenges: social cohesion, coalition signaling, territorial and antipredator defense, knowledge transfer, safe time-passing, lullabies, and sexual selection. Thus, this theory integrates many ancestral adaptive values proposed. The recurrent nocturnal selective landscape also explains musical features (loudness, repetitiveness, call-response, elaboration, chorusing). Across vertebrates, acoustic communication predominates in nocturnal species. Eveningness chronotype is overrepresented among musicians. Adolescents, who are the most evening-oriented age group, show heightened musical engagement. Contemporary tribal campfire activities consistently integrate singing, dancing, storytelling, and rituals. This theory explains why humans are more musical than other great apes. Musicality is therefore best understood as a multifunctional mental adaptation that evolved in tandem with the night-time adaptive landscape.

The origin of beauty

Edward Morrison (University of Portsmouth)

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Abstract: I propose a general theory of beauty. Beauty has often been studied as a branch of philosophy (aesthetics), and applied mainly to man-made art such as painting, music, or architecture. Inspired by psychological and machine learning research, I will propose that we can more deeply understand beauty as the result of information processing, specifically when we obtain useful information for minimal cognitive effort. This theory underpins psychological factors that increase liking such as familiarity, prototypicality, and symmetry. I will explore how individual differences in aesthetic taste emerge depending on expertise. The theory will then be applied to a wide range of things that we find beautiful, including natural landscapes, human physical attractiveness, art, and even intellectual beauty in things like puzzles, riddles, jokes, and mathematics.

Sealed in stones: Toward a computational ethology of stone toolmaking

Cheng Liu (University of Bergen) [LMA]

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This project presents a computational ethology approach to stone toolmaking, addressing a long-standing gap between the typo-technological analysis of stone artifacts and the direct study of the behavior generating those artifacts. I introduce the Human Stone Toolmaking Action Grammar (HSTAG), a large, finely annotated video dataset designed to capture the rapid and complex motor sequences involved in knapping. Unlike existing action recognition benchmarks that focus on daily activities and coarse annotations, HSTAG documents a rare and technically demanding domain with high temporal resolution. The dataset currently includes 18,739 annotated actions drawn from 4.5 hours of expert toolmaking and 20,458 annotated actions drawn from 7.2 hours of novice toolmaking, featuring such as brief action duration, frequent transitions, and multi-angle recordings. These properties provide a challenging benchmark for evaluating machine learning models in action segmentation and open new possibilities for studying skilled behaviors. Building on this benchmark, I apply ethological and computational methods to analyze behavioral structure in stone toolmaking. Using tools such as Behatrix and Fleet, I demonstrate two approaches to study this dataset: a transition probability-based approach grounded in classical ethological analysis, and a more computationally intensive grammar induction approach. The first uses established behavioral coding and transition analyses to quantify structure in action sequences, while the second applies computational methods to infer underlying "grammatical" organization. Together, these approaches show how combining traditional ethological methods with newer computational techniques can recover patterned variability in skilled behavior and provide new insights into cultural evolution.

Wednesday, 24th June

Les enfants dégoûtés – A symposium on development of disgust

Disgust in preschool children: a cross-cultural experimental study

Daniela Dlouhá (Charles University), Hana Hubová (Charles University), Jana Benešová (Charles University), Kateřina Roberts (University of Stirling), S. Craig Roberts (University of Stirling), Šárka Kaňková (Charles University) - [SFA] [LMA]

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The preschool age seems to be critical for the development of disgust, the affective component of behavioral immunity. Around this time, children begin to explore their environment independently, increasing the need for pathogen protection, and parents or other adults serve as models for disgust development. This study explored disgust development in children aged 36–83 months in two countries with differing maternity leave lengths, which affects how long children stay in their home environment. Children were recruited in the UK (Sample1: N=80, 45 girls) and Czechia (Sample2: N=71, 37 girls). They completed experimental tasks, rating visual and tactile stimuli on a 5-point emoticon-based scale (from 1=very nice/pleasant to 5=very disgusting). The visual task involved rating four pairs of photographs (each containing a disgusting and a neutral stimulus), yielding a visual score (the sum of the pair differences). In the tactile task, children rated four objects hidden in boxes, yielding a tactile score (sum of ratings). In each task, stimuli were randomized and presented independently. Parents completed the Child Disgust Scale (CDS). We found no differences in visual or tactile disgust between samples, but UK parents reported higher disgust scores for their children. CDS and visual (but not tactile) scores increased significantly with children's age. Our results suggest that while parental reports may be shaped by the cultural environment, preschoolers' disgust responses seem to be independent of it. Moreover, visual disgust (also reflected in CDS) develops during this age period, whereas the processing of tactile disgust may be more complex.

The development of olfactory-mediated disgust in preschool children

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Disgust is commonly proposed to function as a mechanism for pathogen avoidance, yet its developmental trajectory remains poorly understood. While odours are potent elicitors of affective responses, research has largely focused on visual cues in adults, leaving early childhood, particularly the preschool period, underexplored. In the present study, we aimed to test changes in olfactory-mediated disgust sensitivity over a two-year period, assessing the same group of children at ages four and five.

A total of 345 children (171 girls, 174 boys) evaluated 11 odour samples twice in 2024 and 2025 in public kindergartens. The samples included 5 pleasant and 5 unpleasant/disgusting odours, classified based on prior adult ratings, along with an odourless control. The (un)pleasantness of all odours was rated on a five-point emoticon-based scale. Initially, samples were analysed individually and subsequently grouped into two categories based on cluster analysis, which corresponded to predictions from adult assessments.

In pleasant odours, we found that five-year-old children reported statistically significantly higher pleasantness than at age four. Conversely, unpleasant odours were rated as less pleasant by five-year-olds compared to four-year-olds. Finally, boys consistently rated unpleasant odours as less pleasant than girls across both years. Overall, these findings highlight the development of olfactory-mediated disgust during the preschool years and show that both age and sex are important factors shaping early disgust responses.

Negative emotions evoked by animals: Fear changes, but disgust remains the same

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In the case of animals, the most important emotions are fear and disgust, which protect humans from acute danger and possible infection. The aim of this project was to find out which animals evoke the most fear and which are considered the most disgusting. Two sets of images were prepared to evaluate negative emotions, one representing animals that are dangerous or frightening, and second containing disgusting-looking animals and various parasites. Each set contained 34 color photographs of animals standardized in size on a white background. A total of 344 children (3-15 years) and 160 adults evaluated both sets by sorting the pictures according to their subjectively perceived emotions. The youngest children (ages 3–5) are most afraid of sharks and reptiles (crocodiles and snakes), much like adults. As children get older, they become more afraid of arachnids (spiders, scorpions, and solifuges) than of reptiles. Younger children (ages 3–9) differ from adults primarily in their greater fear of other invertebrates (beetles, hornets, centipedes); these differences gradually disappear in older children. In terms of disgust, no significant differences were found between age groups of children or between children and adults. Invertebrates elicit the greatest disgust regardless of their real risk to human health. The project continues with an experiment in which children rate images on a 5-point scale. To enable us to test preschoolers as well, we use a special app in which the numerical scale is replaced by emojis (specific to each emotion).

Thursday, 25th June

Olfaction

Male body odour attractiveness, but not the arousal state of the male body odour, influences sexual arousal in women

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It has been shown that men's body odour can elicit sexual arousal in women. On the other hand, sexual arousal in women results from excitatory and inhibitory processes, as described by the dual control model. This suggests that it is highly context-dependent. The present study examined how male body odour affects women's sexual arousal in different sexually charged conditions, including attractive, unattractive, and neutral contexts.

Axillary body odour was collected from 30 heterosexual male donors under two conditions—while watching either (a) a relaxing or (b) an erotic video for 10 minutes. Subsequently, 62 heterosexual women evaluated their level of sexual arousal and disgust after watching one of three videos: an attractive erotic, an unattractive erotic, or a neutral video. While watching the videos, the women were exposed to either the "relaxed" or the "erotic" body odour. They also evaluated the intensity and attractiveness of the body odour samples.

The findings indicated that sexual arousal was greatest during the viewing of the attractive erotic video, compared to both the unattractive erotic and neutral videos. Moreover, the perceived attractiveness of the body odour had a positive effect on sexual arousal. However, no significant differences in arousal were observed between the "aroused" and "neutral" body odour conditions. Overall, these results suggest that visual cues have a stronger impact on women's sexual arousal than body odour, and that perceived odour attractiveness—rather than the donor's arousal state—shapes the level of sexual arousal.

Olfactory cues to winning and losing in a virtual reality game

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Dominance status formed by winning or losing a contest plays a key role in various social interactions. Human body odour contains cues to psychological dominance, competition and even competition outcome (a putative marker of a change in dominance hierarchy). Previous research with Mixed Martial Arts fighters has shown that the quality of body odour decreases after losing a match, with affective states mediating the change. Although real-life settings offer high ecological validity, they can introduce noise and obscure some effects. Therefore, this study investigated the effects of winning and losing a competition under more standardised conditions while maintaining a highly realistic and immersive environment using a first-person shooter game in virtual reality. We collected axillary odour samples from 46 men for 30 minutes in three situations: 1) before the game, 2) after winning a game, and 3) after losing a game (the order of winning and losing conditions randomised). Subsequently, 113 men ranked the stimuli from one donor according to their dominance, pleasantness, and intensity. The results showed a higher probability of ranking the winning stimuli as less pleasant and more intense compared to baseline and losing stimuli. Changes in affective states and hormone levels did not mediate these changes. Testosterone levels increased in both winners and losers, but positive mood was higher among winners. The results of our study suggest that competition outcomes influence the body odour quality and provide cues to dominance-related characteristics.

Systematic review of body odor changes across the menstrual cycle

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It has been suggested that body odors may provide cues to female reproductive status. Nevertheless, empirical evidence is mixed regarding perceived changes in women's body odor across the menstrual cycle. We aim to systematically review and synthesize the evidence, focusing on ovulation and actual fertility.

The individual studies search spanned from origination to March 2026, following PRISMA protocol. We included all studies that examined physiological or perceptual responses to the natural odor of women across menstrual phases.

Altogether, we found 15 papers with experimental and observational designs using axillary and vaginal odor samples. Throughout studies is a general trend that follicular phase odors are rated more pleasant, attractive, and less intense than luteal phase. Also reported, men discriminate above-chance between low and high fertility samples, and testosterone levels and sexual interest increased after exposure to periovulatory odors. Some inconsistencies were weak or non-significant effects, particularly when using hormonally verified ovulation.

The evidence has some constraints, including heterogeneity in outcome measures, variability in odor collection methods, inconsistent verification of ovulation, and small sample sizes. Most importantly, many studies relied on highly unreliable self-reported cycle timing.

Overall, the evidence regarding women's body odor variations across the cycle is moderate and inconsistent, with a trend toward increased attractiveness during ovulation. However, the magnitude and detectability of the changes are limited. Suggesting, if fertility cues are delivered through body odors, they are likely subtle and not diagnostic of ovulatory timing. Future researchers should use standardized collection protocols and verify ovulation timing by hormonal assays.

Breastfeeding, bonding, and olfaction: unlocking the potential of mother-infant odour exchange

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Breastfeeding is crucial for infant survival, growth, and health, and it enhances maternal-infant bonding and wellbeing. However, breastfeeding rates typically fall below international targets, partly due to a high prevalence of latching difficulties, intermittent sucking, refusing the breast, or poor milk supply. We propose that such uniquely human difficulties might be ameliorated by recognising, understanding, and facilitating the olfactory mechanisms that, in other mammals, regulate breastfeeding initiation and maternal–infant relationships in the first weeks of life. We briefly review evidence that odour mediates nipple-searching and suckling behaviour in other species, summarise the comparable evidence in humans, and outline pathways that could potentially reap hitherto unrealised benefits of olfactory communication between human mothers and neonates. We argue that enhanced awareness of such odour exchange could inform and enable changes in both policy and practice that might improve breastfeeding success and maternal-infant bonding, ultimately contributing to reduced infant mortality worldwide.

Thursday, 25th June

Language & Sound

The effect of aesthetic appeal on the cultural evolution of language

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Human culture is transmitted across generations, and during this transmission process, some behaviors, artifacts, and ideas persist, while others change or disappear. Language, as a defining feature of human culture, is shaped by similar selective forces: certain words are retained over generations, while others get lost (Tamariz & Kirby, 2016). Various factors have been proposed to explain which words survive, but one factor receiving little attention is aesthetic appeal, i.e. how beautiful language users perceive particular words. In this study, we tested whether pleasantly sounding words were more likely to survive and spread.

We conducted two iterated learning experiments in which participants learned novel names for novel objects. Each object was paired with two synonymous labels, one appealing (e.g., elinya) and one unappealing (e.g., gaftag). After learning all labels, participants labeled each object twice. Their responses were passed on to the next "generation" of participants, who learned only the labels produced by their predecessors, mimicking cultural transmission over time.

We found that participants preferentially used the appealing labels and eliminated most unappealing labels from the language. In a second experiment, we manipulated the beauty of the referents but the preference for appealing labels and the elimination of unappealing labels persisted.

These findings indicate that aesthetic preferences act as cognitive biases that shape language over time and favor forms that language users find appealing. This places language within broader cultural systems and highlights how human perception and preference can influence which forms are maintained and propagated across generations.

The emotional reactions to nature sounds agree with human evolutionary history

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Abstract: Introduction. Hominidae and Homo sapiens (Tattersall, 1995) evolved within a natural environment that shaped their auditory sense, as well as their emotional reactions to sounds, which are still present in contemporary humans (Lenti Boero, 2022). This pilot study investigates whether music training confirms this tendency. Methods. Twenty-five beginner musicians (11 y-o), and five professional musicians (mean years of music studies = 19,8) collectively listened - eye closed - to fourteen nature sounds presented in random order in 5 subsequent sessions. Following each listening, they were required to fill out three 7-point bipolar Likert scales and to rate the sounds verbally. Results and discussion. The comparison of every single sound between the groups revealed that "feeling of security vs fear" was NOT significant for 12 sounds, "curiosity vs repulsion" was NOT significant for 10 sounds, and "nice vs ugly" was NOT significant for 11 sounds. Both groups significantly rated "harsh/aggressive" all sounds containing non-linearities (volcano, cougar growl), i.e. sounds related to danger, and "sweet/warm" melodious sounds (gentle stream, blackbird song) (Lenti Boero & Bottoni 2008).

Thursday, 25th June

Stress

An Ethological Study of Nonverbal Behaviors in Posttraumatic Stress Disorder

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Posttraumatic stress disorder (PTSD) is a mental health condition that may develop from experiencing a traumatic event. Diagnostic symptoms include intrusive thoughts, avoidance of trauma reminders, negative alterations in cognition and mood, and hyperarousal (APA, 2013). Clinically, PTSD is diagnosed after an interview and assessment by questionnaire (e.g., CAPS-5). Nonverbal behaviors are not typically used to diagnose PTSD, even though Troisi (1999) and others have found ethological analysis helpful in assessment of patients with schizophrenia and depression. This study's goal was to identify nonverbal behaviors specific to adults with clinically diagnosed PTSD, as compared to individuals with trauma histories but no current PTSD. The study utilized Troisi's (1999) Ethological Coding System for Interviews (ECSI), adding six behaviors expected to manifest more often in patients with PTSD: teeth-baring, mouth corners down, crying, startle, blank stare, and sighing. Thirty adults with trauma history volunteered to be assessed for PTSD, and to be videotaped during the CAPS-5 interview. After assessment, 17 participants met clinical criteria for PTSD; 13 did not. Their videos were edited into 10.5-minute films and analyzed by 2 coders using BORIS software. Results showed the following significant differences ($P < .05$) between groups: PTSD participants showed more crying, mouth corners down, and blank staring. PTSD participants also scored lower on Troisi's Affiliation cluster of behaviors on the ECSI, with less head movement, smiling and laughing. Discussion centers on how PTSD patients appear to be more still, while simultaneously expressing dissociation (blank staring) and distress (crying) during the interview.

What am I seeing? Novel displacement behaviors in patients with PTSD

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An observational study revealed that, during interviews, patients diagnosed with PTSD showed more Crying, Mouth Corners Down, and Blank Staring than patients with trauma history but no PTSD diagnosis. PTSD participants also scored lower on Affiliation behaviors in Troisi's (1999) Ethological Coding System for Interviews (ECSI), with less Head Movement, Smiling and Laughing. This current presentation, based on the same observational study, focuses on Displacement behaviors in the ECSI, behaviors that these coders found particularly challenging to code and to understand, in terms of function. As Troisi (2009) and others have said, across species, Displacement is often a response to a stressful situation. In this study, coders found some Displacement behaviors very challenging. For example, while Yawn and Lick Lips were relatively easy to code, Groom, Scratch and Soothe were difficult, because these behaviors often seemed persistent and exaggerated (and combined) in patients with PTSD. The clinical literature speaks to the signal value of such novel behaviors, as a possible distress call. The clinical literature also speaks to dissociation (a symptom of PTSD) and the patient's need to stay present through autostimulation of one's senses. The clinical literature warns of risk of self-harm through excessive Scratching, etc. For ethologists, there are questions about the function of such novel displacement behaviors, including whether they function to promote survival in a traumatized individual. If permissions are granted, video footage of some behaviors will be shown, in hopes that discussion will help clarify ethological definitions and raise further questions for research.

Inclusive fitness...and puppy love? Investigating how phylogenetic relatedness, inclusive fitness, and sex of rater influence emotional distress levels when considering hypothetical assault scenarios

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Previous work suggests that human's ability to feel emotional pain of others can be influenced by a variety of factors. This study examines the influence that phylogenetic relatedness, inclusive fitness, and the sex of the participant has on emotional distress levels towards other organisms. In addition, we explored how participant's level of empathy and previous harassment experiences impact the findings. Participants were presented with hypothetical assault scenarios involving different types of individuals including a biological sibling, distant family member, a stranger, or other animals. In each scenario, their emotional distress levels were recorded. Results showed that participant's distress towards other animals were loosely tied to shared common ancestry, with features of neoteny presumably playing a role as well. Emotional distress towards the victim also changed depending on genetic relatedness and the sex of the rater. Among the human scenarios, participants experienced more distress towards closer biological relatives, with males showing less distress towards unrelated individuals, compared to females. Comparing different human scenarios against the dog scenario, participants had comparable levels of emotional distress towards a dog as they did a third cousin, but assaults involving human strangers led to significantly lower distress levels compared to dogs, replicating previous work. We also found that previous harassment severity correlated with levels of empathy across all participants. Implications of the findings and how they relate to inclusive fitness, sex, natural competition levels, and previous harassment experiences and empathy levels will be discussed.

Amateur Ethologists in the Digital Age: How incels misinterpret evolution to rationalise misogyny

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In recent years, there has been a big growth of an online subculture of involuntarily celibate (incel) men. They share worldview based on a biologically deterministic approach to life known as the "Black Pill." This ideology uses and distorts concepts from human ethology and evolutionary psychology to rationalize modern mating dynamics and justify misogyny (Baselice, 2023; Vallergera & Zurbriggen, 2022).

This presentation brings together recent work showing how the manosphere uses evolutionary theory to justify their beliefs and actions.

Incels rely on an oversimplified "males-compete/females-choose" model (Miller, 2013), using concepts like hypergamy to argue that modern dating scene has unleashed primal female instincts, creating a sexual marketplace monopolized by genetically superior men (Preston et al., 2021). They actively generate their own amateur, adaptationist "just-so stories" and use "lay evolutionism," to build identities as victims of genetic inferiority (Bachaud, 2025; Pettersson et al., 2025).

I would like to contrast these pseudo-evolutionary narratives with empirical research on attraction and partner selection. Empirical evidence suggests that incels misinterpret women's mate preferences, significantly overvaluing physical attractiveness and resources while underestimating the role of prosocial traits. (Costello et al., 2024).

Using evolutionary frameworks to rationalise men's superiority to women is common in many manosphere discussions (Lindsay, 2022). The discussion will provide ethologists with insight into this troubling aspect of popular discourse and arm them with the necessary information to respond constructively to the ideas held by today's youth.

Tools, hands, and gesture: the necessary contribution of human ethology to understand material culture

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As an ethnobiologist working with contemporary human communities, I was involved in the constitution of collections of artefacts illustrating the interactions of human beings with their environment, in their daily life. As a former curator of ethnographic museum collections, I was confronted with the lack of precise description of the manipulation of the tools kept in the reserves. How to understand "how it works"? This leads to the difficult question of how to make alive any artefact, conserved for tens of years, long after the period where it was donated by its discoverer? How the hands of the craftsperson maintained both the material and the tool for transforming it? How the hands of the peasant, the farmer, the hunter, the fisherman or the cook manipulate his or her tool, to make it efficient? Through some examples from fieldworks in Central African rainforest, in rural Mexico or through wanderings inside markets and hardware stores everywhere, I want to plead for a reconnection of present anthropologists or archaeologists, when they are observing, collecting and analyzing tools and artefacts, with the founders of cultural technology, like Otis Mason in the USA, André Leroi-Gourhan, André Haudricourt or François Sigaut in France, for which it is the gesture which makes the technique efficient.

Friday, 26th June

Methods

Randomness in decision-making models and its role in integration of information from multiple sources

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Social transmission of information plays an indisputable role in human ecology. Our capacity for learning and imitation enables the uniquely cumulative nature of culture, which has, in turn, driven planetary-scale transformations of our environment.

An understudied aspect of social transmission is the integration of information from multiple sources. In previous models, when A and B represent quantitative traits of "cultural parents" (e.g., spear lengths of two prestigious individuals), the offspring trait C is typically modeled as their mean plus a random noise term with constant standard deviation. This approach proved useful in approximating polygenic biological inheritance, but its assumptions have been applied to culture too uncritically.

Constant randomness is not inherently justified. Instead, a constant coefficient of variation (standard deviation relative to the mean) may better approximate social learning, given the relevance of the Weber–Fechner law in human perception. Novice spear hunters may adjust parental strategies proportionally (e.g., by 10%) rather than by a fixed number of units. Furthermore, the variance of the inputs may matter: when successful individuals exhibit diverse strategies, the "cultural fitness landscape" likely offers more opportunities and thus promotes exploration. Variance of adopted strategies should be thus proportional to the variance of role models.

This contribution introduces alternative models of randomness (mean-proportional and variance-proportional), explains how they can be combined, and demonstrates how fitting them to empirical data (from a trivia-guessing task and an artifact-based transmission chain experiment) alongside other mechanisms (e.g., conformity, guided variation) can yield new insights into human social learning.

Familial Nudging as an Energy Conservation Method in the Workplace: Insights from AI-Driven Analysis

Adam Smith (Future University Hakodate), Hidenori Komatsu (CRIEPI), Nobuyuki Tanaka (CRIEPI), Hiromi Kubota (Future University Hakodate), Osamu Kimura (Future University Hakodate), Maryanne L. Fisher (Saint Mary's University), Renan Koike (Future University Hakodate), Takahiro Ueno (Future University Hakodate), Hiroto Takaguchi (Future University Hakodate), Kimiya Murakami (Future University Hakodate)
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Even seemingly ordinary prosocial behaviors such as energy conservation can be reconceptualized through an evolutionary psychological lens. In this longitudinal proof-of-concept study, we examined how familial nudging (framing energy conservation messages to elicit kin-directed altruism) shapes responses to energy conservation messages. We conducted the study in an office setting where individual energy consumption is difficult to measure due to the commons-like nature of the environment. Across 7 weeks, participants received both control and familial nudging messages via LINE, a widely used messaging app in Japan, in a crossover design. In response to these messages, we collected detailed open-ended responses. We analyzed these responses using an automated API-based system designed to extract and code emotional and thematic content on a 0–3 ordinal intensity scale. This approach allowed us to detect psychosocial effects of familial nudging related to concerns about energy use and climate change. The data provide initial support for the proposed proof of concept. Quantitatively coded patterns suggest that familial nudging increased (a) attention to shared office resources such as air conditioning, (b) awareness of energy consumption, and, crucially for our manipulation, (c) intergenerational responsibility. Future directions include (i) a large-scale replication incorporating measurable behavioral outcomes and (ii) personalized, evolutionarily informed AI-driven messaging to address participant heterogeneity across diverse real-world contexts.

Interviewing Enheduanna. Exploring Artificial Intelligence's impersonation ability as methodological resource in archeological and anthropological research

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Since 2023 digital fieldwork is acquainted to widespread artificial intelligence (AI) manifestations. Encountering the AI instills both an epistemological and an ontological shift to ethnographer's worldview. However, with AI-s, sometimes, mystification can replace the factual just because some algorithms are prone to accommodate the most prominent contemporary ideologies. The present generative AI can impersonate any given fictional character or real life individual. Therefore, it is of particular interest for historians and ethnographers how AI 'generated' texts and images could enrich the knowledge base of extinct, isolated or less studied human communities?

To test the feasibility of such a project, initiated conversations with Chat GPT, Gemini, and Claude about local festivals and forms of entertainment, but also about typical food dishes of a community which I study since 2005: the Ukrainians (Zaporizhians) who established Sfantu Gheorghe (Saint George) - an isolated village in Danube Delta potentially unreachable during winter. I also I asked Chat GPT, Gemini and Recraft to generate imagery samples on original sociocultural this settlement. The AI generated output largely confirmed the data gathered during the fieldwork. There was some knowledge gap also. However, some new interesting correlations ensued.

This initial study tries to offer a glimpse of the potential which resides in using AI impersonation ability to fulfill a largely shared intellectual dream on the possibility of interviewing a historic personality like Enheduanna or Marcus Aurelius or just the average Etruscan or Phoenician.

Friday, 26th June

Twins

Evolutionary Perspectives on Twinning: The Puzzle of Functional Significance

Nancy Segal (California State University, Fullerton)
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The presence of twins in human populations worldwide continues to pose an evolutionary puzzle. Specifically, the functional significance of multiple birth babies is curious, given that twins are often born prematurely, posing health risks to mothers and infants. Clearly, the female uterus is best designed to gestate one infant, rather than two or more. This conundrum is especially relevant in the case of parents producing MZ twins—offspring who do not show the genetic variation of individual siblings, but who are essentially untested genetic duplicates. Twins are present in all human populations, although their frequencies vary. The MZ twinning rate of .3 to .4 percent is fairly constant across cultures, whereas the varied DZ twinning rate is responsible for the elevated twin birth frequency in African populations (17.1/1000 births, or 1.71 percent), relative to North American populations (16.9/1000, births, or 1.69 percent), and Asian populations (9.2/1000 births, or .92 percent); note that these partly figures reflect the effects of in vitro fertilization (IVF) which increases both MZ and DZ twinning, especially among western nations, with DZ twinning increased to a greater degree. Explanations for these population differences also include genetic factors, hormonal influences, and dietary practices. A number of extant evolutionary-based theories (e.g., insurance ova hypothesis, terminal investment hypothesis) and analyses of human twinning in this area will be reviewed, as will topics that have benefitted from evolutionary-based research using twin research methodologies.

Friday, 26th June

Attractiveness

Association between physical fitness and attractiveness in women

Vít Třebický (Charles University), Agáta Kolingerová (Charles University), David Stella (Charles University), Natálie Folbergerová (Charles University), Vojtěch Nesvadba (Charles University), Jitka Holubová (Charles University), František Zahálka (Charles University), Jan Havlíček (Charles University), Jitka Třebická Fialová (Charles University)
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Traits perceived as attractive are assumed to reflect an individual's biological qualities, such as health and reproductive potential. Physical attractiveness is also studied in relation to physical fitness, and while the relationship has been examined repeatedly in men, major research gaps remain in women. The aim of this study was to investigate how measures of physical fitness relate to perceived female body attractiveness across static and dynamic depictions. We collected measures across physical fitness domains (body composition and size, aerobic capacity, flexibility, postural stability, gait symmetry, and isometric, isokinetic, and explosive strength) from 59 women (Mage = 25.72 yrs, SD = 5.83), along with standardized full-body video and still images. The visual stimuli were rated for attractiveness (1-10 Likert scale) at real-life size by 77 men (Mage = 23.4 yrs, SD = 4.15). Exploratory factor analysis resolved a 3-factor structure of fitness measures. In a mixed-effects model, one factor (positively loaded by body size and weight, and negatively by aerobic capacity) was the only statistically discernible predictor of attractiveness in both stimulus types ($\beta_s \sim -0.11$). Static and dynamic stimulus ratings were highly positively correlated ($r = 0.884$; $\Delta = 0.175$). Our results show that slimmer women with higher aerobic capacity are perceived as more attractive, supporting the prior notion that physical attractiveness serves as a marker of biological quality, while suggesting that cues of metabolic health and energetic efficiency play a more substantial role than motor skills or muscular strength in women.

Friday, 26th June

Child Ethology

Play–Work Repertoires and Peer Relations in Yurakare Indigenous Children

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Play is one of the most natural ways for children to develop socially, allowing them to refine skills in a playful context (Pellegrini, 2009). It is a fundamental aspect of childhood and a powerful developmental tool across cultures. Among Indigenous Yurakare children, focal follow observations show that they spend most of their time playing in mixed-age groups, often without adult supervision.

This presentation examines Yurakare children's play, their play partners, and how these activities relate to the concept of work play, where children gradually acquire work-related skills in a playful manner. A Mann–Whitney U test assessed gender differences in overall play time. Results showed a significant effect of gender, $U = 89.00$, $Z = 2.04$, $p < .05$: boys ($M = 39.78$, $SD = 9.58$) engaged in more play than girls ($M = 30.92$, $SD = 9.71$). Children in early and middle childhood spent most of their play time in manipulative activities (64.5%), followed by large-motor (21.3%) and imaginative play (14.2%); gender differences in the proportions of these play types will be highlighted. The presentation will also extend beyond early and middle childhood to show how play practices gradually prepare children for work activities embedded in their peer-culture structure.

The discussion will address children's autonomy and responsibility, as well as the cultural acceptance of activities that might be perceived as 'dangerous' from a Western viewpoint. Additionally, the evolutionary hypothesis linking play and peer groups (Lew-Levy & Amir, 2024) will be presented, along with suggestions for further research approaches to explore this topic.

Friday, 26th June

Emotions

Dogs are not for Eating: Attributing Affective Abilities to Animals

Catherine-Noémie Alexandrina Guran (Paris Nanterre University)
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We seem to have very strict ideas as to which animals are food, and which are not. Therefore, we may attribute less cognitive or affective abilities to animals primarily used for food purposes (such as chickens, cows, pigs). In this study, I investigated how we attribute affective and cognitive abilities, and how much empathy we feel for 16 different species, investigating the effects of an animal being considered food, as well as it being domesticated or not.

101 Participants were asked to rate images of 8 domesticated (4 food and 4 non-food) animals, as well as 8 wild analogue animals (e.g. boars, as a counterpart to pigs, and zebra, as a counterpart to donkeys, similarly 4 food and 4 non-food wild animals). Additionally, I investigated differences between omnivores and participants that removed all or some animal products from their diets. Indeed, domesticated animals received more empathy and higher attributions of affective abilities than non-domesticated animals. Food animals received consistently lower attributions in cognitive and affective abilities, as well as less empathy. There are notable interactions with participant's food preferences (vegetarian/vegan vs omnivore) and attributions of mind and feeling to different types of animals.

Overall, these results paint us a complex picture of how we categorize animals, and how characteristics of the animals and the observer interplay to shape and explain out perception of them as things to be eaten, or to be cherished as social interaction partners.

Keeping Solidarity Alive: Episodic Engagement and Visibility in Crisis Fundraising

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How are prosocial behaviour and large-scale cooperation sustained over time in long-term crises? This project addresses this question in the context of online fundraising. While crowdfunding campaigns are often understood as one-time acts of support, many rely on continued engagement. This raises the question of how such support is maintained beyond the initial moment of mobilization, particularly in the absence of direct interaction.

The study focuses on campaigns related to the war in Ukraine hosted on a Czech crowdfunding platform. Using data from several hundred campaigns, it analyzes the timing and content of updates. Rather than assuming continuous participation, the analysis explores how support unfolds in more episodic ways, potentially linked to moments of renewed visibility and shifts in attention. Campaign updates are approached as one possible mechanism through which organizers interact with supporters, alongside other factors shaping attention and participation, including external events that may trigger shifts in engagement.

These dynamics reflect broader processes of sustaining participation in loosely coordinated contexts, where engagement depends on making commitment and shared goals visible. Campaign communication may make such signals observable to others, contributing to the maintenance of support over time. More broadly, these practices may intersect with forms of identity signalling and affiliation, shaping how collective causes are recognized and supported.

By focusing on the temporal structure of engagement, this study contributes to understanding how mechanisms of cooperation and group cohesion are maintained and adapted in digital environments where interaction is indirect and uneven.

Jokes, Mischief, and Mayhem: Dark Triad Traits Meet Humor Styles?

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Humor is a universal feature of human social interaction and is often interpreted as an evolved mechanism facilitating social bonding, norm negotiation, and the signaling of cognitive and social traits. However, individuals exhibit substantial variability in their judgments of what is humorous, and stable individual differences are observed in both the production and perception of humor. Dark personality traits, including psychopathy, Machiavellianism, and narcissism, are associated with reduced empathic responding, strategic social behavior, and altered sensitivity to social norms, which may shape responses to such humor. The aim of the present study is to examine how dark personality traits and humor styles are related to the perception of humor differing in the presence of dark, norm-violating content. The planned sample for this study includes 200 adult Polish participants, which is expected to be sufficient to detect the predicted effects. Dark personality traits and humor styles are measured using self-report instruments. Humor perception is operationalized through participants' evaluations of an author-constructed set of internet memes, which were systematically selected in a pre-study to represent either dark humor or neutral content. Participants rate the memes in terms of perceived funniness, acceptability, and emotional impact. The study design allows for testing whether dark traits and humor styles differentially predict responses to norm-violating versus neutral humorous stimuli. By integrating personality psychology with an evolutionary framework on humor as a signaling and norm-regulation mechanism, this research aims to clarify the role of individual differences in the reception of dark humor in contemporary digital environments.

The evolved social mind in digital perspective: Adaptation, mismatch, and emerging social ecologies

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Human social cognition evolved under conditions of repeated, face-to-face interaction within small, stable groups. Selection pressures shaped psychological mechanisms for attachment, trust, jealousy, empathy, coalition formation, and reputation management—processes that rely heavily on embodied cues, shared attention, and temporal continuity. In the digital era, however, these evolved affective systems increasingly operate in environments characterized by scale, anonymity, asynchrony, algorithmic mediation, and persistent social visibility.

This talk examines how core components of the evolved social mind are recruited—and sometimes strained—by digital interaction contexts. Drawing on evolutionary psychology, human ethology, social neuroscience, and emerging research on digitally mediated relationships, we maintain that many contemporary social phenomena (e.g., digital jealousy, hypervigilance to social feedback, phubbing, and intensified in-group/out-group dynamics) can be understood as predictable outcomes of ancestral mechanisms functioning in evolutionarily novel environments.

Rather than framing digital interaction as inherently detrimental or fundamentally "unnatural," the talk adopts an adaptation–mismatch framework to identify when digital affordances amplify adaptive functions (e.g., maintaining weak ties, social support at scale) and when they generate systematic biases or emotional costs. Particular attention is given to close relationships and prosocial behavior, where evolved expectations of reciprocity, exclusivity, and mutual monitoring may conflict with the affordances of online platforms.

The talk concludes by outlining key open questions for research on the evolved social mind in the digital era, emphasizing the need for interdisciplinary approaches that integrate evolutionary theory with empirical work on digital behavior and emerging human–AI social ecologies.

Avian alarm calls increase heart rate in anxious individuals

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Sounds convey much information about the environment and natural soundscapes have well documented effects on mood (Ratcliffe 2021). Background birdsongs signal an absence of threats to those that pay attention to them, with species-specific alarm calls being emitted after a threat has been detected (Lakin & Hendrie, 2021). Failing to detect the presence of a threat can be fatal and so many species gain advantage by attending to the alarm calls of other species as well as their own (Suzuki, 2020). It was hypothesised that this might also be a feature of human behaviour. In order to examine this, 96 participants (18-65) were screened for baseline anxiety scores and their heart rates measured. Participants were then randomly assigned to hear 30 seconds of European blackbird (*Turdus merula*) song or 30 seconds of magpie (*Pica pica*) alarm calls. Results were clear and confirmed the calming influence of the blackbird song with a significant lowering of heartrate (74.52 ± 1.66 down to 69.16 ± 1.24 bpm), but only in those individuals with baseline GAD-7 scores of 10 or above (moderate to severe anxiety). Alarm calls produced the opposite effect (71.44 ± 2.00 up to 82.89 ± 3.70 bpm, $p < 0.001$) but again only in those with moderate to severe anxiety. These data confirm that birdsong produces bidirectional effects on heart rate in humans but that pre-existing psychological state is an important moderator of this effect.

Pictorial stimuli can reliably substitute for live animals in studies assessing perceived beauty and elicited emotional responses

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Emotions elicited by live animals influence individual psychological responses, ranging from biophilia to animal phobias, as well as broader perceptions of conservation and animal welfare. Accordingly, these fields require robust data on such emotional responses. However, the vast majority of studies rely on pictorial rather than live stimuli, raising concerns regarding the ecological validity of their findings. We have previously conducted two studies comparing evaluations of live animals with those based on corresponding images. Here, we report results from the more recent study, in which ratings were obtained from 566 participants: 237 assessed photographs, 146 live animals, and 183 both. A total of 62 invertebrate species were used as stimuli, and perceived beauty, fear, and disgust were evaluated on a seven-point Likert scale. Mean scores for pictorial and live stimuli were highly correlated (fear: 0.933; disgust: 0.898; beauty: 0.892), although images elicited slightly higher levels of fear and disgust. Incorporating body size enabled prediction of live ratings from pictorial assessments with up to 93% accuracy. These findings indicate that pictorial stimuli can serve as a reliable proxy for live animals in studies of aesthetic and emotional responses, thereby supporting conclusions drawn from prior image-based research.

Universal facial expressions tell stories, not active states

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Classic theories hold that six facial expressions—happiness, sadness, anger, fear, surprise, and disgust—constitute universal, biologically hardwired signals of basic emotions. However, there is minimal evidence that these expressions occur spontaneously in everyday social interaction alongside emotional states. In stark contrast, posed examples are commonplace. We propose, therefore, that their true social function is more likely intentional, and instead of conveying real-time affective states, they operate as iconic communicative devices to enrich emotional narratives during storytelling. Humans have therefore repurposed facial displays to complement language—departing from the social signaling function in other primates. We propose that this storytelling role may have been pivotal during the evolution of language, providing a multimodal scaffold for sharing emotional and social knowledge.

When we push back or let go: emotions in conflict

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Conflict is a central feature of romantic relationships, yet the intrapersonal causes and consequences of conflict communication remain underexplored. Conflict is inherently emotional: emotions shape how individuals interpret situations and communicate with partners, but are also shaped by the course of the interaction itself (e.g., whether one resists or yields). A useful distinction differentiates hard negative emotions (e.g., anger, irritation), which promote confrontation, from soft negative emotions (e.g., sadness, hurt), which tend to elicit withdrawal or relationship-repair tendencies. The present study examined how pre-conflict emotions relate to conflict strategies and yielding, and how these factors shape post-conflict emotional outcomes in a controlled, simulated partner conflict. Using the Elysai application, 212 participants engaged in a standardized dispute with a virtual partner and reported pre- and post-conflict emotions. Verbal responses were coded into conflict communication strategies (rational, refusal, avoidant, affective, submissive) and the stage of yielding (early, late, none). Associations were tested using logistic regression models. Soft negative pre-conflict emotions significantly predicted greater use of affective communication ($b = 0.49$, $p < .001$). Refusal strategies were associated with lower soft post-conflict emotions ($b = -0.75$, $p = .049$). Yielding predicted lower hard negative ($b = -0.80$, $p = .013$) and higher positive post-conflict emotions ($b = 0.63$, $p = .047$), suggesting a soothing effect of compliance. These findings highlight the central role of soft pre-conflict emotions and suggest that resistance sustains harder negative affect, whereas yielding facilitates emotional recovery following conflict.

Human fear and aggressive vocalisations vary across diverse cultures: Evidence from Hadza, Darkhad and French populations

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Human non-verbal vocalizations such as fear screams and aggressive roars have stereotyped acoustic forms that can be predicted based on their communicative and adaptive functions. Following this form-function theoretical framework, fear vocalisations are characterised as high-pitched and tonal to communicate alarm, whereas aggressive vocalisations are expected to be low-pitched and harsh to communicate threat. However, little is known about how and why such vocalisations vary across human societies. Most research on human non-verbal vocalisations has been limited to WEIRD (Western, Educated, Industrialized, Rich, and Democratic) populations, leading to scientific ethnocentrism. Here, to examine the generalisability of these form-function relationships, we recorded individuals producing fear and aggressive non-verbal vocalisations in three highly distinct human populations: the Darkhad and Hadza groups (two non-WEIRD populations in Mongolia and Tanzania), and French urban dwellers. We then measured several acoustic parameters known to be biologically and perceptually relevant in human non-verbal vocal communication to assess the ostensible universality of the acoustic structure of these vocalisations. Using multilevel Bayesian mixed models, we found that previously established form-function predictions were consistent only for the French group, suggesting that the Darkhad and Hadza groups do not rely on exactly the same acoustic parameters to communicate these emotional states. Furthermore, a random forest classification successfully discriminated between fear and aggressive vocalisations from the three different groups, suggesting the existence of a group signature. These results contribute to a deeper understanding of the acoustic space and evolved functions of the human vocal repertoire.

Behavior of women in space mission scenarios: ethological viewpoint and cross-view

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Human exploration mission in the celestial space will require men and women to adapt to an unknown synergy of environmental factor and time factor. An interplanetary flight to Mars via the Moon should take more than 500 days in confined and isolated environment. From that perspective, behavioral strategies have been studied in a wide panel of analog missions while applying the ethological approach in the field. Our focus today is to emphasize the behavior of women in space mission scenarios. The terrestrial poles mainly Antarctic regions with permanently inhabited stations were the first settings to welcome mixed-gender but unbalanced distribution teams thirty years ago. Differences between men and women were documented in psychological works during winter-overs in isolation. The present study proposes an ethological viewpoint of three experimental confinements that simulated space crews with mixed-gender compositions and an all-male composition. A cross-view between the three scenarios in the same multi-chambers facilities with extended periods of time highlight differences between the male and female crewmembers and similitude within the crews. The results show that positive facial expressions are more frequent in the women. Can similar social behaviors be observed when confined in natural environment? The discussion will be open by displaying a short video in the Lombrives cave in France, where seven women and eight men spent 40 days with no sunlight and own temporal clocks in a space-like habitat. This communication lengthens the glance from early men/women on Earth to humanity in deep missions to the Moon and Mars.

Empathy as a Mechanism of Social Capital Formation in a Patrilocal Society: Evidence from Women of Matlab, Bangladesh

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Patrilocal, a residence system characterized by female dispersal and prolonged coresidence with affinal kin, creates a social environment in which women must often establish cooperative bonds in the absence of support from natal kin. While previous studies have investigated women's socio-behavioral adjustment to patrilocal settings, the social mechanisms through which such adjustment is achieved remain less explored. This study proposes empathy as a key adaptive strategy through which women signal prosocial intent and build social capital under conditions of female dispersal and patriarchal constraint.

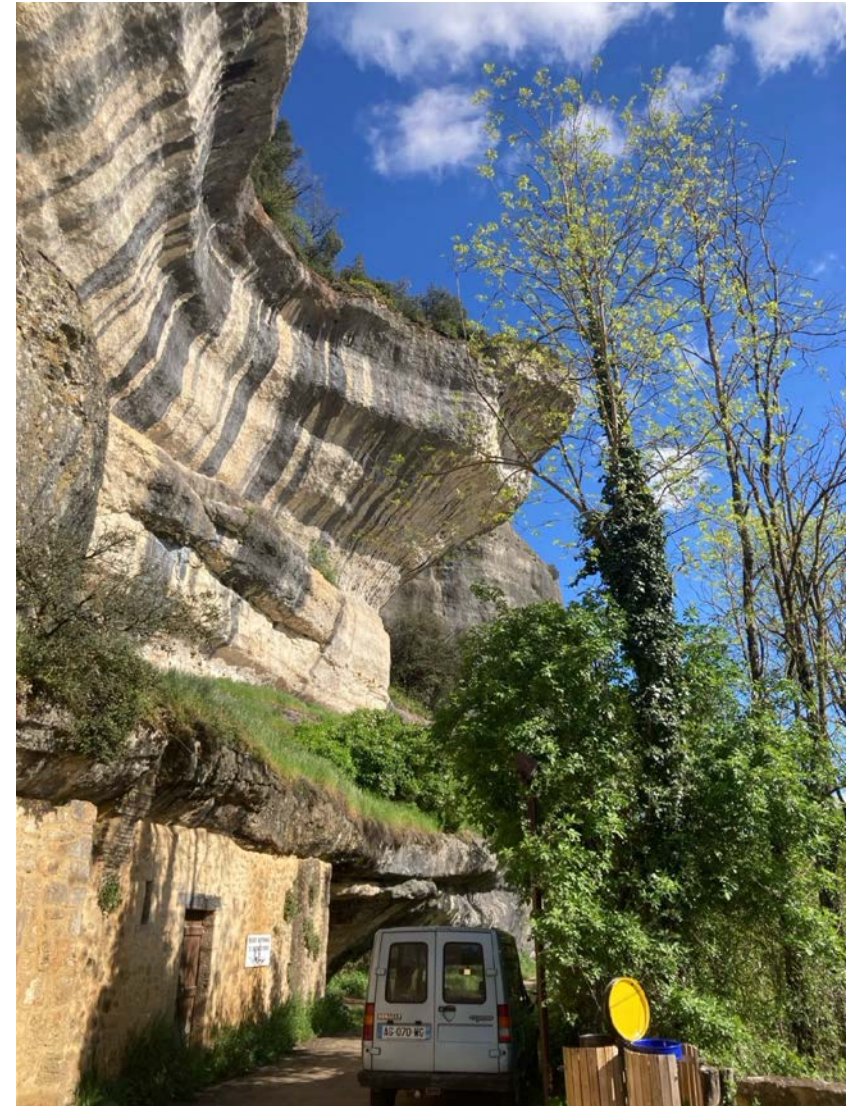
Using survey, qualitative, and support network data from 125 women in Matlab, Bangladesh, we examine (1) the social partners with whom women engage in empathic interaction, (2) how empathy varies across women's kinship, household role, and residential context, and (3) the association of empathy with social capitals, measured by well-being, belongingness, and support networks. Mixed-effects models show that empathic interactions are structured by fitness interdependence, relational value, and different social partners including kin, with the highest empathy directed toward consanguineal kin. Notably, daughters-in-law residing with affinal kin exhibit elevated empathic provision toward affinal kin, consistent with our primary hypothesis that empathy functions as a socioemotional strategy for integration into patrilocal households. Empathic receipt, but not provision, predicted higher subjective well-being, whereas both predicted belongingness. Dyadic and ego-network models indicated that the intensity of empathic interaction, not merely their number, most consistently predicts receiving support. Together, these findings position empathy as a flexible adaptation that enables women to transform emotional engagement into social capital in patrilocal societies.

Emotional experience in the face of threats and opportunities: Connections between emotion theories and the Fundamental Motives Framework

Marc Mehu (Webster University Vienna)

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Emotions are psychobiological programs that evolved to allow individuals to cope with a variety of environmental challenges. Several models also postulated the existence of fundamental motives that are central to survival and reproduction. While researchers emphasised the conceptual overlap between emotion theories and the fundamental motives, there is little evidence about how emotions connect to fundamental motives. In an online experiment, we investigated whether specific emotions are associated with specific motives, whether these associations depend on the valence of the situation and on goal proximity (whether the goal has been achieved or lies somewhere in the future). Participants rated the strength of the emotions (16 categories) they would experience in hypothetical scenarios relevant to seven fundamental motives (e.g. affiliation, self-protection, parenting, etc.). Our results reveal a strong effect of valence whereby negative/positive emotions are experienced more strongly in negative/positive scenarios, respectively. The effect of valence, however, is not uniform across fundamental motives scenarios. We also find an effect of fundamental motives on emotional responding, though one-to-one associations between motives and emotions were rare, as most emotions associated with two or more fundamental motives. Similar clusters of emotions were also observed across motive categories, suggesting more overlap than specificity. The effect of goal proximity was weaker than that of valence and depended on the emotion and fundamental motive. All in all, these results suggest complex association patterns between emotional experience and fundamental motives. These relationships will be discussed in the light of individual differences in survival and reproductive strategies.



Path from Pataud to the museum

Wednesday, 24th June

Reproduction

Poster Presentations

1. Winning the Mate Game: Mate Value as a predictor of rival's derogation

Wiktor Belicki (SWPS University), Dawid Mikulski (SWPS University), Oliwia Bąkowska (SWPS University), Paulina Puczek (SWPS University), Wiktoria Majewska (SWPS University), Aniela Dębowska (SWPS University), Julia Nosek (SWPS University), Nadia Paszyk (SWPS University), Aleksandra Tołopiło (SWPS University), Natalia Frankowska (SWPS University), Aleksandra Szymków (SWPS University) - **[SFA]**
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Intrasexual competition plays a central role in human mating, with rival derogation serving as a strategy to reduce competitors' attractiveness. Drawing on evolutionary frameworks distinguishing good genes, good provider, and good father traits, our study examined whether men's self-perceived mate value predicts their tendency to derogate rivals, and whether this relationship is mediated by perceived mating success and moderated by motivation to find a partner.

We investigate those assumptions conducting a correlational study with a sample of 856 single adult men. Contrary to our predictions, mate value was positively associated with rival derogation, indicating that higher-value men reported greater derogation tendencies. Moderated mediation analyses revealed no evidence that perceived mating success mediated this relationship, nor that relationship motivation moderated it.

All of our hypotheses were rejected. Nevertheless, we were able to identify an interesting relationship between the studied variables. Specifically, the more an individual perceived himself as a valuable mate, the more derogatorily he declared he would behave in a hypothesized situation. These findings suggest that even when a man perceives his mate value as high, he may further enhance them by derogating potential rivals. Such a tactic could potentially serve to maximize his reproductive success.

Interestingly, the only derogation factor that did not correlate with Mate Value was good father derogation. This finding aligns with research by Buss and Dedden, who found that men, compared to women, focus more on derogating rivals' financial resources and social status than their faithfulness or emotional skills.

underlined = presenter, [SFA] = Student First Author

2. (Not) wearing the pants: The impact of gender norm conformity on the perception of female- and male-centric erotic stories

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The portrayal of traditional gender roles in mainstream pornography (e.g., male dominance and female submission) raises concerns regarding its harmful impact on society.

Gender roles are rooted in biological differences between the sexes, but are also shaped by sociocultural norms and circumstances. They describe what's expected of and appropriate for men and women and can influence the perception and evaluation of sexual behavior.

Although some research has examined the effects of pornography on gender role attitudes, a significant gap remains regarding the role of recipients' gender norm conformity in the perception of such content.

To address this gap, an online study was conducted with 267 participants (197 women). Participants were randomly assigned to read either a male- or female-centric erotic story.

The male-centric story depicted a masculine-norm conforming sexual act, prioritizing the male protagonist's sexual satisfaction and portraying the female protagonist as being physically dominated. The female-centric story described a more egalitarian sexual act led by the female character, in which both sexes reach orgasm.

Before reading, participants reported their gender-norm conformity. Afterwards subjective sexual arousal and perception of the fictional characters were assessed.

Initial results indicate that higher conformity to masculine norms among male participants reading the female-centric story was associated with lower sexual arousal and more negative evaluations of the female character. This may indicate that such portrayals of female characters conflict with men's expectations of how women should behave, potentially signaling reduced suitability as a partner or group member.

3. Dyadic trust and digital jealousy: sex differences in romantic relationships in the Chilean population

Belen Zavalla Cordero (University of Santiago, Chile), Ana Maria Fernandez (University of Santiago, Chile), Maria Teresa Barbato (University of Santiago, Chile) [SFA]
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Romantic jealousy has been described as a complex emotion with evolutionary roots, designed to protect the romantic bond against reproductive or affective threats. However, current digital environments present new challenges for understanding the expression of jealousy. This study investigates how dyadic trust, defined as the extent to which one party trusts and is willing to act on the basis of another's words, actions, and decisions within the couple relationship, is associated with digital jealousy, considering sex as a possible moderator.

From clinical and social psychology, trust is a key predictor of relational well-being and acts as a buffer against emotional dysregulation, including excessive jealousy. However, from an evolutionary perspective, jealousy may emerge even in high-trust relationships as an automatic response to perceived threats in the environment.

Study was conducted with 79 Chilean heterosexual couples. Moderation analyses showed that lower levels of dyadic trust predict higher levels of digital jealousy, with a significant negative association between both variables. Sex proved to be a significant predictor, although the interaction between sex and trust was not statistically significant. Simple slope analyses suggested a trend indicating that this relationship might be stronger in one sex than the other.

These findings offer relevant information on how interpersonal trust influences the expression of jealousy in digital contexts, without necessarily suppressing its evolutionary basis. Study underscores the need for further exploration of how complex emotions such as jealousy adapt and manifest in modern digital environments, with implications for both evolutionary psychology and clinical approaches to couple dynamics.

4. Association between pornography consumption and own sexual activities in young adults

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Pornography consumption can affect one's sexual behaviour, yet although young adults may be more susceptible to its effects, most research still focuses on the adults and measures only the frequency of pornography consumption rather than differentiating its content.

The aim of this study was to explore the associations between the consumption of specific types of pornography, and the engagement in violent sexual activities in one's own sexual life.

The research was conducted using an online survey distributed among high school students in the Czech Republic, and the total analyzed sample consisted of 342 women and 474 men aged 18–30 years ($M = 19$ ys). The survey assessed the frequency and types of pornography viewed and experience or desire to experience aggressive sexual practices, either being the perpetrator or target.

Exploratory factor analysis identified four pornography-content factors: i) unconventional practices, ii) masturbatory activities, iii) group sex, and iv) conventional sex. Regression analyses controlling for gender and sexual experience showed that the unconventional practices factor was the strongest and most consistent predictor, especially of desire for aggressive sexual practices in both aggressor and target roles, and of experience in the target role. Conventional practices were additionally associated with the target role, while sexual experience predicted experience in both roles and gender was related only to target role desire.

Our findings highlight selective impact of pornography content on aggressive sexual behaviour.

5. Relational Insecurity, Mate Retention, and Destructive Conflict: A Theoretical Model of Parental Stress

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This project proposes an integrative theoretical model to explain how couple dynamics, shaped by relational threat, can extend to the family system and culminate in parental stress. Relational insecurity is conceptualized as a broader experience of relational instability and vulnerability, emerging from the convergence of three complementary sources: attachment anxiety, low marital satisfaction, and mate value discrepancy. From this base, the model posits two main relational pathways. The first involves cost-inflicting mate retention tactics, understood as strategic behaviors aimed at preventing partner loss through control, jealousy induction, or restriction of autonomy. The second involves destructive interparental conflict, characterized by hostility, withdrawal, and poor cooperation in resolving disagreements. Although conceptually distinct, both pathways are expected to stem from the same underlying perception of relational threat and to reinforce one another over time, forming a recursive cycle of dyadic deterioration. Drawing on family systems theory and the spillover hypothesis, the model further proposes that these couple-level processes are not contained within the romantic relationship, but extend into the parenting subsystem by eroding emotional availability and regulatory resources. In this framework, parental stress is conceptualized as the final parental outcome of the model, reflecting a proximal expression of how chronic relational threat becomes translated into the lived experience of parenting overload, frustration, and strain. In conclusion, this proposal seeks to integrate attachment in adulthood, evolutionary perspectives on mate retention, and family systems theory within a unified explanation of parental stress under conditions of relational insecurity.

6. Coming Out Timing: The Role of Gender Nonconformity and Anal Sex Role Preferences

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Coming out is an important developmental milestone for non-heterosexual individuals. Childhood gender nonconformity (CGN) is among the strongest correlates of non-heterosexual orientation development, however, the mechanisms linking CGN to the timing of both inner awareness and outward disclosure remain underexplored. Furthermore, while sexual role preferences (e.g., anal sex roles) are salient aspects of male same-sex sexuality, their association with identity formation has received little attention. We aimed to investigate how CGN and sexual role preferences influence the timing of coming out.

A total of 3,363 Czech participants (homosexual, bisexual, pansexual, and asexual) participated in an online survey. They reported their age of awareness of sexual orientation, age of coming out, and recalled childhood gender identity (RCGI). Men were also asked about anal sex roles preferences.

Linear regressions showed that higher RCGI significantly predicted earlier awareness of sexual orientation ($\beta = -0.63$) and earlier coming out ($\beta = -0.45$). Women reported later awareness than men, while bisexual, pansexual, and asexual participants reported later awareness than homosexuals. In a separate model for men, later awareness predicted later coming out ($\beta = 0.55$). Notably, higher RCGI ($\beta = -0.57$) and preferences for "bottom" ($\beta = -1.18$) or "versatile" ($\beta = -0.90$) roles significantly predicted earlier coming out.

The findings support a developmental model where specific sexual role preferences and early divergence from gender-typical behavior accelerate sexual identity milestones. These results emphasize the need for diverse internal and behavioral experiences when studying the life trajectories of populations of various sexual orientations.

7. Early Touch in Twins: Chorionicity, Birth Weight and Sex Differences

Jennifer Leão Correia (University of São Paulo), Elisangela dos Anjos Paula Vieira (University of São Paulo), Fraulein Vidigal de Paula (University of São Paulo), Ricardo Prist (University of São Paulo), Tania Kiehl Lucci (University of São Paulo), Emma Otta (University of São Paulo) - [SFA]

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Twins provide a unique natural context to study the emergence of social and self-directed behaviors, as they share prenatal and postnatal environments. Evidence from twin fetuses indicates that co-twin-directed tactile interactions emerge earlier in monochorionic pregnancies, with female–female pairs showing earlier complex contact patterns. This behavioral organization occurs within a context of increased neonatal risk, including prematurity and low birth weight. Building on this, we aimed to characterize patterns and variability of tactile behaviors in twin infants during early infancy from a psychoethological perspective. Three-month-old twins born at Hospital das Clínicas da Faculdade de Medicina da USP were video-recorded at home for 180 seconds without interference. Frequency and duration of self-touch and co-twin-directed touch were coded using Observer XT software. We explored whether chorionicity, sex, and birth weight influenced these interactions. Descriptive analyses of 15 twin pairs ($N = 30$) showed that all infants engaged in co-twin-directed touch, whereas a subset ($n = 4$) did not exhibit self-touch, suggesting a predominance of socially oriented behaviors. Infants tended to engage more frequently in co-twin-directed touch than in self-touch. No differences were observed between monochorionic and dichorionic twins. Exploratory patterns indicated greater engagement in co-twin-directed touch among female infants, with a large effect size. Extremely low birth weight infants showed reduced co-twin-directed touch and increased self-touch. These findings highlight early social behavioral variability within a shared developmental context. Future analyses with a larger sample size will also examine additional variables, such as gestational age and NICU stay. Supported by FAPESP (2025/11761-0).

8. The Fragile Male? Sex-Specific Pathways in the Early Biological Roots of Emotional Regulation in Brazilian Twins

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Research on gene–environment interplay in emotional regulation remains limited to Western, Educated, Industrialized, Rich and Democratic (WEIRD) samples, restricting understanding of how early biological factors operate across socio-environmental contexts. Emotional regulation comprises two dimensions: Emotional Regulation (ER; adaptive emotional expressivity) and Liability/Negativity (L/N; emotional dysregulation). This study investigates how neonatal factors (birth weight, chorionicity) and individual characteristics (zygosity, age, sex) contribute to emotional development in a Brazilian twin cohort of 162 children [aged 7–15 years; 76 males (M), 86 females (F)] — 42 monozygotic (MZ), 21 same-sex dizygotic (DZss), and 18 opposite-sex dizygotic (DZos) pairs, with DNA-tested zygosity. Data collection is ongoing. Emotional development was assessed using the Emotional Regulation Checklist (ERC), completed by parents. Preliminarily, multilevel models (MLM) accounted for the non-independence of twin data. No significant main effects of birth weight, chorionicity, zygosity, age, and sex were observed. A significant sex–birth weight interaction emerged for ER: while no association was observed in girls, birth weight was associated with higher ER scores in boys, possibly acting as a protective factor. Regarding sex groups, a descriptive trend emerged, with female-female pairs showing higher mean ER scores (FF: 34.1; MF: 33.4; MM: 31.5), while male-male pairs showed higher mean L/N scores (MM: 29.5; MF: 28.1; FF: 26.5). This supports the male vulnerability hypothesis, suggesting greater male susceptibility to developmental insults. Intraclass correlations revealed moderate within-pair similarity in ER, lower in DZos pairs, while L/N similarity was consistently low. This study is funded by FAPESP (2024/20769-1).

Wednesday, 24th June

Communication – Facial Expression

9. Identity perception under extreme similarity: A proposed research programme using twin faces

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Despite extensive research on facial identity recognition, there remains limited understanding of how very small facial differences influence social perception under extreme similarity. Twins, particularly monozygotic twins, are frequently confused by both humans and artificial intelligence (AI) systems, yet little is known about which facial cues support successful discrimination or how strategies differ between humans and machines. This gap constrains theory on face perception, kin recognition, and the costs of misidentification.

To address this gap, a coordinated programme of studies will investigate how subtle facial differences between twins affect human and AI identity perception. The project will analyse 3,000 twin sets from the ND Twins Face Recognition Test Set. Facial variation will be quantified across shape, texture, and colour using geometric morphometrics, texture analysis, and standardised colour metrics, producing within-pair difference profiles.

First, facial difference scores will be computed within twin pairs to identify dimensions of variation and test whether these generalise across individuals. Second, human observers will complete an identity discrimination task involving twin and non-twin face pairs. Performance will be modelled as a function of the quantified differences, identifying cues that predict accurate decisions. In parallel, AI face-recognition models will complete the same task, enabling direct comparison of cue reliance and error structure. Third, accuracy and misidentification patterns will be compared between humans and AI systems for twins versus non-twin controls.

Effects are expected to be subtle and informative. The project will identify cues that predict success and provide a comparison of human and AI cue use.

10. Attractiveness in the Face of Threat: How the Sense of Danger Influences Women's Preferences for Male Faces

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Research on women's preferences for men indicates that in situations of threat, women tend to prefer more masculinized male features. This consists with Good Genes Theory, which proposes that masculine traits may signal strength and higher mate quality. Support for this hypothesis comes from studies showing that activating perceived threat can increase women's attraction to masculine facial characteristics, although other research finds that chronic threat may instead reduce preferences for masculinity. These conflicting results highlight the need for further investigation of this phenomenon. The present study aimed to examine whether inducing a sense of physical threat in women increases their preference for typically masculine male facial features, with the expectation that level of fear and anxiety may partially explain this effect. A total of 867 women participated in an experimental study in which they were randomly assigned to read either threatening or neutral scenarios. Afterward, participants evaluated multiple male faces sets that varied systematically in facial masculinity.

The manipulation check confirmed that the threat induction was effective, but women in the threat condition did not show stronger preferences for masculine male faces than those in the control group. Fear and anxiety did not mediate these preferences.

Overall, the findings don't support the idea that perceived sense of threat increases women's attraction to masculine faces, offering no evidence for predictions from Good Genes Theory. The null effects may stem from limitations in the stimuli or the threat manipulation, suggesting that more immersive or ecologically valid methods are needed in future research.

11. Sex-specific benefits of facial expressivity in rhesus macaques

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Sociality affords many benefits, with stronger social bonds and network positions linked to adaptive outcomes in both humans and other animals. In many primate species, males and females navigate social worlds differently: one sex typically remaining in their natal group and the other dispersing to new groups throughout their lives. This may impose different selection pressures, with dispersers needing to re-integrate into unfamiliar societies, whilst the non-dispersing sex can maintain long-term kin supported networks. Facial communication has been proposed as a key mechanism for bonding, with more effective communication facilitating integration. If true, we should expect the dispersing sex to rely more on behavioural strategies when navigating networks. We measured facial behaviour in 42 free-ranging rhesus macaques (a male dispersing species, N=21 males) within a social group of 118 individuals. After quantifying individual facial expressivity and complexity (using NETFACS), we tested its association with social network structure through generalised additive and Bayesian social relations modelling. More expressive males occupied better social positions in the group (degree strength measured from proximity and grooming interactions), but this relationship was non-linear with diminishing returns at higher levels of expressivity. Males with less idiosyncratic facial behaviour, closer to the group-typical pattern, also exhibited better network positions. All measures of facial behaviour were unrelated to social position in females. These findings demonstrate sex-specific benefits of facial expressivity and help us better understand the evolution of facial expression in humans and other animals.

12. Social environment moderates attention to play faces in bonobos (*Pan paniscus*)

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Facial expressions have historically been described as biologically based, hard-wired signals, which humans and animals are born understanding. More recently however, we find that human facial communication may be influenced by social and ecological factors, such as culture, family environment, and social context, shaping how facial expressions are produced and perceived. This study aimed to explore how social environment moderates perception of facial expressions in our closest living relatives, bonobos (*Pan paniscus*). Natural social interactions were observed in a population of bonobos (n=14) at Twycross Zoo, UK, with play and grooming rates calculated between individuals. The population is managed using a zoo-assisted fission-fusion technique, resulting in continuously changing group compositions. Eye movements (via eye-tracking) were recorded (n=8) to investigate how bonobos attend to different play faces in a changing social environment. Bonobos observed six manipulated images of a bonobo face: a neutral photograph merged with an avatar displaying different muscle activations, representing different variants of the play face. Stimuli were presented in pairs and counterbalanced across trials. We found that when individuals were housed with more playful groupmates their attention to the more expressive play face increased. These findings suggest that facial expression processing may be more plastic than previously thought and could be adaptable to our social environment and experiences. We hope these findings help us better understand the evolution of complex facial expressions in humans.

13. Look into my eyes: Attentional bias to facial expressions predicts mechanisms of gullibility

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This study aimed to explore how gullibility relates to attentional responses to emotional expressions. Utilizing an eye-tracking dot-probe task, we examined whether individuals with higher levels of gullibility allocate attention differently to angry faces than those with lower scores. Participants also completed psychological measurements, which were included as covariates in the analysis. The results showed that gullible individuals paid more attention towards angry faces compared to non gullible participants, who tended to avoid them. These findings suggest that gullibility may be associated with reduced sensitivity to social threat cues and highlight the role of personality traits in shaping visual attention.

Wednesday, 24th June

Communication – Smell

14. Beyond the Nose: How Verbal Fluency Drives Domain-Specific Odor Awareness in Preschool Children

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Odor awareness, defined as the metacognitive tendency to notice and reflect on smells, has been extensively studied in adults and school-aged children, yet its early developmental predictors remain poorly understood. This study examined factors influencing odor awareness in preschoolers (ages 3-5), focusing on verbal fluency, demographic variables, and parental characteristics. A sample of 285 Czech children (145 boys, 140 girls; mean age = 3.9 ± 0.4 years) completed an adapted interview based on the Children's Olfactory Behavior in Everyday Life (COBEL) questionnaire, a semantic verbal fluency task, and a four-item odor identification screening (U-Sniff). Parents reported on their own odor awareness, trait anxiety, and children's everyday odor exposure. Linear mixed models accounted for the nested design (children within kindergartens and experimenter pairs). Contrary to expectations, neither age, gender, parental odor awareness, nor reported odor exposure significantly predicted total COBEL scores. The only robust predictor was children's verbal fluency performance (animals category), which explained variance in the total COBEL score ($F(1,258) = 5.16, p = .024$) and in the Food and Environment dimensions ($p \leq .014$). Odor identification and parental trait anxiety were non-significant controls. These findings suggest that linguistic proficiency, rather than chronological age or environmental exposure, is the primary driver of olfactory metacognition in early childhood. Interventions aimed at enhancing odor labeling may therefore represent a promising avenue for fostering odor awareness in preschool populations.

15. Consideration of olfaction in guidance for breastfeeding practitioners: a scoping review of WHO and national guidelines in selected countries

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Background: Breastfeeding guidance focuses on recommendations for healthcare providers to encourage optimal breastfeeding during the perinatal period and up to 2 years post-partum. Nevertheless, many women struggle to establish breastfeeding, and internationally, initiation and maintenance rates remain suboptimal. One contributory factor to these low rates might be an underappreciation of the role of olfactory communication between mothers and newborns. Here, we aimed to assess the awareness and use of olfactory communication within current breastfeeding and newborn care guidelines, including formal healthcare and community-based contexts. A second aim was to identify indirect practices that could promote or hinder beneficial olfactory processes. Methods: We conducted a scoping review of international (UNICEF/WHO BFI) documents and national breastfeeding guidelines and related documents from 11 countries representing varied breastfeeding rates, health systems, and socio-economic and cultural contexts. These guidelines were reviewed to identify focal and related terms associated with olfaction, breastfeeding, and other practices.

Results: One WHO training document and 4 national guidelines made direct reference to olfactory concepts, mainly in the context of the infant's first finding the nipple and awareness of maternal scent. Practices promoting olfaction included skin-to-skin contact, proximity, giving colostrum, and not washing the baby or the mother's breasts. Disruptive practices included washing, using topical odours, discarding colostrum, and pre-lacteal feeding.

Conclusions: There is potential to utilise olfactory communication more broadly in perinatal practice to enhance the breastfeeding experience for mothers and infants. Cross-national sharing of good practice could be encouraged in international guidance.

Wednesday, 24th June

Communication – Cooperation

16. The cooperation paradox and population Welfare: the role of non-social trait heterophily and affective calibration in the evolution of early cooperation networks

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The capacity for cooperation constitutes an evolutionary foundation of survival; however, striving for it generates hidden costs that diminish population welfare. According to 2026 simulations, the alignment between cooperation maximization and social welfare is merely 0.53 for evolutionary peer punishment (Han et al., 2026). To minimize these costs, primates worldwide employ rigorous ally selection: out of 72 potential macaque dyads, successful cooperation occurred in only 27 (Bhattacharjee et al., 2024). Specialists suggest that a higher cooperative propensity is strictly associated with behaviors based on the heterophily of non-social traits, rather than kinship as previously assumed (Bhattacharjee et al., 2024).

Human studies present partner choice as a mechanism of neurobiological calibration, wherein "efficiency recalibrates choices between altruistic and strategic benefactors" (Liao et al., 2025). Cooperative success has a complex etiology influenced by affective and strategic factors. Importantly, communal motivation, such as gratitude or guilt, must be categorically differentiated from a calculated obligation to reciprocate.

The aim of this paper is to review the evolution of cooperation, incorporating cognitive costs and adaptive benefits. I outline the phenomenon of heterophily, based on "dissimilarities in non-social traits" (Bhattacharjee et al., 2024), distinguishing it from kin selection and homophily. The empirical section presents recent fMRI findings by Liao et al. (2025) on human decision-making, specifically regarding striatal and prefrontal cortex activity—a tool also applied in neuroeconomics. Finally, the paper discusses the evolutionary dynamics of network games, examining the population welfare index across selected aspects of social dilemmas.

17. Kin And Non-Kin Support in Adulthood: A Life History Perspective on Relationship and Life Satisfaction in a Representative Sample

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While the impact of social networks on subjective well-being is widely recognized, the relative importance of different network components remains contested in modern individualistic societies. This study investigates how life history strategies (LHS) shape relationship and life satisfaction through the mechanisms of perceived social support and network interference.

Using a representative Czech sample of adults (N = 1,175, ages 18–50), we applied structural equation modeling to examine direct and indirect pathways linking life history strategy (Mini-K), perceived social support (MSPSS), interference in romantic relationships (IRRI), relationship satisfaction (RAS), and life satisfaction (SWLS). We further distinguished between parental and friend contexts and tested for gender invariance.

Consistent with Life history theory, a slower LHS was associated with higher relationship and life satisfaction. These associations were partially mediated by greater perceived social support, suggesting that slower strategists are embedded in more supportive social environments. Interference showed weaker but consistently negative associations, particularly with relationship satisfaction. Notably, parental support exhibited a stronger influence on satisfaction than support from friends. Gender differences were minimal.

These results reveal a functional asymmetry between kin and non-kin support. Although participants reported comparable levels of perceived support from both sources, only parental support was associated with higher relationship and life satisfaction. This suggests that while friends play an essential role in adulthood, they do not replace the specialized role of parental investment in relationship and life quality. These patterns challenge the assumption of peer-kin parity in individualistic societies, highlighting the family's enduring regulatory role.

18. The Evolution of Altruistic Behaviour – Archaeological, Ethnographic and Human Ethological Perspectives

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Altruism is a ubiquitous and important feature of all present-day human societies. We understand the term altruism in the original way Trivers (1971) defined it: a behaviour that increases the fitness of the recipient while decreasing the fitness of the actor.

Our species is not the only one displaying altruistic behaviour (e.g. chimpanzees), but it is the only one for which such behaviour cannot exclusively be explained by kin-selection or reciprocity. Exceptionally, non-human primates may act altruistically towards non-kin. To improve our understanding of the evolutionary trajectory of altruism in early humans and hominins, we present an overview of available data from ethnographic and archaeological records that can be interpreted as indicators of altruistic behaviour and may help to better describe its scope, scale, and motivation. Ethnographic records show that helping, food sharing, sharing knowledge and similar behaviours are mainly present among related individuals (family, clan), but also demonstrate "pure" altruistic behaviours, e.g. helping non-kin, including strangers. Punishing persons, even at own cost, who violate social norms is a particularly interesting form of altruism, often benefitting the group.

Archaeological record show: - Healed traumata that are considered too severe to have been survived without support from the social group; such findings even predate *Homo sapiens*. - Grave goods, costly for the surviving members of the group, as altruistic behaviour *sensu lato*.

We will discuss published material of these and synthesize these findings with the active discussion concerning altruism and its evolution.

Wednesday, 24th June

Communication – Cognition

19. Numerical cognition in the wild: Domestication and the divergence of herd counting practices

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Human numerical cognition is often framed as progressing toward increasingly abstract and symbolic representations. However, cross-cultural evidence suggests substantial variability in how quantities are tracked and managed in practice. Here, we investigate how livestock management shapes numerical practices, focusing on herd tracking as a cognitively demanding problem involving mobile, high-value resources. Drawing on a qualitative cross-cultural survey of 36 societies using the eHRAF World Cultures database, we examine whether variation in numerical practices is predicted by (i) the duration of animal domestication, (ii) herd scale and species characteristics, and (iii) economic reliance on livestock. Using a generalized linear mixed model, we find no consistent association between these domestication-related variables and the presence of symbolic number systems. Instead, substantial between-society variation remains unexplained by livestock characteristics alone. Ethnographic evidence indicates that approximation, individuation, embodied counting, and externalized memory systems constitute adaptive alternatives to exact enumeration, shaped by cultural norms, political risk, and cognitive constraints. In many herding contexts, avoiding precise counts serves to mitigate misfortune, evade taxation or state surveillance, or prioritize qualitative herd composition over abstract totals. From a cognitive perspective, these findings highlight alternative strategies for allocating limited cognitive resources: some societies externalize computation through material or embodied tools, while others rely on memory, perception, and estimation. Overall, the results portray numerical cognition as flexible, socially embedded, and responsive to ecological and institutional conditions, rather than as a unidirectional developmental sequence.

20. The role of experimental interdisciplinary inferences in cognitive evolution studies

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Experimental work is an important part of research on the evolution of cognition. However, since no extant species can serve as a direct proxy for extinct ones, it is crucial to understand to what extent inferences from these experiments can be used to study the distant past and extinct species (Kuleshova & Pleyer, 2025).

Here, we evaluate the role of the inferences made from experiments on extant species about the evolution of extinct ones in three major approaches in cognitive and language evolution research: comparative psychology, cognitive archaeology, and experimental semiotics. For each approach, we outline the methods, summarize key experimental findings, and assess the extent to which they can be used to infer the cognitive abilities of extinct hominins.

We also discuss the epistemological commensurability of central concepts in all three approaches. Namely, we look at the concepts of human, cognition, language, evolution, and culture in order to understand possible convergences between them and thus lay common ground for future dialogue. Importantly, we find that despite epistemological differences, all approaches discussed share similar limitations in their experiments, such as the absence of a real-world baseline or the impossibility of studying the targeted species directly, and more broadly WEIRD (Henrich, 2020) and BIZARRE (Leavens et al., 2010) samples. We then discuss these challenges and the role of experimental work for interdisciplinary theory-building. We conclude that these considerations should be taken into account in future work, which should contain more explicit reflections on the epistemological compatibility of different approaches.

Wednesday, 24th June

Communication – Non-verbal

21. Bridging Filmmaking and Behavioural Science: A Research Proposal on Non-Verbal Communication among the Eipo in West Papua, Indonesia

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The memory of human culture, which consists of knowledge, behaviours and customs is passed down through generations. Yet, these cultural traits are not static and evolve over time, resulting in cultural change. One approach to studying cultural evolution is to make longitudinal comparisons across time frames. The Eipo in the Star Mountains of West Papua, Indonesia, are among the best anthropologically documented traditional societies in the world. Since 1974, Austrian ethologist Irenäus Eibl-Eibesfeldt has recorded their daily behaviour, especially their social interactions, on film. At that time, the Eipo lived isolated by high mountains and steep valleys, as horticulturists, gatherers and hunters in small village face-to-face communities, following the traditions of their ancestors. Within just two generations, increased contact with Indonesian, Western and other Papuan cultures has had a significant impact on verbal communication, religion and everyday practices. However, less is known how these shifts may have affected non-verbal communication. My research project aims to create new film recordings of comparable social situations documented in the archive material, such as mother-child interactions, children at play or interactions among adults, and to systematically compare patterns, frequencies and durations of non-verbal behaviour from the mid-1970s to the present, thereby bridging filmmaking and behavioural science. Historical events, such as the construction of an airstrip and thus the availability of travel and internet access in Eipomek, serve as predictor variables. I hypothesise stability in facial expressions but variability in gestures and certain social behavioural patterns, reflecting exposure to media and higher-status external societies.

22. Body Position and Multicomponent Communication in Humans

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In human language, information and meaning are collectively derived not only from the words spoken, but also from other salient cues such as gaze direction, head orientation, facial expression, and combinations of these signals (Holler & Levinson, 2019). The combined, simultaneous use of these signals is known as multi-component communication. Within the communication literature, the role of the body (here defined as the body excluding the head and arms) in multicomponent signals has been largely overlooked, despite body position and movements being potentially salient signals of intention and action. This project aims to investigate the role of the body in human communication. The study will use a referential communication task to mimic a naturalistic social interaction, in which one participant (Director) describes a word or object that the other participant (Matcher), wearing eye-tracking glasses, will have to identify. Analyses will investigate the gaze patterns of the Matcher to test if longer time spent looking at the body (independent of or in combination with face and hands) of the Director results in improved task performance (measured by speed and accuracy). Additional analyses will include quantifying the facial, gestural, and body signals produced by the Director, in order to investigate if higher use of body signals and multicomponent signals result in better performance on the task. Investigating the perception of and production of body signals naturalistically will help us understand the significance of body cues in human communication and will highlight the importance of studying the interplay between signals.

23. A Nouvelle Vague, or waves of regionally specific behavioral traits? Towards a more contextual understanding of modern human behavior

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The past decades have seen intense debates over the beginnings of modern human behavior (MHB). Various models have been proposed, ranging from sudden onset models such as a "Middle to Upper Paleolithic transition" or "human revolution" and a "neural hypothesis" centered on the archaeological record of 50 - 40 ka, to gradual later Middle Pleistocene models, presenting behavioral modernity in Middle Stone Age sites of Africa. The use of behavioral traits to support such models has long been scrutinized due to tendencies for Eurocentric, taphonomical and cartographical issues, issues of subjectivity, and because many traits are not exclusive to anatomically modern humans. Some have called for leaving behind the concept of MHB traits altogether. Still, these traits remain a part of the archaeological and anthropological vocabulary with which we investigate what makes us *Homo sapiens*. This study examines the ways in which observing MHB traits can lead to more nuanced discussions of human social elements and cognitive processes if incorporated on a more regional scale, within a wider range of considerations (e.g. environmental, genomic, effects of other populations) and with the application of perspectives from anthropology, cognitive science, and evolutionary theory, such as Material Engagement Theory and Extended Evolutionary Synthesis. Emphasizing MHB traits can create the misleading impression of a linear development of "modern" cognitive abilities. This study contends that (i) local surroundings, (ii) the making of artifacts, and (iii) particular survival needs have shaped our relationships to diverse environments and how we became the humans we are today.

24. Two FAIR datasets from a multimodal project on human appearance and physical fitness

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Research projects routinely generate rich materials (e.g., stimuli, protocols, measurements) that hold substantial potential for secondary analysis, replication, reference, and extension of specific findings. However, these resources often remain only partially reported, scattered across supplementary materials, or not made fully accessible within individual research articles. Here, we present two complementary FAIR-compliant (Findable, Accessible, Interoperable, Reusable) datasets stemming from a single larger project investigating attractiveness cues to physical fitness across perceptual modalities.

The first dataset provides a standardized high-fidelity audiovisual recordings of 120 Central European adults (aged 18–40), capturing full-body morphology (faces blurred) and motion under controlled conditions. These stimuli integrate visual, dynamic, and acoustic cues. The second dataset offers an extensive, multi-domain assessment of physical fitness of the same sample, including anthropometry, body composition, strength, flexibility, postural stability, and aerobic capacity.

Together, these datasets address critical challenges of lacking high-quality standardized audio-visual stimuli sets and the scarcity of comprehensive reference physical fitness data for the general population, enabling reproducible research on social perception with reference values allowing for better evaluation of findings generalizability. By linking richly documented stimuli with objective physical performance measures in a transparent, accessible manner, these datasets exemplify how open science practices can transform data collected for a complex research endeavor into a versatile open resource for cross-disciplinary reuse.

25. The Feminine Kind: association between amiability and femininity through appearance modification

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Appearance modification is a universal phenomenon that can be motivated by internal and external factors, such as social advantages. Accordingly, the halo effect states that better appearance leads to better judgment of one's psychological characteristics by others; however, since beauty presents evolutionary hallmarks, aesthetic modifications tend to follow specific guidelines. In the case of makeup, the darkening of the eyes and mouth helps to feminize the face, which is often considered more attractive in women. Paired with the social notion that amiability is a feminine trait, this study aims to explore whether different makeup applications can indicate a correlation between femininity and amiability ratings, thus indicating that social expectations of what is feminine can be biologically applied to others. Around 2500 participants rated the standardized photographs of 34 Brazilian women in 5 progressive states of makeup application, through a Likert scale that varied from 1 to 13 in the categories femininity, amiability and attractiveness. Preliminary results obtained by repeated measures for each evaluation pinpoint a strong correlation between categories, although femininity is expressed more strongly with heavier makeup, while amiability decreases with stronger applications. For milder applications, both categories showcase higher evaluation. The findings of this experiment may contribute to discussions about gendered attribution of traits based on appearance, and the way appearance modifications may exacerbate such behavior.

26. Static vs. Dynamic Nonverbal Cues in Jealousy-Related Emotions: A Systematic Review and Meta-Analysis

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Jealousy is a complex social emotion that arises in response to the perceived threat of losing a valued relationship to a rival. Despite its interpersonal relevance, its involuntary nonverbal manifestations have been scarcely studied compared to self-report measures. To address this gap, the present study synthesizes experimental and observational evidence from closely related emotions—anger, sadness, and distress—to characterize their nonverbal expressive patterns. Ten studies ($N \approx 1,847$ adults) were included following the PRISMA 2020 protocol. A central analytical contribution was the distinction between two types of nonverbal signals: static signals—color and facial structure cues evaluated from fixed images—and dynamic signals—body movement, gaze direction, and facial micromovements. Results indicate a robust multimodal effect ($d = 1.17$), with both signal types contributing complementary, non-redundant information. Static signals yielded the largest effect sizes: facial skin color change showed the strongest effect in the corpus ($d = 1.99$), followed by facial angularity as a key structural cue in emotional perception, accessible even from brief exposures. Dynamic signals showed smaller but consistent effects ($d = 0.61\text{--}0.79$), with the distinctive advantage of indexing expressive authenticity—evoked expressions were better recognized than posed ones, information that static signals alone cannot capture. Together, these findings suggest that static and dynamic signals are not interchangeable but provide qualitatively distinct information about the expresser's emotional state, with direct implications for the design of observational paradigms in relational threat contexts.

27. High heel as supernormal stimuli: Conceptual Drifts and Methodological Compromises

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The translation of concepts from one scientific field to another can introduce conceptual drift and methodological compromises that undermine empirical validity. This paper examines these risks through the supernormal stimuli concept in high heels research.

Supernormal stimuli are exaggerated traits that exploit existing perceptual preferences by exceeding the naturally occurring range of a trait. The initial hypothesis that high heels enhance attractiveness by exaggerating sexually dimorphic gait and lumbar curvature was theoretically compelling, as it applied this well-established ethological principle to explain a widespread appearance modification practice via evolved mate preferences. However, subsequent research has shown a pattern of theoretical distortion and empirical inconsistency. Most critically, the proposed midrange lumbar curvature optimum of 45 degrees fundamentally contradicts the definition of supernormal stimuli. Additionally, the literature exhibits methodological weaknesses, including uncontrolled stimuli, inconsistent manipulations, and at least one retracted study. Findings have been contradictory: some studies report effects regardless of movement toward or away from the proposed optimum, while others using computer-generated stimuli find linear relationships—evidence potentially supporting supernormal stimuli but ignored in favor of the midrange optimum narrative. Most recently, a carefully controlled factorial study combining trait exaggeration and costly signaling frameworks found significant but small effects, with experimental manipulations explaining only a small portion of total variance.

Presenting this body of work, we emphasize the importance of maintaining conceptual fidelity to source disciplines, demanding methodological rigor, adopting multi-method approaches that balance experimental control with ecological validity, and prioritizing empirical evidence over narrative appeal in human ethology research.

Wednesday, 24th June

Communication – Art & Craft

28. Evolutionary Artisticology: A Comprehensive, Integrative, Open-Science Approach for All Extraordinary Aesthetic Activities Across Species and Cultures

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Evolutionary approaches to human artistic predispositions are blossoming but remain underdeveloped, disconnected, and rarely empirical. We offer a comprehensive, integrative and open-scientific framework to artistic propensities via a back-to-basics approach guided by the Ethology of Arts. The new discipline of Evolutionary Artisticology investigates every extraordinary aesthetically-enhancing activity and creative ornamentation across species, integrating proximate, sociocultural, and evolutionary approaches. It expands and connects evolutionary perspectives on visual arts, literature and scenic arts, music/dance, circus(kinetic), olfactory, and tactile arts. It compiles at least ten aesthetic techniques (e.g., contrasting, repetition, exaggeration, and schematizing) used to attract attention, super-stimulate, challenge and satisfy. Psychological artisticity is the multicomponent cognition underlying extraordinary aesthetically-enhancing activities. It stems from the interconnection of pre-artistic precursors such as patternicity/pareidolia, aesthetic preferences, creativity, dexterity and ritualization. Artisticity exhibits homologies, adaptive convergences, antiquity, universality, heritability, neural organization, cognitive modularity/specialization, developmental precocity/reliability, related pleasures and emotions, intrinsic motivation, and associated costs, indicating an ancestral adaptation. It also conveys health, psychological, sexual, and social benefits, confirming current adaptiveness. Artisticity likely increased ancestral fitness by improving: cognition, health, interpersonal manipulation, social cohesion, mating attraction/competition, relationship maintenance, and anti-predatory defenses. Evolutionary Artisticology promotes empirical investigations comparing all art forms and testing different adaptive values while embracing Open Science: large global collaboration, power estimation, preregistration, and multi-lab replications. Human Ethology contributes by offering Tinbergenian interdisciplinary explanatory pluralism, and the cross-cultural depth, ecological validity and observational rigor of Eibl-Eibesfeldt and Dissanayake on aesthetic precursors and ritualization.

29. Double perforated ivory beads are difficult to make! Interpretation of the Aurignacian Swabian Jura craft (Germany) in the light of costly signaling theory

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Costly signaling theory (CST), originally used to explain the benefits of costly biological traits for mate selection, has also been applied to understand costly traits in human behaviours. We investigate if and how CST could explain the occurrence and persistence of a specific regional bead type in the Swabian Aurignacian: the double perforated ivory bead (DPIB). We evaluate how difficult they are to produce/fake and what could be their benefit for Aurignacian individuals and groups. "Cost" of DPIB production is examined through a replication experiment involving three types of participants with different levels of experience and familiarity with the materials. Each group produces multiple DPIBs under sequential conditions representing increasing levels of information access, time, and skill. The resulting beads are then compared based on their visual characteristics. Despite that the most regular, symmetrical and smooth DPIBs require a high level of information access and a considerable amount of time, skill and resources (i.e. "costs"), experiments show that DPIBs may be produced by participants with varying levels of experience. Archaeological DPIBs show an exclusively regional distribution and a persistent gradient with many roughly and few technically perfect specimens. We propose that they may represent an in-group phenomenon and worked as interindividual competition by rendering visibility to crafts-persons, admired and trusted for their costly investment, which might have played a role in attracting mates and/or enhancing social status. The skills and traditions of local production were most likely, as in today's societies, a much-valued expression of regional cultural identity.

30. Rethinking Technical Effort: The Role of Affordant Selection in Prehistoric Tool Production, The Case of the Aldène Assemblage (Hérault, France)

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The complexity of prehistoric human behaviour is often estimated by the number of steps involved in tool production or by the extent to which the original block was transformed. However, the initial step of every tool production, the selection of the block, is frequently overlooked.

We propose to focus on affordant selection as a specific form of block selection, and to examine how it structures the overall logic of tool production. Although frequently discussed in prehistoric studies (e.g., Silva-Gago et al., 2021; Wynn, 2020), the concept of affordance remains unevenly integrated into technological analysis of lithic tools. Interpreted differently depending on the approach, it is understood here as a technical operation involving the integration of natural criteria into the tool-making process (Boëda, 2021).

Reintegrating the step of affordant selection provides a more nuanced understanding of technical complexity by revealing the invisible component of design effort, often reduced to mere transformation operations. The Aldène assemblage (Cesseras, Hérault, France) (Rossoni-Notter et al., 2016) provides a clear illustration of this analytical shift. The affordance operation occupies a structuring role in Aldène tool production, integrating natural criteria into prehensile parts, active parts, and overall volumetry.

Considering this stage provides a clearer understanding of the technical investment involved in the assemblage, clarifying the logic of selection and integration of natural criteria while repositioning where and how technical effort is distributed throughout the production sequence. In doing so, it highlights variability in tool production logic and contributes to a better understanding of human technical behaviour.

31. An Ethnoarchaeological View of Red Deer (*Cervus elaphus*) Maxillary Canine Ornaments in the European Upper Paleolithic

Josh London (University of Tübingen), Marian Vanhaeren (University of Bordeaux), Nicholas Conard (University of Tübingen), Sibylle Wolf (University of Tübingen) - [SFA]
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Perforated red deer (*Cervus elaphus*) maxillary canines are among the most well-represented animal tooth pendants from the European Upper Paleolithic. These teeth have highly distinctive morphologies that vary diagnostically by sex, age, side and source population, providing insights into the emergence of regional social identities as well as some of the very earliest long-distance exchange networks. Transregional connections fostered by the exchange of symbolically laden red deer canine ornaments would have mitigated local ecological risks, expanded effective breeding populations and ensured the retention of novel social and technological innovations in the sparsely inhabited landscapes of late Pleistocene Europe. Here, morphological and morphometric faunal analysis, experimental archaeology, use-wear and traceological analysis, and multivariate statistics are used to identify discrete regional craft traditions as well as transregional exchange dynamics in the Aurignacian, Gravettian and Magdalenian technocomplexes of Southwest France and the Swabian Jura of Southern Germany. A special focus is placed on ethnohistorical parallels for the long-distance exchange of red deer canine pendants and their probable role as prehistoric exchange media linking geographically dispersed pioneer communities at the height of the last Ice Age.

32. Fabricating presence – personal archaeologies in contemporary art

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The question of human frailty and perishability instills in our consciousness a fear of total dissolution and oblivion of the departed. Human body has become, in present time, an epitome of identity and value as major features of a successful social presence. As we are faced with death in its various forms, we are also confronted by question of memory and its lack of persistency. Memory must be sustained by either oral or visual materials to prolong one's presence, to delay or to prevent forgetting. By collecting a plethora of objects - impermanent traces that replace a person - and transforming them into precious guardians of the past, people express the need to have continuity, meaning and constant dialogue with the past.

In the field of visual arts, questions of time and existence are, as Buci-Glucksmann observed in 2003, "without a doubt, one of the great obsessions of twentieth century art". Artists like Arman, Messenger, Boltanski, Parmiggiani, Viola, to name a few, trespass the boundaries of individual or collective reasonable practices involving memory, space and time. By amplifying the scale, the place and the type of collected content (anonymous photos, cigarette stubs, waste, clothes, etc.), these artists are shifting the discussion from the acts of collecting, recuperating, hoarding or keeping historical accuracy to a profound reflection of the impact of facing death, destruction and oblivion. Derision and fabricated history confront the viewer with its own mechanisms of coping with absence, playing on perception and reality.

33. The “objets de mémoire” from the La Mouthe cave (Les Eyzies-de-Tayac). Between rural knowledge and prehistoric science.

Roland Nespoulet (Muséum national d'Histoire Naturelle), Emilie Lesvignes (UMR 8068 Temps) et Jean-Michel Geneste (UMR 5199 PACEA)
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Discovery of the archaeological site La Mouthe cave, 1895. For over 130 years, this decorated cave, a Paleolithic site, has remained the property of the Lapeyre family, then their descendants, the Dazats. As a major decorated cave that has played a fundamental role in the history of Prehistory, the La Mouthe cave has always remained in the quiet hamlet that protects it, above the village of Les Eyzies-de-Tayac. Since the death of Edouard Lapeyre, a farmer (1927-2005), the house is no longer inhabited, and the cave is not open to visitors, or almost not. Since 2018, the archaeological research program has focused on studying the decorated walls and complex archaeology of this cave, which shows signs of occupation since the Middle Paleolithic period.

In 2022, we uncovered a large collection of flint artefacts, bones and other objects collected in and around the cave by Edouard Lapeyre throughout his life. This collection was accumulated and stored in the entrance hall. Closely associated with these were numerous modern objects, which we inventoried in 2023. They attest to the cave's other history, one that is everyday, invisible and singular: that of its appropriation by its owner, who was also an occasional guide.

We present a human and sensitive approach, considering these “objets de mémoire” as exceptional witnesses to the hidden history of the convergence of rural skills and knowledge with the scientific knowledge of prehistoric archaeology. They help us to perceive, beyond the skillfully exploited touristic folklore, the epistemological importance of this encounter between rurality and “official” science during the second half of the 20th century.

Wednesday, 24th June**Communication – Attractiveness****34. Blue eyes are more attractive in Colombia and Turkey, people are indifferent to eye colour elsewhere**

Vojtech Fiala (Charles University), Petr Tureček (Charles University), Karel Kleisner (Charles University), Przemysław Żywiczyński (Nicolaus Copernicus University), Juan David Leongómez (El Bosque University), Andres Castellanos Chacon (El Bosque University), Zuzana Štěrbová (Palacký University Olomouc), Theresa Matzinger (University of Vienna), Ondřej Pavlovič (Palacký University Olomouc), S. Adil Saribay (Kadir Has University), Sławomir Waciewicz (Nicolaus Copernicus University)

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Some studies propose that iris colour has a systematic effect on first impression formation, whereby blue eyes, a rare phenotype, are preferred over brown. However, this preference has only been observed in some cultures. We therefore asked a set of participants (N=318) from six world regions (Australia & New Zealand, Colombia, Czechia, South Africa, Turkey, and Vietnam) to rate the iris colour of a single set of Czech faces balanced with regard to sex (N=195, M_{age} = 23.22, SD = 4.17), and another group of raters from the same countries (N=435) to rate the same set of faces on attractiveness. We subsequently analysed the association between attractiveness and eye colour using Bayesian regression. Eye colour was operationalised as the proportion of raters classifying each face as blue-, brown-, or other-eyed; because these proportions sum to one, blue and brown were entered as predictors with "other" as the reference category. The results point to an ambiguous, culture-dependent role for iris colour in attractiveness formation. Unlike in other countries, in Colombia (mean=0.34, 95% CI: [0.01; 0.68]) and Turkey (mean=0.30, 95% CI: [-0.02; 0.63]), perceived attractiveness increased with the proportion of people classifying the face's eyes as "blue". This result was corroborated by an analysis that examined whether the faces possessing eyes classified unambiguously as blue, brown, or other differed in attractiveness. We thus provide further evidence that the effects of iris colour on attractiveness are culture-specific.

Wednesday, 24th June**Communication – Socialisation****35. Ontogeny of narratives in childhood: structure, Theory of Mind, and the influence of socialization**

Carla Ribeiro (University of São Paulo), Eduardo Ottoni (University of São Paulo) - [SFA]

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Narrative is a universal human characteristic, acting as a tool to organize experiences, generate meaning, promote group cohesion, and transmit cultural knowledge. Its development in childhood is shaped by socialization processes that influence story structure and complexity. This study investigated child narrative development and its relationship with Theory of Mind (ToM), as well as the influence of sociodemographic variables, especially siblings and parental education. Eighty children (ages 3, 5, 7, and 9; 20 per sex) completed four narrative tasks (Heider & Simmel, Invented Story, Favorite Story, and Illustrated Story), evaluated for narrative structure and mental state attribution, in addition to the false-belief task Sally & Anne. Caregivers provided information on sociodemographic variables. Analyses included descriptive statistics, Spearman correlations, and age-group comparisons using the Kruskal–Wallis test. Results indicated consistent age-related progression in narrative complexity and mental state attribution, with higher performance in more contextualized tasks at earlier ages. Narrative structure and ToM were positively correlated across all tasks. Performance on the false-belief task was highly variable, suggesting the influence of pragmatic demands and task format. Socialization variables showed nonlinear effects: younger siblings were associated with greater narrative and sociocognitive complexity, while older siblings, especially males, were linked to less complex performance at some ages. Parental education, interaction with other children, reading frequency, and children's ability to invent stories showed inconsistent correlations. These findings indicate that narrative and sociocognitive development is progressive, sensitive to elicitation context, and modulated by interactional experiences, reinforcing narrative as a skill dependent on development and socialization.

36. Socio-Emotional Dynamics in Early Twin Relationships: A Study of Emotion Expression, Attachment, Conflict Resolution, and Rivalry

Maria Markodimitraki (University of Crete), Michalis Linardakis (University of Crete)
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This study examined socio-emotional functioning and aspects of the twin relationship in early childhood across four behavioral domains: emotion expression, twin attachment, prosocial conflict resolution, and aggression/rivalry. The sample consisted of 92 twin pairs (N = 184 children). Parents completed questionnaires evaluating each child separately. The mean age of the children was 5.20 years (SD = 1.87). An exploratory factor analysis was conducted to examine the structure of the questionnaire items. Parallel analysis supported a four-factor solution corresponding to Emotion Expression, Aggression/Rivalry, Twin Attachment, and Prosocial Conflict Resolution. All factors demonstrated satisfactory internal consistency.

Descriptive analyses indicated similar mean levels between twins across all behavioral domains. Correlation analyses revealed moderate associations among several domains, particularly between emotion expression, twin attachment, and prosocial conflict resolution, suggesting that these represent related but distinct aspects of socio-emotional functioning. Twin similarity analyses showed moderate correlations between twins for most factors. The strongest similarity was observed for twin attachment, followed by emotion expression and aggression/rivalry, whereas prosocial conflict resolution showed weaker similarity between twins.

Paired-samples t-tests indicated no significant differences between twins within pairs across the four behavioral domains. Additional analyses comparing monozygotic and dizygotic twin pairs did not show greater similarity among monozygotic twins. Correlations were somewhat higher among dizygotic twins, although these differences were not statistically significant.

Overall, the findings suggest that socio-emotional behaviors within twin relationships are organized around distinct but related dimensions, with shared environmental influences playing an important role in early socio-emotional development.

Wednesday, 24th June

Communication – Methods

37. Individual differences in alignment between physiology and behaviour using thermal imaging

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Individuals differ in both their physiological reactions to stimuli and the corresponding behavioural response. Whether individuals differ in the alignment between a physiological response and the behaviour is unknown, but there could be functional consequences of being well aligned (behaviour matches the physiological response) or poorly aligned (behaviour does not match the physiological response). Here, we aim to measure the relationship between the physiological response and behavioural responses of individuals and develop a 'reactivity alignment index' (RAI) to measure behavioural inhibition and reactivity. Physiological responses will be measured using facial thermal imaging to detect changes in skin temperature due to activation of the sympathetic nervous system. Behavioural responses such as facial expressions (using the Facial Action Coding System: FACS) and self-directed behaviours will also be measured. The relative difference between physiological and behavioural responses in an individual will be measured to reflect an individual's 'reactivity alignment' (how they "feel" compared to how they "behave"). The responses will be measured during an experimental paradigm inducing surprise and startle responses. We will assess how much variance in RAI there is across individuals (and whether this is a trait level individual difference) and investigate potential links between RAI, personality and social network measures. Examining the link between reactivity and other social variables will help us understand how social and communicative behaviours are underpinned by individual differences in reactivity, and how this might have potential adaptive value.

Wednesday, 24th June

Twin Studies

38. Different children or different treatment? Environmental sensitivity and anxiety in twins

Lilian Cristina Luchesi (Universidade de São Paulo), Pedro Alves Sironi (Universidade de São Paulo), Tania K. Lucci (Universidade de São Paulo), Emma Otta (Universidade de São Paulo) - [SFA]
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Individual differences, such as environmental sensitivity (ES), influence psychological and physiological responses to environmental conditions. Twin studies allow us to understand the environmental and genetic influences on different responses, since monozygotic (MZ) twins share nearly all of their DNA, whereas dizygotic (DZ) twins, like any other siblings, share only about 50%. This study examined whether ES and zygosity affect anxiety responses in 19 Brazilian twin dyads (10 MZ; 9 DZ; 9 ± 1.5 years; range: 6–14.5 years) during a dental visit, in which the twins received different treatments (one requiring anesthesia, the other not). We assessed anxiety using the self-reported dental anxiety questionnaire (MCDAS) and facial temperature variation in three regions of interest (ROI). First, we generated mixed linear models to examine the effects of treatment and ES on anxiety, which revealed no main effect of treatment condition. However, we found an association between ES and anxiety, indicating that higher ES increased anxiety levels ($p=0.45$). When analyzed by zygosity, ES predicted anxiety only among DZ twins, although results for MZ twins were limited due to model instability. Furthermore, ES was associated with variation in forehead temperature ($p = .016$). Any interaction treatment*ES was found. Contrary to our initial hypothesis, ES did not moderate intra-pair contextual differences but rather acted as a predictor of anxiety-related responses. Thus, individual differences in ES may be more important than dental treatment in explaining variability between twins. Overall, our study highlights the importance of individual differences in understanding the trait-driven model of anxiety.

Wednesday, 24th June

Emotions – Loneliness

39. The effects of meditation and nature interaction on loneliness

Nicholas Gray (Florida Gulf Coast University), Rafael de Albuquerque (University of Stirling), Eva Jaramillo (Florida Gulf Coast University), João Emos (University of Stirling), Bianca Mejia (Florida Gulf Coast University), Nathan Pipitone (Florida Gulf Coast University), S. Craig Roberts (University of Stirling), Anna Whittaker (University of Stirling) - [SFA]
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Loneliness is an important survival mechanism to encourage reconnection and increase vigilance. However, loneliness can also cause psychological and physiological harm when left untended. Evidence suggests both nature-based interventions and physical touch reduce loneliness, so hugging a tree was explored via an international study taking place in Brazil, the United States, and the United Kingdom. Participants either hugged a tree, hugged a pole, or stood under a tree, all while listening to a guided meditation. The meditation session acted as a time keeper and also had potential to reduce loneliness and improve well-being. During analysis, a repeated-measures ANOVA revealed hugging a pole did not significantly reduce loneliness ($p = 0.565$) while the tree conditions equally reduced it ($p < 0.001$). It is unclear if this lack of effect of hugging a pole was due to embarrassment of the participants or the lack of nature interaction. To establish a better understanding of the difference and effect of the meditation, an additional condition was added; a lab-based meditation in the UK. Secondly, the study evaluated changes in well-being and nature connectedness. The final results and implications will be discussed in the presentation. A qualitative analysis of participants' thoughts provides insight to the subjective aspects of each condition.

40. Barefoot in Nature: An Exploratory Analysis of Grounding within a Standardized Nature-Based Intervention on Loneliness

Eva Jaramillo (Florida Gulf Coast University), Nicholas Gray (Florida Gulf Coast University), Bianca Mejia (Florida Gulf Coast University), Nathan Pipitone (Florida Gulf Coast University), S. Craig Roberts (University of Stirling), Anna Whittaker (University of Stirling) - [SFA]
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This study explored the effects of grounding (also known as earthing) during a guided meditation session and brief nature interactions on loneliness and well-being. Grounding refers to direct barefoot skin contact with the earth, allowing physical connection to the ground's natural surface. Studies have shown that grounding may amplify the psychological benefits of nature interactions by reducing stress, enhancing mood, and promoting a deeper sense of connection to the natural environment. A study in progress- the "Hug a Tree Study" asked participants to either hug a tree, hug a pole, or stand under a tree while listening to a guided meditation. This study reports on a subset of data investigating a barefoot (grounding) variable, aiming to determine how additional direct contact with the immediate environment influenced participants' responses. Participants were given the option to complete the activity barefoot, with some choosing to do so and others declining. This variable was not part of the original "Hug a Tree Study" design and is treated as a non-randomized exploratory factor. Analyses explored whether barefoot participation influenced any changes in loneliness from pre- to post- intervention, as well as any differences in well-being and nature connectedness between barefoot versus shod. This work extends the primary study by exploring whether direct physical contact with natural surfaces may influence psychological responses in ways that reflect our evolutionary history of interacting with the environment. Findings and implications will be presented.

Wednesday, 24th June

Emotions – Disgust

41. Effect of hormonal contraception on disgust sensitivity

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Disgust is a part of the behavioral immune system, protecting individuals against pathogens. Research shows that women exhibit higher levels of disgust than men, which could relate to their role as mothers; protecting themselves as well as their offspring. Disgust sensitivity has been shown to vary depending on hormonal changes (e.g. during pregnancy). However, it is not yet clear whether these hormonally-driven changes in disgust sensitivity could also be influenced by hormonal contraception use, which characterizes an evolutionarily new and voluntarily chosen non-reproductive phase in a woman's life. The aim of our project was to determine whether the use of combined oral hormonal contraception affects disgust sensitivity. This cross-sectional study included 229 childless women aged 18–48 years (mean = 26.1, SD = 5.79), 52 of whom were using hormonal contraception. To measure disgust sensitivity, participants completed the Disgust Scale-Revised and the Three Domains of Disgust Scale. ANCOVA with age and data collection method (in-person, online) as covariates was used to test the effect of hormonal contraception on disgust sensitivity. We found no significant difference in the total score of disgust sensitivity or any subscale scores (using either questionnaire) between women who used hormonal contraception and those who did not. To better understand the relationship between hormonal changes and disgust sensitivity, a follow-up longitudinal study is underway, which aims to determine whether initiation of using combined oral hormonal contraception is associated with changes in disgust sensitivity over time (after three and six months of use).

42. The effect of age on disgust sensitivity in non-pregnant women depending on their reproductive and motherhood status

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Disgust is an emotion thought to protect individuals from infection and other fitness-relevant threats. Age has been identified as a factor shaping disgust sensitivity. Previous research suggests that disgust may either decrease with age as reproductive value declines or increase in response to age-related immune decline. To clarify these mixed results, we examined the effect of age on disgust sensitivity in 340 women aged 18–85 years depending on their reproductive and motherhood status: naturally menstruating childless women (N=174, 18–48 years, mean(SD)= 26.4(5.9)), naturally menstruating women with children (N=86, 23–54 years, mean(SD)= 37.8(6.9)), and postmenopausal women (N=80, 44–85 years, mean(SD)= 59.0(8.4)). Disgust was measured by the Disgust Scale-Revised (subscales: core, contamination, animal-reminder) and the Three Domains of Disgust Scale (domains: pathogen, sexual, moral). We found that animal-reminder disgust significantly decreased with age in the overall sample, but this effect remained significant only among naturally menstruating childless women. On the other hand, contamination disgust increased with age, but significantly only in postmenopausal women. No significant effects of age were observed for pathogen domain and core subscale. Sexual disgust showed a group-specific pattern, decreasing with age in naturally menstruating childless women and increasing in postmenopausal women. Moral disgust increased with age in the overall sample, and this effect remained significant in naturally menstruating women with children and postmenopausal women. Our findings suggest that age-related variation in disgust sensitivity depends on specific stimuli and is partly shaped by women's reproductive stage.

Wednesday, 24th June

Emotions – Fear

43. Spontaneous Human Fear Responses: An Ethological Analysis of Defensive Behaviour in Naturalistic Settings

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This study examines the temporal organisation of spontaneous human defensive behaviours in response to acute, unexpected threat using a naturalistic, ethological framework. Fear is widely understood as an evolutionarily conserved system that coordinates rapid behavioural responses to danger, yet human research has predominantly relied on laboratory paradigms that lack ecological validity and fail to capture whole-body defensive behaviour as it unfolds in real-world contexts. Addressing this gap, the present study investigates whether human responses to sudden threat exhibit structured behavioural patterns consistent with ethological models, including the Predatory Imminence Continuum. A quantitative observational design was employed using publicly available video footage of unsuspecting individuals exposed to sudden threat stimuli in naturalistic settings. Behaviour was coded frame-by-frame using a predefined ethogram capturing discrete motor and vocal responses, including freezing, jumping, backward displacement, arm movements, and vocalisations. Temporal onset and duration measures were recorded to enable fine-grained analysis of behavioural sequencing, co-occurrence, and escalation patterns. Planned analyses include descriptive statistics, inferential tests, and temporal sequence analyses to evaluate the organisation of defensive responding. Ethical considerations were addressed through the use of publicly accessible data, strict anonymisation, and adherence to established psychological research guidelines. This approach ensures minimal risk while enabling access to ecologically valid behavioural data. Data collection has been completed, and the dataset is currently under analysis, with final results expected by the end of April. Findings will provide novel insight into the structure of human defensive behaviour in naturalistic contexts.

44. Differences in Physiological Reactivity and Habituation to Snake and Spider Stimuli: Preliminary Results

Tereza Hladíková (Charles University), Markéta Janovcová (Charles University), Šárka Peterková (Charles University), Iveta Štolhoferová (Charles University), Kristýna Sedláčková (Charles University), Daniel Frynta (Charles University), Eva Landová (Charles University) - **[SFA]**
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Snake and spider phobias are among the most common specific animal phobias. Evolutionary theories suggest that while fear of snakes may be evolutionarily older and deeply ingrained due to the historical threat they posed to our ancestors, fear of spiders may be less evolutionarily conditioned, with individual experience and cultural learning playing a more significant role. This study aims to explore this by measuring physiological and behavioural responses (Behavioural Approach Test) and habituation to phobic stimuli in individuals with varying levels of fear.

Participants underwent two experimental presentation blocks using snake and spider images as phobic stimuli and leaf images as controls. Phobic stimuli were organized into series with increasing salience. Physiological responses (skin resistance) were measured continuously, along with self-reported feelings of distress before and after the experiment and phobia questionnaires. After at least a year a retest is being conducted to monitor medium-term changes in physiological and behavioural responses and the subjective perception of phobic stimuli.

Preliminary results showed no significant differences in the probability of a physiological reaction during control stimuli presentation. Conversely, differences were significant for phobic stimuli for snake images, snake-phobic individuals reacted with a probability higher than non-phobics; for spider stimuli, this difference was more pronounced. A habituation effect was observed within individual series of similar stimuli rather than as a uniform trend across the presentation. The strongest reactions were elicited by the full image of the animal.

Continued data collection will allow for a better understanding of the evolutionary mechanisms shaping specific phobias.

45. Behavioral Approach Test (BAT): Assessing Fear of Snakes and Spiders in Children and Adults

Anna Končícká (Charles University), Markéta Janovcová (Charles University), Tereza Hladíková (Charles University), Iveta Štolhoferová (Charles University), Jakub Polák (Charles University), Alexandra Chomik (Charles University), Daniel Frynta (Charles University), Eva Landová (Charles University) - **[SFA]**
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The most prevalent animal-related phobias are ophidiophobia (fear of snakes) and arachnophobia (fear of spiders). It appears that the fear of snakes is more deeply rooted in evolution and emerging earlier in ontogeny. In contrast, the fear of spiders seems to be more influenced by individual experiences and environmental factors. There are different methods of assessing respondents' levels of fear of snakes and spiders. To gain objective measurements, we use the Behavioural Approach Test (BAT), in which the respondent gradually approaches the potentially phobic animal (a tarantula, a snake, and a turtle as a control) in several steps, with the final step involving direct touch. Subjective fear is assessed using questionnaires (SNAQ and SPQ). To better understand the onset and development of fears of snakes and spiders, we conducted a cross-sectional study examining their prevalence in children of various ages (4–16 years old). The BAT was also conducted in adults, comprising groups with elevated fear of snakes, elevated fear of spiders, and a control group. Among younger children (4–9 years), there was little difference in the proportion willing to touch the snake (65%) and the spider (60%). In older children (10–16 years), a larger difference emerged: 70% completed the BAT by touching the snake, compared to approximately 46% who touched the tarantula. By comparison, only 14.5% of adult participants with a heightened fear of snakes completed the BAT by touching the snake, and 21.5% of adult participants with a heightened fear of spiders touched the tarantula.

46. Evaluation of the emotions evoked by snakes and other threats: Are the fears of snakes and other threats influenced in the same way by our evolutionary past?

Eva Landová (Charles University), Markéta Janovcová (Charles University), Iveta Štolhoferová (Charles University), Aleksandra Chomik (Charles University), Jakub Polák (Charles University), Silvie Rádlová (Charles University), Anna Pidnebesna (Charles University), David Tomeček (Charles University), Jaroslav Hlinka (Charles University), Daniel Frynta (Charles University)

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Humans have evolved rapid emotional and neurophysiological reactions to ancestral, life-threatening stimuli, such as snakes, heights, or signs of infectious diseases. These threats can evoke fear or disgust and some of them are common triggers of specific phobias. However, humans also encounter modern threats—such as guns or global pandemic of airborne diseases signalled mostly by modern cues—and it remains unclear whether these elicit comparable responses or rely on similar underlying mechanisms.

Our research investigates evolutionary influences on fear, focusing primarily on phobias of snakes in comparison with other evolutionary old or recent threats. Using psychometric assessments, subjective ratings of visual stimuli, psychophysiological responses to these stimuli, and fMRI, we examine how ancestral threats shape emotional processing and how these responses differ across individuals. We also relate self-report data to objective measures of defensive responses.

A growing area of interest concerns airborne diseases, which constitute an evolutionarily novel threat of increasing global relevance. We explore whether humans respond adequately to cues of airborne pathogens, or whether limited evolutionary experience leads to weaker emotional or behavioural reactions.

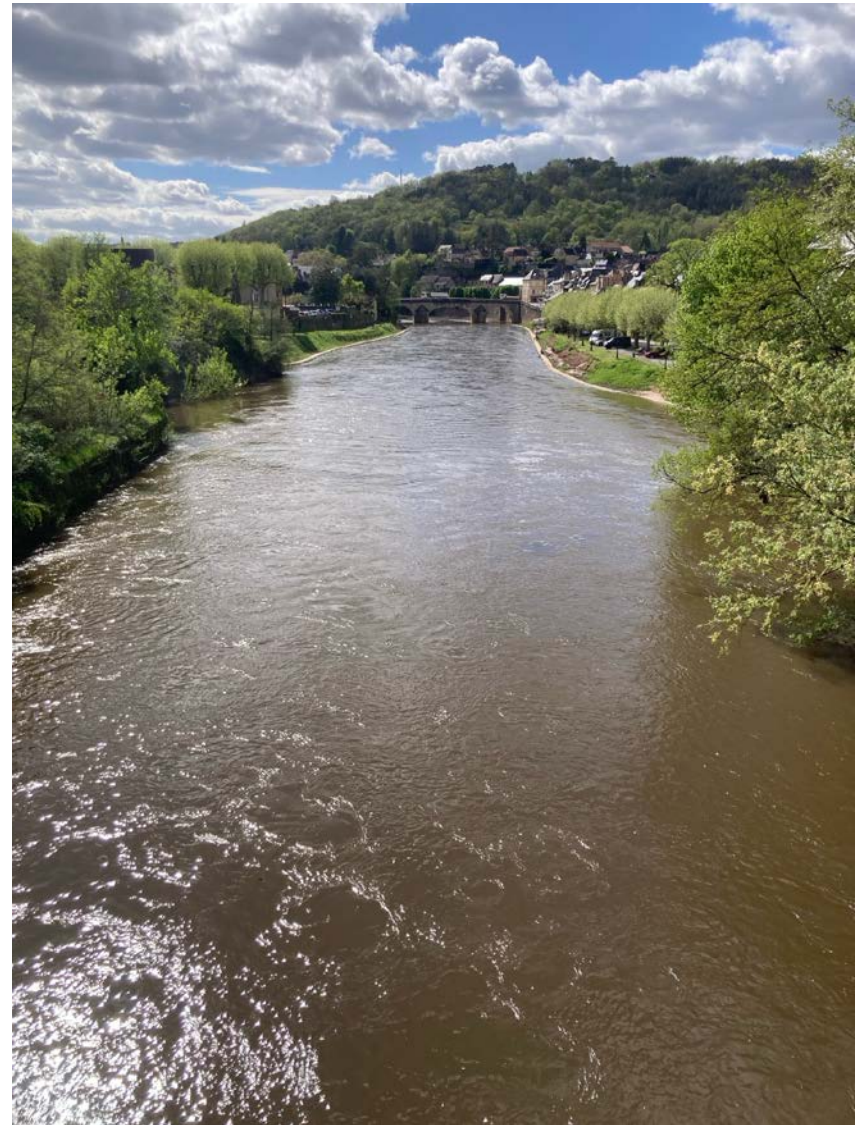
Across methodologies and respondent groups, our findings suggest that ancestral threats like heights elicit stronger psychophysiological responses, whereas snakes and threat of pandemic of airborne disease provoke more intense neural activation in fMRI. However, pattern of neural activation caused by airborne disease is more like threat posed by modern threat (guns). Together, these results highlight both the evolutionary shaping and the flexibility of the human defensive response system (GAČR 25-16279S).



Path from the museum to Pataud



Path from the Clos du Rocher with view towards the museum



The Vézère River

Tuesday, 23rd June

Lascaux IV

„Lascaux IV is the only full and exact replica of the original cave. The International Centre of Parietal Art invites you to dream, to imagine, and to follow in the footsteps of our ancestors.“

<https://lascaux.fr/en>

„Lascaux is a network of caves near the village of Montignac, in the Vézère Valley. Over 600 parietal wall paintings cover the interior walls and ceilings of the cave. The paintings represent primarily large animals, typical local contemporary fauna that correspond with the fossil record of the Upper Paleolithic in the area. They are the combined effort of many generations. With continued debate, the age of the paintings is now usually estimated at 17,000 to 22,000 years (Early Magdalenian). Because of the outstanding prehistoric art in the cave, Lascaux was inducted into the UNESCO World Heritage List in 1979, as an element of the Prehistoric Sites and Decorated Caves of the Vézère Valley.“

<https://en.wikipedia.org/wiki/Lascaux>



Excursions

For the cave visits, a **warm jacket** is recommended

Thursday, 25th June

Rouffignac Cave

„Located in the middle of the Black Périgord, a few kilometres from the prestigious Vallée Vézère, Rouffignac is a huge cave. Successively occupied by cave bears and prehistoric artists, it still beholds the spectacular testimonies of those passages. More than 250 animal figures are scattered in this underground maze, where they were left 160 centuries ago. Sat aboard an electric train, you will dive into the mysterious cave world and discover the art of the prehistoric hunter-gatherers“

Cf. <https://www.grottederouffignac.fr/index.php/en/>

„The Cave of the hundred mammoths, with more than 8 km of underground passageways, opens in a hill slope along the right-hand side of the La Binche river. The artistic representations in the cave were mainly executed as engravings or black contour drawings. The presence of cave bears in the Rouffignac cave is attested by scratch marks on the walls, and also by the remains of their resting places.“

Cf. https://en.wikipedia.org/wiki/Rouffignac_Cave



Thursday, 25th June

Pataud Rockshelter

“The Abri Pataud (Pataud Shelter) is located in the village of Les Eyzies and shows the excavation of a prehistoric site by archaeologists. It has two discovery areas to explore. The prehistoric site and, a stone's throw away from the site, a museum set up, sheltered under a rock.

The site became the property of the Muséum National d'Histoire Naturelle (Paris) at the initiative of Hallam L. Movius, who had directed excavations since 1953.

Thanks to the different archaeological layers, visitors can make their way through the chronology of civilizations that succeeded one another under the Les Eyzies cliff. These layers also reveal the evolution of landscapes over the millennia.

Occupied during the first half of the Upper Paleolithic period, the Pataud Shelter has preserved traces of 15,000 years of prehistory, from the Aurignacian (~35,000 years) to the Solutrean (~20,000 years) periods. An era marked by the presence and activity of the first *Homo sapiens*, called Cro-Magnon men. Great users of highly sophisticated stone tools, they also invented figurative art in caves, shelters and habitats.

Nearly 35,000 years ago, the first occupants of the Pataud Shelter, the Aurignacians, found a shallow refuge here for their short stays. They were semi-mobile hunter-gatherers. Around 28,000 years ago, the Gravettians settled for longer periods of time in this shelter, which has been enlarged by erosion. At the end of the Gravettian civilization (22,000 years ago), the canopy collapsed and only a narrow corridor running along the rock face remained. It was then used as a burial site. Six individuals are buried there.

One of the first revelations of the excavations was the discovery of a young woman buried with a newborn baby. This was followed by a goddess in relief, carved out of a block of limestone, and numerous objects of movable art - including an engraving of a fish on antlers, jewelry, perforated shells, decorated pebbles etc...Note the perforated human tooth, which must have been hung like a pendant.

The Musée de l'Abri Pataud presents, over an area of 75m², the most significant artefacts out of the two million found on site. All of the fieldwork carried out by the prehistoric archaeologists and the results of their excavations are exhibited there.”

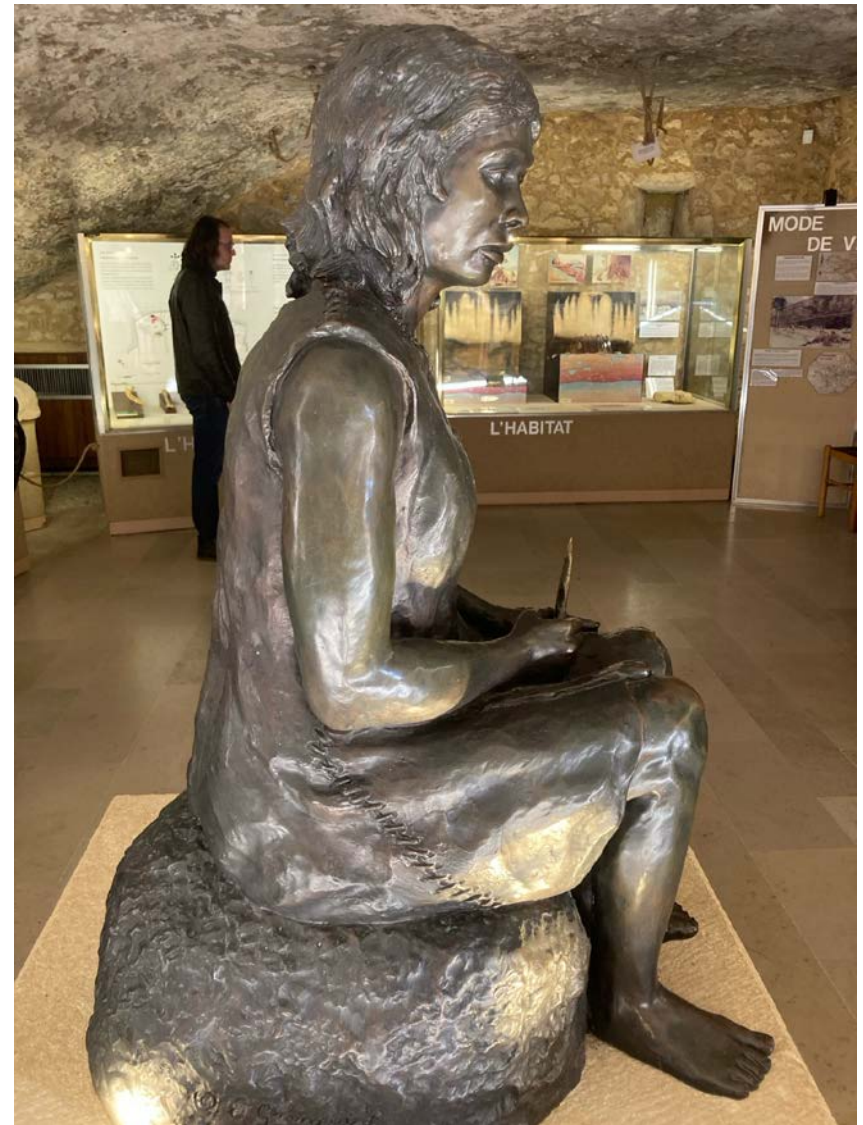
Cf. <https://www.mnhn.fr/en/abri-pataud-pataud-shelter>

„In 1958, a small carved female figure was found on a stone about 20 cm tall, likely dating to approximately 21,000 years BP. According to Hallam Movius, the figure represents a comparatively young woman, “more slender and gracile than is normally the case,” roughly carved, and with contours suggesting pregnancy. Movius wrote that the despite “disharmonic features, the overall proportions of the figure are both pleasing and, at first glance, symmetrical.” Movius continued, “from a stylistic point of view, this figure has been rendered in the finest tradition of Upper Paleolithic art as represented by the well-known series of carvings and statuettes, collectively known as Venuses...”

Cf. https://en.wikipedia.org/wiki/Abri_Pataud



Pataud Rockshelter



Pataud Museum

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INTERNATIONAL SOCIETY FOR HUMAN ETHOLOGY



"ISHE was founded in 1972 to promote exchange of knowledge and opinions concerning human ethology between scientists in a variety of disciplines. Key figures in the initiation of the society were its first President Irenaus Eibl-Eibesfeldt, Daniel G. Freedman, and William Charlesworth. The core topics of ethological inquiry are the same now as they were in 1972: fundamental and universal human behaviors such as infant attachment, emotion, dominance and other social relationships, nonverbal communication, courtship and ritual. The methods and scope of inquiry have however, expanded. Originally based on longitudinal naturalistic observations and cross-cultural fieldwork, ethologists now use, in addition, more technological methods borrowed from medicine, neurophysiology, behavior genetics and computer science.

Ethology has close ties to many disciplines both within psychology (evolutionary psychology, comparative psychology, developmental psychology, and linguistics), and without (behavioral ecology, evolutionary biology, physical anthropology and cultural anthropology). Recently it has come to the attention of theorists and practitioners of the arts as well. The underlying theme that brings all these disciplines together is the belief that human behavior, cognition and affect have evolved through the processes of natural and cultural selection, and that a Darwinian framework provides the best vantage from which to design and interpret research.

ISHE provides a forum for interdisciplinary discussion via its open access journal, *Human Ethology*. HE features book reviews and, as of 2012, a variety of peer-reviewed articles. ISHE also sponsors two series of biennial meetings: a larger biennial Congress and, in odd numbered years, a Summer Institute on Human Ethology.

ISHE is an international society with a membership spanning approximately 26 countries. The society is highly interdisciplinary; members come from backgrounds and departments in psychology, anthropology, biology, primatology, psychiatry, public health, nursing, and of course, ethology."

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