

2024 BAPS Annual Meeting Program

Vrije Universiteit Brussel

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Introduction

On behalf of the organizing committee, it is my pleasure to welcome you to the 2024 Annual Meeting of the Belgian Association for Psychological Sciences, held on 30-31 May at Vrije Universiteit Brussel. This year, we are proud to present a program that not only showcases the pioneering research and innovations in psychology but also provides a platform for meaningful academic and professional exchanges.

We are immensely grateful for the support from our sponsors—the Research Foundation - Flanders (FWO), the Fund for Scientific Research (FNRS), and the Flemish Government. Their generous funding has been instrumental in bringing this conference to fruition, enabling us to feature a diverse range of topics and speakers.

This year, we are particularly excited to introduce our two distinguished keynote speakers, Prof. Max Louwerse and Prof. Lorraine Whitmarsh. With their profound expertise and groundbreaking work in cognitive sciences, artificial intelligence, and climate psychology, they are sure to inspire and provoke thought-provoking discussions among all attendees.

A highlight of this year’s conference is the introduction of the Junior Board Track, which features sessions spread over both days. This initiative reflects our commitment to fostering the next generation of scholars and practitioners in psychological sciences. These sessions promise to bring fresh perspectives and innovative ideas to the forefront, contributing significantly to the vibrancy of our program.

Moreover, we are thrilled by the high quality of presentations scheduled throughout the conference. Each session has been carefully curated to ensure a comprehensive exploration of various areas of research in psychology, addressing both current challenges and emerging trends. Our

presenters come from diverse backgrounds and bring a wealth of knowledge and experience that will enrich our discussions and enhance our understanding.

As we gather over the next two days, we invite you to engage fully—network, collaborate, and exchange ideas. This conference is not just a platform for disseminating research but also a venue for building relationships and fostering new collaborations.

Thank you for joining us at the 2024 Annual Meeting of the BAPS. We hope you find the sessions informative and inspiring, and that your participation here leads to continued growth and innovation in your professional journey.

Finally, we would like to thank the members of the organizing committee and the scientific committee for their hard work in putting together the program of the 2024 BAPS Annual Meeting. This conference would not have been possible without their dedication and commitment.

Warm regards,

Prof. Tim Vantilborgh

Organizing committee

- Tim Vantilborgh (VUB)
- Gina Rossi (VUB)
- Olivier Mairesse (VUB)
- Sara De Gieter (VUB)
- Jasmine Vergauwe (VUB)
- Kris Baetens (VUB)
- Martijn Van Heel (VUB)
- Peter Theuns (VUB)
- Imke Baetens (VUB)
- Natacha Deroost (VUB)
- Valentina Sagmeister (VUB)
- Luz Maria Sanchez (VUB)
- Sarah Isabell Stolle (VUB)
- Jasper Van Assche (ULB)
- Mandy Rossignol (UMons)
- Jellina Prinsen (KULeuven)

Scientific committee

- Régine Kolinsky (ULB)
- Jan De Houwer (UGent)
- Olivier Luminet (UCLouvain)
- Dinska Van Gucht (Thomas Moore / KULeuven)
- Tim Vantilborgh (VUB)
- Vera Hoorens (KULeuven)
- Lien Goossens (UGent)
- Clémence Verhaegen (UMons)
- Kobe Desender (KULeuven)
- Valérie Goffaux (UCLouvain)
- Arnaud D'Argembeau (ULiège)
- Jasper Van Assche (ULB)

Practical information

This book contains information on the 2024 BAPS Annual Meeting, held at the Vrije Universiteit Brussel on the 30th and the 31st of May 2024. You will find the following information in this book:

- A schematic overview of the program, offering a quick glance at the sessions and their timing.

- A detailed program with information on all abstracts. The program is divided into keynote, invited symposia, regular symposia, oral presentation sessions, junior board track sessions, and poster sessions.
- An alphabetical list of all authors and the abstract id numbers of their contributions.

The 2024 BAPS Annual Meeting will take place at the Etterbeek campus of the Vrije Universiteit Brussel (Pleinlaan 2, 1050 Brussels). All sessions will be organized in building I.

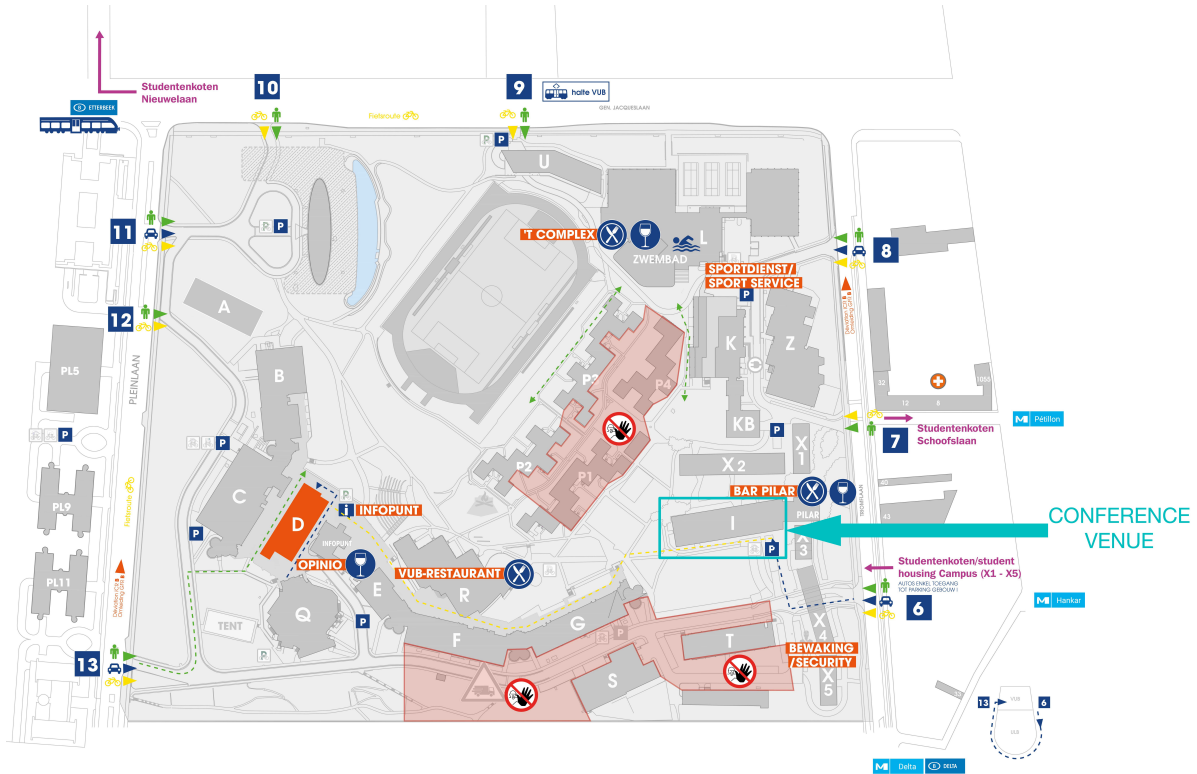


Figure 1: Plan of VUB Etterbeek campus and location of building I

Emergencies

What to do if there is an emergency during the conference:

In life-threatening situations or if you require urgent medical assistance on campus, please call the campus security emergency numbers immediately. They can be contacted 24/7 to assure safety at VUB. They give first aid and will guide the emergency services on campus if necessary.

- VUB campus security emergency number: +32 2 629 11 11

For more information, see <https://www.vub.be/en/services-vub-campus-in-etterbeek-and-jette/health-and-safety-vub/safety-vub-campus/emergencies-vub-what-should-i-do>

Schematic overview

Day 1: Thursday 30th of May 2024

Sessions							
11:00-12:00	Registration desk opens <i>I.0.Atrium</i>						
12:00-12:45	Opening ceremony <i>Auditorium I.2.03</i>						
13:00-14:20	Keynote 1: Max Louwerse - How language creates meaning: From Psycholinguistics to Computational Linguistics to Rocket Science <i>Auditorium I.2.03</i>						
14:30-15:30	Coffee break + Poster session 1 <i>I.0.Atrium</i>						
15:40-17:00	Invited symposium 1: Personality at work: From a static toward a dynamic and developmental perspective <i>Bart Wille, Evy Kuijpers, Joeri Hofmans, Theresa Leyens, Patrick Mussel, Johannes Hewig, Sofie Dupré</i>	Invited symposium 2: Non-Suicidal Self-Injury (NSSI) Throughout the Life-Span: The Prevalence and Psychosocial Characteristics of NSSI in different age groups. <i>Tinne Buelens, Glenn Kiekens, Lisa Van Hove, Laurence Claes, Imke Baetens</i>	Regular symposium 1: Advances in experimental environmental psychology <i>Florian Lange, Ruth M. Krebs, Sarah Kusch, Frederik De Spiegeleer, Kobe Millet, Bert Weijters, Yannick Joye, Asta Lisauskienė, Marine I. Severin, Ann Buysse, Gert Everaert, Filip Raes</i>	Oral presentation session 1: Stress, burnout, depression, and anxiety <i>Pauline Verhelst, Laura Sels, Gilbert Lemmens, Lesley Verhofstadt / Emilie Banse, Moira Mikołajczak, Marie Bayot, Anne-Laure Lenoir, Philippe De Timary</i>	Oral presentation session 2: Research on autism <i>Annabel Nijhof, Roeljan Wiersma / Hannah De Laet, Annabel D. Nijhof, Jan R. Wiersma / Ruth Op de Beeck, Jellina Prinsen, Nicky Daniels, Matthijs Moerkerke, Jean Steyaert, Bart Boets, Kaat Alaerts / Jaana Van Overwalte, Stephanie Van der Donck, Birte Geusens, Bart Boets, Johan Wagemans</i>	Oral presentation session 3: Emotions <i>Sarah Leveaux, Tanguy Leroy, Marie Prăau / Davide Pirrone, Anna Schouten, Eva Ceutemans, Batja Mesquita, Lesley Verhofstadt / Jarosław Letonkiewicz, Witold Szejjis / Marine Mas, Olivier Luminet</i>	Workshop on the use of machine learning and AI for psychology research questions <i>Wivine Blekic (LINCog)</i>
	<i>Auditorium I.0.02</i>	<i>Auditorium I.0.03</i>	<i>Auditorium I.2.03</i>	<i>Auditorium I.2.01</i>	<i>Auditorium I.0.01</i>	<i>lokaal I.1.03</i>	<i>Auditorium I.2.02</i>
17:10-18:30	Invited symposium 3: The Impact of emotion and reward on cognition <i>Alison Mary, Charline Urbain, Rocco Mennella, Jade Serfaty, Matteo Sequestro, Julie Grizes, Ruth M. Krebs, Vincent Hoofs, Haeme RP Park, Julie M Hall, Virginie Sterpenich</i>	Invited symposium 4: Emotions of Immigrant Minorities: Evidence on the Role of Language and Cross-Cultural Interactions in the Emotional Experiences of Immigrant Minorities <i>Batja Mesquita, Alba Jasini, Graziela Dekeyser, Yeaste Lee, Rüya Su Şencan</i>	Regular symposium 2: Overprotective parenting in adolescence: Different perspectives on its determinants and consequences <i>Stijn Van Petegem, Katherine M. Ryan, Melanie J. Zimmer-Gembeck, Tanya Hawes, Taylor Kovacs, Nikola Leahy, Nele Flamant, Peter Prinzie, Bart Soenens, Bénédicte Mouton, Annalisa Soncini, Emilio Paolo Visintin, Maria Cristina Matteucci</i>	Oral presentation session 4: Politics, conspiracy beliefs, and polarization <i>Ruben Van Severen, Tessa Haesevoets, Ame Roets / Camila Amal, Olivier Kleih, Régine Kolinsky / Myrto Pantazi, Olivier Klein, Régine Kolinsky / Michael Quayte</i>	Oral presentation session 5: Children and adolescents <i>Laura BOURGAUX, Diane REKOW, Amaud LELÉU, Adélaïde DE HEERING / Erika Wauthia, Natacha Duroisin, Mandy Rossignol / Anthony Mauroy, Sarah Galdio, Justine Gaugue / Nellia Bellaert, Federico Cassioli, Mandy Rossignol, Michael Crowley, Christen Deveney, Wan-Ling Tseng</i>	Oral presentation session 6: Sensory Integration and Social Cognition: Exploring Multimodal Perception and Interaction <i>Manisha Biswas, Marcel Brass / Filippo Cerpelloni, Alice Van Audenhaege, Jacek Matuszewski, Remi Gau, Ceren Battal, Federica Falagiarida, Hans Op de Beeck, Olivier Collignon / Ying Yang, Iqra Shahzad, Alice Van Audenhaege, Filippo Cerpelloni, Olivier Collignon / Federico Cassioli, Mélanie De Leener, Nellia Bellaert, Jim Draux, Tafath Abed, Vincent Mourier, Mandy Rossignol</i>	Workshop on the use of generative AI for daily research <i>Pieter Fizez (VAIA, the Flemish AI Academy)</i>
	<i>Auditorium I.0.02</i>	<i>Auditorium I.0.03</i>	<i>Auditorium I.2.03</i>	<i>Auditorium I.2.01</i>	<i>Auditorium I.0.01</i>	<i>lokaal I.1.03</i>	<i>Auditorium I.2.02</i>
18:30-20:30	Reception <i>I.0.Atrium</i>						

Note: Sessions in pink cells are part of the BAPS Junior Board track.

Day 2: Friday 31st of May 2024

Timeslot	Sessions						
09:00-10:20	Invited symposium 5: From motivation to environmental action	Invited symposium 6: The Psychological Vulnerability and Emotional Toll of Informal Care	Regular symposium 3: Persisting gender disparities in contemporary parenthood: Considering parental narratives, gender beliefs, and workplace discourses	Regular symposium 4: Resilience & Family Dynamics: Triadic Synchrony and Parental Support in the Face of Stress: An Excellence of Science (EOS-FWO/FNRS) Symposium	Oral presentation session 7: Neuroplasticity and Sensory Integration: Insights from Brain Injury, Enhancement, and Hand Preference	Oral presentation session 8: Exploring the Moral Landscape: Cross-Cultural Perspectives and Neural Correlates of Ethical Decision-Making	Workshop on diversity and intersectionality in research
	<i>Thijs Bouman, Catho Vermeulen, Marylise Schmid, Cameron Brick, Veroline Caubergher, Sara Vandamme</i>	<i>Nico De Witte, Benedicte De Koker, Deborah Lambotte, Claire Champeix, Peter Wallegghem</i>	<i>Cindy Eira Nunes, Gaëlle Venard, Eli-Anastasia Lamprianidou, Sarah Grootjans</i>	<i>Michel Sfeir, Mandy Rossignol, Federico Cassioli, Shiyao Wang, Chiara Cartier, Eva Ceutemans, Mariah Matar, Alexandre Heeren, Nadischa Dierdor, Melisse Houbrechts, Tsachi Ein-Dor, Luc Goossens, Patricia Bijttebier, Karla Van Leeuwen, Wim Van Den Noortgate, Viktoria Chubar, Jonathan Turner, Guy Bosmans, Doris Lacassagne, Alexandre Heeren, Rudi De Raedt</i>	<i>Jirka Liessens, Elise Palmans, Nora Tuts, Karla Michiels, Eline Note, Hanne Huygheleir, Céline R. Gillebert / Ioana-Sabina Rautu, Xavier De Tlége, Mathieu Bourguignon, Julie Bertels / Siddharth Talwar, Stefania Mattioni, Eléonore Giraudet, Roberta P. Calce, Francesca M. Barbero, Collignon Olivier / Guy Vingerhoets, Emma Karlsson</i>	<i>Tassilo Tissot, Alain Van Hiel, Dries Bostyn, Leen Haerens, Bram Constandt / Leslie Tricoche, Antonin Rovai, Emilie Caspar / Kalliopi Ioumpa, Emilie Caspar, Valeria Gazzoia, Christian Keysers / Xinyi Xu, Dries Bostyn, Xiaopeng Ren, Arne Roets</i>	<i>Julie Walaszczyk (Umons)</i>
	Auditorium 1.0.02	Auditorium 1.0.03	Auditorium 1.2.03	Auditorium 1.2.01	Auditorium 1.0.01	lokaal 1.1.03	Auditorium 1.2.02
10:30-11:30	Coffee break + Poster session 2 I.O. Atrium						
11:30-12:50	Keynote 2: Lorraine Whitmarsh - Engaging the public with climate change: public participation and lifestyle change to achieve net zero Auditorium 1.2.03						
13:00-14:00	Lunch + Poster session 3 I.O. Atrium						
14:00-15:20	Invited symposium 7: Second Language Acquisition	Invited symposium 8: Advances in forensic psychology research: Cognitive-emotions-behavioral correlates and antisociality	Regular symposium 5: Advances in informal caregiving research: non-participation, dyadic dynamics, and population-based focus	Oral presentation session 9: Neural and Physiological Responses: Advances in Aphasia, Share, and Sensory Processing	Oral presentation session 10: Confidence and decision making	Oral presentation session 11: Applied psychology	Workshop on using social media to share your research
	<i>Marc Bysbaert, Vanessa De Wilde, Eléonore H. M. Smalle, Saara Kaskvuuo, Chloé Parmentier, Arnaud Szmalc</i>	<i>Henryk Bukowski, Alk Bigot, Luca A. Tiberi, Xavier Saloppé, Jean-Louis Nandini, Thierry H. Pham, Fanny Degouis, Angèle Becuwe, Ann Darsonville, Charlotte Regoulière, Pierre Oswald, Emilie TELLE, Victoria Tricard</i>	<i>Pierre Gérard, Lisa Choucroun, Charlotte Manceau, A Awada, C Langhendries, G Libérale, I Libert, A Lénard, N Meuleman, Darius Razavi, D Van Gestel, Isabelle Merckaert, Yves Libert, Emilie Wawrziczny, Emilie Constant, Bérengère Flinois, Kathy Dujardin, Antoine Pascal, Bram Spruyt, Laura Van Den Borre, Pierre Smith, Robby Depauw, Sarah Dury, Filip Van Droogenbroeck</i>	<i>Charlène Aubinet, Amandine Regnier, Pauline Fritz, Marion Pauls, Paolo Cardone, Olivia Gosseries, Steve Majerus / Matthieu Koroma, Paradeisios Alexandros Boulakis, Federico Raimondo, Christine Blume, Mélanie Strauss, Jonas Beck, Christina Schmidt, Björn Rasch, Athena Demertzi / Marco Barilari, Jacek Matuszewski, Remi Gau, Eléonore Giraudet, Marc Van Baelen, Siya Sherif, Renzo Huber, Olivier Collignon</i>	<i>Charlotte Anckaert / Pierre Le Denmat, Kobe Desender, Tom Verguts / Luc Vermeylen, Tom Verguts, Tobias H. Donner, Kobe Desender / Lara Navarrete-Orejudo, Robin Vloeberghs, Kobe Desender</i>	<i>Sophie De Grauwe, Katrin Van Parijs, Steven Joris / Femke Legroux, Yoko Junius, Tim Vantilborgh / Kat-Andrew Wolfin, Joanne Sneddon / Alice Schitteck / Mélanie De Leener, Michel Sfeir, Anthony Mauroy, Mandy Rossignol, Sarah Galdio</i>	<i>Sarra Zaghbouni (Uhasselt)</i>
	Auditorium 1.0.02	Auditorium 1.0.03	Auditorium 1.2.03	Auditorium 1.2.01	Auditorium 1.0.01	lokaal 1.1.03	Auditorium 1.2.02
15:30-16:50	Invited symposium 9: Recent advances in memory and language research	Invited symposium 10: Substantive-methodological synergy in research	Regular symposium 6: "The Gordian Knot of Intergroup Dynamics: Unwilling Novel Predictors across Multiple Levels of Analysis"	Oral presentation session 12: Multifaceted Approaches to Diversity and Adjustment	Oral presentation session 13: Intersections of Emotion, Cognition, and Identity in Psychological Development and Perception	Oral presentation session 14: Integrating Affect and Cognition: Insights from Psychophysiology, Problem-Solving, and Confidence Judgments	Panel discussion on Life after the PhD
	<i>Steve Majerus, Muhammet Ikbal Sahan, Benjamin Kowaliewski, Klaus Oberauer, Hong Xiao, Pauline Querella, Judith Schweppe, Louisa Bogaerts</i>	<i>Joeri Hofmans / Chiara Cartier, Mirka Henninger, Martine Verhees, Peter Kuppens, Eva Ceutemans / Tim Vantilborgh, Eva Mertens, Valentina Sagmeister, Femke Legroux, Sara De Gieter / Jasmine Vergauwe</i>	<i>Jasper Van Assche, Emanuele Politi, Berlin Acar, Luca Fehér, Emilie Caspar, Sarah Zahreddine, Eren Aslı Tekin, Alba Jasini, Batja Mesquita, Soha Abboud, Zacharia Bady, Antoine Roblain</i>	<i>Kim Dierckx, Loris Vezzali / Hilde Depauw / Charlotte Manceau, Pascal Antoine, Justine Deleruyelle, Pierre Gérard / Louise Mathijs, Stijn Van Petegem, G.J. Melendez-Torres, Sophia Backhaus, Frances Gardner, Patty Lejten</i>	<i>Milena Waterschoot, Joachim Waterschoot, Arne Roets / Jakke Coenye, Kristof Hoorelbeke, Sandra Verbeken, Wim Beyers, Lien Goossens / Aline Cordonnier / Inès Mentec, Ivan Ivanchei, Axel Cleeremans</i>	<i>Paradeisios Alexandros Boulakis, Nicholas John Simos, Stefania Zoi, Christina Schmidt, Federico Raimondo, Athena Demertzi / Irene Cogliati Dezza / Alessandro Mazza, Hans Stuyck, Axel Cleeremans, Eva Van den Bussche / Hélène Van Marcke, Senne Braem, Kobe Desender</i>	<i>Tyas Ayuningtyas, Stephanie Liangos, Simon Gorin, Hanna Gauvin</i>
	Auditorium 1.0.02	Auditorium 1.0.03	Auditorium 1.2.03	Auditorium 1.2.01	Auditorium 1.0.01	lokaal 1.1.03	Auditorium 1.2.02
17:00-18:00	Closing ceremony Auditorium 1.2.03						

Note: Sessions in pink cells are part of the BAPS Junior Board track.

Detailed program

Keynotes

1 - How language creates meaning: From Psycholinguistics to Computational Linguistics to Rocket Science

Author(s): Max Louwerse

Day: Thursday

Time: 13:00 - 14:20

Room: Auditorium I.2.03

Abstract: How does language attain meaning? This is a central question for the cognitive sciences. This talk will argue that the answer to the question how language attains meaning may not come so much from the language instinct in the language user or from large neural networks (the human or the AI versions), but from within the language system itself. Using examples from phonology, syntax and semantic – specifically word embeddings – the argument is made that language creates meaning. Such an argument would call for revisiting some common principles advocated in theoretical, computational and psycholinguistics, such as the arbitrariness of language, symbol grounding and linguistic relativity. Moreover, it would have far reaching consequences for the cognitive sciences at large.

2 - Engaging the public with climate change: public participation and lifestyle change to achieve net zero

Author(s): Lorraine Whitmarsh

Day: Friday

Time: 11:30 - 12:50

Room: Auditorium I.2.03

Abstract: In this talk, I will argue that most of the measures required to reach our climate change targets require at least some degree of behaviour change. And that more broadly, social transformation is required to reach 'net zero' carbon targets in the coming years. In order to achieve this, we need public engagement and participation in decision-making about what a low-carbon future looks like, and how to reach it. We also need a wide range of measures to change people's behaviour at home, work and elsewhere. I will present findings from polls and citizens assemblies on public concern about climate change, and support for net zero policies; and from behavioural science research on how to effectively change behaviour to cut emissions.

Invited symposia

3 - Personality at work: From a static toward a dynamic and developmental perspective

Author(s): Bart Wille, Evy Kuijpers, Joeri Hofmans, Theresa Leyens, Patrick Mussel, Johannes Hewig, Sofie Dupré

Day: Thursday

Time: 15:40 - 17:00

Room: Auditorium I.0.02

Abstract: Brief summary: There is a long and successful history of personality research in the work context. Although originally this field departed from a strictly static view on personality, contemporary work has challenged this perspective and increasingly explores dynamic and developmental properties of personality in work and organizational settings. This symposium showcases three such examples, focusing on respectively (1) the consequences of acting counter to one's trait level, (2) the meaning, relevance and assessment of intraindividual behavioral patterns, and (3) people's personal evaluations of their personality trait levels at work.

Presentation 1:

Title: Is it all in the eye of the Beholder? Examining the Affective Consequences of (Perceived) Counterdispositional Extraversion

Abstract: Although a majority of studies show that acting in a more extraverted way is beneficial for one's well-being, there are also indications that acting counterdispositionally is emotionally draining. In the current study we try to explain these discrepancies by comparing two existing conceptualizations of counterdispositional extraversion (one relative to the trait level and one relative to the average state level) and we introduce a novel conceptualization that taps into perceived counterdispositional extraversion. We collected a large ESM dataset from 187 participants who provided five daily ratings across a period of four weeks ($N = 17,547$). Results showed that for the existing conceptualizations of counterdispositional extraversion, higher state levels of extraversion related to higher levels of positive affect (PA) and lower levels of Negative Affect (NA). Findings for perceived counterdispositional extraversion revealed a different story, with people low on trait extraversion only experiencing increases in PA up to a certain point when acting more extraverted, and both introverts and extraverts having higher levels of NA when deviating from their typical behavior. Altogether, our findings show that acting in a more extraverted way is better for one's well-being, on the understanding that subjective experiences of atypical behavior can be experienced as harmful.

Presentation 2

Title: Behavioral signatures in Situational Judgment Tests

Abstract:Key to contextualized assessment is that it is particularly person x situation interactions rather than traits alone that hold important predictive information and consequently allow a more accurate prediction of future behavior. In the present paper, we provide a test of this idea by drawing on the theory of behavioral signatures (Mischel & Shoda, 1995). Specifically, we examine whether one's unique pattern of behavior across a broad range of (standardized) SJT exercises – referred to as one's behavioral signature – prospectively predicts final secondary education grades in Math, German, English as a foreign language, and grade point average (GPA) above and beyond trait levels. This is done by performing Criterion-Related Profile Analysis – a regression-based technique that is specifically developed to test the predictive validity of a profile or configuration of scores – on a 110-item SJT dataset. 255 participants were examined on 22 items of a facet of each of the Big Five dimensions, respectively. Patterns of Openness to ideas (a facet of Openness to experience) account for unique variance in predicting Math, German, and GPA. Results support the conceptual and predictive importance of assessing intraindividual patterns across exercises and call for more attention to assessment methods that allow capturing them.

Presentation 3

Title:Careless procrastinator or rigid perfectionist? Employees' personality trait evaluations and experienced negative consequences

Abstract:Organizational psychology increasingly acknowledges that employees can possess 'too much' of seemingly beneficial personality traits at work, referred to as the 'Too-much-of-a-good-thing' effect (TMGT; Pierce & Aguinis, 2013). Employing a multi-method, multi-informant design with 734 employees and their 521 managers, the current study explored how employees personally evaluate their traits in relation to their workplace functioning. Specifically, traditional descriptive personality assessment was complemented with employees' evaluations of their traits using the too little/too much scale (TLTM; Kaiser & Kaplan, 2005). Our investigation into key aspects of these evaluations reveal a high prevalence of employees perceiving their traits as 'too little' (30%) or 'too much' (42%), with varying Likert ratings being associated with 'the right amount'. Moreover, thematic analysis shows that the negative consequences experienced from suboptimal trait levels extend beyond task performance, including well-being issues and interpersonal difficulties, with distinct patterns across traits. Finally, while the Likert scale is the better overall predictor of job performance, TLTM models capture substantial variance and reveal nuanced linear and curvilinear effects not identified by the Likert scale. Collectively, our results underscore the pervasive impact of the TMGT effect as perceived by employees, influencing diverse aspects of their workplace functioning.

4 - Non-Suicidal Self-Injury (NSSI) Throughout the Life-Span: The Prevalence and Psychosocial Characteristics of NSSI in different age groups.

Author(s): Tinne Buelens, Glenn Kiekens, Lisa Van Hove, Laurence Claes (chair), Imke Baetens (discussant)

Day: Thursday

Time: 15:40 - 17:00

Room: Auditorium I.0.03

Abstract: In the present symposium, we focus on non-suicidal self-injury (NSSI) across the lifespan. NSSI refers to the intentional and direct harm to one's own body tissue without the intent to die, such as scratching, cutting and burning oneself. Our focus includes examining the prevalence and psychosocial characteristics of NSSI in various age groups, including adolescence, emerging adulthood, and older adults.

Chair: Prof. dr. Laurence Claes

Discussant: Prof. dr. Imke Baetens

Non-Suicidal Self-Injury in Adolescents

Presenter: Tinne Buelens (PhD)

University of Amsterdam, The Netherlands.

NSSI reaches its peak onset in mid-adolescence, around the ages of 14 and 15. The adolescent years are marked by numerous developmental transitions and challenges, including identity exploration and body image concerns. This presentation will focus on understanding NSSI in adolescence, with a specific emphasis on its intersections with identity development and body image. First, we will discuss how NSSI may serve a dual function in adolescent identity development. On the one hand, NSSI can act as a maladaptive coping mechanism for identity-related distress. Striving to establish a coherent identity amidst cultural, social, and personal influences can cause significant distress. For some adolescents, NSSI provides a temporary sense of relief or control over these overwhelming emotions. On the other hand, NSSI can serve as a so-called 'negative identity' by adolescents who experience severe identity confusion or even a lack of identity. Specifically, adopting an 'I am a self-injurer'- identity can be a quick-fix for feelings of emptiness that might come with severe disturbances in identity formation. Secondly, adolescence is characterized by heightened body image concerns, as individuals navigate physical changes and societal pressures to conform to idealized beauty standards. Research suggests a strong association between body dissatisfaction and NSSI behaviors in adolescence, with negative body image serving as both a risk factor and consequence of NSSI. In sum, we will discuss adolescent NSSI in general and in specific relation to identity and body image. We will briefly address how recent findings in these domains inform key prevention- and intervention targets.

Non-Suicidal Self-Injury in Emerging Adults: Prevalence, Course, and Predictors

Presenter: Glenn Kiekens (PhD)

Tilburg University, The Netherlands. KU Leuven, Belgium.

This presentation explores the vulnerability of emerging adulthood (18-29 years) for non-suicidal self-injury (NSSI) and summarizes recent empirical findings on its prevalence, course, and associated risk and protective factors. Drawing from a global epidemiological study on 20,842 first-year college students, the pooled prevalence of lifetime, 12-month NSSI, and positive screen for DSM-5 NSSI disorder is estimated at 17.7%, 8.4%, and 2.3%, respectively. A second study reveals that only 0.8% of students meet full diagnostic criteria for DSM-5 NSSI disorder. The incidence of NSSI during the college years will be estimated at 10.3% and 6.0%, with 7.0% reporting repetitive NSSI for the first time during this period. A fourth study will consider NSSI persistence which is estimated at 56.4%, with 15.6% exhibiting a high-frequency repetitive pattern. Proximal and distal risk factors, such as childhood trauma, recent stressors, and mental disorders, are identified and incorporated into an integrative prediction model for identification of emerging adults at high risk for NSSI. Finally, utilizing ecological momentary assessment to investigate short-term predictors of NSSI thoughts and behaviors among emerging adults in daily life, demonstrates that NSSI thoughts occur in situations with high momentary levels of negative affect and low levels of positive affect. Risk of NSSI behavior is elevated in situations characterized by high distress and low perceived ability to resist NSSI. The presentation shows that NSSI is relatively prevalent in emerging adulthood and advocates for increased emphasis on prevention and novel treatment modalities to intervene effectively to address NSSI among emerging adults.

Non-Suicidal Self-Injury in Older Adults

Presenter: Lisa Van Hove

Vrije Universiteit Brussel, Belgium

In most countries, adults aged 60 and over show the highest rates of suicide mortality, underlining the urgent need for preventive measures. Addressing the most significant predictors of suicide can serve as a crucial strategy for prevention. Prior literature identified NSSI as one such predictor. However, research on NSSI among older adults remains scarce. In this symposium presentation, the findings of the speaker's recent systematic review on NSSI in older adults will be discussed. Additionally, the speaker currently has a study on NSSI in older adults running. Recruitment will be finished by the end of April. Findings on NSSI prevalence, characteristics and associated factors of approximately 700 participants will be presented in comparison to younger age groups.

5 - The impact of emotion and reward on cognition

Author(s): Alison Mary, Charline Urbain, Rocco Mennella, Jade Serfaty, Matteo Sequestro, Julie Grèzes, Ruth M. Krebs, Vincent Hoofs, Haeme RP Park, Julie M Hall, Virginie Sterpenich

Day: Thursday

Time: 17:10 - 18:30

Room: Auditorium I.0.02

Abstract: Research in psychology and cognitive neuroscience evidence that emotion and cognition are closely interconnected. Emotion exerts a strong influence on our behavior and cognitive processes, serving as powerful cues that motivate action, facilitate learning, and guide decision making. Conversely, cognitive processes play a pivotal role in shaping our emotional experience and response. This symposium aims to showcase recent research shedding light on how emotional and rewarded stimuli impact various aspects of cognition, from goal-directed behavior to memory consolidation. The first talk will explore how the predictability of emotional stimuli influences goal-directed avoidance behavior. The second talk will examine the overlapping and distinct influences of motivational and emotional stimuli in various task contexts to unravel how these stimuli shape our behavioral responses. The third talk will focus on how sleep selectively reactivates rewarded memories and enhances their consolidation. The symposium seeks to provide a comprehensive understanding of the impact of emotions on cognitive functions, offering valuable insights for both theoretical frameworks and clinical applications.

The effect of outcome predictability on social threat avoidance in virtual reality

Human social behavior involves interactions with potentially threatening individuals, which elicit a spectrum of responses from automatic reactions to deliberate, goal-directed actions. The brain's selection among these possible responses hinges on the perceived control over outcomes. When control is minimal, individuals tend to rely on simple stimulus-response associations; however, when control is perceived to be higher, more sophisticated goal-directed actions come into play. In a series of three studies, we delved into how the predictability of outcomes influences the avoidance of angry individuals within a virtual reality setting. Participants ($N = 150$) were asked to choose between two elevators, each containing avatars displaying either neutral or angry expressions. In conditions where outcomes were predictable, the avatar remained, while in unpredictable conditions, new avatars entered displaying either neutral or angry expressions, randomly. Findings indicated an increase in avoidance of the angry avatar when outcomes were predictable, which was explained computationally by a more efficient evidence accumulation. Additionally, cardiac deceleration before choice was more pronounced under predictable conditions and was associated with better incorporation of value into choice. These results underscore the prevalence of goal-directed avoidance behavior when outcomes are perceived to be foreseeable. These results carry implications for both theoretical frameworks

of behavior and clinical practices, deepening our understanding of social threat avoidance and its underlying mechanisms.

Exploring the common affective coding of emotional and motivational stimuli in cognition and action

Both motivational and emotional stimuli exhibit strong influences on cognitive processes and our actions. Yet, in the lab, these effects have mostly been studied in isolation and based on different experimental paradigms. In this talk, I will present studies that aim to explore overlapping and distinct influences of motivational stimuli (reward/loss cues) and emotional stimuli (positive/negative facial expressions) in different task contexts, including target discrimination, reinforcement learning, and approach-avoid actions. Overall, we see shared influences of reward cues and positive faces, in that these facilitate learning and approach behavior, as well as responses to targets in general. Negative faces and loss cues display a more distinct pattern depending on the task, with slower responses in general, but facilitation in contexts where avoidance actions are required. For some but not all of these tasks we also acquired neuroimaging data. We see shared activity modulations across positive faces and reward cues, as well as across negative faces and loss cues. However, in addition to these shared activity patterns, motivational and emotional stimuli elicit distinct modulations depending on the paradigms and response requirements. These results illustrate a common coding of motivational and emotional stimuli in terms of their global affective connotation, which aligns with inherent behavioral tendencies. Specifically, positive stimuli promote action execution and approach behavior, while negative stimuli can lead to inaction or avoidance behavior. Intriguingly, in the motivational task realm, participants can overcome the inherent avoidance tendencies triggered by loss cues in order to maximize the monetary outcome.

How sleep boosts memories of rewards

During sleep, memories are spontaneously reactivated, a process crucial for their consolidation. Given that rewarded experiences are known to be more effectively remembered, we propose that sleep selectively enhances the consolidation of such events. Using functional MRI and a brain decoding approach, we discovered that patterns of brain activity observed during wakeful experiences reemerge during slow-wave sleep. Notably, our findings reveal a higher reactivation of neural patterns associated with rewarded tasks, such as winning in a complex game. Next, we employed intracranial EEG recordings from emotionally responsive brain regions in patients with medically resistant epilepsy. Following exposure to rewarding images paired with sounds during wakefulness, we investigated the reinstatement of these reward-associated memories by replaying the sounds during subsequent sleep. Our results indicate that the reactivation of reward memories during sleep amplifies slow-oscillation and spindle activity in the orbitofrontal cortex, accompanied by heightened theta connectivity between the hippocampus and orbitofrontal cortex. Furthermore, our investigation extended to narcoleptic patients, where alterations in brain regions linked to the reward system were observed during gameplay of a rewarded task. Collectively, these findings underscore the role of sleep in providing an optimal state for the spontaneous reactivation and processing of rewarded events, ultimately facilitating their enhanced consolidation in memory.

6 - Emotions of Immigrant Minorities: Evidence on the Role of Language and Cross-Cultural Interactions in the Emotional Experiences of Immigrant Minorities

Author(s): Batja Mesquita, Alba Jasini, Graziela Dekeyser, Yeasle Lee, Rüya Su Şencan

Day: Thursday

Time: 17:10 - 18:30

Room: Auditorium I.0.03

Abstract: This symposium showcases empirical evidence from four different studies highlighting the role of language and cross-cultural interactions in the everyday emotional experiences of immigrants and immigrant-origin minorities. The studies use diverse theoretical and methodological perspectives to understand the phenomena of emotional competence (i.e., the extent to which immigrant minorities can distinguish between their different emotions) and emotional fit (i.e., the extent to which immigrant minorities attune their emotions to their socio-cultural context).

The first talk examines whether multilingual immigrant minority children differ from the monolingual majority culture children in their emotional competence, and whether these differences can be explained by minorities' language proficiency and exposure to the majority culture. This study made use of survey data from more than 900 primary school children of minority and majority background in Flanders. The findings show that fluent multilingual minority children are better in differentiating between emotions compared to monolingual and less fluent multilingual peers (i.e., showed higher emotional competence) independent of their exposure to majority society.

The second talk zooms in the cross-cultural relationships to elucidate the processes through which immigrant minorities' emotions come to fit the majority culture emotion norm, and the consequence such fit may have for immigrant minorities' inclusion. The authors examine longitudinal associations between the cultural fit of emotions and friendships with majority in a representative sample of immigrant minority youth in Flanders. The findings demonstrate that the emotions of immigrant minority youth increasingly fit the majority culture emotion norms when they have majority friends; and that their emotional fit predicts their majority friendships over time.

The third talk focuses on immigrant minority youths' emotional fit with both the majority and minority cultures and sheds light on whether the immigrant minority youth actively switch between the normative emotional patterns of these two cultures depending on the cultural context of their social interactions. In addition, it also examines whether such emotional frame-switching affect their wellbeing within the specific contexts. The findings draw from data collected in a daily diary study with 193 immigrant minority students in three secondary schools in Flanders. The findings show that immigrant minority youth have higher emotional fit with the majority cultural norm in majority-dominated contexts, such as school (vs. home context) and during interactions with majority peers (vs. immigrant minority peers). Moreover, their emotional fit with the majority culture in positive interactions is positively related

to their wellbeing at school. The fourth talk sheds light on the different aspects of emotional descriptions that recent immigrants report when they recall interactions with majority others vs. immigrant minority others. This study makes use of language analyses (e.g., open- and closed-vocabulary approaches) to examine emotional narratives of everyday interactions collected in a study with 100 Turkish immigrants in Belgium. The study goes beyond the emotion ratings heavily used in emotion research by providing valuable insight into the most prevalent themes in immigrants' emotional narratives, such as the types of situations they most often report and the aspects of the emotional experiences they most often focus on (i.e., the social relationships, the bodily experiences, etc.).

7 - From motivation to environmental action

Author(s): Thijs Bouman, Catho Vermeulen, Marylise Schmid, Cameron Brick, Veroline Cauberghe, Sara Vandamme

Day: Friday

Time: 09:00 - 10:20

Room: Auditorium I.0.02

Abstract: In this invited symposium, we will discuss recent insights from psychological research on responses to environmental problems, such as climate change and biodiversity loss. In four presentations, we show how research in this context can strongly contribute to the advancement of theory and methods, while simultaneously having strong practical impact.

Environmental problems, such as climate change and biodiversity loss, are among the largest issues mankind has ever faced. These problems are caused by human action, have disruptive impacts on eco- and social systems, and require unprecedented levels of behavioral change for their mitigation. Hence, people are affected by, and responsible for causing and solving environmental problems, making this an eminent topic to be studied through a psychological lens.

In this symposium, we will focus on personal and social factors that underlie people's environmental behaviors, including acceptance of environmental policies and projects, as well as how environmental behaviors are constructed and structured in the human mind. In this, we will move from deeper motivational factors such as values, beliefs (talk 1, 2a and 3) and place attachment (talk 2b), to more concrete environmental behaviors (talk 3), and discuss the steps and hick-ups in how environmental behaviors come about (talk 1 and 3). We will focus on more general psychological models and findings that explain environmental behaviors and the diversity in the performance of such behaviors, as well as on more concrete applications of such models in the Flemish Coastal Region (talk 2a, 2b).

Talk 1 (Thijs Bouman) addresses the discrepancy between personal values and environmental behavior, and provide explanations for this. Specifically, whereas most people appear - on the one hand - to strongly care about nature and the environment, their pro-environmental actions - on the other hand - lag behind. In this talk we show that one reason for this may be the perceptions people have about each other. People strongly underestimate each other's motivations to take pro-environmental action, which may for various reasons cause individuals to not act on their own pro-environmental motivations anymore. These reasons, as well as different potential interventions, are discussed, providing understanding of people's personal and social motivations, and the processes through which these translate (or not) into concrete actions.

Talks 2a and 2b will present findings from a larger research project focusing on the Flemish coastal region. This project investigated how tourists ($n = 762$) and residents ($n = 426$) of the Flemish coastal region experience the region and engage in local environmental behaviors,

including acceptance of projects, with a strong emphasis on value orientations (Talk 2a) and perceptions of place (Talk 2b).

More specifically, Talk 2a (Catho Vermeulen) zooms in on the construct of values in the context of the (natural) marine environment. In her presentation, she shows how basic human values (i.e., general life goals of individuals) translate into more context related value orientations, some of which affect feelings of personal responsibility to take care of the marine environment. In this, she differentiates between four distinct marine value orientations, namely: intrinsic (the marine environment has value in itself), nature-relational (valuing the marine environment for enabling people to experience nature), communal (valuing the marine environment for bringing people into contact with each other), and instrumental (valuing the marine environment for bringing people services and resources). The relevance of these value orientations, both for theory and practice, will be discussed.

Talk 2b (Marylise Schmid) focuses on how tourists and residents attach to the Flemish coast, how these depend on different perceptions of time periods (recent past, present, future), and how these may affect engagement in pro-environmental action in the region, including acceptance of coastal protection measures. Tourists and residents have different perceptions of the Flemish coast region, and attach differently to it. Moreover, the association between these constructs, as well as their associations with pro-environmental engagement, differs across the groups. This highlights that perceptions of environments are construed differently in the minds of people depending on their engagement with these environments, which has consequences for how they interact with the environment and their willingness to protect and conserve it.

The symposium will be closed by talk 3 (Cameron Brick), first reflecting on public opinion on climate change, both in terms of reactions to protests and individual advocacy and protest actions, and thereafter transitioning to measuring and conceptualizing pro-environmental behavior. The traditional method for measuring pro-environmental behavior is to measure dozens of self-reported behaviors and create a composite mean, but this approach assumes the behaviors are caused by an underlying latent variable. Most previous studies assumed that pro-environmental behavior is a coherent psychological variable, but recent work suggests behaviors may not be a psychological variable at all: they are not mental constructs, are diverse, and have distinct causes. This view is consistent with recent research simultaneously assessing multiple types of pro-environmental measures, because those behavior measures do not correlate highly. He will expand this point to other psychological variables and discuss the implications of these for psychological theory and research.

8 - The Psychological Vulnerability and Emotional Toll of Informal Care

Author(s): Nico De Witte, Benedicte De Koker, Deborah Lambotte, Claire Champeix, Peter Wallegem

Day: Friday

Time: 09:00 - 10:20

Room: Auditorium I.0.03

Abstract:

The Psychological Vulnerability and Emotional Toll of Informal Care

Informal caregivers are the keystone of the health and social care system. In Flanders, 1 out of 3 aged 18 or older provide some form of informal care. They provide unpaid care to family members, friends, and neighbours who are unable to care for themselves due to illness, disability, or old age. Informal caregivers provide a wide range of services like personal care, home care, medical care, administrative tasks and emotional support. Informal caregivers play a vital role in the health and social care system as they reduce the burden on formal healthcare services, providing continuity of care, improving patient outcomes and enhancing the quality of life of the care receiver. Despite the important role they play, informal caregivers often face challenges, such as emotional stress, lack of support, financial constraints and difficulties to combine roles. This symposium will delve into the challenges and opportunities faced by informal carers throughout life, from young students juggling caregiving with studies to older adults who may themselves be vulnerable. The symposium will feature three insightful talks:

Balancing Studies and Care. The Unique Challenges of Young Informal Carers.

Based on a study focussing on student-caregivers in HOGENT en Erasmus Brussels., this talk will explore the experiences of young adults who are balancing caregiving responsibilities with their education. It will examine the impact on their studies, social lives, and well-being, and discuss strategies for support.

A Lifetime of Caring. Supporting Older Informal Carers.

When ageing, some individuals may find themselves caring for a spouse, parent, or other loved one. This talk will focus on the unique challenges faced by older informal carers, who may themselves be experiencing health issues, emotional distress or require support. The results are based on the data provided by the Belgian Aging Studies, a large survey focussing on the needs and quality of life of community dwelling older people. Strategies for ensuring their own well-being and accessing resources will be addressed.

The COVID-19 Impact. Informal carers navigating the Global Crisis.

The pandemic has significantly impacted the lives of both care recipients and informal caregivers. During the pandemic an online survey by HOGENT en Steunpunt mantelzorg was deployed in Belgium. Based on these results, this talk will examine the specific challenges

faced by informal carers during this period, including increased care demands, social isolation, and anxieties related to health. Additionally, it will explore potential resources and strategies developed in response to the crisis.

Reflection from Eurocares: Shining the light on Informal Caregivers across Europe.

Eurocarers, a European platform dedicated to informal caregivers, fosters collaboration between carers' organizations, universities, and research institutes. This unique network drives evidence-based advocacy, ensuring care is valued and unpaid care recognized as essential for sustainable health and long-term care systems. During this session, Eurocarers will examine the previously discussed results from a European perspective, broadening our understanding of their implications across the continent.

9 - Second Language Acquisition

Author(s): Marc Brysbaert, Vanessa De Wilde, Eleonore H.M. Smalle, Saara Kaskivuo, Chloé Parmentier

Day: Friday

Time: 14:00 - 15:20

Room: Auditorium I.0.02

Abstract: People from non-dominant cultures often show a higher prevalence of multilingualism than people from dominant cultures, influenced by various socioeconomic factors. In addition, the presence of multiple official languages in many countries contributes to the widespread phenomenon of individuals acquiring additional languages. This in turn leads to a significant proportion of the world's population (estimated at more than 50 percent) being multilingual. This symposium presents recent research on the early stages of second language acquisition (both voluntary and involuntary) in children and explores the potential impact of this process on their broader developmental trajectory. Out-of-school acquisition of English as a second language Vanessa De Wilde (Ghent University) Today's omnipresence of English in many European countries provides an excellent context to investigate L2 learning in an informal setting. This presentation will look into young learners' acquisition of English through out-of-school exposure. In the presentation I will discuss findings from various studies which investigated the influence of out-of-school exposure on L2 English learning in various contexts, both before and after the start of formal instruction. I will also discuss how the role of out-of-school learning is different for various L2s by comparing French and English learning in Flanders. The results of the studies showed that out-of-school exposure can have an important role in L2 English learning but also pointed to large differences between learners. The most beneficial types of input were gaming, computer use and contact with speakers of English. Results of other types of exposure were mixed. Longitudinal studies showed that this type of informal language learning had a large impact on young learners' L2 English proficiency even after formal instruction had started.

Cognitive development as important piece of the language learning puzzle Eleonore H.M. Smalle (Ghent University, Tilburg University) Why do children learn language more easily than adults do? This puzzle has fascinated language scientists for decades. During the presentation, I will approach the language learning puzzle from a cognitive perspective that is inspired by evidence from the perceptual and motor learning literature. Recent neuroscientific studies show that two memory systems in the brain are involved in human learning, an early implicit procedural memory system and a late-developing cognitive or declarative memory system. We argue that higher cognitive development constrains implicit statistical learning processes that are essential for learning patterns and regularities in languages, that is, the adult cognitive architecture has a cost. This is supported by experimental evidence showing that the acquisition of implicit linguistic knowledge via auditory statistical language learning is enhanced in young adults under temporary conditions of cognitive fatigue, as well as in children and presumably also healthy cognitively aged adults (pilot data). More research is

needed to test the cognitive cost hypothesis, as it could partly solve the language learning puzzle as well as explain individual differences in language development.

Multilingual experience is associated with better statistical language learning but also L1 interference Saara Kaskivuo (University of Helsinki) Prior language experience shapes statistical language learning (SLL). SLL performance is guided by familiar cues from L1 [1, 2, 3, 4] or even L2 [5]. Compared to monolinguals, multilingual experience facilitates SLL when cues are unfamiliar [6, 7] although results for general improvement of SL(L) are inconclusive (review: [8]). We investigated whether experience with more languages facilitates SLL when structure conflicts with participants' native language. We recruited native Finnish-speaking participants ($n = 61$) with diverse multilingual experience for a visual SLL task containing items adhering and not adhering to vowel harmony, a prevalent phonotactic rule in Finnish. After an exposure of two minutes, we measured their performance in a serial recall task (see [9]). Our results showed that overall performance was positively correlated with multilingualism ($r(59) = .42-.53$, $p < .001$), and that performance with harmonious vs. nonharmonious items was better ($t(60) = 7.63$, $p < .001$). However, contrary to our hypothesis, the multilingual advantage was less pertinent with nonharmonious items, as the difference between harmonious-nonharmonious performance was also positively correlated with multilingualism ($r(59) = .3-.33$, $p < .05$). Thus, multilingual experience is associated with improved SLL but also stronger native language interference.

Are children with developmental or learning disorders more at risk in immersion education? Chloé Parmentier (Université catholique de Louvain) Arnaud Szmalec (Université catholique de Louvain, Ghent University) Although immersion education has gained much popularity worldwide, it is often regarded as an elitist approach focused on the cognitively most gifted children. Hence, the question whether this bilingual education method is also profitable for children with developmental disorders, remains largely unanswered. We conducted 2 studies in French-speaking Belgium investigating whether children with dyslexia (study 1) and children with AD(H)D (study 2) can also benefit from an immersion education experience or whether their reading or attention problems puts them more at risk. In study 1, 28 5th and 11th-grade children with diagnosed dyslexia and 112 matched controls were identified within a larger sample of participants. We compared immersed and non-immersed children with or without dyslexia, in terms of linguistic abilities and acquired academic content. In study 2, we recruited more than 50 5th and 6th-grade children with various attentional profiles, including AD(H)D. We assessed their attentional and executive control abilities in addition to their linguistic skills. Overall, our findings suggest that there is no measurable disadvantage for pupils with dyslexia or with attentional difficulties to attend immersion education, neither for foreign-language learning, nor for acquiring academic content. Also, we observed that immersion education did not exacerbate the reading or attentional problems of children with dyslexia or AD(H)D, respectively.

10 - Advances in forensic psychology research: Cognitive-emotions-behavioral correlates and antisociality

Author(s): Henryk Bukowski, Alix Bigot, Luca A. Tiberi, Xavier Saloppé, Jean-Louis Nandrino, Thierry H. Pham, Fanny Degouis, Angèle Becuwe, Ann Darsonville, Charlotte Reguidière, Pierre Oswald, Emilie TELLE, Victoria Tricard

Day: Friday

Time: 14:00 - 15:20

Room: Auditorium I.0.03

Abstract: Forensic psychology includes a large set of different topics involving both clinical and community populations. This symposium will present recent and ongoing research from a collaborative network in Belgium and abroad. The first paper focuses on a specific deficit of social cognition: The impaired self-other distinction among forensic patients with antisocial personality disorder in comparison to community participants. The second paper addresses The traumatic experience and its impact on autobiographical memory recall among forensic patients with antisocial personality disorder. The third paper focuses on the diagnosis of attention deficit hyperactivity disorder and its implications for the medico-legal system in terms of risk prevention and treatment. The fourth paper develops the notions of Sexual Addiction and Hypersexuality and their overlaps with the concept of psychopathy in general population. Overall, the symposium outlines important implications of these topics for diagnosis evaluation, risk management and therapeutic intervention for persons presenting these different symptomatologies.

1. Mistaking my views for his: Impaired self-other distinction in antisocial personality disorder

Deficits of social cognition are regularly but inconsistently reported among individuals with Antisocial Personality Disorder (ASPD). Because of the multifaceted nature of social cognition, deficits might be only observed when assessing specific facets of social cognition and under sufficiently demanding conditions. We examined 21 forensic inpatients with ASPD and 19 participants from the community via a visual perspective-taking paradigm allowing to tease apart self-other priority (i.e., how self-focused one is) from self-other distinction performance (i.e., how much one confuses his with others' mental states). The ASPD group made significantly more errors at handling conflicting self-other viewpoints by enforcing self-other distinction (19%) than the control group (4%), but the ASPD group was not significantly more self-focused. In contrast, the Interpersonal Reactivity Index self-report scale did not differentiate the two groups. Hence, examining performance on self-other distinction, a key facet lying at the core of the attachment-based model of mentalizing (Fonagy & Luyten, 2009), allowed us to pinpoint a clear socio-cognitive deficit in ASPD and advocates for psychometric approaches that embrace the multifaceted nature of social cognition and the need for objective measures with sufficient sensitivity.

2.The traumatic experience of people with antisocial personality disorder: What impact on autobiographical memory recall?

People with Antisocial Personality Disorder (ASPD) have difficulties in managing and producing emotional content compared to the community people. Several studies have shown that people who have been exposed to a traumatic event in childhood are also affected in their management of emotions. People with ASPD have experienced a significant number of early complex or cumulative events. Exposure to traumatic events at key points in development can impact identity construction and therefore potentially lead to a pathological developmental trajectory such as a personality disorder. The way in which these traumatic events are integrated in autobiographical memory and at the level the self-conceptual is decisive in identity construction. The objective of the current study is to identify among people with ASPD, which variables (mainly traumatic events exposure or dissociation processes) may explain identity disturbance by using the recall of autobiographical memories. We expect strong positive predictions between history of cumulative interpersonal traumatic experiences and dissociation, and some specific properties of autobiographical memories such as the recall of non-specific, non-integrated, thematically threatening life events memories. The study provides refined indicators by considering traumatic experiences subtypes according to their severity and number but also defines the specific role of dissociation.

3.ADHD and medico-legal aspects: Screening and prevention for recidivism

Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder causing cognitive and psychopathological difficulties. In recent decades, literature has shown compared with published general population prevalence, a fivefold increase in prevalence of ADHD in youth prison populations and a 10-fold increase in adult prison populations (Young et al., 2015). ADHD offenders come into contact with the justice system earlier and at a higher prevalence than the general population, even when treated with medication (Silva et al., 2014). Furthermore, evidence suggests that ADHD symptoms are important in predicting institutional behavioral problems once incarcerated (Young et al., 2011). The risk of reoffending is also higher. Indeed ADHD appears to have an incremental predictive power for criminal recidivism (Philipp-Wiegmann et al., 2018). In this research project we will focus on 3 steps to better address the care of inmates with ADHD. (1) screening by making specific screening tools available to this population, (2) improving understanding of the direct and indirect interactions between ADHD and comorbidities, and (3) tailoring treatment according to the 3 principles of the Risk-Need-Responsibility model.

4.Sexual addiction/hypersexuality in general population: Epidemiological data, conceptual overlapping, and association with subclinical psychopathic traits

Sexual Addiction/Hypersexuality (SA/H) is a long-studied concept involving a lack of terminological and diagnostic consensus (Grubbs et al., 2020), explaining its absence among international nosographies. This umbrella concept refers to compulsive, impulsive, or addictive components characterized by excessive sexual thoughts, behaviors, or fantasies (e.g., excessive masturbation, pornography use.; Karila et al., 2014). Furthermore, these sexual components

may involve antisocial behavior (e.g. fetichism, exhibitionism), whose subclinical components are often non-investigated in the literature. Consequently, epidemiological studies on the topic of SA/H are rare, with estimations approximating 10% among community samples (Dickenson et al., 2018). In a Belgian non-clinical sample of 444 participants (84.50% women; MeanAge = 29.00; SD = 10.59), the current paper investigates SA (SAST-fr), H (HBI), and Psychopathic Subclinical Traits (PST; SPR-4), using an online survey. Main descriptive results highlight low rates of SA/H (SA: 0.9%; mild SA: 6.30%; H: 3.60%). Males exhibit significantly higher scores than females for H and PST, but not for SA. Cross-section age comparisons (5-year range) highlights a significant decrease in H and antisocial traits (facet 4; SRP-4). Finally, analyses identified a wide range of positive and significant correlations between difficulties in self-regulating fantasies, impulses, and behaviors (H) and SA (total score) ($r = .63$), and between SA/H (total scores) and impulsivity and sensation-seeking (facet 3, SRP-4; $r = .36$ to $.42$). Further analyses will be conducted with linear regression models. The overall will be discussed in light of the international literature.

11 - Recent advances in memory and language research

Author(s): Steve Majerus, Muhammet Ikbal Sahan, Benjamin Kowialiewski, Klaus Oberauer, Hong Xiao, Pauline Querella, Judith Schewpe, Louisa Bogaerts

Day: Friday

Time: 15:30 - 16:50

Room: Auditorium I.0.02

Abstract: This symposium will present recent developments in the field of memory and language research. Muhammet Ikbal Sahan will highlight the importance of eye-movement recordings in working memory research, including verbal working memory. He will show that delay period eye movements closely follow the geometric structure underlying not only visuospatial working memory but also verbal working memory. These findings suggest that scan patterns of eye movements are a promising approach to reveal how mental space is structured and accessed during short term-retention. Benjamin Kowialiewski and Klaus Oberauer will show that response suppression, a mechanism used by most working memory models for guiding response selection at retrieval, is not a tenable assumption. He will show that when an item is presented repeatedly in the same memory list, its recall probability increases instead of decreasing. These results demonstrate the non-plausibility of response suppression as a means of preventing item repetitions during recall. Hong Xiao and colleagues will present novel evidence for the grounding of verbal working memory in the linguistic system, for both item and serial order aspects of working memory. They will show that recall of word lists composed of adjective-noun pairs is influenced by their syntactic order regularity, irregularly ordered adjective-noun pairs leading to an increase of both item and serial order recall errors, as well as to adjective-noun positional regularization errors. These data show that verbal working memory is supported by syntactic knowledge, in addition to the phonological and semantic influences already demonstrated in the past. Finally, Louisa Bogaerts will provide further novel evidence for interactions between language and memory, by showing that linguistic statistical learning does not only support the identification of novel words in the continuous language stream, but also leads to novel linguistic knowledge. She will demonstrate that learned statistical patterns are available in memory for up to a week after learning. She will also examine how long-term linguistic knowledge derived from extensive native language exposure interacts with the acquisition of novel artificial languages.

12 - Substantive-Methodological Synergy: Novel Methodological Approaches to Long-Standing Issues

Author(s): NA

Day: Friday

Time: 15:30 - 16:50

Room: Auditorium I.0.03

Abstract: This symposium brings together three studies that are characterized by substantive-methodological synergy, or the offering of novel insights through the application of new, advanced methods to substantively important issues. In the first presentation Chiara Carlier will present how the use of a novel measure of profile similarity combined with the application of regression trees allows for a better understanding of predictors of emotional similarity in romantic couples. In the second presentation Tim Vantilborgh applies network models and the idea of bridge symptoms to shed light on the comorbidity of burnout with depression and generalized anxiety disorders. In the final presentation, Jasmine Vergauwe presents a novel theoretical framework and an associated methodology based on bifactor models to study shared and unique perspectives in multisource ratings.

Applying profile similarity and regression trees to chart fluctuations and covariates of emotional similarity in romantic couples

Chiara Carlier¹, Mirka Henninger², Martine Verhees¹, Peter Kuppens¹, Eva Ceulemans¹

¹Research group of Quantitative Psychology and Individual Differences, Faculty of Psychology and Educational Sciences, KU Leuven, Belgium ²Center for Statistics & Data Science, Faculty of Psychology, University of Basel, Switzerland

Romantic couples are often thought to align their expectations, feel on a same wavelength or to behave ‘in sync’. But when looking at similarity in emotions, we can find only mixed evidence for its existence. Until now, emotional similarity in romantic couples has mostly been examined in a cross-sectional way or by focusing on single variables like positive or negative affect. However, emotional similarity often concerns multiple discrete emotions simultaneously and can be expected to change over time and contexts. We therefore propose to compute the similarity between profiles of multiple discrete emotions on a momentary level, for each timepoint of each couple separately. In this talk, we will use this new framework in two experience sampling studies to examine the fluctuation of momentary emotional similarity. In addition, we will use multilevel regression trees to explore which (combinations of) covariates can best predict this type of similarity and whether being in a romantic relationship makes partners even more similar than what can be predicted with these covariates.

Reconceptualizing burnout as a network of symptoms to understand comorbidity with depression and generalized anxiety disorder

Tim Vantilborgh¹, Valentina, Sagmeister¹, Femke Legroux¹, Eva Mertens¹, Robin Biesmans, Sofie Van Ballaert, Sara De Gieter¹

¹Research group of Work and Organizational Psychology, Faculty of Psychology and Educational Sciences, Vrije Universiteit Brussel, Belgium

Burnout, depression, and generalized anxiety disorder (GAD) are significant mental health issues impacting both individuals and organizations, with an estimated annual cost of 940 million euros due to productivity losses. These conditions often co-occur, leading to complex clinical management and poorer health outcomes. Understanding their interconnections can help improve interventions and management strategies. In this study, we applied a network approach to explore the relationships among burnout, depression, and GAD. This method assumes that psychological phenomena arise from causal interactions between symptoms. Specifically, we focused on identifying ‘bridging symptoms’ that link these conditions, providing insights into why comorbidity occurs. We collected data from 215 Flemish employees using the Burnout Assessment Tool, VierDimensionale KlachtenLijst, Patient Health Questionnaire, and Generalized Anxiety Disorder scale. We generated Gaussian Graphical Models to visualize the interconnections of symptoms across these scales. Our analysis highlighted that ‘depression’ and ‘exhaustion’ were central symptoms in our networks, though only depression showed strong connections as hypothesized. Key bridging symptoms included physical characteristics (‘slow/restless’) linking anxiety and depression; ‘mental distance’ connecting burnout with depression, but not GAD; and ‘difficulty relaxing’, ‘feeling anxious’, ‘worrying behavior’, ‘sleep problems’, and ‘worrying’ serving as links between various conditions. The study confirmed that while burnout, depression, and GAD manifest as distinct conditions, their high comorbidity can be explained by bridging symptoms. This reinforces the utility of a network perspective in understanding and addressing comorbidity. Future research should investigate how these symptoms interact over time to better tailor preventive and therapeutic strategies.

The Leadership Arena-Reputation-Identity (LARI) Model: Distinguishing shared and unique perspectives in multisource leadership ratings Jasmine Vergauwe¹, Joeri Hofmans¹, and Bart Wille²

¹Research group of Work and Organizational Psychology, Faculty of Psychology and Educational Sciences, Vrije Universiteit Brussel, Belgium ²Department of developmental, personality and social psychology, Faculty of Psychology and Educational Sciences, Ghent University, Ghent, Belgium

Multisource leadership ratings rely on the core assumption that –in addition to the leader’s self-ratings– different rater groups (subordinates, peers and superiors) offer unique perspectives, and thus provide a more well-rounded analysis of the leader’s behavior (i.e., the ‘discrepancy hypothesis’; Borman, 1997). However, current methods provide limited insight into the extent of overlap and uniqueness in these perspectives, leaving the empirical support for the discrepancy hypothesis unclear. In pursuit of improved substantive-methodological alignment, we introduce the Leadership Arena-Reputation-Identity (LARI) model, which conceptualizes both the shared and unique perspectives in terms of latent factors reflecting respectively (i)

the consensus about the leader (i.e., the Leadership Arena), (ii) the impressions conveyed to others that are distinct from self-perceptions (i.e., the leader's Reputation), and (iii) the unique self-perceptions of the leader (i.e., the leader's Identity). The LARI model is formalized by means of bifactor modeling, which allows to statistically decompose the variance captured by multisource ratings. The LARI model was tested against five alternative models in two large multisource samples (N1 leaders = 537, N1 observers = 7,337; N2 leaders = 1,255, N2 observers = 15,777), each using different leadership instruments. In both samples, the LARI bifactor model outperformed the alternative models. In line with the discrepancy hypothesis, a subsequent variance decomposition showed that each rater source indeed provides unique information about the target's behavior, although in varying degree. Notably, superiors consistently provided the largest share of unique information among the three observer groups, across all leadership dimensions.

Regular symposia

13 - Advances in experimental environmental psychology

Author(s): Florian Lange, Ruth M. Krebs, Sarah Kusch, Frederik De Spiegeleer, Kobe Millet, Bert Weijters, Yannick Joye, Asta Lisauskienė, Marine I. Severin, Ann Buysse, Gert Everaert, Filip Raes

Day: Thursday

Time: 15:40 - 17:00

Room: Auditorium I.2.03

Abstract: In view of human-driven environmental degradation, climate change, and biodiversity loss, it is critical to better understand the relationship between human behavior and the natural environment. As an applied discipline, environmental psychology studies (1) how those human behaviors that benefit the natural environment (i.e., pro-environmental behaviors) can be explained and promoted, and (2) how human behaviors are affected by natural (and built) environments. Our symposium will introduce the field of environmental psychology and showcase novel experimental approaches to the analysis of environment-behavior relations. Environmental psychology has relied heavily on self-report methods and correlational designs in the past and given the obvious limitations of this approach, we seek to highlight the opportunities provided by an experimental analysis of actual behavior.

The five presentations of our symposium will illustrate the motivational potential of environmental consequences and natural environments using experimental methodology. All presentations will focus on key results and their applicability and will include 2-5 minutes of discussion. By this means, we aim to contribute to the debate on how psychological science can support the mitigation of environmental issues.

Florian Lange (KU Leuven) will provide an introductory overview of key concepts in environmental psychology and present an experimental paradigm for studying effortful pro-environmental behavior under controlled conditions (the Work for Environmental Protection Task, WEPT). On this task, participants can exert voluntary effort on a boring task in order to generate pro-environmental donations, that is, they need to trade off individual costs and environmental benefits. In a series of within-subject and between-subjects online experiments, Florian studied participants' pro-environmental behavior on the task as a function of its pro-environmental consequences. Participants were observed to exert more effort for environmental protection when their efforts related to larger or more tangible environmental benefits. Knowledge about these motivational effects was also used in a subsequent field experiment to reduce meat consumption in a pasta restaurant. Customers were found to order more vegetarian meal options when doing so was linked to additional environmental benefits (i.e., donations to an environmental organization).

Next, Ruth Krebs and Sarah Kusch (Ghent University) will discuss the role of cognitive effort in pro-environmental behavior. Many pro-environmental behaviors come at a personal cost in terms of money or time, but also cognitive effort, which has to be compensated by a valuable outcome. In a series of studies, Ruth and Sarah tested participants' willingness to invest cognitive effort for pro-environmental outcomes (profiting a pro-environmental organization) and how this differs from cognitive effort for personal outcomes (profiting the participant). Overall, individuals invested less effort during pro-environmental compared to personal outcome trials, which is indicative of a lower subjective value. Consistently, in a context where pre-selected outcomes could be changed, participants forwent pro-environmental outcomes more frequently in favor of personal ones. However, pro-environmental outcomes were stickier when they required more cognitive effort. These results highlight that effort expenditure - even if aversive in the process - can increase the value of pro-environmental outcomes eventually, which might contribute to understanding long-term behavior change and devising tailored interventions.

Frederik de Spiegeleer (Ghent University) and colleagues will then present the Environmental Decision Task as an alternative approach to study the trade-off between individual and environmental consequences. Recent research suggests that pro-environmental behavior paradigms that involve costs in terms of time or effort may be less enjoyable, more fatiguing, more sensitive to multitasking, and more time-consuming. Some paradigms may also be prone to cognitive biases. Frederik et al. aimed to develop a new measure of the money-environment trade-off using a simple task less susceptible to biases. Participants had to choose between receiving money or investing money in the fight against climate change. Their study found that the new measurement has good convergent validity regarding self-report scales of pro-environmental propensity and related constructs but is less sensitive to social desirability. The same results were found even with just nine trials and when hypothetical consequences are introduced. This presentation will discuss the advantages and limitations of this new measurement.

People may be motivated by the prospect to generate environmental benefits, but also by being exposed to beautiful natural environments. Yannick Joye (Vilnius University) and colleagues will illustrate this possibility through their work on the nature-as-reward hypothesis. Much of environmental psychology research indicates that exposure to nature can be cognitively reinvigorating for individuals experiencing cognitive fatigue. According to one of the leading theories in research on cognitive nature benefits – Attention Restoration Theory (ART) – these “restorative” effects arise from a process of resource replenishment, where the soft-fascinating features of natural scenes allow depleted cognitive resources to rest and recover. Yannick et al. will propose an alternative explanation for cognitive nature benefits, referred to as the “nature-as-reward” hypothesis. At the core of this hypothesis is the idea that the high aesthetic reward value of natural settings motivates individuals to work on tasks, including cognitive tasks typically performed in ART studies. Yannick et al. will discuss the specifics of the nature-as-reward hypothesis and present findings from two experimental studies that offer initial support for this hypothesis.

Finally, Marine Severin (Flanders Marine Institute) and colleagues analyzed whether exposure to nature, particularly coastal landscapes, can also motivate people to engage in pro-

environmental behavior. Previous research has mainly focused on virtual exposure and investigation of potential pathways to maximize this effect remains limited. Marine et al. conducted an experimental study to assess the effect of real-life exposure to a coastal (vs. urban) landscape on performance in the WEPT, and to compare differential effects of mindful engagement vs. mind-wandering vs. distraction during coastal exposure. Adult participants (22 to 78 years old) took part in a 20-minute guided walk at the beach or in an urban street. Those walking at the beach were instructed to either be mindful of their surroundings, let their mind wander, or follow mental visualization tasks. No significant group difference was found in performance in the WEPT after the walk. Marine et al. discuss theoretical and practical considerations when examining the relationship between nature and pro-environmental behavior.

14 - Overprotective parenting in adolescence: Different perspectives on its determinants and consequences

Author(s): Stijn Van Petegem, Katherine M. Ryan, Melanie J. Zimmer-Gembeck, Tanya Hawes, Taylor Kovacs, Nicola Leahy, Nele Flamant, Peter Prinzie, Bart Soenens, Bénédicte Mouton, Annalisa Soncini, Emilio Paolo Visintin, Maria Cristina Matteucci

Day: Thursday

Time: 17:10 - 18:30

Room: Auditorium I.2.03

Abstract: Overprotective parenting can be defined as parents' provision of protection that is excessive considering the child's developmental level. Although often well-intentioned, overprotective parenting would backfire as it may interfere with the development of youth's resilience and coping skills. Indeed, a significant body of research illustrates how overprotective parenting may set adolescents and young adults at risk for psychosocial difficulties, including internalizing and externalizing problems. However, a number of important questions still remain regarding its causes and consequences, which will be addressed in this symposium.

We will first focus on the correlates of overprotective parenting in terms of adolescents' internalizing and externalizing problems. In the presentation entitled "A meta-analytic review of intrusive parenting and adolescents' externalizing and internalizing symptoms: Combining and comparing control, overparenting, helicoptering, and low autonomy support", Ryan et al. seek to summarize the research evidence on overprotective parenting and related parenting dimensions. In the past 20 years, multiple streams of research have examined how parents' intrusiveness or overinvolvement in their adolescents' autonomy could be associated with adolescents' mental health and behavioral problems. After identifying 180 studies published between 2000 and 2023, they conducted meta-analyses to quantify associations of psychological control, overprotective/overinvolved parenting, helicopter parenting, and autonomy support with adolescents' externalizing (antisocial, delinquency, aggression, bullying) and internalizing (anxiety, depression) symptoms. Overall, they abstracted 112 effect sizes for externalizing and 200 effect sizes for internalizing. Summary effect sizes for the association (effect size = r) of intrusive parenting with externalizing ranged from .15 to .33 and for internalizing ranged from .18 to .29. There were small moderating effects of type of intrusive parenting and child age, but overall, results indicate significant and generally moderate positive associations of intrusive parenting with adolescents' symptoms.

Then, Flamant et al. will present their study entitled "Bidirectional associations between overprotective parenting and adolescent problem behaviors: A multiverse analysis". Most research on overprotective parenting has examined the assumed consequences of such parenting using cross-sectional designs, thereby adopting a unidirectional approach. This is unfortunate, because bidirectional models emphasize that adolescents' own behaviors can have a major impact on the nature and quality of parenting. The few available longitudinal studies have yielded mixed findings regarding direction of effects in associations between overprotective parenting

and adolescent outcomes. The differences between these studies can be due to many factors, including the type of outcomes examined and a variety of methodological choices. The study of Flamant et al. aimed to examine the bidirectional interplay between overprotective parenting and adolescents' functioning over time more systematically using a multiverse analysis. Such an analysis uses all possible combinations of substantive and methodological choices that can be made in a given dataset to arrive at a more robust estimation of associations. They used two-wave longitudinal data with a three-year time gap from the Flemish Study on Parenting, Personality, and Development (FSPPD). Data were available from 477 adolescents, both parents and their teacher. Latent change models were estimated within a multiverse framework. Preliminary results provide more robust evidence for effects of parental overprotection on changes in adolescents' problem behavior than for opposite effects. Overall, the findings showcase the potential of multiverse analysis in determining the direction of effects in associations between parenting and adolescent outcomes with greater confidence.

Then, we will address the potential determinants of overprotective parenting. Mouton et al. will present the results of their study entitled "Parental worldviews and self-efficacy as determinants of overprotective parenting". Past research has shown that parents' negative beliefs about their child (e.g., hostile attributions) or themselves (e.g., low parental self-efficacy) are associated with negative parenting behavior. However, the role of parents' beliefs about the world have not been examined extensively yet. In the current societal context, parents are often exposed to worrying news suggesting that we are experiencing a period of polycrisis, where we are facing multiple consecutive and intertwined crises (e.g., the COVID-19 pandemic, war in Ukraine, climate change). Parents' beliefs about the world, where resources are perceived as scarce and instable, may make parents more sensitive to threat cues, and therefore elicit overprotective parenting. That is, to protect their offspring, parents may become anxiously overinvolved in their adolescents' life. Therefore, the goal of this study was to examine the direct effects of parents' negative worldviews on overprotective parenting and whether parental self-efficacy plays a moderating role in this association. These hypotheses were tested among 758 Belgian parents (63% mothers) of adolescents. Using linear regression models, they observed that negative worldviews were positively associated with overprotective parenting for both mothers and fathers. While parental self-efficacy was negatively associated with overprotection, the interaction of negative worldviews with parental self-efficacy was not significant for fathers or mothers.

In the last contribution, entitled "Parents who are overly involved in school: A risk factor for teachers' well-being? A qualitative study on teachers' perceptions", Soncini et al. will focus on teachers' perspectives on overprotective parenting. Parental involvement in school is considered a key pillar to promote children's achievement and well-being, thus, parents who are not involved are considered a risk factor for students' achievement development. Overinvolved parents may become a risk factor as well, by eliciting children's performance anxiety and extrinsic motivation. Teachers may also be affected by parental involvement since they have to collaborate with parents to promote a fruitful educational path for the children. Scholars highlighted that low-involved parents negatively affect teachers' perceptions towards parents and behaviours towards the students. However, there is a lack of research on how teachers

perceive overinvolved parents and whether these parents may affect their well-being. This study aimed to fill this gap by interviewing Italian teachers ($N = 23$) from different school levels to explore their perceptions of parental involvement. Participants described overinvolved parents as problematic, and they portrayed them as excessively worried about their children's schooling, demanding and intrusive. Furthermore, they reported that these parents may increase their stress and students' performance anxiety as well as reduce students' autonomy. This study highlights the need to consider the negative effects of overinvolved parents not only on the children but also on teachers' well-being.

15 - Persisting gender disparities in contemporary parenthood: Considering parental narratives, gender beliefs, and workplace discourses

Author(s): Cindy Eira Nunes, Gaëlle Venard, Elli-Anastasia Lamprianidou, Sarah Grootjans

Day: Friday

Time: 09:00 - 10:20

Room: Auditorium I.2.03

Abstract: Despite changing societal expectations towards parents nowadays, important gender disparities in families persist within most Western countries (Sullivan et al., 2018). This symposium aims to facilitate discussion on contemporary motherhood and fatherhood. Through four papers, we propose to address persisting gender disparities in parenthood from different perspectives, including couples' perceptions of societal demands, parents gender beliefs, and dynamics within both families and workplaces.

The first paper of Venard et al, entitled Exploring Intensive Parenting Ideology and Parental Couple Coordination: Narratives from Parents of Adolescents, explores the narratives of couples on parenthood in a current context that emphasizes intensive parenting. Intensive parenting is an ideology marked by directives promoting deeply engaged parenting practices with the goal of maximizing a child's development. While existing research focuses on how parents, particularly mothers, manage the demands of intensive parenting for young children, gaps remain regarding its impact on parents' daily lives, especially for both mothers and fathers of adolescents. Moreover, the effects of intensive parenting ideology on parental cooperation and household responsibilities have yet to be explored. This study aims to address these gaps through 12 semi-structured interviews with six couples raising adolescents aged 14 to 17 in Switzerland. Preliminary thematic analysis identified three key themes. Firstly, parents described specific intensive parenting norms, emphasizing the importance of being present at home, engaging in extracurricular activities, and overseeing schooling to ensure their adolescent's future success. The challenge of balancing these norms with respecting the adolescent's autonomy also appeared. Secondly, gendered roles seemed to persist in certain parental and household tasks within couples, with mothers often assuming the role of "family managers". However, collaborative efforts between partners emerged as crucial aspects of parenting. In summary, current analyses have highlighted the intricate interplay between parent's adherence to intensive parenting norms, the enduring influence of gendered roles in parenting coordination, and the significance of effective partnership.

Then, Lamprianidou et al's paper, A Mother's Intuition? The Link Between Mothers' and Fathers' Gender Essentialist Beliefs and Their Parental Involvement, focuses on parents' gender beliefs and diverse forms of parental involvement.

In this study, they used gender essentialism as a lens to examine culturally embedded gender inequalities between mothers and fathers. Gender essentialism pertains to the belief that men and women are biologically distinct, and thus better suited for different societal roles

and behaviors (Bem, 1993), including parental roles (Hays, 1996). This study investigated the relationships between mothers' and fathers' gender essentialist beliefs and their engagement in positive (i.e., parental responsiveness, autonomy support) and negative forms of involvement (overprotection, controlling parenting). The sample consisted of 1,260 Belgian heterosexual parents (Mage = 49.6 years old; 62% of mothers) of adolescents. They examined relationships through actor-partner interdependence modeling, yielding evidence for several actor effects. For both mothers and fathers, the endorsement of gender essentialist beliefs was related to more controlling and overprotective parenting. In addition, among fathers, gender essentialist beliefs were associated with less responsiveness and autonomy support, while these relationships were not significant for mothers. There were no significant partner effects. These findings highlight the importance of considering parental gender beliefs when studying parenting, as these can play an important role in understanding the quality of parents' involvement in their children's lives.

The third paper, "Fathers' Involvement and Mothers' Gender Essentialist Beliefs About Parenthood: A Longitudinal Study", from Eira Nunes and colleagues specifically explores the mechanisms underlying the relationship between gender beliefs and parental involvement. This paper investigated the role of mother-father dynamics in fathers' involvement but also in mothers' endorsement of more traditional gender beliefs about parenthood. It tested two hypotheses: fathers' lower involvement would predict mothers' endorsement of gender essentialist beliefs, according to which fathers are biologically less suited to parenting (Pinho & Gaunt, 2021), that in turn reinforces lower involvement; mothers' gender essentialist beliefs would predict fathers' involvement through mothers' gatekeeping—discouraging and controlling fathers' involvement in childcare. Using longitudinal data from 373 heterosexual Belgian couples, they tested the direction of effects in the relationship between mother's essentialist beliefs and father's involvement, focusing on the quality of parenting (i.e., responsiveness, autonomy support, overprotection, and controlling parenting). In addition, the intervening role of maternal gatekeeping was examined. The cross-lagged models offer partial support to the first hypothesis. Fathers' overprotection and controlling parenting predicted mothers' essentialist beliefs, but not the other way around. Mothers' essentialist beliefs predicted fathers' responsiveness at T3, but this relationship was not explained by maternal gatekeeping. Throughout the analyses, no evidence was found for the second hypothesis. Research is thus still needed to better understand the mechanisms underlying fathers' involvement.

In this regard, the last paper from Grootjans and colleagues, entitled "We Know What Men Want - Or Do We? Insidious Processes That Maintain the Powerful Impact of Traditional Norms on Men's Work-Family Choices", opens the discussion on work-related mechanisms that may underlie contemporary parenthood. While much has changed for women regarding work-family (W-F) arrangements in past decades, much less has changed for men. Men's lower family care participation also impacts women on the work front, presenting a remaining barrier for gender equality. Despite men's clear lower care participation, almost all of the focus in science and policy has gone to addressing the lower work participation of women. In the current proposal, we shift this focus to address the care gap, and focus in particular on men. We take the perspective of the employee and examine the implicit and explicit messages men are

receiving within organizations, and the impact of these messages on W-F choices. For this analysis we combine social, psychological, and sociological/work-organizational perspectives, to understand the world from the perspective of the individual in context and identify the underlying mechanisms that maintain W-F gender gaps. We start with a consideration of the role of masculine organizational climates in men's perceptions of what is possible regarding W-F roles, and then examine three mechanisms by which climates may affect W-F choices.

Together, these papers paint a complex picture of contemporary parenthood underscoring the multiple factors that may reinforce (or challenge) remaining disparities between mothers and fathers.

16 - Resilience & Family Dynamics: Triadic Synchrony and Parental Support in the Face of Stress: An Excellence of Science (EOS-FWO/FNRS) Symposium

Author(s): Michel Sfeir, Mandy Rossignol, Federico Cassioli, Shiyao Wang, Chiara Carlier, Eva Ceulemans, Mariah Matar, Alexandre Heeren, Nadischa Dierdorff, Melisse Houbrechts, Tsachi Ein-Dor, Luc Goossens, Patricia Bijttebier, Karla Van Leeuwen, Wim Van Den Noortgate, Viktoriia Chubar, Jonathan Turner, Guy Bosmans, Rudi De Raedt

Day: Friday

Time: 09:00 - 10:20

Room: Auditorium I.2.01

Abstract: Synchrony can be understood as a timely and harmonious interaction between two or more individuals. It can encompass facial expressions, mutual gaze as well as other physiological measures. Synchrony has mainly been measured and investigated in stressful settings as it may either disrupt family dynamics or help members overcome difficulties by being more connected, fostering resilience. To date, most of the measures of synchrony are dyadic, which restricts the studies to interactions between dyads. However, the family is a system in which all members might have a mutual effect on each other. The goal of this symposium is to grasp a better understanding of synchrony within the family, focusing on triadic synchronization. In the first presentation (Sfeir, UMONS), the role of synchrony in families and how it may be linked to resilience will be discussed, based on a systematic review. In the second presentation (Wang, KULeuven) -a novel data-analytic approach for triadic synchronization will be presented. Thereafter (third presentation), triadic eye-gaze synchrony will be analyzed and quantified during a discussion task (Matar, UCL). Furthermore, in the fourth presentation, a component of synchrony – child-parent attachment – will be examined in association to children’s daily stressors, parental support, and methylation of children’s stress-regulatory genes. (Dierdorff, KULeuven). Finally, as synchrony is part of daily interactions, in the last presentation (Lacassagne, UCL), Experience Sampling to measure synchrony and family interactions in daily life will be showcased. An integrative dive into biobehavioral synchrony within families will be the highlight of the discussion with a focus on how resilience may develop in the family system (De Raedt, UGent).

The first presentation provides the first systematic review to understand how synchrony can interplay within the family. A systematic search was conducted on four databases, where 50 studies were included. When both parents and children synchronize with one another, this tends to reduce stress levels within the family while increasing positive affect. Used both as a strategy and as a communication channel, synchrony would allow families to bounce back after problems while preserving their equilibrium. Stress within the family can be found to be a potential intervening factor as to how low levels of synchrony may be associated with behavioral and emotional disturbances in children. The findings highlight the extent to which synchrony may shape family systems. In this sense, synchrony could buffer the effect of stress and hardships by facilitating the transmission of resilience and helping family members be in harmony and synchrony with one another.

After setting the ground on synchrony, the following presentation will combine all dyadic synchronizations to quantify triadic synchronization. To assess synchronization across time, many statistical methods have been developed. However, the validity of these measures is still to be examined. Besides, it has been argued that a trivariate approach would yield novel insights. The current study examined both possibilities: combining all dyadic synchronizations to quantify triadic synchronization and capturing triadic synchronization directly. The validity of these measures was tested on data generated from latent state models with different parameter settings, which can simulate the synchronization features of family interactions. The results show that the adapted multiplication of dyadic synchronizations can reflect the synchronization features in the data.

Eye gaze synchrony, or the temporal coordination of eye gaze between interacting partners, is one of the most determining signals of social engagement and bonding. Yet, despite years of research on human interactions, its operationalization still poses a challenge to scientists. This is especially true for interactions involving more than two partners, due to the difficulty of obtaining accurate and precise gaze measurements in ecological settings. The present presentation explores the feasibility of capturing triadic eye gaze synchrony in a naturalistic discussion between three participants using mobile eye tracking. We tackle the problem of spatiotemporally integrating data from multiple (mobile) eye trackers and implement several approaches to the quantification and assessment of triadic eye gaze synchrony. In revealing this to be feasible, this work offers a proof of concept and methodology for researchers wishing to do the same. The limitations of currently available technology are discussed.

In this next presentation, we tackled we tackled caregiving and parental support by investigating the association between daily hassles, parental support and two stress-regulatory genes, namely the brain-derived neurotrophic factor (BDNF) and serotonin transporter (SERT) genes. The Learning Theory of Attachment (LTA) posits that secure attachment develops through repeated experiences of parents providing supportive care during distress, leading to neurobiologically-driven feelings of relief and trust. Epigenetic variations, specifically DNA methylation in genes related to stress regulation, are considered to be factors explaining individual differences in attachment. We gathered a sample of 563 middle childhood aged children, who participated in three-year-wave study to assess whether children's daily hassles and methylation in the BDNF and SERT genes moderate the link between parental support and changes in attachment. Robust mixed-effects models revealed a significant three-way interaction between parental support, daily hassles, and BDNF. For children with low parental support, daily hassles were linked to lower trust and higher attachment anxiety, regardless of BDNF and SERT methylation. Conversely, for children reporting high parental support, the relationship between daily hassles, trust, and attachment anxiety, depended on their BDNF and SERT methylation levels. Hence, BDNF and SERT methylation seemed to determine when distressed children's attachment was linked to parental support suggesting that attachment development depends not only on parenting behaviours.

17 - Advances in informal caregiving research: non-participation, dyadic dynamics, and population-based focus

Author(s): Pierre Gérard, Lisa Choucroun, Charlotte Manceau, A Awada, C Langhendries, G Libérale, I Libert, A Liénard, N Meuleman, Darius Razavi, D Van Gestel, Isabelle Merckaert, Yves Libert, Emilie Wawrziczny, Emilie Constant, Bérengère Flinois, Kathy Dujardin, Antoine Pascal, Bram Spruyt, Laura Van Den Borre, Pierre Smith, Robby Depauw, Sarah Dury, Filip Van Droogenbroeck

Day: Friday

Time: 14:00 - 15:20

Room: Auditorium I.2.03

Abstract: Format:

Three presenters with introduction and discussion by the chair

Content:

In this symposium, we will explore advances in informal caregiving research in the field of health psychology. Informal caregivers assist a relative or friend facing health-related challenges and loss of autonomy. Research in informal caregivers is particularly important as they are shown to experience important strain, but also because their presence alongside patients is essential. This symposium focuses on three key issues in the caregiving literature: the non-participation of caregivers in research, the exploration of dyadic dynamics throughout the disease, and the contributions of population-based sampling.

The first presentation focuses on and will explore how to address the barriers to recruiting informal caregivers in cancer research (for advanced care planning), even when they are available at the hospital. The second presentation uses a unique design to explore the couple dynamics throughout the different phases of Parkinson's disease, by showing how we can address this complex issue through the use of Interpretative Phenomenological Analysis. The third presentation addresses the common assumption that all kinds of informal caregivers experience comparable stress by exploring a population-based sample from the Health Interview Survey in Belgium.

Together, these three presentations will provide scientific and methodological insights that can benefit the field and clinical health psychology. A discussion with the audience will conclude this symposium to have an opportunity to share experiences and insights on comparable topics.

Presentation 1 by Lisa Choucroun entitled “Challenges in conducting a study about advance care planning with advanced cancer patients and primary caregivers”

Abstract:

Topic and research questions: Advance care planning (ACP) is a communicative process involving patients, relatives, and healthcare providers to define treatments and care to administer or not to patients if they become incapable of expressing their wishes. Despite guidelines recommending ACP for advanced cancer patients and advocating for primary caregiver involvement, implementation remains limited. This study aimed to assess the reasons for refusal of dyadic participation in a study on ACP communication by patients and their caregivers, as well as their characteristics

Methods: This cross-sectional study involved administering questionnaires to patients with advanced cancer and their primary caregivers between October 2021 and October 2023. Reasons for refusal of dyadic participation, demographic, medical and relational characteristics of the patient and primary caregiver were assessed.

Results: Out of the 1009 eligible patients contacted, 522 (52%) were recruited. Although 443 (85%) recruited patients had a primary caregiver, 231 (44%) participated in the study without them. The main results regarding reasons for refusal of dyadic participation by patients and their caregivers, as well as their characteristics will be presented.

Conclusion and contribution: This study will provide insights into barriers to dyadic participation in ACP research with advanced cancer patients and their primary caregivers, along with suggestions for addressing these barriers.

Presentation 2 by Charlotte Manceau entitled “Navigating changes in couple dynamics throughout Parkinson’s disease: Methodological and clinical implications”.

Abstract:

Background. Time and change are special issues for couples facing Parkinson’s disease (PD). To get close to the changes in couple dynamics throughout the evolution of PD, this study aimed to overcome practical constraints associated with longitudinal designs when approaching slow-evolving diseases, by the development of an alternative approach.

Methods. Using three independent samples, each of which consisted of fifteen couples at various stages of PD, the Interpretative Phenomenological Analysis was used to identify the dyadic processes associated with each stage. The aggregation and parallelism of these processes revealed five distinct patterns of couple dynamics throughout the evolution of PD as well as hypotheses of evolution for these patterns.

Results. The findings show that while some couples exhibited relatively stable functioning within a pattern, the dynamics of other couples changed when symptoms worsened and transitioned into a different pattern.

Discussion.

This study highlights the need for couple interventions to consider the dynamic aspect of couple functioning throughout PD. Future studies are needed to obtain a deeper understanding of the changes that occur in couple dynamics. For example, monitoring simultaneously several small separate samples of couples over some years would give a more complete picture of transitions and their underlying factors.

Presentation 3 by Pierre Gérardin entitled “Who are the informal caregivers and how is their mental health? Preliminary results from the Belgian Health Interview Survey 2013 and 2018”

Abstract

Background. Demographic evolutions lead to a growing need for informal care in the coming decades. Informal caregivers are individuals providing unpaid assistance to an individual unable to independently manage their (instrumental) activities of daily living. In a majority of approaches, it is assumed that informal care leads to negative mental health outcomes. Yet, this claim is questioned by works showing the limitations of the existing literature and the necessity to rely on population-based samples to investigate this relationship.

Method. Data from the Belgian National Health Surveys from 2013 and 2018 were used. First, we investigated the sociodemographic profile of who provides informal care, to whom, and how often. Second, we explored the relationship between informal care (no/yes; no/1-20h a week/>20h a week) and mental health (GHQ-12) while controlling for sociodemographics and social support (OSLO-3).

Results. Unemployed women between 45 and 64 years old living in dense agglomerations are more likely to be informal caregivers. Unemployed individuals with lower education are more prone to provide more informal care (>20h/week). While informal care is associated with poorer mental health, this association is mostly due to the intensity of informal care (>20h/week) and interaction with social support.

Discussion. This study shows that the picture of informal care being a risk factor must be nuanced. To better picture the association between informal care and mental health, attention should rather be given to finer indicators, such as the intensity of informal care and the quality of social support, rather than focusing on a label.

18 - “The Gordian Knot of Intergroup Dynamics: Unveiling Novel Predictors across Multiple Levels of Analysis”

Author(s): Jasper Van Assche, Emanuele Politi, Berfin Acar, Luca Fehér, Emilie Caspar, Sarah Zahreddine, Eren Asli Tekin, Alba Jasini, Batja Mesquita, Soha Abboud, Zacharia Bady, Antoine Roblain

Day: Friday

Time: 15:30 - 16:50

Room: Auditorium I.2.03

Abstract: Symposium title:

“The Gordian Knot of Intergroup Dynamics: Unveiling Novel Predictors across Multiple Levels of Analysis”

Symposium organizers:

Jasper Van Assche^{1,2} & Emanuele Politi³

¹Université Libre de Bruxelles, Belgium

²Universiteit Gent, Belgium

³Katholieke Universiteit Leuven, Belgium

Symposium abstract:

This symposium features five presentations by early-career social psychology scholars addressing the complexities of intergroup dynamics. Panelists will explore various levels of analysis, including ideologies, social norms, group positionality and resulting discrimination, and interpersonal experiences of intergroup friendship. These presentations offer unique insights from diverse intergroup contexts, ranging from Belgian middle-school emotional patterns to narratives of the Lebanese civil war and Cambodian reconciliation processes. Starting with the majority perspective, Berfin Acar highlights the significance of situating personal ideologies within social contexts. Next, Luca Fehér explores the association between ideological worldviews and reconciliation preferences in the post-conflict setting of Cambodia. Moving on to collective memory, dr. Sarah Zahreddine experimentally manipulates victimhood narratives to examine how inclusive versus competitive narratives influence intergroup attitudes in the Lebanese civil war setting. Fourth, the longitudinal study by Eren Asli Tekin investigates emotional acculturation, focusing on how sustained contact between majority and minority groups influences emotional norms. Finally, Soha Abboud focuses on the minority perspective, exploring attitudes towards newcomers among established immigrants. By examining how perceived discrimination affects such inter-minority attitudes through group identification, the study provides insights into the complexities of immigrant integration and identity formation. Together, these studies unveil the multifaceted interplay of ideology, victimhood,

emotion, and identity in shaping intergroup relations, offering tantalizing perspectives on how to achieve harmony in current pluralistic societies.

Presentation 1:

“The more you want to fit in, the more similar you become: How others’ ideologies predict our own intergroup attitudes”

Berfin Acar¹ & Jasper Van Assche^{1,2}

¹Université Libre de Bruxelles, Belgium

²Universiteit Gent, Belgium

Why people develop prejudice toward outgroups has been under the spotlight of many social psychological studies in the past decades. The current study makes its contribution to the understanding of prejudice by bridging the gap between individual and contextual perspectives and conceptualizing attitudes as joint products of personal ideologies and social norms. We investigated some of the predictors of prejudice by adopting a person-within-context approach. In a sample of 615 adults, we examined whether the perceived levels of Right-Wing Authoritarianism (RWA) and Social Dominance Orientation (SDO) in one’s close groups (such as family, friends, colleagues and even the town one lives in) predict warmth toward and avoidance of ethnic outgroups through one’s own RWA and SDO. We also included desire for norm enactment in the model as a factor that moderates the effect of close-group perceived RWA and SDO on one’s own RWA and SDO. The results showed that perceived RWA and SDO in close groups was positively linked to participants’ own RWA and SDO, which, in turn, was associated with lower warmth toward and higher avoidance of ethnic outgroups. Furthermore, participants’ desire to enact the norms of their close groups moderated this relationship. The conditional indirect effect was the highest for those who have a strong desire to enact their close groups’ norms, and it was the lowest, yet still significant, for those who have a weak desire for norm enactment. These findings highlight the significance of situating personal ideologies and tendencies within context while studying intergroup relations.

Presentation 2:

“Ideologies and their links with reconciliation in Cambodia”

Luca Fehér¹, Emilie Caspar², & Jasper Van Assche^{1,2}

¹Université Libre de Bruxelles, Belgium

²Universiteit Gent, Belgium

Previous research has highlighted the negative correlation between Right-Wing Authoritarianism (RWA) and reconciliation preferences, but less attention has been given to Left Wing Authoritarianism (LWA) and its association to reconciliation. Also, reconciliation is not a homogenous construct, and different dimensions (such as willingness to forget and awareness) could relate differently to ideological worldviews. Given that both RWA and LWA are associated with obedience to authority figures (albeit different ones), it is important to explore how

these ideologies intersect with different types of reconciliation preferences when the authority changes. To investigate these connections, we analyzed data from Cambodian genocide survivors and their offsprings (N = 199). Cambodia went from a left-wing, communist regime (i.e., Pol Pot's Khmer Rouge) in the 1970s perpetrating the genocide to a democracy with characteristics of authoritarianism since 1993 till today. Regression analysis revealed that RWA and LWA were connected to different forms of reconciliation. On the scale level, RWA positively predicted a willingness to create more awareness about the past, whereas LWA was related to a willingness to forget the past. More specifically, on the dimension level, higher scores on the Aggression subdimension of RWA predicted a preference for awareness of past aggressions and the Submission subdimension of LWA was found to relate marginally to a preference for forgetting past aggression. These results suggest that people high in LWA, possibly still adhering to the former regime, are more inclined toward moving on rather than understanding the past. The opposite is true for Cambodians high in RWA. In conclusion, these findings underscore the importance of individual differences and distinct ideological perspectives in addressing reconciliation efforts within a country recovering from conflict.

Presentation 3:

“Narratives of Suffering: Unraveling the Threads of Victimhood and Its Impact on Lebanon’s Intergroup Dynamics - An Experimental Study”

Sarah Zahreddine¹

¹ Université de Genève, Switzerland

This study investigates the intricate dynamics of collective memory and its influence on intergroup relations, specifically focusing on the context of the Lebanese civil war. By examining the roles of victimhood beliefs (inclusive and competitive) and responsibility attribution, we seek to understand how these factors shape attitudes and behaviors towards outgroup members. Utilizing a sample of 300 Lebanese participants, comprising Christians and Muslims, we experimentally manipulated victimhood beliefs through exposure to narratives. We assessed their effects on responsibility attributions and intergroup relations outcomes, such as positive outgroup attitudes and willingness to engage in intergroup contact. Our findings reveal that participants exposed to inclusive victimhood narratives exhibited higher positive outgroup attitudes than those exposed to competitive victimhood narratives, indicating the potential of inclusive victimhood to foster more harmonious intergroup relations. However, the experimental manipulation had a limited effect on responsibility attributions and did not significantly impact the willingness to engage in intergroup contact. Additionally, the study highlights the significance of national versus religious identification in the relationship between victimhood beliefs, responsibility attribution, and intergroup relations. The results underscore the complexity of collective memory and its impact on post-conflict intergroup dynamics. They suggest that fostering an inclusive understanding of past suffering and acknowledging shared victimhood can contribute to more positive intergroup attitudes. This research contributes to the broader discourse on reconciliation and peacebuilding in post-conflict settings, offering insights into the Lebanese civil war’s lasting effects on its society’s sectarian divisions.

Presentation 4:

“The asymmetry in immigrant minority and majority members’ emotional acculturation: The role of intergroup friendships and norm clarity”

Eren Ashi Tekin¹, Alba Jasini^{1,2}, & Batja Mesquita¹

¹Katholieke Universiteit Leuven, Belgium

²Université Libre de Bruxelles, Belgium

People’s emotions may change when they have sustained contact with members of another culture – a phenomenon known as emotional acculturation. Previous research has primarily focused on the emotional acculturation of immigrant minorities, showing that the emotions of minorities who have many majority friends better fit the majority culture emotion norms. Evidence from a recent cross-sectional study has suggested that the emotions of majority culture members may too acculturate towards the norms of immigrant minorities. Yet, minority friendships were found to relate to majorities’ emotional fit with the minority emotion norms only when those norms were clear. The current study aims to further elucidate the asymmetry in these findings by comparing the role of intergroup friendships in majorities’ vs. minorities’ emotional acculturation over time. We also examined the role of emotion norm clarity in both minority and majority groups. We investigated the emotional patterns and intergroup friendships of 413 majority and immigrant minority youths in a representative sample of Belgian middle schools. We computed minority and majority members’ emotional fit with the majority and minority cultures by relating their individual emotional patterns to the average emotional pattern of their majority and minority classmates in comparable situations. Multilevel longitudinal analyses show that whereas intergroup friendships afford only minorities’ emotional fit with majority culture over time, clarity of minority emotion norms emerges as an important predictor only for majorities’ emotional fit with the minority culture over time. These findings suggest that the process of emotional acculturation in minority and majority members is asymmetric.

Presentation 5:

“Are they welcome? Discrimination, group identification, and attitudes towards newcomers among immigrants residing in Belgium”

Soha Abboud¹, Emanuele Politi², Zacharia Bady¹, & Antoine Roblain¹

¹ Université Libre de Bruxelles, Belgium

² Katholieke Universiteit Leuven, Belgium

Most of the research on the attitudes towards immigrants and immigration policies has focused on the members of the native majority group. As such, little is known about the attitudes of immigrants toward newcomers. The present study delved into the role of perceived discrimination as a key predictor of established immigrant’s attitudes towards the arrival of newcomers,

investigating the underlying mechanisms at play. Highlighting a novel contribution to the understudied area of citizenship and its identity implications, this study uniquely distinguished between the attitudes of immigrants undergoing the naturalization process and those who were not, underscoring the impact of this process on their identity and their attitudes towards new immigrants. By using a sample of immigrants who were participating in a civic integration program in the Wallonia region of Belgium ($N = 809$), we examined how perceived discrimination affected attitudes towards newcomers through group identification. We also explored how a “citizenship process” moderated the link between perceived discrimination and group identification. The results showed that the perception of discrimination has an indirect effect on attitudes towards the arrival of new immigrants through national identification. Indeed, perceived discrimination decreased host national identification. In turn, host national identification increased the negative attitude towards the arrival of new immigrants. This indirect effect was observed only for people in the naturalization process. By shedding light on this intricate dynamic, our research contributes a novel perspective to the understanding of how identity and citizenship processes intersect to shape inter-minority relations. These findings not only deepen the discourse on immigrant integration but also suggest targeted areas for policy intervention to foster more inclusive societies.

Oral presentation sessions

Oral presentation session 1: Stress, burnout, depression, and anxiety

Day: Thursday

Time: 15:40 - 17:00

Room: Auditorium I.2.01

19 - The Role of Emotion Regulation in Perinatal Depression and Anxiety: A Systematic Review

Author(s): Pauline Verhelst, Laura Sels, Gilbert Lemmens, Lesley Verhofstadt

Abstract: Major depressive disorder and anxiety disorders are highly prevalent and comorbid during the perinatal period. Although research and clinicians agree that emotion regulation (ER) is an important transdiagnostic factor underlying both disorders in the general population, ER during the perinatal period has received less research attention thus far. Therefore, the aim of this systematic review was to assess the literature regarding the role of ten commonly studied ER strategies in the onset and maintenance of perinatal depression and anxiety in pregnant women and young mothers, using the Process Model of Gross (1998) as a theoretical framework. To this end, we searched four electronic databases to identify English, peer-reviewed, and quantitative studies published between January 1999 and March 2022. Six articles were selected for analysis. Overall, the results indicate that similar ER strategies emerge as risk and protective factors in perinatal depression and anxiety, supporting the role of ER as a transdiagnostic factor. Overall, behavioral avoidance, distraction, rumination, and expressive engagement appeared as risk factors, while problem solving, emotional and instrumental support seeking, cognitive reappraisal, and acceptance, emerged as protective factors in the onset and maintenance of perinatal depression and anxiety. These findings are in line with previous research in perinatal community samples, as well as in non-perinatal clinical samples. Building on these findings, clinicians are encouraged to implement ER strategies into the screening, prevention, and treatment of perinatal depression and anxiety.

21 - Stress resilience in university students: evaluation of coping strategies, empathy, attachment, and gratitude.

Author(s): Mélanie De Leener, Michel Sfeir, Anthony Mauroy, Mandy Rossignol, Sarah Galdiolo

Abstract: University students are exposed to many stressors that can lead to psychological distress (e.g. living alone, academic pressure, financial difficulties...). Stress resilience (SR), defined as a dynamic process in which individuals demonstrate adaptive skills to face stress, has been linked to student mental health and well-being, as well as academic engagement and achievement. However, the factors involved in SR in university students require further investigation. Therefore, the aim of the study is to investigate the effect of coping skills, attachment, empathy, and gratitude on resilience to stress in Belgian French-speaking university students. These factors were measured by the Connor and Davidson Resilience Scale, the Brief Coping Scale, the Experiences in Close Relationships- Revised questionnaire, the French version of the Cognitive and Affective Empathy Questionnaire and the French Gratitude Questionnaire (GQ-5). The preliminary results ($N = 216$; mean age = 23.384.94 years) revealed that resilience is positively correlated with problem-focused coping strategies ($r = .43$, $p < .001$), emotion-focused coping strategies ($r = .17$, $p = 0.01$), cognitive empathy ($r = .32$, $p < .001$) and gratitude ($r = .3$, $p < .001$). Moreover, negative correlations were measured between resilience and affective empathy ($r = -.22$, $p < .001$), avoidant coping strategies ($r = -.33$, $p < .001$) and anxious attachment ($r = -.3$, $p < .001$). This ongoing study will contribute to a better understanding of the factors underlying students' resilience to stress.

22 - Harmful dimensions of the medical culture and their relation to physicians' burnout

Author(s): Emilie Banse, Moïra Mikolajczak, Marie Bayot, Anne-Laure Lenoir, Philippe De Timary

Abstract: Topic and research question: Despite extensive research, physician burnout remains a pressing issue. The impact of the unique medical culture on physicians' burnout is gaining interest, yet empirical research on the subject is lacking. The present study quantitatively investigates the structure and dimensionality of harmful dimensions of the medical culture and how they relate to burnout in physicians. It was hypothesized that the dimensions would be interdependent and positively correlated to burnout.

Method: This cross-sectional study was conducted by online survey from September 5, 2023, to November 5, 2023. Participants were 1002 physicians and physician residents who completed the BAT-12 and home-made items measuring Harmful Dimensions of the Medical Culture. Statistical analyses included Exploratory (EFA) and Confirmatory Factor Analyses (CFA) to explore and confirm the factorial validity of the Harmful Dimensions of the Medical Culture structure. Correlations and regression analyses assessed associations with burnout.

Results: An eight-factor structure representing dimensions of the medical culture was found, summarized into three distinct yet interdependent higher-order dimensions: Identity centrality of the medical profession, Doctors' role as superhuman, and Stigma towards burnout in physicians. The three dimensions were correlated and independently associated with more burnout.

Conclusions: This study provides a first empirical investigation of the medical culture and its relation to physicians' burnout. Further investigations of the concept of medical culture its' relationship to physicians' professional well-being are necessary. The results of this research open up new clinical, educational and organizational perspectives in the field of physicians' burnout.

Oral presentation session 2: Research on autism

Day: Thursday

Time: 15:40 - 17:00

Room: Auditorium I.0.01

23 - Validating the Dutch Movie for the Assessment of Social Cognition in adults with and without autism

Author(s): Annabel Nijhof, Roeljan Wiersema

Abstract: Introduction

Differences in Theory of Mind (ToM), the ability to represent one's own and others' mental states, are thought to explain social interaction difficulties in various conditions, such as autism. The 'Movie for the Assessment of Social Cognition' (MASC) is a widely used, ecologically valid ToM measure, which we introduce in a Dutch version (MASC-NL). This validation study investigates if the MASC-NL is a reliable tool for assessing social cognition in Dutch-speaking adults, and if performance distinguishes adults with autism from neurotypical adults.

Method

Through Qualtrics, 142 neurotypical adults and 38 adults with autism from Belgium and the Netherlands carried out the MASC-NL, consisting of 46 ToM-related questions and 20 control questions. They also filled out two questionnaires measuring autism-related characteristics.

Results

The total number of correctly answered ToM-questions in the neurotypical group was comparable to that of earlier validation studies in different languages, with no significant difference between Flemish and Dutch participants. Furthermore, scores on both autism questionnaires correlated negatively with number of ToM-questions answered correctly. Moreover, the autism group gave significantly less correct ToM-related (but not control) answers than adults without autism, although the effect size was smaller than in previous studies. Across groups, Cronbach's alpha for ToM-related questions was .73.

Conclusion

Results suggest the MASC-NL, which is more ecologically valid than most existing measures, is a reliable tool for assessing social cognition in the Dutch population. However, performance differences between adults with and without autism were relatively small, possibly due to the characteristics of the autism sample.

24 - Creating a common ground during social interaction between individuals with autism

Author(s): Hannah De Laet, Annabel D. Nijhof, Jan R. Wiersema

Abstract: Having social interaction difficulties is one of the main criteria for the diagnosis of autism. However according to the theory of the double empathy problem, these social interaction difficulties are rather due to a mismatch between neurologically different interaction partners than an inherent deficit attributed to the person with autism. The theory also states that the communication between individuals with autism might be easier and more successful. The research on this topic is limited and, while individuals with autism report better communication with other individuals with autism, it remains unclear whether this communication is actually more successful and efficient. This study examines dyadic interactions during a cooperative game. In total, 64 individuals with and without autism took part in the study, each playing the game twice. In the final analysis, 14 autism – autism dyads, 14 no autism – no autism dyads and 30 mixed dyads (autism – no autism) were retained. In this game, participants communicated the order of abstract figures to one another by creating a common ground over multiple game rounds. Results showed that all dyads were able to create a common ground and became more efficient across rounds. Differences in time to complete a round, number of words used and turn-taking between the different dyads are currently analysed and will be presented during the conference.

25 - Revisiting the mirror neuron system in children with autism: “broken” mirroring or inefficient modulation?

Author(s): Ruth Op de Beeck, Jellina Prinsen, Nicky Daniels, Matthijs Moerkerke, Jean Steyaert, Bart Boets, Kaat Alaerts

Abstract: Autism spectrum disorder (ASD) is a neurodevelopmental condition characterized by socio-communicative difficulties. The action observation network, also known as the mirror neuron system (MNS), has gained profound attention for understanding the neural mechanisms of ASD. Initially, it was argued that the MNS is impaired in ASD, whereas recent viewpoints posit that basic action simulation or ‘mirroring’ could be intact, but that the attunement of this response in line with socio-interactive demands may be inefficient. We adopted fMRI neuroimaging to compare neural activation in 56 autistic versus 38 typically developing children (8-12 years). These children were instructed to observe videos of an actor performing hand movements or keeping her hand still while engaging in direct or averted gaze. Across the 2x2 task paradigm (Hand Action, Still Hand; Direct Gaze, Averted Gaze) we examined group differences in BOLD-signal in specific regions of interest (ROIs), including classic MNS regions and ROIs involved in eye contact processing. Generally, across both groups, action observation combined with direct gaze elicited more inferior parietal lobule (IPL) MNS activity as combined with averted gaze. Further, across all conditions, autistic children showed decreased left IPL activation as compared to non-autistic peers. They also displayed significantly lower neural activation in the MNS’ ventral premotor area during action observation. An exploratory whole-brain analysis confirmed this pattern. To conclude, autistic children demonstrated decreased neural activity in critical MNS regions during action observation. These regions are essential for motor representation and for action processing and understanding.

26 - Slower Category Learning and Over-Specific Generalization in Adults with Autism

Author(s): Jaana Van Overwalle, Stephanie Van der Donck, Birte Geusens, Bart Boets, Johan Wagemans

Abstract: Individuals with Autism Spectrum Condition (ASC) are suggested to experience difficulties with categorization and generalization. However, studies empirically investigating categorization or generalization in ASC have mainly focused on one process at a time, and neglected underlying neural mechanisms. Here, we investigated these perceptual processes in adults with and without ASC, both at a behavioral and neural level. The study was completed by 38 adults with ASC and 38 matched neurotypical individuals. By presenting shapes sampled from an artificial multidimensional stimulus space, we investigated (1) neural underpinnings of category learning via electroencephalography recordings and (2) generalization of trained categorization to an extended version of the stimulus space and a novel stimulus space. Our findings show that both adults with and without ASC are able to categorize highly similar stimuli and to generalize this categorization after training. However, in the initial stages of training and when generalizing to a novel space, adults with ASC were significantly less accurate. Electroencephalography recordings during training showed that the amplitude of the N1 component (after stimulus presentation) and P300 component (after receiving negative feedback) was significantly reduced in adults with ASC. A reduced N1 component could indicate less categorical processing or expertise in ASC. The P300 component was related to higher activation in the frontal regions in adults with ASC, which could represent an increased explicit processing or a higher salience of prediction errors in ASC. This multi-level approach sheds new light on the mechanisms that underlie information processing issues and intolerance to uncertainty in ASC.

Oral presentation session 3: Emotions

Day: Thursday

Time: 15:40 - 17:00

Room: lokaal I.1.03

27 - Emotional experiences and representations of Covid-19 expressed on Facebook at the beginning of the pandemic.

Author(s): Sarah Leveaux, Tanguy Leroy, Marie Préau

Abstract: The emergence of the Covid-19 pandemic has created a climate of uncertainty that has disturbed individuals from both a representational and emotional point of view (Bouchat et al., 2020). The aim of this study was to: 1. describe the evolution of the content of the SRs concerning Covid-19 (at the beginning of the pandemic); 2. observe the emotional experiences expressed by individuals; 3. explore the potential interactions between emotional and representational content.

For our research, we constituted a corpus of 59,091 Facebook comments. We extracted all comments in reaction to 157 press articles. We have selected all articles relating to Covid-19 published by the 10 most consulted French-language online media. Data were analysed using IRaMuTeQ.

The results show an evolution in emotional and representational content over the genesis of the pandemic. At the start of the pandemic, it was mainly emotions linked to fear and panic that were evoked. Discussions focused on the rise of racism and discrimination, and the minimisation of the dangerousness of the virus. However, when the virus arrived in Europe and France, emotions of sadness and compassion were expressed. The content of the discussions was related to the way in which the situation was being handled by the institutions (e.g., government, media).

This research show that the content of representations relating to Covid-19 evolves dynamically, in interaction with the different phases of the pandemic and the emotional content associated with it. These are encouraging results for understanding and exploring the link between emotions and social representations (Rimé, 2019).

Bouchat, P., Metzler, H., & Rimé, B. (2020). Crise et pandémie. Impact émotionnel et psychosocial du confinement. *Le Journal des psychologues*, 380(8), 14-20.<https://doi.org/10.3917/jdp.380.0014> [<https://doi.org/10.3917/jdp.380.0014>]

Rimé, B. (2019). Emotions at the Service of Cultural Construction. *Emotion review*, 12(2), 1-14.<https://doi.org/10.1177/1754073919876036> [<https://doi.org/10.1177/1754073919876036>]

28 - Beyond cultural boundaries: An analysis of emotional connectedness in Eastern and Western couples.

Author(s): Davide Pirrone, Anna Schouten, Eva Ceulemans, Batja Mesquita, Lesley Verhofstadt

Abstract: Cultural backgrounds contribute to unique modalities of relating with our intimate partners, profoundly influencing the emotional dynamics that unfold within these relationships. Indeed, based on cultural relationship ideals, emotions reflect how well our relationships are going, whether we get what we need within our relationship, or whether our desires are frustrated. The present study aims to explore empirically partners' emotion dynamics in their everyday life, by looking for possible differences across cultures. In a 14-day daily study, 150 couples (75 Belgian, 75 Japanese) rated their experiences of 16 different emotions (e.g., sad, calm, strong, proud). Employing K-means cluster analysis, the Mac Queens K-means cluster algorithm, and the Chull procedure we identified three different couples' emotion profiles. The first profile was characterized by low arousal of emotions and the presence of residual calm; the prevalence of this cluster was found in Japanese couples. The second profile occurred more often in Belgian couples, and it was characterized by the presence of positive emotions related to emotional stability, such as resignation, calm, and security. Levels of negative emotions, on the other hand, were low, indicating emotional resilience and the ability to manage these emotions without letting them become dominant. Finally, the third profile was equally spread across the two cultures and it was characterized by a shared experience between the two partners of emotional tension within the relationship, with high levels of negative emotions such as embarrassment, worry, disappointment, and sadness. Our findings provided first insights into the cultural nuances that shape couples' emotion dynamics which is essential for fostering effective therapeutic interventions tailored to diverse cultural backgrounds.

29 - Is being positive good for you? Tracking emotions in psychotherapy with Large Language Models

Author(s): Jarosław Lelonkiewicz, Witold Szejgis

Abstract: Psychological therapies strive to improve the overall emotional state of the client. Solution Focused Brief Therapy (SFBT) aims to achieve this by avoiding lengthy discussions of the problem and by focusing on the positive aspects of the client's life. To direct the conversation towards the positive, SFBT practitioners use a number of techniques, including reframing what the client said, appreciating and complimenting the client, and asking questions that nudge the client towards elaborating on their desired future. But to what effect? If these techniques succeed, the emotional valence of the client's speech should transition towards positive, both within and across sessions. Importantly, and as theorized by SFBT, more positive conversations should be more successful at inspiring a positive vision of the future, leading to better therapy outcomes. To test these predictions, we recorded and transcribed sessions and measured clinical outcomes for 29 SFBT clients. We then used a transformer-based Large Language Model (HerBERT) to track the evolution of clients' emotional state as expressed through language. The analysis revealed that although clients did become more positive, this did not correlate with therapy outcomes. We discuss the potential of machine learning and the implications of our findings for psychotherapy research.

30 - A cognitive flexibility framework for emotion regulation: emotional salience perception and executive function

Author(s): Marine Mas, Olivier Luminet

Abstract: Individuals face ever-changing situations that require processing information coming from their physical and social environment, and internal world, such as bodily sensations, thoughts and feelings. However, due to the limited resources available to process these different stimuli, some are prioritized while flexibly integrating goals and contextual events. Cognitive flexibility has been theorized as an emergent property of salience perception and executive function that allows adaptive everyday life functioning. Salient stimuli have a high value during competition for cognitive resources and direct executive function in the form of cognitive control.

Cognitive flexibility is crucial for adaptive behaviour, but also during emotion regulation. Indeed, the ability to adapt one's emotions to new contexts has been associated with psychological and somatic health. Due to the salient nature of emotional stimuli, a distinction should be made between the involvement of executive function during the cognitive processing of more neutral stimuli and the cognitive processing of emotional stimuli. Additionally, flexibility in the use of emotion regulation strategies has been reportedly characterized as being mainly orchestrated by executive function.

Based on previous literature in the field of emotion and cognitive psychology, we propose a new theoretical framework to study emotion regulation from a cognitive flexibility perspective. We discuss the empirical and application potential of our model, which includes assessing a) specific cognitive processes associated with emotion regulation strategies in normative individuals; b) stimuli-related idiosyncratic cognitive biases and c) associations between symptoms and a specific cognitive processing of emotional stimuli.

Oral presentation session 4: Politics, conspiracy beliefs, and polarization

Day: Thursday

Time: 17:10 - 18:30

Room: Auditorium I.2.01

31 - The Ironic Effects of Direct Democracy on Political Cynics: An Empirical Case Study

Author(s): Ruben Van Severen, Tessa Haesevoets, Arne Roets

Abstract: Political cynicism among the citizenry is a particular challenge faced in contemporary democracies. Giving citizens a more direct say through referendums is often proposed as a solution to tackle this problem and restore disenchanting citizens' political trust and involvement. In a large, stratified sample of the Belgian-Flemish population ($N = 2,205$), we first confirm that citizens high in political cynicism are indeed more favourable towards the idea of referendums as a way to determine policy. However, the practical implementation can lead to negative and perhaps ironic effects. Surveying a targeted sample of residents of a Belgian-Flemish city ($N = 773$) in which the government organized a series of local referendums, we find that despite the overall positive effects, political cynics were more negative towards the specific referendums and less likely to participate in them – which is explained by their perception of the themes as being 'unimportant'. Furthermore, political cynics report that these referendums actually reduced their trust in various democratic actors, most notably in local politicians and civil servants. These findings point to an apparent disparity between aspired and actual effects of direct democracy initiatives on the (growing) subgroup of politically cynical citizens. We discuss the implications and provide suggestions for local policy-makers to enhance direct democratic practices.

32 - Do perceptions of injustice explain the endorsement of conspiracy theories?

Author(s): Camila Arnal, Olivier Klein, Régine Kolinsky

Abstract: In this presentation we will study multiple factors that influence conspiracy theory endorsement. We have several objectives: 1) To investigate the general mechanisms that influence the endorsement of conspiracy theories from an intergroup perspective; 2) More specifically, to shed light on how perceptions of social justice may lead individuals to endorse conspiracy theories; 3) To shed light on the impact of group identification, educational level, and political orientation on this relationship. We will present a study based on 393 US residents, in which we observe how group membership (minority vs. majority/white) influences the proclivity to endorse conspiracy theories. We conducted a multivariate regression with the indicators of procedural justice and distributive justice as predictors. In addition, we included: minority status (White vs. Minority) and Gender, Subjective SES and Education/Literacy level as predictors. We observed that people belonging to the minority group believe significantly more than majority in conspiracy theories. Also, based on Tyler and Blader's (2003) Group Engagement Model, we study how the perception of procedural justice impacts the belief in conspiracy theories. We observed that the higher the perception of procedural justice, the lower the adherence to conspiracy theories. We find that the subcomponent of procedural justice that is most important in the perception of procedural justice and consequently in the adherence to conspiracy theories is "quality of treatment", a variable measuring how individuals feel they are being considered and treated. In this research, we were able to replicate Tyler and Blader's (2003) model and apply it to endorsement of conspiracy theories. Also, we observed two variables that influence this relationship: level of education and political orientation. The higher the level of education, the lower the adherence to conspiracy theories. People who are further to the right on the political spectrum have a higher level of conspiracy belief.

33 - Unraveling the Web: Investigating the Influence of Information Consumption Habits on Conspiracy Beliefs in the Digital Age

Author(s): Myrto Pantazi, Olivier Klein, Régine Kolinsky

Abstract: Conspiracy theories have long intrigued and concerned society, prompting extensive psychological research into individual-level correlates of belief in such theories. More recently, interest has shifted towards understanding the consequences of holding conspiracy beliefs. A pressing question that remains unanswered is to what extent conspiracy beliefs stem from individual dispositions versus influences from the environment, particularly the informational environment. This inquiry gains significance in light of recent shifts in digital information consumption habits, where the absence of traditional gatekeepers has amplified exposure to false or conspiratorial information. We addressed this question by examining the extent to which individuals' information consumption habits shape their propensity to believe in conspiracy theories. A national representative study conducted in Belgium ($N = 2040$) incorporated measures of three distinct information consumption habits—consuming news, visiting online social media, and reading fiction—alongside assessments of individuals' conspiratorial beliefs. Our results suggest that individuals who frequently consume news exhibit lower levels of conspiratorial beliefs. Conversely, those who visit social media platforms more often tend to harbor conspiratorial beliefs. Interestingly, reading fiction showed no significant relationship with individuals' conspiratorial beliefs. These findings were obtained while controlling for a broad range of demographic variables commonly related to conspiracy beliefs, such as age, individual and parental education, and individual and parental profession. These findings suggest that individuals' information and news diets may play a pivotal role in shaping their conspiracy beliefs, opening interesting discussions around notions of content regulation in the battle against conspiracy beliefs and misinformation.

34 - Understanding attitudes as emergent social information systems that encode social identity; and polarization as an identity-imbued system configuration

Author(s): Michael Quayle

Abstract: I argue that attitudes are a social information substrate on which group identities are stored. Supported by several empirical studies, I demonstrate: (1) that group structure is embedded in attitude systems; (2) people are positioned by the attitudes they express; (3) the structure is dynamic, and peoples' positions shift as the system shifts around them; (4) in structured attitude systems, people can perceive each-others' positions with minimal information; (5) consequently, certain positions come to constitute "turf" belonging to one group or another. In such a system expressing, or engaging with, opinions in outgroup territory is at the risk of being misrecognized, and the social effect of expressing, or being seen to be holding, a particular set of opinions depends on those held by others in society. In this view, attitudes are a substrate on which social groups are stored, and issue-based polarization is a signal of group structure. Attitude change is thus identity change, at both the personal and social level. Using this recursive dynamic identity approach, I define social polarization as a state of an opinion system where particular configurations of attitudes, beliefs, values, etc., reliably distinguish between different group identities. The ability for people to position themselves and each-other in groups by the attitudes they express is a key interface between the social system and individual psychology, and this depends on the structure of the information system, and the ability of people to perceive and produce it.

Oral presentation session 5: Children and adolescents

Day: Thursday

Time: 17:10 - 18:30

Room: Auditorium I.0.01

35 - Visual context modulates the categorization of facelike visual stimuli in the young infant brain

Author(s): Laura BOURGAUX, Diane REKOW, Arnaud LELEU, Adélaïde DE HEERING

Abstract: Face pareidolia is the illusory perception of a face in ambiguous objects or patterns (e.g., clouds depicting a face shape; Wardle et al., 2020), as reflected by face-selective electroencephalographic (EEG) activity in both adults (Rekow et al., 2022a) and infants (Rekow et al., 2021). However, the perceptual interpretation of these facelike stimuli depends on the context in which they are presented (Rekow et al., 2022b; Bourgaux et al., in prep). Indeed, we recently developed a paradigm using a frequency-tagging approach – which allows for short and efficient recordings, has an excellent signal-to-noise ratio and is immune to most artifacts (Kabdebon et al., 2022; de Heering & Rossion, 2015) – to address this issue (Bourgaux et al., in prep) and we found that, in adults, face-like stimuli are more interpreted as faces in a non-face context and as non-face objects in a face context. Accordingly, here, we aim to explore how visual context shapes the perception of these facelike stimuli early in life. We thus measured scalp EEG activity in 4-to-6 months-old infants who were exposed to 20-second stimulation sequences of natural images presented at a rate of 6 images per second (6 Hz), with facelike items inserted every 5th image (at 1.2 Hz), and face or house items inserted every 4th image (at 1.5 Hz) in dedicated sequences, defining a visual face or non-face context, respectively. Preliminary data (N = 10 infants) reveal that the brain response to facelike stimuli is present in the young infant brain although weaker in amplitude than in adults. In addition, contrary to the adult responses, the infant response is also more face-like in the face context (with a typical occipito-temporal location of the response, as in Rekow et al., 2021) and shifts to a more occipital response in the non-face context. While these preliminary results still need to be consolidated (recruitment is ongoing), they suggest that the influence of visual context on the categorization of ambiguous, facelike stimuli changes throughout development, likely due to the effectiveness of perception at a given developmental stage.

36 - Impact of math anxiety and developmental dyscalculia on working memory performance in numeric and non-numeric contexts in school-aged children

Author(s): Erika Wauthia, Natacha Duroisin, Mandy Rossignol

Abstract: Many children encounter learning difficulties in mathematics, attributed to developmental dyscalculia (DD) or mathematics anxiety (MA), conditions associated with alterations in working memory (WM). However, to this day, little is known about WM abilities when DD and MA are cooccurring. This research aims to examine the specific and combined impacts of DD and MA on WM, varying cognitive load. 45 girls aged between 9 and 12, distributed into 4 groups (DD, MA, DD+MA, Control) participated in tasks involving consonant recall, mental calculations, and a combined task. The results reveal better performances for MA children than DD or DD+MA children across all tasks. Beyond challenging the literature on the impact of MA on arithmetic performance, data indicate more widespread WM deficits in DD and DD+MA children. Conversely, they suggest compensatory abilities in MA children, discussed within the framework of attentional control theory.

37 - Do mental health symptoms impair empathy between parental partners? Preliminary analysis of longitudinal dyadic data in a sample of parents of young children

Author(s): Anthony Mauroy, Sarah Galdiolo, Justine Gaugue

Abstract: Empathic accuracy (EA) is the ability to correctly infer the content of others' thoughts and feelings during an interaction. EA fosters relationship satisfaction and better communication in couples. However, mental health symptoms diminish partners' empathy by affecting their cognitive and emotional resources (e.g., emotional inhibition). Links between EA, depression, anxiety, and stress symptoms were examined in a sample of parents of children from 12 to 18 months. Parents with higher mental health symptoms were expected to be less empathetic toward their partner. Mental health symptoms (i.e., depression, anxiety, and stress) were collected at three time points (T1, children's age = 12 months, T2 = 15 months, T3 = 18 months) through online questionnaires. At T2, families engaged in a videotaped free play interaction. EA was assessed after the interaction via structured interviews, during which each partner watched the recorded interaction and described their thoughts and feelings. Preliminary analyses first suggest a positive correlation between partner's EA. Also, higher symptoms of depression, but not stress nor anxiety, were associated with lower EA toward the partner for father only. Consistent with the literature focusing on couple, impaired mental health can lead to decrease empathy in parental dyads. Gender differences between fathers and mothers will be discussed.

38 - Exploring the Interplay of Irritability and Anhedonia on Neural Responses to Reward in Young Adults

Author(s): Nella Bellaert, Federico Cassioli, Mandy Rossignol, Michael Crowley, Christen Deveney, Wan-Ling Tseng

Abstract: Irritability and anhedonia are two prevalent, co-occurring, and impairing symptoms of depression that have both been proposed to result from paradoxical dysfunctions in reward processing. While irritability is associated with increased reward responsiveness (Brotman et al., 2018), anhedonia is linked to blunted striatal reactivity to reward receipt (Borsini et al., 2020). How these two symptoms interact to affect reward responsiveness remains unclear. Therefore, this study aimed to investigate EEG measures (i.e., event-related potentials and time-frequency analyses) of reward responsiveness in young adults presenting varying degrees of irritability and anhedonia. Ninety-one participants ($M_{age}=21.37\pm 2.27$) completed two EEG paradigms involving monetary gain and loss. Irritability and anhedonia were measured via self-reported questionnaires, and the Feedback-Related Negativity (FRN) was used to assess reward responsiveness to gain and loss. Computation of time-frequency measures (i.e., Delta and Theta power to gain and loss) are underway and will be presented. A set of general linear models tested the unique and interacting effects of irritability and anhedonia on these EEG variables. We found a significant interaction effect of irritability and anhedonia on FRN to loss ($\beta=-0.04$, $SE=0.01$, $p<.001$), but not on FRN to gain. In individuals with high anhedonia, higher irritability was linked to larger FRN (i.e., more negative) to loss. This suggests that individuals with high levels of both irritability and anhedonia may respond more aversively to loss. These findings provide preliminary evidence of an interactive effect of anhedonia and irritability on neural responsiveness to loss, giving new insights into the complex pathophysiology of depression.

Oral presentation session 6: Sensory Integration and Social Cognition: Exploring Multi-modal Perception and Interaction

Day: Thursday

Time: 17:10 - 18:30

Room: lokaal I.1.03

39 - Shared Rhythm to Shared Vision: Synchronous Marching increases Conformity on Perceptual Decision making

Author(s): Manisha Biswas, Marcel Brass

Abstract: Interpersonal movement synchrony has been associated with self-reported measures of prosocial propensity toward the synchronised group and increased reliance on group opinion. Rituals such as military marching are likely motivated by the goal to increase group conformity. However, whether basic cognitive processes such as perceptual decision-making in groups is affected by synchronous movement remains unexplored. In this novel virtual reality experiment, we examined whether marching synchronously with a group can induce greater informational conformity on an unrelated perceptual task (forced choice random dot motion). We found higher reported levels of self-other blurring and crucially higher degree of conformity following synchronised marching on hard and ambiguous trials. This finding indicates that interpersonal synchrony may induce minimal group membership expressed via increased self-other blurring and conformity. Thus, participation in synchronised rituals has the capacity to change our perception of the world to align more closely with the synchronised group.

40 - Visual Braille in the visual brain: word processing in absence of shape cues

Author(s): Filippo Cerpelloni, Alice Van Audenhaege, Jacek Matuszewski, Remi Gau, Ceren Battal, Federica Falagiarda, Hans Op de Beeck, Olivier Collignon

Abstract: Shape processing is crucial for visual object understanding. Visual reading seems to be attuned to it, as most scripts share similar visual features like line junctions and shape cues. We investigate how the brain adapts to read visual Braille, a script developed for touch that does not share low-level characteristics of classical alphabets like line junctions. Braille has no explicit shape cues, yet it shares the linguistic properties of Latin scripts. We measured fMRI responses in expert readers of visual Braille and in a naïve control group. The visual word form area (VWFA) defined for a regular script was also strongly activated by visual Braille in expert readers only. On a multivariate level, we found a graded coding of linguistic properties of Braille in experts as it exists for regular scripts in all readers. In both groups, words can be decoded from other orthographic material based on the number of linguistic properties shared, while those linguistic properties can be decoded in visual Braille only in experts. Interestingly, cross-script decoding failed to reveal common representations across Latin and Braille scripts. Expanding to primary visual cortex (V1) and shape-selective areas (LOC) we observed, if present, lower univariate preference for Braille over scrambled dots. However, we found similar, albeit weaker, coding schemes to the one observed in VWFA. We conclude that linguistic regularities of a stimulus, rather than visual features of scripts, play a major role in how the visual system as a whole adapts to the demand of processing written material.

41 - Brain regions representing numerosity across the senses and across presentation formats.

Author(s): Ying Yang, Iqra Shahzad, Alice Van Audenhaege, Filippo Cerpelloni, Olivier Collignon

Abstract: Numerosity can be extracted from a plethora of situations: the number of pens on a table, of knocks on the door, of times a hammer hit a nail, or from the number that you see or hear when you need to find the track on which you train arrives. How does the brain compute the same numerosity (e.g. three) across modalities (e.g. auditory, visual) or format (symbolic or non-symbolic; simultaneous or sequential)? In particular, whether the mind and brain represent numerosity separately or similarly across format/modalities is still a matter of debate. We used fMRI to characterize the brain activity of participants processing numerical information (range 2-5) across modalities (auditory, visual) and format (sequentially and simultaneously; symbolic and non-symbolic) to collect a comprehensive mapping of numerical representation across multiple dimensions. Multivariate Pattern Analysis (MVPA) showed that a set of brain regions within the dorsal stream, from early stage of visual processing area V3b to lateral intraparietal area (LIP), can decode non-symbolic numerosity across format and modality. Cross-modal MVPA analyses additionally showed that the representation of auditory and visual sequential numerosity are aligned in the V3, parietal, and frontal regions; suggesting that a general coding of numerosity across the senses depends on shared (sequential) format of presentation. Our study shows that several dorsal brain regions encode absolute non-symbolic numerosity across senses and format, but only align the geometry of their response across the senses if the format of stimuli presentation is shared.

42 - Visual spatial reasoning and social anxiety: a tangram-based task in multiple social conditions

Author(s): Federico Cassioli, Mélanie De Leener, Nella Bellaert, Jim Draux, Tafath Abed, Vincent Mourier, Mandy Rossignol

Abstract: Social anxiety refers to symptoms of anxiety or fear in situations where a person may feel judged by others, or during a performance. As social anxiety is thought to have a deleterious effect on cognitive performance, we explored the effect of different interindividual settings on visual-spatial reasoning (VSR), the ability that allows the understanding of spatial relationships among objects in multiple dimensions. A further research objective was to validate our tangram-based task for the investigation of VSR in social settings.

After completing the Liebowitz Social Anxiety Scale (LSAS), participants were invited to the laboratory where they were asked to solve tangram puzzles alone, while being observed, and while cooperating with a same-biological sex confederate. The puzzles presented three ordinal levels of difficulty, purposely designed for this research. A set of post-trial visual analogue scales investigated the perceived difficulty, anxiety, and frustration. The experimental condition, the tangram difficulty, and stimulus assignment were pseudo-randomized. Data collection is ongoing. We hypothesize that the manipulated difficulty will affect the participants' self-reported experience, the performance time, and the rate of success. Also, we expect increased perceived difficulty, anxiety, and frustration reported by participants while being observed as compared to the cooperation and alone conditions. Lastly, we conjecture a positive correlation between the LSAS score and after-trial perceived anxiety and a negative one with performance metrics during observation.

This study may provide insightful evidence on the relationship between cognitive performance and social anxiety and support the use of tangrams in experiments involving interpersonal interactions.

Oral presentation session 7: Neuroplasticity and Sensory Integration: Insights from Brain Injury, Enhancement, and Hand Preference

Day: Friday

Time: 09:00 - 10:20

Room: Auditorium I.0.01

43 - The lesion neuroanatomy of spatial biases in head orientation post-stroke: A voxel-based lesion to symptom mapping study

Author(s): Jirka Liessens, Elise Palmans, Nora Tuts, Karla Michiels, Eline Note, Hanne Huygelier, Céline R. Gillebert

Abstract: Topic and Research Questions

Hemispatial neglect is a frequent consequence of unilateral stroke. Neglect patients tend to orient their trunk, head and eyes towards the ipsilesional side of space. It is currently unclear what mechanisms underlie spatial biases in body orientation. Previous studies interpreted head orientation biases as a marker of neglect, but it may be a general consequence of unilateral stroke. Alternatively, it may reflect a motor or attentional impairment. This study will examine the neural basis of post-stroke changes in head orientation.

Method

Unilateral stroke patients were recruited in a rehabilitation hospital. Patients performed a VR assessment (HEMIREhApp) with a head-mounted VR system in which targets had to be identified at different head-contingent eccentricities, while head orientation was monitored. Patients also performed a Posner cueing task, in which cued targets in the ipsi- or contralesional visual field had to be detected. Lesions were delineated on structural CT/MR-scans. Using voxel-based lesion mapping, we compared the association of lesion locations with (1) median head orientation and (2) spatial attention biases derived from the Posner cueing task.

Results

A total of 53 (34 right-, 19 left-hemispheric) stroke patients completed the VR assessment and the Posner cueing task. Right-hemispheric stroke patients had an average head orientation to the ipsilesional side that significantly differed from 0° (straight ahead), while no difference from 0° was found for left-hemispheric stroke.

Conclusion and Contribution

Uncovering the lesion neuroanatomy of biases in head orientation will help in understanding the mechanisms underlying post-stroke spatial biases.

44 - Vibrotactile enhancement of speech-in-noise perception at the cocktail party

Author(s): Ioana-Sabina Rautu, Xavier De Tiège, Mathieu Bourguignon, Julie Bertels

Abstract: Understanding speech in the presence of multiple speakers (i.e., cocktail-party scene) is challenging. In such scenarios, research has shown that visual speech cues can improve speech intelligibility, but the extent to which tactile speech input can also provide a beneficial effect remains unclear. In the current study, we present two distinct experiments which evaluated the effect of vibrotactile stimulation on speech perception in cocktail-party noise. Firstly, we measured 46 participants' speech recognition thresholds in audio-only and audio-tactile noisy conditions. The vibrotactile stimulation, presented congruently (i.e., synchronously) with the speech stream of interest, was provided to the palms either unimanually or bimanually. Secondly, 30 participants listened to four 6-min audio stories which contained speech presented in silence or embedded in noise, with and without additional unimanual vibrotactile stimulation. The vibrotactile input was either congruent or incongruent (i.e., random) with the attended speech. At the end of each story, participants answered comprehension questions related to each experimental condition. The first experiment showed a significant positive effect of vibrotactile stimulation on speech-in-noise recognition, with no significant effect of the stimulation location. The second experiment illustrated a significant effect of congruent vibrotactile stimulation on the percentage of correct responses to comprehension questions. Moreover, it highlighted the absence of a significant enhancing effect when the vibrotactile input is incongruent with the speech signal, as well as in the absence of background noise. Taken together, our results illustrate the potential role of the tactile modality to supplement speech-in-noise perception, even in complex cocktail-party auditory scenes.

45 - Multi-level reorganization in the temporal dynamics of sound processing in early blind people

Author(s): Siddharth Talwar, Stefania Mattioni, Eléonore Giraudet, Roberta P. Calce, Francesca M. Barbero, Collignon Olivier

Abstract: Early blindness triggers reorganization in brain networks that code for sound processing. How visual deprivation impacts the temporal dynamics of the different stages of auditory discrimination (acoustic to categorical coding) remains unexplored. We used electroencephalography (EEG) to characterize the time course of brain representation elicited by sounds belonging to eight categories in congenitally blind (CB) and sighted individuals (SC). Multivariate decoding analyses revealed enhanced sound decoding in CB from ~160 to 1000ms after sound onset, with a topography evolving along an anterior-to-posterior axis as the sound unfolded in time. To investigate which formats of sound processing were enhanced in CB, we used representational similarity analysis (RSA) with different sound models: (i) Modulation Transfer Function (MTF) simulating early stage of acoustic processing, (ii) layers of a deep neural network (DNN-YAMNET), (iii) models based on categorical membership of sounds and participant specific similarity ratings. MTF model peaked at ~200ms in the EEG of each group, with no differences between the two populations. Correlations between brain activity and specific DNN layers were enhanced in CB at ~200ms and at sound offset, likely representing modulations in intermediate acoustic processing. Categorical representation of sounds emerged at ~250ms in both groups, with CB showing an enhanced representation peaking at ~550ms. These results suggest that early blindness triggers features specific reorganization in brain networks coding for sounds at different time points, with enhanced intermediate-level acoustic discrimination earlier in time in more anterior regions, followed by an increased categorical coding of sounds in posterior regions.

46 - Variability in Hemispheric Segregation Patterns in a Large Sample of Left- and Right-Handers

Author(s): Guy Vingerhoets, Emma Karlsson

Abstract: The brain exhibits a characteristic pattern of hemispheric functional segregation, with language and praxis predominantly lateralised to the left hemisphere, while spatial attention and face recognition favour the right hemisphere. In this study, we explore the phenotypic diversity of hemispheric segregation patterns across these four lateralised functions on the individual level using fMRI. The sample comprised of 95 left-handed and 99 right-handed individuals, carefully selected to represent the adult Flemish population, with a deliberate enrichment of left-handedness. We find notable differences between right-handed and left-handed individuals. Among right-handers, 70% of individuals displayed the expected prototypical pattern of functional hemispheric segregation. In contrast, only 40% of left-handers exhibited typical lateralisation across all four functions. A striking 8% of left-handers showed a complete reversal of the prototypical pattern, a phenomenon not observed among right-handers. Additionally, approximately half of left-handers and 30% of right-handers displayed atypical patterns, deviating from the prototypical asymmetry pattern for at least one function. These findings underscore the substantial variability in hemispheric segregation, shedding light on the diverse range of hemispheric segregation phenotypes present in the human population. The clinical relevance of this finding for diagnosis and personalized (neurostimulation) treatment in left- and right-handers cannot be underestimated.

Oral presentation session 8: Exploring the Moral Landscape: Cross-Cultural Perspectives and Neural Correlates of Ethical Decision-Making

Day: Friday

Time: 09:00 - 10:20

Room: lokaal I.1.03

47 - The multidimensionality of moral identity - toward a broad characterization of the moral self

Author(s): Tassilo Tissot, Alain Van Hiel, Dries Bostyn, Leen Haerens, Bram Constandt

Abstract: Moral identity refers to the importance individuals place on morality as part of their self-concept and was introduced to bridge the gap frequently arising between moral judgment and action (Blasi, 1980). Previous research has examined measures attempting to capture moral identity and criticized most instruments for underestimating the concept's complexity (Jennings et al., 2015). Following this reasoning, we explored the multidimensionality of moral identity. In five studies (total N = 1,442), we compiled a comprehensive list of moral traits, analyzed their factorial structure, and established the relationships between the factorial dimensions and various outcome variables. The resulting measure of moral identity, the Moral Identity Profile (MIP), consists of 48 items grouped into four components that embody distinct dimensions of a person's moral identity: (1) Connectedness describes the desire to be connected and responsive to others, (2) Truthfulness represents the importance of truth and authenticity, (3) Care indicates the willingness to help and support others, and (4) Righteousness captures the importance of ethical values and justice. Employing correlation and regression analyses, relative weight analyses, and mediation analyses, we examined the MIP dimensions in relation to personality traits, indicators of prosocial and antisocial behavior, and relevant moral psychological concepts (Moral Foundations Theory and Morality as Cooperation Theory). The results showed the presence of distinctive relationships for the four dimensions and even yielded opposing effects, challenging previous unidimensional conceptualizations of moral identity. The implications of a multidimensional moral identity are discussed, and directions for future research on human morality are suggested.

48 - When the brain says “No!”: An MRI study on the neural correlates of resistance to immoral orders.

Author(s): Leslie Tricoche, Antonin Rovai, Emilie Caspar

Abstract: People’s ability to resist immoral orders is a fundamental aspect of individual autonomy and of democratic societies. Milgram’s studies mostly described psychological and contextual components which make an individual to obey or disobey immoral orders, but the neuro-cognitive processes that prevent an individual from being coerced into causing pain to others have almost not been investigated. By using a new protocol developed by E.Caspar, in a fMRI study we explored the neural signature of disobedience to immoral orders in 57 young adults. At each trial, participants received the instruction by the experimenter to send a shock or not to the victim’s hand (a confederate). Participants should decide to obey or not by pressing a key among two keypresses. Through a camera, participants saw the victim’s hand. If a shock was sent, participant saw a muscle twitch on the victim’s hand. Based on previous studies (Caspar et al., 2020, 2021), we particularly focused on three socio-cognitive (response conflict, sense of agency – SoA, and theory of mind – ToM) and two socio-affective (empathy and guilt) processes. Our results indicated that most individuals were able to refuse to send a shock, as more than 70% of them disobeyed in at least 10% of the trials where experimenter ordered to send a shock to a victim. Only participants disengaging angular gyrus and median prefrontal areas to mitigate response conflict between self and other and enhance their SoA, were able to focus on their moral judgment, ultimately disobeying experimenter’s instructions to send a shock to a victim. Additionally, we found that an involvement of social brain regions (encompassing ToM, empathy, and guilt areas), especially in response to shock events, favored subsequent disobedience. This study sheds light on the mechanisms that enable individuals to resist immorality.

49 - Commanding or being a simple intermediary: how does it affect moral behavior and related brain mechanisms?

Author(s): Kalliopi Ioumpa, Emilie Caspar, Valeria Gazzola, Christian Keysers

Abstract: Psychological and neuroscientific research has demonstrated that dividing operational tasks across multiple individuals within a hierarchical structure distributes responsibility and enhances antisocial behaviors. Here we present two studies, employing functional magnetic resonance imaging (fMRI) and electroencephalography (EEG), investigating the impact of commanding or occupying an intermediary hierarchical position on the sense of agency and empathy for pain. In the context of contemporary military technology involving drones, we investigated ordering both a human and a robotic executor. We utilized a paradigm where participants make decisions to administer or refrain from administering painful shocks to another participant in exchange for monetary rewards. The fMRI results showed that activation in brain regions associated with social cognition and empathy (as IFG, IPL and SII) remained consistently low when witnessing a victim experiencing pain, whether the participant had a commanding role or acted as a simple intermediary conveying orders, as opposed to being the direct executor administering the shocks. Findings revealed no significant difference in the sense of agency between commanders and intermediaries, irrespective of whether the executing agent was a human or a robot. An increased neural response, particularly in the P3 event-related potential, was observed when the executing agent was a robot compared to a human. EEG signal source reconstruction showed the involvement of areas such as the insula and ACC in mediating this effect. These results shed some more light on how hierarchical situations can facilitate the commission of actions that harm others as responsibility is reduced and split across multiple individuals.

50 - An Eastern Twist to a Western Dilemma: A Cross-cultural Moral Study with Action-Balanced Trolley-like Dilemmas

Author(s): Xinyi Xu, Dries Bostyn, Xiaopeng Ren, Arne Roets

Abstract: Research into moral judgement has predominantly focused on traditional trolley-like dilemmas, mainly building on Western philosophies and relying on WEIRD samples. However, this approach has introduced a potential Western-centric bias by a) implying an inherent opposition between utilitarian and deontological morality and b) underestimating cultural influence on the moral implications of inaction.

To address previous bias, our study aimed to explore cross-cultural differences in moral judgement by applying a more culturally-sensible methodology, administered to Chinese ($n = 273$) and American ($n = 240$) participants. We coupled each trolley-like dilemma with a counterpart that emphasizes inaction and asked participants to evaluate the moral appropriateness of the potential solutions in each scenario independently. In our approach, the study design allows balanced consideration of both action and inaction framings and separately analyzes utilitarian and deontological moral perspectives.

Our results revealed that Chinese participants possessed a more holistic moral construct with utilitarian and deontological moral approaches being positively correlated, whereas American participants viewed them as opposite to each other. Additionally, in contrast to previous studies with traditional methodology, our research demonstrated that Chinese participants actually were more utilitarian than American participants when balancing action and inaction in trolley-style dilemmas.

Our study contributes to cross-cultural morality research by challenging the Western-centric methodology and assumptions in traditional trolley dilemma research. With a culturally sensitive method, we demonstrated previously overlooked cross-cultural influences in moral judgement. This highlights the importance of developing inclusive approaches rather than merely extending Western frameworks to other cultural contexts.

Oral presentation session 9: Neural and Physiological Responses: Advances in Aphasia, Sleep, and Sensory Processing

Day: Friday

Time: 14:00 - 15:20

Room: Auditorium I.2.01

51 - Validation of the Brief Evaluation of Receptive Aphasia (BERA) tool in post-comatose patients: Preliminary data

Author(s): Charlène Aubinet, Amandine Regnier, Pauline Fritz, Marion Pauls, Paolo Cardone, Olivia Gosseries, Steve Majerus

Abstract: The Brief Evaluation of Receptive Aphasia (BERA) is a new tool to assess receptive phonological, semantic and morphosyntactic abilities in patients with severe brain damage, based on visual fixation of a target image next to a specific distractor. We here aim to provide preliminary validation data regarding the administration of the BERA in post-comatose patients with preserved visual functions. The BERA and Simplified Evaluation of CONsciousness Disorders (SECONDS) were administered to 25 patients (17 in minimally conscious state and 8 emerging from the minimally conscious state) on two consecutive days, by two blinded raters, to determine the validity and reliability of the BERA. Two versions of BERA with different items were administered. We calculated Spearman and intra-class correlations to define validity and reliability. Very strong and strong correlations were found between versions 1 and 2 of the BERA (internal validity: $r=0.83$; $p<0.001$) and between BERA scores and a language score extracted from the SECONDS assessment (concurrent validity: $r=0.65$; $p<0.001$). Good intra- and interrater reliabilities were also observed (respectively: $r=0.67$; $p<0.001$, and $ICC=0.97$). These preliminary data suggest that the BERA may complement the SECONDS for assessing language impairments and diagnosing consciousness disorders. The BERA scores may also indicate selective receptive difficulties for phonological, semantic and morphosyntactic abilities, which would help to orient speech-language therapies.

52 - The embodiment of sleep functions: insights from cardiac responses to sounds

Author(s): Matthieu Koroma, Paradeisios Alexandros Boulakis, Federico Raimondo, Christine Blume, Mélanie Strauss, Jonas Beck, Christina Schmidt, Björn Rasch, Athena Demertzi

Abstract: Cardiac signals, often recorded in cognitive studies during sleep, are typically neglected from analyses. We advocate here that they contain meaningful information about sleep functions. To do so, we demonstrate that cardiac responses to sounds hold valuable and irreducible information about stimulus processing during sleep.

We first analyzed two datasets (<https://doi.org/10.1073/pnas.1501026112> [<https://doi.org/10.1073/pnas.1501026112>] [<https://doi.org/10.1093/sleep/zsac199>]) presenting an auditory local-global paradigm – a modified version of the classic oddball – during sleep. We show that cardiac activity accelerates to local deviants (corrected Wilcoxon test: $z=-0.27$, corrected $p=0.029$) in NREM sleep and decelerates to global deviants ($z=0.26$, corrected $p=0.038$) in REM sleep. This double dissociation between complexity levels of error detection across sleep stages diverge from previously reported magnetoencephalographical and electroencephalographical findings.

Second, we analyzed a study showing that presenting relaxing words during NREM sleep induce a deeper sleep and a better sleep quality (<https://doi.org/10.1093/sleep/zsab148> [<https://doi.org/10.1093/sleep/zsab148>]). We found that cardiac activity slows down upon hearing relaxing (17.5ms, $p=0.037$), but not control words (-4.6ms, $p=0.561$, relaxing vs. control: $z=0.29$, $p=0.040$). We also show that cardiac signals contribute independently to sleep modulation compared to cerebral signals (part of variance explained without ECG:18% vs. with ECG:28%, model comparison test: $p=0.030$). We further promote our approach by freely sharing our methodology as a tutorial on Gitlab (https://gitlab.uliege.be/Matthieu.Koroma/cardiac_relaxation_beck) [https://gitlab.uliege.be/Matthieu.Koroma/cardiac_relaxation_beck] with data available at OSF (<https://osf.io/jn7ar/>) [<https://osf.io/jn7ar/>]). Overall, our results offer new empirical evidence supporting the embodied nature of stimulus processing during sleep. They also highlight the relevance of including cardiac signals in our understanding of sleep functions and their modulation by sensory stimulation.

53 - Characterizing layer-dependent activity of visual and auditory motion in hMT+/V5 of blind and sighted individuals using ultra-high-field fMRI (7T)

Author(s): Marco Barilari, Jacek Matuszewski, Remi Gau, Eléonore Giraudet, Marc Van Baelen, Siya Sherif, Renzo Huber, Olivier Collignon

Abstract: hMT+/V5, a region long thought to specialize for visual motion, also responds to auditory motion insighted and even more so in congenitally blind people. The mechanisms behind auditory motion information transfer to the “visual” motion area insighted and congenitally blind individuals remains unknown. Our study characterizes layer-dependent activity to visual and auditory motion in hMT+/V5 and Planum Temporale (hPT) of blind and sighted individuals using ultra-high-field fMRI (7T), in order to define the feedback or feedforward nature of information exchange in this audio-visual motion selective network.

In sighted people, we hypothesize that hMT+/V5 and hPT receive feedforward visual and auditory input in middle layers, respectively; and send feedback signals to superficial and/or deeper layers of the counterpart motion area. Additionally, we aim to explore how these feedforward and feedback connections reorganized due to visual deprivation.

To do so, we relied on ultrahigh-field 7T fMRI with VASO submillimeter resolution acquisition involving both sighted (n. 12) and blind individuals (n. 10) processing horizontal and vertical motion stimuli presented in vision (in the sighted group) and audition (in both groups). Preliminary findings from a subset of participants (n. 3 per group) suggest prevalent visual feedforward activity within hMT+/V5 for sighted participants and a similar feedforward activity for auditory input among blind individuals. Further analysis will validate these findings and explore directional motion encoding across layers, modalities and motion areas in both groups.

Oral presentation session 10: Confidence and decision making

Day: Friday

Time: 14:00 - 15:20

Room: Auditorium I.0.01

54 - Changing minds, shifting biases: investigating confirmation bias dynamics in the face of changing opinions

Author(s): Charlotte Anckaert

Abstract: People tend to discount information that contradicts their own belief, a phenomenon called confirmation bias. People are also influenced by how strongly or confidently new information is shared. Kappes and colleagues explored the relation between confidence and confirmation bias. Participants were allowed to update their confidence in a belief after receiving new information from another person that (dis)confirmed their initial belief. The information was expressed with varying levels of confidence. A confirmation bias was observed but interestingly, the strength of the new information was considered only if it was confirming. In real life, however, besides updating confidence in beliefs, we also have the possibility to change the belief itself. It is currently unknown what changing beliefs does with confidence in beliefs. We investigated this question in two studies. A first study replicated Kappes et al. while a second study added the option to change the belief. Both studies replicated the finding that another's belief strength is only considered when the information is confirmatory. However, an overall confirmation bias was not observed. Instead, it appeared as an interaction with confidence: a regular confirmation bias occurred when the other person was more confident and reversed when the other was less confident. Finally, when participants changed their belief, a large drop in confidence was found. The largest drop was observed when the other person was less confident. These findings highlight that the confirmation bias is a social construct, defined by the belief strength of another person and sensitive to belief change.

55 - Learning how to compute confidence

Author(s): Pierre Le Denmat, Kobe Desender, Tom Verguts

Abstract: When making a decision, individuals tend to be more accurate when they report higher confidence in their decision. This observation led to the proposal that confidence reflects the posterior probability of making a correct response, given relevant data. In the drift diffusion model framework, this probability is determined by both the total amount of evidence sampled and accumulation time. To adequately compute confidence, one thus needs to learn the proper mapping from their readout of their decision process (i.e. evidence and time) to the corresponding probability of the decision being correct (further referred to as confidence mapping). The exact mechanical underpinnings of this learning process are still mostly unknown, as current computational models of confidence often implicitly assume this learning to be terminated. In this work, we present a new modelling framework where the confidence mapping is instead continuously updated according to feedback. We tested this model as well as the proposal that humans learn the confidence mapping from feedback in two perceptual decision making experiments where participants were alternating between two different feedback contexts. As predicted, confidence ratings progressively increased (resp. decreased) after switching into high (resp. low) feedback blocks, while objective performance (i.e. accuracy and reaction time) was not affected by feedback. Importantly, our learning model was able to precisely capture this evolution of confidence over time. Overall, this work highlights the importance of taking into account the dynamics of the computation of confidence, and sheds new lights on how confidence biases and other metacognitive inefficiencies may emerge.

56 - Confidence-informed belief state informs decision policy

Author(s): Luc Vermeulen, Tom Verguts, Tobias H. Donner, Kobe Desender

Abstract: Adapting decision-making strategies to the task context is crucial for efficient behavior. Rational humans should adjust their level of caution based on perceived task difficulty, being less cautious and make rapid decisions in easy tasks and being more cautious and avoid errors in hard tasks. In the absence of external feedback, participants likely base their decision policy on an internal belief about the difficulty of the current task. However, what then determines the belief state regarding the difficulty of the current task? We propose that the accumulation of decision confidence, i.e., the internal estimate of accuracy, shapes one's belief state, which subsequently informs decision policies. To test this, participants performed a random dot motion task where task difficulty (easy vs. hard) unpredictably switched. On each trial, participants rated their decision confidence, and periodically, participants indicated their belief with respect to the task context. To model the dynamics of context beliefs, we compared various models, where different measures were used as sources for belief updating (e.g., confidence, accuracy and (confidence) response time). Confidence-based models provided the best fit to the observed belief patterns, outperforming the alternative models. We observed a contextual modulation of performance by model estimated belief: using drift diffusion modeling, we show that higher drift rates were associated with believing the current task is easy (contrary to our expectations, there was no association with decision boundaries). Together, these results show that confidence shapes contextual beliefs and subsequent latent decision-making parameters.

57 - Decision confidence is sensitive to trial-by-trial fluctuations in decision criterion

Author(s): Lara Navarrete-Orejudo, Robin Vloeberghs, Kobe Desender

Abstract: Many of the choices we make are accompanied by a sense of confidence. Traditionally, confidence has been conceptualized as the distance between a decision variable and a static decision criterion. However, recent work challenges the notion of a static decision criterion, suggesting instead that the criterion is subjected to non-stationarity and undergoes trial-by-trial fluctuations. Based on the distance-to-bound hypothesis, these slow fluctuations are expected to induce slow fluctuations in confidence. We tested this hypothesis using data from Shekhar and Rahnev's (2021) study, where 20 participants judged the orientation of Gabors with varying contrast levels and reported trial-by-trial confidence. Trial-by-trial estimates of slow drifts were obtained using the Hierarchical Model for Fluctuations in Criterion (hMFC, Vloeberghs et al., in prep.). Using linear mixed models, we found that confidence was best explained by a model including evidence direction (the Gabor orientation), evidence strength (the Gabor contrast), and the estimated criterion. As predicted, we found a crucial interaction between evidence direction and the estimated criterion, showing that confidence is affected by slow fluctuations in decision criterion. Our results suggest that what has been previously referred to as metacognitive noise, might instead reflect variability caused by slow fluctuations in decision criterion.

Oral presentation session 11: Applied psychology

Day: Friday

Time: 14:00 - 15:20

Room: lokaal I.1.03

20 - Stages of Parental Burnout and Their Link to Violence Towards the Offspring: A Longitudinal Cross-Lagged Study

Author(s): Alice Schitteck

Abstract: Background:Parental burnout's (PB) literature has blossomed, showing that PB is a major predictor in child maltreatment. But it is unclear at what PB stage parents become violent. Methods:675 parents answered a pre-registered three-wave longitudinal survey. Results: PB is a developmental process that starts with exhaustion. Feeling fed up mediates the relationship between exhaustion and emotional distancing. All PB symptoms directly increase violence, but contrast and feeling fed up have the largest impact on violence. There is also a process that leads to violence: exhaustion increases feeling fed up, which then increases violence. Conclusions:Researchers would benefit from focusing more on the symptoms of PB, to increase nuance and give even more concrete suggestions for clinical practice. Clinicians should focus on reducing exhaustion as it seems to be the starting point of PB, and be alert to child maltreatment when any PB symptom is mentioned. Implications are discussed.

NOTE:I will not be able to attend on the 30th of May, could my presentation be moved to the 31st? Thank you.

58 - The Dutch COVAT_Anto test: The evaluation of Comprehension-Knowledge in selection contexts

Author(s): Sophie De Grauwe, Katrijn Van Parijs, Steven Joris

Abstract: The COVAT_Anto is being developed within the CHC-model of intelligence in a collaboration between Cebir and Thomas More. The test elaborates on the COVAT intelligence tests, which are aimed at children in an educational context. It builds on one COVAT subtest: Antonyms, in which participants need to recognize the word most opposite in meaning to a given word. This way, the test measures Comprehension-Knowledge(Gc): the ability to understand and communicate knowledge, including language. Our aim is to transform the original classical test into a computerised adaptive test to enable remote online testing of adults in selection contexts.

First, we combined the 45 Dutch items of the original test with 51 new Dutch items. Then, we collected data on them in the experimental COVAT_Anto test (N=138). Next, we applied Rasch analysis to these data and created 25 new Dutch items. The new items (plus 4 existing “anchor” items) are now being tested in another experimental test, in which participants have to solve the items and rate their difficulty.

By combining accuracy and difficulty ratings of both new and anchor items, we will be able to estimate the difficulty parameters of the new items. This will allow us to integrate the new items with the items of the first test.

The final COVAT_Anto will have enough items of a wide range of difficulties to estimate a wide range of participant abilities. Due to the adaptations to the original subtest, quality assessment of adults' Gc will then be possible within selection contexts.

59 - Does variability in personality states relate to feeling authentic: a dynamic systems approach

Author(s): Femke Legroux, Yuko Junius, Tim Vantilborgh

Abstract: Background

Authenticity is often described as a sense of alignment with one's true self. This led to the development of the 'state-trait' hypothesis, suggesting that individuals who act in accordance with their inherent traits are likely to feel more authentic. In this study, we examine this hypothesis by applying a dynamic systems approach. We investigate how personality variability and attractor strength relate to authenticity, focusing on an individual's (ideal) trait and state level of authenticity, and considering potential mediators (positive and negative affect).

Method

We collected data from 198 psychology bachelor students using an Experience Sampling design. Participants completed a general survey measuring Trait Personality, Trait Authenticity, and Ideal Trait Level, followed by 8 daily experience sampling surveys over the course of 7 days (56 measurement moments per person). In total, we collected 5028 valid measurements, which were analyzed using Bayesian Hierarchical Ornstein-Uhlenbeck Modeling - and polynomial regression models.

Results

We found no support for the state-trait hypothesis, and found no interaction effects between attractor strength and variability. Furthermore, no congruence effect between (ideal) personality traits and momentary feelings of authenticity was found. However, a significant mediation effect of positive affect in the relationship between (ideal) personality traits and momentary feelings of authenticity was observed.

Conclusion

Our study pioneers the application of a dynamic systems perspective to authenticity, offering valuable insights. First, it offers a more detailed perspective of the temporal nature of fluctuations in personality states and its effects on authenticity. Second, by integrating the HEXACO model of personality traits, we expand the scope of research on authenticity.

60 - Examining Personal Values and Regulatory Fit in Poverty Alleviation Appeals: Impact on Appeal Evaluation, Campaign Interest, and Donations

Author(s): Karl-Andrew Wolpin, Joanne Sneddon

Abstract: Past work suggests that that matching messages' framing to people's regulatory focus (i.e., regulatory fit) affects their persuasiveness and liking, with downstream consequences including charitable donations. At the same time, people's value priorities influence charity donation decisions. We examined joint effects by measuring participants' (a) promotion focus on aspirations and gains versus prevention focus on obligations and losses and (b) their prioritization of the universalism-concern value. Participants (N=705) then read promotion- or prevention-framed appeals to act on poverty emphasizing universalism-concern by highlighting poverty-related inequality. They then evaluated the appeal, stated whether they wanted to receive materials on campaigns seeking to alleviate poverty, and could donate part of their remuneration to charities targeting poverty alleviation or other causes. Participants prioritizing universalism-concern evaluated the promotion-framed appeal more favorably the stronger their promotion focus was. A similar effect did not emerge for prevention-framed appeals, dovetailing past work on asymmetric regulatory fit in evaluative judgments. More importantly, only universalism-concern value prioritization predicted both interest in campaign materials and actual donations to poverty-focused charities (vs. to other charities or not donating at all). Furthermore, promotion-framed appeals predicted donations. Overall, employing promotion framed appeals when advocating for poverty alleviation thus seem advisable, but more important is an emphasis on content congruent with the universalism-concern value. These findings are consistent with work showing that the principle of „care“ (an individual trait) is consistently related to charitable giving, regardless of the framing of appeals, and indicate that in this context the importance of framing might have been overestimated.

Oral presentation session 12: Multifaceted Approaches to Diversity and Adjustment

Day: Friday

Time: 15:30 - 16:50

Room: Auditorium I.2.01

61 - An Empirical Investigation of Secondary Transfer Effects of Contact Among Five Ethnic-Cultural Minority Groups in the Netherlands

Author(s): Kim Dierckx, Loris Vezzali

Abstract: Although the relationship between direct intergroup contact and prejudice has received pervasive scholarly attention, research on the secondary transfer effect (STE) – whereby positive contact experiences with primary outgroups generalize and promote tolerance towards secondary outgroups (outgroups uninvolved in contact) – is still in its infancy. In particular, only a handful of studies have explored inter-minority STEs, i.e., transfer effects of contact between two minority groups on attitudes towards secondary minority groups. Therefore, concerns about the robustness, the generality, and the underlying psychological mechanisms of STEs in an inter-minority context remain unaddressed. To tackle these gaps in literature, in the present contribution we investigated STEs in a large, representative sample (N= 5,157) of first- and second-generation immigrants pertaining to five different ethnic-cultural groups living in the Netherlands. Overall, our results revealed a small but robust inter-minority STE. It was further revealed that attitude generalization (i.e., enhanced attitudes towards the primary outgroup) was an explanatory process variable. Follow-up analyses further demonstrated significant intergroup STE variation in terms of the strength of the observed effects, as well as in terms of which primary and secondary outgroups produced the strongest STEs. Taken together, the present results contribute to literature by showing the robustness of inter-minority STEs in the super-diverse Dutch context.

62 - Navigating Intersectionality: Therapist Engagement with Religious and Ethnic Identities in Psychotherapy and the Relationship with Working Alliance

Author(s): Hilde Depauw

Abstract: In an effort to increase therapy effectivity, especially for clients that identify as minority members, much research attention has been granted to therapists' management of cultural processes in therapy. To date, research has demonstrated that therapists often lack practical guidelines to actively attend to the constellation of minority clients' identities and provide adapted care. As a result, clients conceal parts of their identities, worldviews and experiences, and therapists run the risk of misdiagnosing and implementing unadopted interventions, as the client's views on mental health and illness, causal attributions, symptom presentation and (social) meaning are rooted in the constellation of their identity. The current study focuses on clients who identify at the intersection of religious and ethnic minority backgrounds. By studying the association between client reports of the quality of the therapeutic alliance and how therapists engage in dialogues about clients' religious affiliation and ethnic background in relation to their concerns, the aim is to explore how therapists can integrate intersectional sensitivity into their clinical practice. Data for this study consisted of 254 religious ethnic minority members who had received at least one session of psychotherapy in the last 6 months and responded to an online survey about their experience in therapy. Preliminary analysis revealed that therapists are more reluctant to talk about religious affiliation compared to ethnic identification, especially with Muslim compared to Christian clients. Moreover, results indicate that therapists' ability to attend to both identities, rather than one, is positively reflected in clients' reported quality of the therapeutic relationship. Qualitative analysis of open-ended survey questions further contributed to the understanding of clients' subjective experiences with ethnicity and religion related conversations in therapy.

63 - Dyadic processes and adjustment of couples experiencing a neurodegenerative disease: a meta-synthesis

Author(s): Charlotte Manceau, Pascal Antoine, Justine Deleruyelle, Pierre Gérard

Abstract: Topic and research question: Neurodegenerative diseases (NDDs) pose significant challenges to couple relationships. Existing research has predominantly focused on the impact of Alzheimer's disease (AD) on various types of dyads, resulting in significant advances in the field. However, despite a keen interest in transdiagnostic approaches, a comprehensive review addressing dyadic processes underlying the functioning of couple relationships across different NDDs is lacking. This meta-synthesis aimed to fill this gap by identifying, analysing, and integrating findings from qualitative studies examining couples facing different NDDs.

Method: Searches were conducted in four databases, identifying 35 articles meeting several inclusion criteria, for example focusing on relational aspects of the functioning of adult couples in which one member was diagnosed with an NDD, or using a dyadic qualitative design. A thematic synthesis was performed, identifying three interdependent themes.

Results: The first theme "Disease-related challenges" emphasized that stress, social changes, the perception of time, and uncertainty are major challenges for partners. The second theme "Dyadic interactions" showed how dyadic interactions are disrupted, and how certain elements such as affection compensate for the transformation of communication. The third theme "Dyadic identity" emphasized how partners strive to maintain their shared identity, shared perspective, and decision-making, despite the progressive loss of the relationship's core components.

Conclusion and contribution: This synthesis highlights key implications for clinical practice and future research, including the need to integrate disease-specific characteristics into interventions and understand the couple's functioning patterns and their evolution throughout the disease.

64 - Group-based Versus Individual Parenting Programs: A Meta-Analysis of Effects

Author(s): Louise Mathijs, Stijn Van Petegem, G.J. Melendez-Torres, Sophia Backhaus, Frances Gardner, Patty Leijten

Abstract: Parenting programs aim to motivate change in parents' behaviors, perceptions, and knowledge to promote desirable changes in children's adjustment and behavior. Although parenting programs are typically delivered in a group-based or individual format, it is unknown which format most effectively enhances parenting behaviors, parenting stress, and parental depressive symptoms. On the one hand, group-based programs may be more effective since they provide access to peer-based support. On the other hand, individual programs may be more successful since they offer a tailored approach. Furthermore, which delivery format is more effective may depend on the outcome of interest. Therefore, this meta-analysis investigated which delivery format is most effective in optimizing child behavior management (i.e., positive reinforcement and non-violent discipline) parenting stress, and parental depressive symptoms. Studies were selected from the systematic review by Backhaus et al. (2023). Our sample included evaluations of 122 group-based and 43 individual programs. Robust variance estimation indicated that parents' child behavior management and parenting stress improved in both delivery formats. In contrast, parental depressive symptoms improved only in group-based programs. Our findings suggest that whether parents benefit more from a group-based or individual program depends on the aspect they want to address. Therefore, clinicians should aim to fully comprehend parents' goals in order to effectively guide them towards the most appropriate type of support.

Oral presentation session 13: Intersections of Emotion, Cognition, and Identity in Psychological Development and Perception

Day: Friday

Time: 15:30 - 16:50

Room: Auditorium I.0.01

65 - From Frustrated Relatedness to Extremist Attitudes: The Mediating Role of Aggression

Author(s): Milena Waterschoot, Joachim Waterschoot, Arne Roets

Abstract: Violent extremism presents a pervasive threat to societies. Given that violent extremism tends to be group-based, we focus on the process that makes individuals susceptible to joining extremist groups. For this, we build upon the significance quest theory. This theory states that when individuals feel insignificant, a quest is activated to restore a sense of significance. Restoring feelings of significance can be achieved in multiple ways, but a primordial one is through aggression. Extremist groups are believed to encourage the expression of this impulse by providing opportunities for significance restoration through aggressive means. To test this hypothesis, we build a model with aggression as a mediator between feelings of insignificance and extremist attitudes. Additionally, we explored the moderating effects of two personal characteristics—simple knowledge beliefs and empathic concern—on the aggression-extremism relationship. Through a survey study ($n= 734$), we tested our model. Significance loss was conceptualized through the self-determination theory as frustrated autonomy, relatedness, and competence. Frustrated relatedness was the strongest predictor of extremist attitudes. Furthermore, partial mediation through aggression was established, especially for participants with high levels of simple knowledge beliefs and low levels of empathic concern. These findings demonstrate that, through aggression, frustrated relatedness can enhance extremist attitudes. Moreover, simple knowledge beliefs and empathic concern can further strengthen/weaken this relationship through their moderating role on aggression. In sum, the current study furthers our understanding of the intrapsychological process that increases susceptibility to extremism and the important role of individual differences herein.

66 - The relationship between identity functioning and early maladaptive schemas in emerging adults: a network-analytical approach.

Author(s): Jakke Coenye, Kristof Hoorelbeke, Sandra Verbeken, Wim Beyers, Lien Goossens

Abstract: Identity development is a core developmental task in emerging adulthood (Arnett, 2000; Erikson, 1950) which an increasing amount of research points to as being an important factor in understanding psychopathology in this age group (Schwartz et al., 2011). However, as of yet, a strong theoretical framework explaining this relationship is lacking. Based on the works of Jeffrey Young (2003), who argues that not being able to cope with developmental tasks may result in maladaptive schemas, this study uses schema theory as such a framework. This exploratory study used network analyses to map the complex relations between measures of identity functioning and maladaptive schemas in a sample of 711 emerging adults. The results revealed that, while healthy identity functioning (i.e. 'identity synthesis') was not directly related to any maladaptive schemas, unhealthy identity functioning (i.e., 'identity confusion', and, in particular, a 'lack of identity') was associated with schemas centering around the themes of disconnection/rejection and autonomy.

67 - Phenomenology of autobiographical and vicarious memories of friends and family members across the lifespan

Author(s): Aline Cordonnier

Abstract: Most people can recount personal memories of events they did not directly experience but were relayed to them by friends or family members. These narratives, termed vicarious memories, show phenomenological similarities to autobiographical memories. However, it is not clear whether all vicarious memories are similar. In our study, we investigated the phenomenological aspects of autobiographical memories in contrast with those of vicarious memories associated with partners, parents, and grandparents across both younger and older participants. Through an online questionnaire, participants were prompted to describe one event for each memory type and provide ratings on Likert scales measuring vividness, intensity of positive and negative emotions, belief in accuracy, importance, and thought frequency. For vicarious memories, participants also indicated the perceived closeness with the memory owner. Our results show that vicarious memories resemble autobiographical memories but to a lesser phenomenological level. Furthermore, when comparing different categories of vicarious memories, those involving family members were deemed more significant than those involving friends. Additionally, we found a positivity bias in memories involving grandparents. Interestingly, our results suggest that the closeness of the relationship impacts the phenomenology differently depending on the type of relationship. Finally, we did not observe significant differences associated with age. We conclude with a reflection on the conceptual relationship between self-related memories and those involving others, suggesting that exclusive focus on self-memories in research may not be necessary or beneficial.

68 - Exploring the Role of Valence in Conscious Perception: Insights from Similarity Judgments and Deep Learning Models

Author(s): Inès Mentec, Ivan Ivanchei, Axel Cleeremans

Abstract: Recent theories claim that valence plays an important role in conscious perception (Cleeremans & Tallon-Baudry, 2022, Barrett & Bar, 2009). Inspired by these theories, we tested how valence judgments are related to similarity judgments and whether they correlate with different stages of processing in deep neural networks (DNNs). More specifically, we focused on micro-valence, i.e. valence of presumably neutral everyday objects.

Forty-seven participants provided similarity judgments for 120 images of everyday objects using the odd-one-out task. Using the birthday task (Lebrecht et al., 2012), we also collected affective judgments for the same 120 images. Finally, for the same images, we extracted activations from the layers of DNNs trained to classify objects.

Leveraging representation similarity analysis, we first compared affective and similarity judgments. We found that affective processing was correlated with similarity processing, indicating that valence contributes to similarity judgments. This result was confirmed by multidimensional scaling analyses that highlighted the role of valence in the similarity space.

DNN analysis showed that perceptual features of the stimuli contributed to both valence and similarity processing. Most importantly, valence processing correlated with activations in the first DNN layers, indicating that low-level visual features take part in the computation of valence in everyday object perception.

These results indicate that valence computation may be present already in early visual processing. They also show that valence is involved in similarity judgments, suggesting a link between affective experience and cognitive tasks, corroborating recent claims for the functional role of affective conscious experience (Cleeremans & Tallon-Baudry, 2022).

Oral presentation session 14: Integrating Affect and Cognition: Insights from Psychophysiology, Problem-Solving, and Confidence Judgments

Day: Friday

Time: 15:30 - 16:50

Room: lokaal I.1.03

69 - Autonomic arousal states alters mind-blanking report frequency

Author(s): Paradeisios Alexandros Boulakis, Nicholas John Simos, Stefania Zoi, Christina Schmidt, Federico Raimondo, Athena Demertzi

Abstract: In this registered report (<https://osf.io/nfcvu/> [<https://osf.io/nfcvu/>]), we examined whether the inability to report any immediate content, termed mind-blanking (MB), can result from the manipulation of a person's current physiological state. In a repeated-measures design, 26 participants performed an experience-sampling task (40 trials; inter-probe interval=110s) under different autonomic arousal conditions while multimodal brain-body recordings were taking place. During baseline measurements, participants reported their thoughts by opting across a) sensations, b) mind-wandering, and c) blank. The protocol was repeated in counter-balanced order in a high-arousal (post high-intensity exercise) and a low-arousal condition (post 8-hour sleep deprivation). According to our hypothesis, MB reports were increased in the low arousal condition compared to baseline ($b=-.794$, $pFDR<.000$) and high arousal ($b=-.968$, $pFDR<.000$). We found partial evidence for a temporary increase of blanks during the high arousal condition that did not last across the experience-sampling session. Utilizing a machine learning approach, we further showed that a balanced random-forest classifier can decode MB reports from a brain-body matrix above chance level (balanced accuracy = .66), and outperforms classifiers trained solely on brain (balanced accuracy = .64) or body (balanced accuracy = .61) features. This result was maintained when the classifier was trained on separate arousal conditions, and when considering different analysis windows. Our results suggest that MB is an arousal-modulated mental state and that peripheral physiology carries unique information about MB that cannot be encapsulated solely in brain activity. Overall, we show that an embodied approach provides greater explanatory power in understanding MB.

70 - When cognition overshadows affect, maladaptive information-seeking arises

Author(s): Irene Cogliati Dezza

Abstract: In today's digital age, people have unprecedented access to vast amounts of negative information such as news about wars, environmental disasters, or economic collapse. While some people selectively avoid such distressing content, others persistently immerse themselves in such information, even to the detriment of their well-being and mental health – a phenomenon commonly known as doomscrolling.

Here, we introduce a novel reinforcement learning model and empirically test its predictions to shed light on the origins of this maladaptive information-seeking behavior. First, by simulating human data, we showed that doomscrolling arises when the motivation to reduce uncertainty is higher than the motivation to improve affect through information-seeking; a pattern we term the “doomscrolling fingerprint”. Next, we tested these predictions in the real population using data from an information-seeking task ($N = 190$) and a follow-up survey ($N = 95$). Consistent with our model's predictions, participants who presented a doomscrolling fingerprint sought more negatively valenced information when performing the information-seeking task. Most importantly, these participants reported a greater incidence of doomscrolling in real-life behavior.

Our study takes a significant step toward unraveling the intricate psychological mechanisms behind maladaptive information-seeking behaviors prevalent in today's digital age, paving the way to future behavioral interventions.

71 - Validation of the Insight/Non-Insight Problem Solving Self-Report Procedure via Clustering Algorithms

Author(s): Alessandro Mazza, Hans Stuyck, Axel Cleeremans, Eva Van den Bussche

Abstract: Sometimes, problems are solved with a sudden leap of understanding, which is often met with an Aha! Experience. Initially, we tend to employ analytical strategies to solve problems (non-insight). Studying insight has proven difficult because of its elusive nature. An often-used procedure to identify whether insight occurred is relying on participants' insight/non-insight self-reports after each solved problem. However, it remains unclear whether insight and non-insight are consistently identified similarly across participants, and on which features this classification is based (e.g., solution confidence). We argue that if the solution types derived from self-reports are consistent, we should also be able to detect them as naturally occurring clusters in the data, independently from self-reports. To address this, we asked participants ($N = 65$) to complete word puzzles solvable with insight and non-insight. Participants tracked their closeness-to-solution while problem-solving. After each solved problem, they completed the insight/non-insight self-report, and then indicated their confidence in the solution, and the insight intensity. We applied several clustering algorithms based on the online closeness-to-solution data, solution confidence, insight intensity, solution accuracy, and solution time. Based on these features and clustering algorithms, we observed two clusters closely aligning with self-reported insight and non-insight solutions. Moreover, the cluster identification consisted of a combination of the features, not just one that biases the insight classification (e.g., a preponderant influence of solution time). These results contribute to assess the validity of the insight/non-insight self-report procedure, showing how participants consider their problem-solving experience in a similar and shared way.

72 - Bidirectional interactions between local and global confidence explain the pervasive effect of confidence biases

Author(s): H el ene Van Marcke, Senne Braem, Kobe Desender

Abstract: Metacognition is commonly measured as local decision confidence, i.e. confidence about the correctness of a single decision. Recently, there has been growing interest in global confidence, i.e. the general feeling about the ability to perform a task. When lacking external feedback, global confidence is formed by integrating local confidence judgements. Reversely, the initial global confidence one has can result in pervasive local confidence biases. However, the mechanisms driving the pervasiveness of these biases over time remain unclear. We hypothesised that this pervasiveness stems from continuous, bidirectional interactions between local and global confidence. We tested 42 healthy adults in a perceptual decision-making scenario, querying local and global confidence. Multiple regression showed that global confidence was strongly predicted by preceding local confidence ratings, while hardly influenced by accuracy or RTs. Reversely, local confidence ratings were informed by preceding global ratings over and above accuracy and RTs. To understand the underlying cognitive mechanisms, we fit our data to an extended drift-diffusion model. Our model explicitly represents global confidence as the expected probability of being correct, and continuously updates this representation based on the prediction error between model-expected global confidence and local confidence. Global confidence then informs local confidence in turn, resulting in continuous interactions. Our model successfully captured the behavioural effects, explaining pervasive confidence biases as resulting from bidirectional local-global confidence interactions. Overall, our findings provide mechanistic insights into how these interactions contribute to confidence biases persisting over time, aligning with the notion of a metacognitive hierarchy with multiple interacting levels of confidence.

Junior board track

72 - Scientific speed dating

Author(s): NA

Day: Thursday

Time: 14:30 - 15:30

Room: Auditorium I.0.02

Abstract: The scientific speed dating is back! During this event, you will meet other like-minded researchers and have fun (and short) conversations about diverse research topics. It's the perfect opportunity to broaden your network with a minimal risk of awkward silences!

73 - Workshop on the use of machine learning and AI for psychology research questions

Author(s): Wivine Blekic

Day: Thursday

Time: 15:40 - 17:00

Room: Auditorium I.2.02

Abstract: This session aims to demystify the core concepts of machine learning (ML) and illustrate its application in the mental health field. The workshop starts with an introduction to ML, covering its basic principles, types of algorithms, and explaining how and why these tools can be utilized to analyze complex datasets. Dr. Blekic will present specific case studies where machine learning approaches have been employed to identify predictors of Post-Traumatic Stress Disorder (PTSD) and suicidal ideation. The goal of this workshop is to equip attendees with the tools to (1) understand the benefits of ML approaches in mental health, (2) comprehend the methods section of a paper that used ML approaches, and (3) have some references to further explore ML approaches on their own.

74 - Workshop on the use of generative AI for daily research

Author(s): Pieter Fizez

Day: Thursday

Time: 17:10 - 18:30

Room: Auditorium I.2.02

Abstract: This workshop will contextualize Generative Artificial Intelligence for researchers and practitioners in the field of psychology. A theoretical framework will be followed by a discussion of several prototypical use cases, including such applications as automated literature review and research assistance for setting up methodologically sound experiments. Specific attention will also be given to ethical and practical challenges, such as plagiarism and fabricated citations by ChatGPT.

75 - Workshop on diversity and intersectionality in research

Author(s): Julie Walaszczyk

Day: Friday

Time: 09:00 - 10:20

Room: Auditorium I.2.02

Abstract: In this workshop, we will have a closer look at intersectionality as a theory but also as a method, and how it can be applied to research. Through reflective activities, group discussions and peer feedback, participants will have the opportunity to delve into the benefits of adopting an intersectional approach to their own research field and share perspectives with others.

76 - Science coffee break

Author(s): NA

Day: Friday

Time: 10:30 - 11:30

Room: NA

Abstract: Attendees will be invited to write down a fun fact about their research. During the science coffee break, you will receive one of these facts about other people's research, along with your hot cup of coffee. Your mission? Throughout the day, you can seek out the fellow researcher who wrote this fact. It's a fun and interactive way to spark conversation and enhance networking opportunities during the event.

77 - Workshop on Using social media to share your research

Author(s): Sarra Zaghbouni

Day: Friday

Time: 14:00 - 15:20

Room: Auditorium I.2.02

Abstract: In the age of social media, how can we use these platforms to our advantage, for promoting scientific research and bringing science to the younger generation?

78 - Panel discussion on life after the PhD

Author(s): Tyas Ayuningtyas, Stephanie Liangos, Simon Gorin, Hanna Gauvin

Day: Friday

Time: 15:30 - 16:50

Room: Auditorium I.2.02

Abstract: This panel will feature four researchers who have transitioned into new positions outside academia after completing their PhD. They will discuss their career path and answer questions about life after getting a PhD.

Posters

79 - Impact of very premature birth on visual statistical learning at school-aged - Study plan

Author(s): Lauréline Fourdin, Xavier De Tiège, Julie Bertels

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: At school age, many children born very prematurely have cognitive and learning difficulties that are linked to structural and functional cerebral abnormalities. In particular, connectivity between the default mode and dorsal attentional networks is weaker compared with children of the same age. These networks also underpin so-called statistical learning, an early-emerging ability to detect regularities between elements in our sensory environment. This ability is important because it underpins high-level learning abilities such as oral language, reading skills, short-term memory, and attentional processes.

My research project aims to study how very premature birth affects statistical learning abilities, and whether these are linked to children's cognitive performance at school age. I will use neurophysiological and behavioural measures of statistical learning to examine their links with resting-state functional connectivity on the one hand, and cognitive and language measures on the other hand. I hypothesise that the lower statistical learning abilities of very premature children compared with those of children born at term may partly explain their cognitive difficulties. These lower abilities would be linked to differences in resting-state functional connectivity.

Overall, the goal of this project is to provide a better understanding of the cognitive difficulties of premature infants and the underlying brain mechanisms involved. It would allow us to develop new behavioural and electrophysiological tools for measuring basic learning abilities. In so doing, it will improve the detection of these children's cognitive difficulties and, consequently, inform professionals to provide more adequate support during their school learning.

80 - The Roles of Morality and Agency in Self-Esteem and Affect: Findings from a Priming Study

Author(s): Yujing Liang, Robin Vroon, Sara Hodges, Vera Hoorens

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: What is more important for one's self-esteem: feeling moral or agentic (able & assertive)? Previous research and theories provide evidence for both sides. To help answer this question, we conducted an experimental study (N = 487) comparing the influence of priming morality vs. agency on global self-esteem and affective states. We introduced a new priming paradigm to the domain—a sentence-completion task, where participants completed sentence stems related to positive or negative characteristics about their morality or agency (e.g., “A moral virtue of mine is that I...”). To add further nuances, we explored participants' defense or coping responses when confronted with positive or negative past experiences involving morality or agency.

The morality hypothesis predicted that morality priming would influence state self-esteem and affective states more than agency priming, while the agency hypothesis predicted the opposite. Both priming morality and agency influenced participants' general affect (e.g., feeling pleasant) and self-relevant emotional states (e.g., feeling proud), but not state self-esteem. When recalling past immoral (vs. non-agentic) acts, participants reported feeling more shame and guilt, distanced themselves more from the recalled experiences, and felt that the experiences were more difficult to recall. Our research provides experimental evidence of how morality and agency influence state self-esteem and affective states, uncovers associated defense and coping processes, and highlights the greater importance of morality than of agency for the self (224 words).

81 - Research Poster: Minority Stress, Socialization Practices and Adoptees' Adjustment in Adoptive Families with Gay Fathers in Western Europe

Author(s): Alessio Gubello, Salvatore D'Amore, Stijn Van Petegem

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: Since the last century, the concept of the family has undergone several changes, not only in its composition, but also in its dynamics. In this context, a growing body of research on parental socialization practices illustrates its fundamental role, especially in families defined as “non-conventional” or “non-traditional”. Indeed, one of the most challenging efforts for parents in these families is to transmit norms, values, habits and understanding of inter-group relationships to their children, along with strategies to cope with minority stress and discrimination. The present project focuses on families composed of gay fathers' couples who adopted children. The first two quantitative studies aim at examining the impact that gay fathers' minority stress has on their socialization patterns and their children's adjustment, as well as the impact that parents' socialization patterns have on adoptees' adjustment and implementation of coping strategies against perceived discrimination. The sample will be composed of 150 families living in Western Europe (Belgium, the Netherlands, France, and Spain). Data will be collected through questionnaires given to both adoptive fathers and adopted children. Moreover, a qualitative study will take place in order to investigate how socialization processes develop in these families, and which are the dynamics behind parents' choices. The expected results should provide further insight into the potential role of minority stress in adoptive families with gay fathers, and how socialization may represent a fundamental resource for adopted children to cope with daily discrimination and its effects.

82 - Assessment of Neurocognitive Dysfunction Following Hyper-CVAD Chemotherapy in Juvenile Murine Models

Author(s): Congcong Gao

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: Chemotherapy, a pivotal cancer treatment modality, frequently precipitates chemotherapy-induced cognitive impairment (CICI), a neurological syndrome characterized by a decline in cognitive functions. This adverse effect significantly undermines the quality of life, necessitating urgent solutions. Our research specifically targets the Hyper-CVAD regimen, a combination therapy prevalently used against certain types of blood cancers. The regimen's cognitive effects are likely multifaceted, potentially encompassing white matter changes, inflammatory and oxidative stress responses, epigenetic modifications, and impacts on synaptic plasticity and myelination.

Our study employs juvenile mice as models to mimic the adolescent human population, aiming to elucidate the cognitive consequences of Hyper-CVAD. We explore the underlying molecular mechanisms of CICI, focusing on oxidative stress, hormonal alterations, and the BDNF-TrkB signaling pathway. Furthermore, we evaluate the efficacy of potential interventions, such as antioxidants and methylphenidate, along with environmental enrichment strategies, in ameliorating CICI. These interventions are designed to counteract the cognitive deficits associated with chemotherapy, facilitating the development of targeted therapeutic approaches and enhancing our understanding of CICI's pathophysiology.

By integrating juvenile mice models, our research not only extends to the specific vulnerabilities of the adolescent demographic but also contributes to the broader goal of devising effective treatments for chemotherapy-related cognitive challenges, paving the way for improved patient outcomes in pediatric oncology.

83 - Prevalence of drug-facilitated sexual assaults in Belgium

Author(s): Leeloo Godefroid, Vincent Didone, Etienne Quertemont

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: A drug-facilitated sexual assault (DFSA) is a crime in which a person is sexually assaulted while under the influence of a psychoactive substance, significantly impairing its ability to give a consent or defend oneself. Two types of DFSA are reported in the literature. In opportunistic DFSA, the victim willingly consumed a substance, and the offender takes advantage of its state of intoxication to commit a sexual abuse. In contrast, in proactive DFSA the perpetrator administers the substance to the victim for the purpose of committing the sexual abuse.

The aim of this study was to assess the prevalence of both opportunistic and proactive DFSA in the registered cases of sexual violence by “the sexual assault centers” of Brussels, Ghent and Liege between 2017 and 2018.

The data shows a strong implication of psychoactive substances in sexual violences with more than half of the registered cases mentioning the consumption or the effects of psychoactive substances, usually alcohol. Based on self-reported intoxication by the victims, 20-30% of the cases might be classified as opportunistic DFSA, whereas the prevalence of proactive DFSA was estimated between 7 and 17%. High regular alcohol consumption was a significant risk factor for experiencing a sexual abuse under psychoactive substances. Whether opportunistic or proactive, DFSA were characterized by increased delays before contacting a sexual assault center and a reduced willingness to file a legal complaint.

The results of the present study confirm the high prevalence of DFSA in Belgium, with alcohol being the most frequently involved substance.

85 - Sleep, mental health, and the need for physical and real-life social contact during the COVID-19 pandemic: A Bayesian network analysis

Author(s): Aurore Roland, Louise Staring, Martine Van Puyvelde, Francis McGlone, Olivier Mairesse

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: The enforced social isolation measures to curb the spread of COVID-19 led to a deteriorating mental health, increased insomnia, and a heightened longing for physical touch termed as ‘skin hunger’. This study aimed to deepen our understanding of the relationship between sleep, mental health, and the desire for physical and real-life social contact. A survey involving 2827 adults during the second COVID-19 lockdown was conducted online. Bayesian gaussian copula graphical model (BGCGM) and Bayesian directed acyclic graph (DAG) were estimated, alongside mixed ANOVA tests. Results indicated reduced need for physical contact with non-family members ($t(2091) = 12.55, p < .001, d = .27$) and reduced relational satisfaction ($t(2089) = 13.62, p < .001, d = .30$) during the lockdown compared to pre-pandemic levels. Weak positive associations were observed in our BGCGM between the need for physical contact and for real-life social contact, and sleep and mental health. During the lockdown, individuals expressed less desire for physical contact with non-family members and lower satisfaction with their relational lifestyle. Those with a higher need for physical and real-life social contact reported poorer mental health, including increased worry, depression, and mental fatigue.

86 - Parental overcontrol and adolescent's externalizing behaviour. Does self-esteem mediate this relationship?

Author(s): Zuzana Michalove, Maria Bacikova-Sleskova

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: Background: Research shows an existing relationship between parental overcontrol and externalizing and internalizing outcomes. While numerous studies have confirmed the negative effect of overcontrolling parenting on anxiety and depression of adolescents, there has been relatively less exploration of its effects on behavioural problems, such as delinquency and crime. Both maternal and paternal overparenting is associated with adolescent's self-esteem as well. Aim: To explore the role of adolescents' self-esteem as a mediator between their feeling of being overcontrolled by parents and their problem behaviour. Methods: The participants of this study consisted of 676 students (mean age 15.53, 50.59 % female). Four mediation analyses were conducted using Jamovi software. Results: Neither for girls nor for boys was their externalizing behaviour significantly associated with feeling of being overcontrolled by mother, but it was significantly associated with feeling of being overcontrolled by father. Girls' self-esteem was significantly associated only with maternal overcontrol, and boys' self-esteem was significantly associated only with paternal overcontrol. Self-esteem did not act as a mediator between independent and dependent variable in neither of the mediation models. This supports the theoretical background that both boys and girls are more likely to be influenced by a parent of their own gender.

87 - Hearing With Hands: Vibrotactile Stimulation Generates a Frequency-Following Response

Author(s): Emily B.J. Coffey, Ana B. Carbajal Chavez, Loonan Chauvette, Marcel Farrés-Franch, Andréanne Sharp, Robert J. Zatorre

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: Human perception relies on a complex interplay of sensory modalities to make sense of the world. However, the nature of these interactions is not yet well understood. For instance, vibrotactile stimulation can activate the auditory cortex in both healthy and hearing-impaired populations. Furthermore, auditory and tactile modalities share similar physical properties such as periodicity, amplitude and phase. In this project, we explored the interaction between auditory and tactile perception by measuring the frequency-following response (FFR) to auditory and vibrotactile stimulation. The FFR is an evoked brain response that reflects the strength of sound periodicity encoding in the brain. Given the physical similarities, we proposed that vibrotactile periodicity could be encoded in a similar way as in the auditory modality. Concretely, we investigated whether vibrotactile stimulation could generate an FFR and its relationship with auditory FFRs. Normal hearing participants were presented with a complex 'da' sound at a fundamental frequency (f_0) of 98 Hz, this same stimulus was also presented through vibrotactile stimulation on the left hand using a haptic glove. FFR was collected for auditory, vibrotactile and audio-tactile stimulation using electroencephalography (EEG) with 64 electrodes. Results show a clear vibrotactile FFR with amplitude peaking at f_0 , but no harmonics. Moreover, topographies suggest separate generators for auditory and tactile FFR, which is further supported by the lack of correlation between both FFR amplitudes. Further research is needed to map the anatomical pathways and generators of vibrotactile FFR and to explore the potential applications of tactile input to hearing augmentation.

88 - The moral high ground: Priming moral self-superiority affects evaluations of morally-relevant behaviors

Author(s): Diego Avendaño, Sara Hodges, Sophia Mauelshagen, Vera Hoorens

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: Moral self-superiority –the belief that one is morally better than others– is widespread, but its consequences remain understudied. We investigated the effect of moral self-superiority on judgments of, and proposed sanctions for (im)moral actions. We did so across three experiments (including a preregistered one) in Belgium and the US, with 926 participants in total. Participants read about mundane but morally relevant actions performed by either themselves or an acquaintance (protagonist manipulation). They judged how beneficial or harmful each action was and how much praise or blame the protagonist would deserve. Participants also filled out a self-report survey that was designed to make them aware of their feelings of moral self-superiority (moral self-superiority questionnaire). Half of them filled out the moral self-superiority questionnaire before judging and sanctioning the actions (moral self-superiority priming condition). The other half performed the tasks in the reverse order (control condition). Participants generally sanctioned their own actions more harshly (less praise, more blame) than an acquaintance’s actions. Importantly, participants in the moral self-superiority priming condition sanctioned their own actions (but not an acquaintance’s) even more harshly than participants in the control condition, even though they did not consistently judge their own actions as less benign or more harmful. This pattern, which occurred in each of the three studies and in an overall analysis, robustly supported a ‘noblesse oblige’ hypothesis stating that moral self-superiority makes people hold themselves to higher standards than others. This suggests that moral self-superiority may be socially adaptive.

89 - The Primary Somatosensory Cortex is Involved in the 24-hour Retention of Motor Memories: A TMS Study

Author(s): Shahryar Ebrahimi, Bram van der Voort, David Ostry

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: Accumulating evidence underscores the involvement of somatosensory regions in the acquisition and retention of motor memories. Previous work, utilizing a visuomotor rotation task, observed reduced retention of motor memories following continuous theta-burst stimulation (cTBS) to the primary somatosensory area (S1), compared to stimulation of the primary motor (M1) or a control area. To address the possibility that the stimulation effects were transient, we assessed longer-term motor memory retention (24 hours after stimulation). Participants engaged in a visuomotor adaptation task, executing point-to-point movements towards a visual target. Their visual feedback was gradually shifted clockwise by 0.4 degrees over 75 trials, culminating in a 30-degree rotation. Subsequently, they completed 75 trials with a sustained 30-degree shifted feedback. Thus, participants implicitly learned the visuomotor rotation, unaware of the perturbation. Immediately following learning, we applied cTBS to either the M1 location encoding the biceps, its S1 equivalent, or an occipital control area. Participants returned to the lab 24 hours later and performed 162 trials with limited visual feedback, which meant they saw only their movement amplitude but crucially not their hand direction. They were instructed to move directly towards the remembered target position. Our findings revealed that S1 stimulation led to reduced retention of the visuomotor perturbation, compared to stimulation of M1 or an occipital control area (with no significant difference between M1 and control). This study highlights the importance of S1 in the encoding and longer-term consolidation of motor memories, improving our understanding of the neural pathways involved in motor learning and retention.

90 - The cognitive toll of chronic stress: Exploring avoidance behavior and recognition memory

Author(s): Yana Van der Heyden, Alba López Moraga, Tom Beckers, Laura Luyten

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: Stress and coping are intertwined since managing stressors is necessary to maintain well-being. However, chronic stress can lead to maladaptive coping, increasing the risk of developing stress-related disorders such as anxiety and depression. To explore potential mechanisms involved in the transition from adaptive to maladaptive behavior, this study will investigate the effects, in male and female rats, of exposure to chronic restraint stress (10 days, 2 hours/day) on (1) active avoidance using the Platform-Mediated Avoidance (PMA) task, (2) recognition memory as assessed by the Novel Object Recognition (NOR) task, and (3) neuronal density in the hippocampus, identified by Nissl-staining. First, corticosterone assays and a sucrose preference test will be used to confirm stress induction. Next, food-restricted rats will first be trained to press a lever for food. During the PMA, they then learn to avoid signaled footshocks by stepping onto a platform. This avoidance behavior comes at the expense of obtaining food. During the NOR task, rats are presented a novel and familiar object; their relative tendency to explore the novel object reflects recognition memory. We hypothesize that chronically stressed rats will exhibit more avoidance (i.e., spending more time on the platform instead of getting the food reward), possibly due to increased anxiety-like behavior that emerges because of chronic stress. Additionally, we hypothesize that chronic stress will reduce neuronal density in the hippocampus and impair recognition memory. If so, this could provide a new target for intervention for stress-related disorders. The data collection will be completed before the conference.

91 - The Effect of Visual Order on Inhibitory Control

Author(s): Yuying Wang, Xuemin Zhang, Eva Van den Bussche

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: Inhibitory control is a key aspect of cognitive control, crucial for modulating attention, thoughts and behaviors by suppressing irrelevant stimuli. It can be exerted proactively, to anticipate conflict before it occurs, or reactively after the conflict has occurred.

In two experiments using a Number flanker task, we investigated the impact of visual order on individuals' inhibitory control. Experiment 1 compared inhibitory control performance in completely ordered versus completely disordered visual contexts, while Experiment 2 altered the level of visual disorder (25%, 50%, 75%) to examine more fine-grained effects. We used a within-subjects design with context orderliness, task congruency (congruent/incongruent), and the proportion of congruent trials within a block of trials (mostly congruent/neutral/mostly incongruent) as within-subjects factors.

As expected, we observed significant congruency and proportion congruency effects in both experiments in the reaction time data. The latter indicates the exertion of proactive control when the proportion on incongruent trials increases. In Experiment 1, we did not observe any effects of order. Contrarily, in Experiment 2, a three-way interaction was observed. Although proportion congruency effects were observed in all disorder conditions, they seemed to be most prominent in the 25% disorder condition.

These findings tentatively suggest that completely ordered contexts, completely disordered contexts and contexts with low levels of visual disorder stimulate the engagement of proactive cognitive control, enabling efficient performance in conflict-resolution tasks.

93 - How Do Citizens Perceive the Use of Artificial Intelligence in Public Sector Decisions?

Author(s): Tessa Haesevoets, Bram Verschuere, Ruben Van Severen, Arne Roets

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: Artificial Intelligence (AI) has become increasingly prevalent in almost every aspect of our lives. At the same time, a debate about its applications, safety, and privacy is raging. In three studies, we explored how UK respondents perceive the usage of AI in various public sector decisions. Our results are fourfold. First, we found that people prefer AI to have considerably less decisional weight than various human decision-makers; those being: politicians, citizens, and (human) experts. Secondly, our findings revealed that people prefer AI to provide input and advice to these human decision-makers, rather than letting AI make decisions by itself. Thirdly, although AI is seen as contributing less to perceived legitimacy than these human decision-makers, similar to (human) experts, its contribution is seen more in terms of output legitimacy than in terms of input and throughput legitimacy. Finally, our results suggest that the involvement of AI is perceived more suitable for decisions that are low (instead of high) ideologically-charged. Overall, our findings thus show that people are rather skeptical toward using AI in the public domain, but this does not imply that they want to exclude AI entirely from the decision-making process.

95 - Apnea as a Tool of Resilience after Dramatic Life-Changing Events

Author(s): Lisa Santoro, Bruyninckx Marielle, Guerra Angélique

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: Engaging in apnea as a recreational pursuit can foster personal growth. This practice shares several parallels with mindfulness meditation, such as focusing on the present moment and attending to one's breath. Additionally, scientific research underscores an activation of identical brain regions during meditation and apnea.

Our research focuses on individuals who opt for apnea sessions during scuba diving trips following one or more dramatic life-changing events. The objective is to explore how apnea contributes to resilience. To collect our data, we conducted semi-structured interviews with 10 participants. We also utilized two psychometric instruments—the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2008) and The Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003)—to assess their mindfulness levels and resilience factors.

Our findings show that the scuba-diving trip, particularly the apnea sessions, afforded participants an opportunity for introspection and acceptance of life events they had to face. They identified areas for personal improvement that could enhance their well-being and alleviate negative emotions. Moreover, their levels of mindfulness, as measured by the FFMQ, significantly exceeded the population average. Notably, the trip facilitated their integration into a supportive community, providing them with social reinforcement. Importantly, all participants continued practicing apnea post-trip.

96 - The interplay between over-parenting, emotional dysregulation and non-suicidal self-injury among Chinese and Belgian adolescents

Author(s): Long Wang, Imke Baetens, Zahra Azadfar, Martijn Van Heel

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: Non-suicidal self-injury (NSSI) is a common phenomenon among adolescents worldwide. It is well known that NSSI and its risk factors differ across cultures. In the current study, we aim to investigate (1) whether emotional dysregulation as an intrapersonal risk factor mediates the association between over-parenting (as an interpersonal risk factor) and NSSI among adolescents, and whether such mediating effect varies across cultures (Chinese culture vs. Belgian culture). We recruited 390 Chinese and 163 Belgian adolescents to participate in this study. Our hypothesis is that (1) emotional dysregulation plays a mediating role in the association between over-parenting and NSSI in both the Chinese and Belgian samples; (2) compared to the Belgian sample, the strengths of association between over-parenting and emotional dysregulation and between emotional dysregulation and NSSI are weaker in the Chinese sample. We will analyse the data using structural equation modelling (SEM) in Mplus.

98 - Neural signatures of stream segregation: from childhood to adulthood

Author(s): Elena Benocci, Claude Alain, Axelle Calcus

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: BACKGROUND : From classrooms to playgrounds, children communication occurs in noisy environments. Despite the peripheral auditory system reaching maturity approximately six months after birth, children have difficulties in perceiving speech in noise.

Auditory segregation is a fundamental mechanism of auditory scene analysis, involving the organization of similar sound waves into a coherent stream, while distinguishing dissimilar acoustic components and attributing them to distinct sources. This process is closely associated with speech perception in noisy environments. Two Event-Related Potential (ERP) components have been identified as associated to auditory segregation: the Object-Related-Negativity (ORN) and the P400.

OBJECTIVES/METHODS : The current study aims to investigate the development of the relationship between auditory segregation and speech perception in noisy environments, along with the maturation of the neurocorrelates associated with auditory segregation. Participants aged 8 to 27 (children n =17, adolescents n=13 and adults n= 20) performed in auditory segregation and speech perception in noise tasks.

RESULTS : Behavioral results indicate an improvement in auditory segregation mechanisms and speech intelligibility in noise. Furthermore, our neurophysiological findings show a reduction in both the ORN and the P400 amplitude from childhood to adulthood.

CONCLUSIONS :Stream segregation improves during childhood to adulthood and both neural signatures (ORN and P400) seem to decrease in amplitude during the development. Speech perception in noise is predicted by age and auditory segregation.

99 - Does everyone default to men as humans? Exploring the relationship between individual differences in gender egalitarianism and androcentrism

Author(s): Yuchao Wang, Colette Van Laar, Jenny Veldman

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: Androcentrism is the tendency to center society around men and men's experiences, welfare, goals, and values while marginalizing women and other genders. People perceive men as more typical than women in generic person categories (e.g., person) while viewing women as gendered. This bias manifests at the individual level across various forms. However, little is known about how it varies across individuals. The present study investigates how individual gender egalitarianism is associated with androcentrism, using both explicit and implicit measures. Explicit androcentrism is measured by asking participants to select faces representing typical humans, rate importance of agentic and communal traits for typical humans, and report androcentric ideology. Implicit androcentrism is measured using an adapted implicit association test (IAT). It captures cognitive processes underlying associations between person/gender categories and men/women. Explicit gender egalitarianism is measured using three separate scales: traditional gender role attitudes, gender roles malleability beliefs, and gender essentialism. Implicit gender egalitarianism is assessed using the gender-career IAT. Results showed that in Belgian culture, only men participants showed explicit androcentric bias, while both men and women participants exhibited implicit androcentric bias. Specifically, individuals tended to associate broad human concepts more with men and gender-specific concepts more with women. In explicit form, individuals with stronger gender-egalitarian attitudes showed less male-biased selections and lower androcentric ideology while controlling for participant gender. In implicit form, individuals with weaker gender-career associations showed less implicit androcentric bias. These findings suggest that gender egalitarianism might play a role in buffering against androcentric bias at the individual level.

100 - The Contextual-Statistical Approach to the Perceived Validity of Generics

Author(s): Felix Hermans, Susanne Bruckmüller, Vera Hoorens

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: Why do people consider both “Boys don’t cry” and “Boys cry” valid? And why do people consider “Mosquitos carry malaria” valid (despite the low proportion of infected mosquitos), but not “Canadians are right-handed” (despite the high proportion of right-handed Canadians)? Bare plural generic generalizations (‘generics’ for short) like these have intrigued researchers for decades because it is difficult to comprehensively explain when and why people find them ‘true’. We present the Contextual-Statistical framework (ConStat), a novel integrative model of how people judge the validity of generics. Based on the assumption that generics serve to transmit information of relevance for action, ConStat consists of five tenets. (1) People may understand a generic as being meant normatively or descriptively. If they deem it normative, judging its validity involves endorsing or rejecting it – a decision that may masquerade as a truth judgment. If they deem it descriptive, judging its validity does involve judging its truth. (2) People decide whether a descriptive generic is primarily about the category or about the feature. (3) People judge whether a descriptive generic is true by acting as intuitive statisticians. (4) The explicit and implied content of a descriptive generic determines the threshold that intuitive statisticians use to assess whether the generic feels true. (5) The processes described in tenet (1) to (4) are shaped by the context in which the generic is used. Constat parsimoniously explains the fickle way in which generic validity is determined and inspires directions for future research on how people understand generics.

102 - The influence of narratives on attitudes through emotions and social identity: A Belgian case.

Author(s): Ségolène Cardon, Aline Cordonnier, Olivier Luminet

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: Groups navigating a difficult past often harbour divergent collective memories rooted in their social identity and seek recognition for their narratives. How do stories resonating or clashing with collective memory influence attitudes? The Belgian context, with its historical and socio-political complexities surrounding WWII collaboration and repression, presents an interesting exploration opportunity. Based on Fisher's narrative paradigm (1985), which emphasises stories' resonance in shaping the audience's attitudes, we examined how the emotional valence of a son's narrative about his father's past as a former Belgian Eastern Front volunteer during WWII impacts the audience's attitudes towards collaboration and repression. We hypothesised that the narrative's emotional valence would influence the direction of the change in attitude moderated by the participants' linguistic identity (French- versus Dutch-speaker). 154 Belgian participants evaluated their attitudes before and after reading a positive or negative version of the ecologically-valid vignette. The linear regression model showed that after reading the positive vignette, participants showed increased tolerance towards collaboration, while perceiving repression as harsh. In the negative vignette, collaboration attitudes became less favourable and participants regarded repression as justified and moral. However, no conclusion could be drawn regarding linguistic identity. In future studies, we will further investigate the link between narratives and attitudes in the context of Belgium's collective memory regarding WWII collaboration and the Congo colonisation by examining the psychological factors and processes involved in collective memory dynamics, with particular emphasis on linguistic identification (French-versus Dutch-speakers) and emotion at the individual and collective level.

103 - Decoding entrepreneurial decision-making through eye tracking: Preliminary Results

Author(s): Harry Antony, Elena Alâadany, Marine Le Petit, Frédéric Ooms, Fabienne Collette

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: Entrepreneurship scholars have advocated adopting cognitive neuroscience tools to better understand how entrepreneurs think, perceive, and make decisions under uncertainty. To this end, we aimed to identify the behavioural differences in opportunity recognition that have been linked to entrepreneurial decision-making, through an exploratory eye-tracking study in young entrepreneurs. We hypothesized that students enrolled in entrepreneurship-related master's degree training will show higher opportunity recognition than those enrolled in managerial business courses (MBA). Student participants ($N=40$), divided into two groups (Entrepreneurs and MBA, respectively) had to evaluate the feasibility of fictional business pitches presented as S-W-O-T analyses—under free-viewing, and limited-time conditions. Between and within group differences were assessed in each condition with 2-way mixed design ANOVA on the following eye-tracking parameters: fixation duration (total and mean), first-fixation S-W-O-T category, and fixation counts. We observed lower total/mean fixation duration and fixation counts in the entrepreneurial group in the limited-time condition, but these differences were not statistically significant ($p=0.146$ and $p=0.136$, respectively). For S-W-O-T categories, the MBA group showed higher first-fixation frequency towards the opportunity (and strength) fields, in the fixed-time condition. These results are contrary to our hypothesis of higher opportunity recognition in the entrepreneur group. It can be posited that the student entrepreneur group yet lacks the experience of habitual entrepreneurs with a knack for opportunity recognition as demonstrated in the literature. This paves the way for more extensive studies to capture the influences of entrepreneurial experience on entrepreneurship cognition and decision-making.

104 - Exploring Spontaneous Thoughts: A Comparative Study of Methodologies

Author(s): Arya Gilles, Arnaud D'Argembeau, David Stawarczyk

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: Topic and Research Questions. Our mind is never at rest and has the remarkable ability to continuously generate spontaneous thoughts (STs). Traditionally, the Thought Probes Procedure (TPP), wherein participants report their STs upon random prompts, has been used to study STs. However, this method presents limitations in tracking the dynamic flow of thoughts because the features of STs experienced between prompts cannot be assessed. In response, researchers have recently revisited the Think-Aloud Procedure (TAP), where participants continuously verbalize their STs. However, the validity of this method for assessing STs has been questioned, and our aim in the present study was to examine the validity of the TAP by comparing the features of STs reported using different methods.

Method. Participants reported their STs for two 8-minute rest periods in the laboratory, with either the TAP or the TPP. In addition, we used the Everyday Life Experience Sampling Method (ESM) to capture STs during the participants' daily activities over a three-day period. Participants also rated the features of each reported ST on a series of phenomenological dimensions (e.g., temporal orientation, self-relevance, etc.) on a self-report questionnaire.

Results. Our results show substantial similarities between TAP and TPP, and closer resemblance between TAP and ESM than between TPP and ESM.

Conclusion and Contribution. Our results suggest that the TAP offers a comprehensive understanding of STs, demonstrating a closer alignment with real-life experiences than the traditional TPP. Moreover, its ability to capture the dynamic nature of STs highlights its potential for future cognitive research.

105 - How short breaks impact the consolidation of procedural memories in children and adults

Author(s): Dimitri Voisin, Philippe Peigneux, Charline Urbain

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: Short (~30 minutes) post-learning breaks transitorily boost adult's motor procedural memory (PM) performance. This effect remains unexplored in children, as well as the impact of the type of activity in the intermediary break. In this study, 59 children and 60 adults (8.9 ± 1.2 and 22.8 ± 1.7 years) practiced a sequential motor task (repeatedly reproducing a 5-elements sequence of button presses with the non-dominant hand, as fast and accurately as possible) for twelve 30-seconds blocks during two sessions (S1, S2) separated by a 30-minute (Short) or 4-hours (Long) delay. The 30 minutes post-learning included either a quiet (still) or an active (playground) activity. Repeated measure ANOVA with within-subject Session (S1 vs. S2) and between-subject Age (Children vs. Adults), Activity type (Quiet vs. Active), and Duration (Short vs. Long) factors showed Session \times Age \times Duration and Session \times Age \times Activity interaction effects ($p < .05$). Post-hoc analyses showed Session effects in adults in both Activity conditions only at Short delay ($S1 < S2$, $p < .001$; Long delay $p = .1$). In children, Session effects were observed at both Short and Long delays but only in the Active condition ($S1 < S2$, $p < .001$; Quiet condition $p = .1$). These results highlight spontaneous post-learning, offline, motor performance improvements at both Short and Long delays in children but only in an Active post-training condition, at variance with adults who improved performance only at Short delay both in the Active and Quiet conditions. This suggests developmental differences in the offline conditions (Duration and Activity) associated with plasticity mechanisms subtending motor PM consolidation.

106 - Do Psychiatric Symptom Dimensions predict Metacognitive Changes after Sleep Deprivation? An Experimental study

Author(s): Gabrielle Van Tomme

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: Alterations in metacognition, the ability to evaluate your own thinking and behavior, are characteristic of compulsive and affective disorders, such as obsessive-compulsive disorder, anxiety and depression. Despite that sleep abnormalities are highly prevalent in these disorders and are known to affect cognitive functioning, it remains unclear whether sleep loss drives metacognitive changes.

133 participants underwent two nights of 9h in bed and two nights of 4h in bed. To assess whether metacognitive evaluations were altered by short-term sleep restriction, in both conditions prediction and confidence measures were completed about a physical strength task. Furthermore, trait self-report measures of obsessive-compulsion and anxious-depression were completed to assess whether transdiagnostic symptom dimensions could predict such changes. Firstly, I expected to find a relation between confidence bias and psychiatric symptom dimensions, and a shift in confidence bias in different sleep conditions. Secondly, I expected to find a relation between metacognitive sensitivity and psychiatric symptom dimensions, and I also hypothesized that metacognitive sensitivity would deteriorate within psychiatric symptom dimensions after sleep loss.

The results show that sleep condition did not impact metacognitive measures. However, highly obsessive-compulsive individuals tend to be overconfident and have impaired metacognitive sensitivity, regardless of sleep condition.

This implicates that obsessive-compulsive trait is associated with metacognitive measures, however, sleep loss did not alter metacognition in psychiatric symptom dimensions, suggesting that sleep does not act as a modulating factor that worsens metacognitive evaluations.

107 - Adolescent development of the late auditory event-related potentials and audio-visual integration

Author(s): Ellen Saliën, Ugo Benrubi, Axelle Calcus

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: Late auditory event-related potentials (ERPs) have been used extensively to investigate the function of the auditory pathway. They reflect successive levels of sound processing (e.g., detection, discrimination, audiovisual integration) across the auditory pathway. Across the lifespan, late auditory ERPs undergo a series of morphological and topographical changes. In fact, maturation of late auditory ERPs is thought to follow a step-like function with specific changes at the beginning and the end of adolescence. Coincidentally, the beginning of adolescence is marked by puberty onset, which triggers a cascade of hormonal changes that might drive neural plasticity not only in cognitive brain areas, but in the sensory areas as well. Therefore, we hypothesize that pubertal changes associated with adolescence influence the developmental changes in the morphology of late auditory ERPs and the maturation of audiovisual integration. To test this hypothesis, we will present adolescents with an oddball paradigm of audio(visual) speech stimuli, focusing on both speech sounds and visual speech cues. Crucially, we will take their pubertal stage into account, as well as chronological age. We expect the step-like changes to be related to the transition between successive pubertal stages, rather than the development in terms of chronological age. This will for example be reflected in the responses of the early-pubertal adolescents being more adult-like than those of age-matched pre-pubertal children. We aim to record ERPs in a cohort of over 100 children/adolescents. Data have already been collected in fifteen young adults, as examples of mature audio(visual) processing. Results will be discussed with respect to the literature on the development of audio(visual) processing, neuroimaging and endocrinological measures indicative of an effect of puberty on the central auditory pathway.

108 - Exploring the Diversity of Children's Street Experiences in Peru through Drawings

Author(s): Léa Lacourt, Marielle Bruyninckx, Tiziana Pastorelli

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: Peru's economic situation, though evolving, remains fragile and exacerbates the plight of families in poverty. For many years, the streets of Peru's urban centers have been a place where hundreds of thousands of children try to survive while relying on disparate support networks (other street children, associations, family members, etc.).

Our field research aims to understand how young people describe their street life experience in Lima. One of our researchers carried out several weeks of participant observation in an institution, gathering data on seven boys aged 13 to 18. Employing an anamnestic questionnaire, thematic drawings, and semi-structured interviews, we sought to obtain information on their familial connections, their representations of the street, and how they perceived their future and what their dreams were.

Data from drawings and interviews show the diversity of family situations (living exclusively on the street/regularly returning to the family, family composition, attachment, deficiencies, various dysfunctions, etc.). Our analysis also highlighted the appeal of the street and freedom, even if this life generates anxiety, hostility, and a need for protection. Finally, our data show that these children have real difficulties projecting themselves into the future due to the economic restrictions they have experienced. On the other hand, they appreciated working on the theme of "dreams" because it challenged the possibility of projecting themselves without any limitations.

109 - A network approach to burnout: The impact of chronic stress

Author(s): Tim Vantilborgh, Eva Mertens, Femke Legroux, Valentina Sagmeister, Sara De Gieter

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: In this study, we challenge the traditional approach of burnout that studies it as a latent construct. Instead, we operationalize burnout as a network of interacting symptoms. In particular, we test a foundational assumption of network models hypothesizing that the connectivity between symptoms in a burnout network is stronger for individuals experiencing high chronic stress.

We collected cross-sectional data from 460 employees. Respondents completed the Perceived Stress Scale and the Burnout Assessment Tool. We used the Network Comparison Test to examine differences in network strength. This revealed that the average strength of symptoms in burnout networks was higher for individuals with average to high chronic stress than for those with low chronic stress. This suggests that burnout symptoms are more strongly connected for those individuals experiencing high levels of chronic stress. Furthermore, we estimated moderated network models, treating chronic stress as a continuous moderator of relationships between symptoms in burnout networks. This confirmed the relationship between chronic stress and burnout network connectivity, showing that the relationships between the burnout symptoms depressive symptoms and mental distance, emotional impairment, and cognitive impairment are stronger for individuals facing high levels of chronic stress.

By confirming a central assumption of network models in the context of burnout, we lay the foundation for studying burnout as a complex system of interacting symptoms. Moreover, our results show the important role of depressive symptoms, as this symptom becomes more important as employees face higher levels of chronic stress.

110 - Latent Inhibition in Fearful Avoidance

Author(s): Haya Serena Tobing, Manuel Aranzubia-Olasolo, Bram Vervliet

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: Avoiding dangerous situations is crucial for survival. However, when objectively safe situations are appraised as dangerous, avoidance can become debilitating. Generalization of avoidance to safe situations is commonly observed in patients with anxiety disorders, who engage in unnecessary avoidance behaviors. Investigation into preventing the development of avoidance overgeneralization is needed. We investigated whether a phenomenon called latent inhibition (LI) could be applied to weaken the development of generalized avoidance across contexts in a laboratory setting. LI refers to the decrease in the ability to acquire or express a new association to a stimulus previously received passive, non-reinforced pre-exposures. Using a well-validated avoidance task within a fear renewal procedure, we investigated whether pre-exposing participants to unreinforced stimuli in context B before conditioning them in context A (acquisition context), where the CS+ is paired with electric shock, would lead to reduced avoidance responses in context B (pre-exposure context) compared to participants with no pre-exposure. Surprisingly, we found no latent inhibition effect in the test phase in either context. Another surprising finding is that the experimental group showed more avoidance responses in the avoidance conditioning phase, where there was a real threat, as well as in the renewal phase, where the test was presented in context A but without electric shock. This may be due to the different contexts used during the pre-exposure and acquisition phases. More investigation is needed to explain the results and to guide novel interventions to prevent the development of full-blown anxiety disorders.

111 - The Benevolent Sexist Bystander in a Sexual Harassment Episode

Author(s): Rachel Huynen, Benoit Dardenne

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: Although a significant body of research has demonstrated benevolent sexism (BS) deleterious consequences for women, little is known about its impact on sexual violence. Moreover, the few existing studies have failed to observe real behaviors. The present study investigates the extent to which the victim's conformity to traditional gender roles and bystander endorsement of BS predict real bystander intervention in an unwanted sexual attention situation.

Using a Minimal Bystander Intervention Paradigm, we exposed participants ($N = 235$) to sexually harassing episodes between a woman and several men on a computer-chat and gave them the opportunity to stop the interaction after each message. We manipulated the victim's (stereotypical) traditionality through her sexual orientation and gender identity. The bystander intervention was operationalized by the interruption of the conversation. We predicted that BS participants would be less likely to intervene when the victim was transgender or lesbian and thus stereotypically nontraditional. Data were analyzed performing a linear mixed model.

Results demonstrated that the victim's traditionality and BS endorsement did influence bystander intervention. As hypothesized, high BS participants let the nontraditional victims (lesbian and transgender) to receive more harassing messages than the traditional (heterosexual) victim. This effect remained after controlling for hostile sexism and was not contingent on participants' gender.

The present study contributes to theoretical development by integrating ambivalent sexism theory into sexual violence and bystander intervention literature and demonstrates that BS also impacts damaging phenomenon like sexual harassment.

112 - Application of Brain Functional Conductivity Imaging to Cognitive Tasks

Author(s): Emily Van Hove, Caroline Rae

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: Understanding the neural basis of cognitive processes in the human brain is a fundamental pursuit in cognitive neuroscience. However, a majority of currently used imaging techniques rely on indirect measures, such as blood flow, which limits precise assessment of neural activity. This study explores the potential of Magnetic Resonance Electrical Properties Tomography (MREPT) as a non-invasive modality for directly measuring changes in brain conductivity throughout the entire brain of a cognitive process. It further aims to explore relevant paradigm considerations to increase robustness of the method. Through measures of repeatability and by assessing the expected regions of activation from previous neuroimaging literature, the feasibility of MREPT in two simple tasks, namely word reading, and face perception are assessed. In three experiments, five participants were presented with words or faces for varying durations while lying in an MRI scanner. Conductivity maps are obtained through phase maps using the phase-based Helmholtz equation. Results of widespread activation through the brain suggest some potential for MREPT in elucidating task-based cognitive processes pathways and understanding brain activation patterns as well as highlighting high individual variability and a poor voxel wise repeatability. While possible pathways were suggested for the face recognition tasks no clear lexical and non-lexical reading pathways were identified in this study. Overall results suggest a high need for further exploration of functional conductivity imaging methods and the development of new analysis methods. Insights gained from this research could contribute to further development of paradigms for functional conductivity imaging.

113 - The finite pool of climate change concerns and its mediating role in negative spillover effects

Author(s): Morgan De Rocker, Adriaan Spruyt, Iris Vermeir

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: It is often observed that interventions intended to promote sustainable behavior ultimately result in an increase in unsustainable behaviors initially not targeted by that intervention, i.e., negative spillover effects. Until now, the underlying reasons for such negative spillover effects remain largely misunderstood. We examined the extent to which negative spillover effects can be explained by the fact that the cognitive capacity to worry is inherently limited. Specifically, we predicted that worrying about one aspect of climate change would result in a decrease in worry about another aspect of climate change (i.e., the finite pool of climate change concerns, FPCCC). In three experimental studies, participants were prompted to worry about either the negative consequences of greenhouse gas emissions or excessive water use. Results showed that this manipulation does indeed reduce concerns about other aspects of climate change (Experiments 1 - 3). Moreover, Experiment 2 demonstrated that interindividual differences in this FPCCC effect mediate negative spillover effects. Finally, Experiment 3 provided preliminary evidence that the FPCCC is critically dependent on cognitive capacity, in that the FPCCC effect was observed to be more pronounced under conditions that taxed working memory relative to a control condition. Overall, our findings suggest that behavioral interventions aimed at raising climate change concerns may not be the most effective approach to promoting climate-friendly behavior. While they strengthen behavioral intentions for the targeted behavior, they may inadvertently weaken intentions toward other forms of sustainable behavior.

114 - Modelling speed-accuracy tradeoffs in the stopping rule for confidence judgments

Author(s): Stef Herregods, Pierre Le Denmat, Luc Vermeulen, Kobe Desender

Day: Thursday

Time: 14:30 - 15:30

Room: I.O.Atrium

Abstract: Making a decision and reporting your confidence in the accuracy of that decision are thought to reflect a similar mechanism: the accumulation of evidence. Previous research has shown that choices and reaction times are well accounted for by a computational model assuming noisy accumulation of evidence until crossing a decision boundary (e.g., the drift diffusion model). Decision confidence can be derived from the amount of evidence following post-decision evidence accumulation. Currently, the stopping rule for post-decision evidence accumulation is underspecified. Inspired by recent neurophysiological evidence, we introduce additional confidence boundaries that determine the termination of post-decision evidence accumulation. If this conjecture is correct, it implies that confidence judgments should be subject to the same strategic considerations as the choice itself, i.e. a tradeoff between speed and accuracy. To test this prediction, we instructed participants to make fast or accurate decisions, and to give fast or carefully considered confidence judgments. Results show that our evidence accumulation model with additional confidence boundaries successfully captured the speed-accuracy tradeoffs seen in both decisions and confidence judgments. Most importantly, instructing participants to make fast versus accurate decisions influenced the decision boundaries, whereas instructing participants to make fast versus careful confidence judgments influenced the confidence boundaries. Our data show that the stopping rule for confidence judgments can be well understood within the context of evidence accumulation models, and that the computation of decision confidence is under strategic control.

115 - Investigating the effect of Elaborated Semantic Feature Analysis on anomia in early Alzheimer's disease: presentation of four cases studies

Author(s): Eléa Millien, Melike Semiz, Isabelle Simoes Loureiro

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: Alzheimer's disease (AD) is a common neurodegenerative pathology affecting more and more people worldwide. Among its symptoms, anomia is early observed and affects speech, due to a combination of lexical retrieval deficit and semantic memory deterioration. The aim of this study is to evaluate the effectiveness of the method implemented by Papanasiou et al. (2006) named Elaborated Semantic Features Analysis (ESFA), which aims to work on the semantic features of concepts to reinforce them and ultimately improve lexical retrieval. Four participants were recruited for the study, P01 (MMSE 23/30, woman, 79 years), P02 (MMSE 22/30, woman, 84 years), P03 (MMSE 20/30, woman, 87 years), and P04 (MMSE 20/30, woman, 84 years). Different measures of lexical (naming), semantic (questioning) and speech performances are taken in pre-intervention, post-intervention and maintenance phases. Between the first two baseline, a treatment phase is proposed to form a four-phase methodology (ABAA). An individualized management program consisting of 16 sessions, each lasting approximately 50 minutes, was executed over an 8-week period with two sessions per week. During sessions, participants were asked to complete a semantic feature analysis form for fourteen different items, twelve failed and two passed in the naming task, and to generate a sentence with the features. The results of this study will be discussed in the light of semantic memory models, after statistical analysis using in Single Case Experimental Design following the Evidence-Based Practice. An improvement in lexical-semantic skills is expected as well as a generalization of acquired knowledge to speech.

186 - Perceived Parental Psychological Control and NSSI in Adolescents: The Moderating Role of Attachment

Author(s): Shokoufeh Vatandoost, Imke Baetens, Zahra Azadfar, Martijn Van Heel

Day: Thursday

Time: 14:30 - 15:30

Room: I.0.Atrium

Abstract: Research indicates a correlation between parental psychological control and adolescent non-suicidal self-injury (NSSI). Yet, there remains a gap in understanding the specific mediating and moderating factors influencing this association. This study test the moderating effect of attachment security in the association between parental psychological control and adolescent NSSI. A sample of 210 adolescents (Mage = 16.13 years) completed questionnaires assessing the study variables. The preliminary results showed a significant negative correlation between parental psychological control and secure attachment ($r = -0.54$), a significant positive correlation between parental psychological control and NSSI ($r = 0.31$), and a negative significant correlation between secure attachment and NSSI ($r = -0.32$) among adolescents. Our hypothesis is that secure adolescent-parent attachment can buffer the negative impact of parental psychological control on NSSI in adolescents. The moderating role of secure attachment in the association between parental psychological control and NSSI will be examined using structural equation modeling.

Key words: Parenting, NSSI, Attachment, Adolescent, Perceived Parental Psychological Control

116 - Representational Geometry Underlying Chess Expertise in Biological and Artificial Networks

Author(s): Esna Mualla Gunay, Laura Van Hove, Felipe Luiz Fontana Vieira, Hans Op de Beeck, Andrea Ivan Costantino

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Expertise emerges through extensive training and learning, and it provides an opportunity to understand how learning shapes the brain. Here we focus upon chess, a major field of expertise that has been referred to as the drosophila of reasoning and artificial intelligence. Previous research has studied chess expertise at the behavioural and neural level, but no comparison between information processing in modern computational models and human data has been made yet. This study aimed to explore how chess expertise reorganizes the geometrical representation in both human and artificial brains. For this, we collected data from humans and deep neural networks (DNNs). For the human data, we conducted an fMRI experiment where expert and naive participants performed a one-back task with chessboards. For the DNN data, we passed the same chessboards to trained (i.e., expert) and untrained (i.e., naive) chessDNNs and extracted their activations. In both cases, they were randomly presented with 20 checkmate and 20 non-checkmate chessboards which are visually similar. We hypothesized that while non-experts would be guided by the visual characteristics (e.g., number of pieces), experts would be guided by higher-level characteristics of the boards (e.g., relation between the pieces). Thus, we expected that the checkmate information would be successfully decoded from the activation patterns of human experts and trained DNNs, but not from those of human naives and untrained DNNs. Moreover, we also expected the brain patterns and DNN activation patterns to have a similar information processing hierarchy. Preliminary results show support for our hypotheses.

117 - The Development and Validation of an Automated Method to Quantify Cortical Atrophy in Acute Post-Stroke CT Scans

Author(s): Ibe Couwels, Margaret Jane Moore, Georgina Hobden, Taylor Hanayik, Nele Demeyere

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Post-stroke cognitive impairment (PSCI) is a common yet debilitating consequence of stroke. Prior studies have linked cortical atrophy, as assessed on diagnostic CT scans, to PSCI prognosis. Cortical atrophy is typically evaluated through visual ratings, which are time-consuming and prone to variability. Our study aimed to develop and validate a robust automated method to quantify cortical atrophy in acute post-stroke CT scans.

The new method extracts volume measurements of cerebrospinal fluid (CSF) directly from the scans and normalizes by intracranial volume (CSFn). Cortical atrophy was visually assessed using the Global Cortical Atrophy (GCA) scale. We calculated the Spearman correlation between CSFn and total GCA. Using multivariable linear regression models, we related both CSFn and GCA to global PSCI (proportion impaired Oxford Cognitive Screen tasks) 6 months post-stroke, with age, sex, education, NIHSS, lesion volume, recurrent stroke, scan-assessment interval, and presence of white matter lesions as covariates. Next, logistic regression models related both CSFn and GCA to binary domain-specific impairment.

Preliminary results in our dataset of 371 participants (M/SD age = 73.68/12.47; 173 female; 318 ischemic stroke; 97 recurrent stroke) show that there is a strong correlation between CSFn and total GCA. The linear and logistic models showed that CSFn was as strongly predictive of global, memory and attention impairment as GCA, confirming the models' comparability.

These findings highlight that our method is a potentially valuable alternative for the GCA scores obtained through visual ratings and further establish the prognostic utility of acute CT neuroimaging markers for post-stroke cognitive outcomes.

118 - Emotional and cognitive aspects of professional's experience regarding attachment behaviours versus challenging behaviours.

Author(s): Sarah Dupont, Romina Rinaldi, Caroline Kahwaji

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: Objectives

Attachment behaviours are defined as behaviours that occur between an individual and a caregiver that aim at seeking and maintaining proximity and/or protest to separation. Previous studies have highlighted that primary care staff could be considered as attachment figures for adults with intellectual disability, especially in the context of group homes. This study aims to investigate the emotional and cognitive experience of staff members working with adults with intellectual disabilities in living facilities. More specifically, this study aims to determine the impact of attachment behaviours being perceived as challenging, compared to other types of behaviours being defined as challenging.

Method

We developed two standardized clinical vignettes describing either attachment behaviour or other behaviour of an adult with ID in a group home context and submitted them to a committee of experts in emotional development and to support workers to improve their validity. We improved these vignettes prior our data collection. Both vignettes are presented in a random order to support workers. After each vignette, participants are asked to provide information on their emotions, their feeling of self-efficacy and controllability assigned to the behaviour.

Results

Ongoing study -Analyses will be presented.

Discussion

This research will provide a better understanding of professionals and their feelings in their work experience, which in turn will lead to better support to adults with intellectual disability in living facilities and to improve well-being in the workplace, and potentially to better care for adults with ID.

119 - Development of an inventory on attachment behaviours of adults with ID towards professionals.

Author(s): Caroline Kahwaji, Kendall Duffeleer, Romina Rinaldi

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Objectives

Attachment behaviours can be defined as behaviours that occur between an individual and a caregiver that aim at seeking and maintaining proximity and/or protest to separation. Research suggests that primary care staff could be considered as attachment figures for adults with ID in group homes. For adults in this context, contact with staff in group homes has the advantage of being an adapted environment, they can constitute a risk to the emotional security for these adults, especially due to discontinuity in the presence of professionals. Available research indicates a lack of a sound tool to address the topic of attachment in adults with ID. A previous study (Rinaldi et al., 2023) highlighted that adults with ID display attachment behaviours towards support workers, however, we do not know if they are displayed selectively or indiscriminately. This study aims to develop an inventory for the observation of attachment behaviours in adults with ID in living facilities.

Method

We elaborated an inventory (Adult Attachment Behaviour Inventory) and ask support staff to complete this tool and BPI and VABS for an adult with ID that they know well.

Results

Ongoing study. Psychometric as well as correlational analyses will be presented.

Discussion

Developing a scale for the assessment of attachment behaviours from adults with ID towards their support workers can offer a better understanding of the behaviours and needs of these individuals in relation to group home context and lead to more sensitive and responsive practices.

120 - Using deep convolutional neural networks to model face learning

Author(s): Raphaël Legrand, Daniel Defays, Jacques Sougné, Christel Devue

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: How do we learn faces? Current prevailing theories, largely based on early computational models, suggest that various instances of a face we have encountered are incorporated into averaged representations (Burton et al., 2005). However, recent human data supports an alternative account of face learning: the cost-efficient encoding mechanism (Devue & de Sena, 2023). This theory explains a surprising differentiation in recognition performance for faces that are stable or variable in appearance. The former would be represented more coarsely than the latter, which would incorporate higher-resolution areas corresponding to intrinsic diagnostic features. Concurrently, since the introduction of the averaging theory, artificial facial recognition systems have improved immensely, largely due to the emergence of deep learning-based systems. Here, we capitalized on deep convolutional neural networks to test predictions derived from the cost-efficient theory. Specifically, we examined whether these networks would also show the appearance-based differentiation in representations. To do so, we produced a database of images of 38 actors classified as “stable” and “variable” (based on independent ratings) that we fed to the well-established “DeepFace” model (Taigman et al., 2014). We then compared the content of the facial representations built by the model for each category of actors. Preliminary principal component analyses suggest that variable faces are represented in a more complex fashion than stable faces, similar to the hypothesized way of representing faces in humans. The present results suggest that an AI-based investigation of the cost-efficient framework holds merit and will serve as a baseline for future research.

121 - Sequential effects in decision making: the role of slow fluctuations in decision criterion

Author(s): Robin Vloeberghs, Anne Urai, Kobe Desender

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Every day, we have to make numerous decisions based on noisy perceptual input. These decisions are not only influenced by the immediate sensory input but also depend on the broader context, such as the choice history, decision confidence, and the previously seen stimuli. The influence of experimental history, broadly referred to as sequential effects, is observed across tasks and species, and seems to be a fundamental feature of decision making. Whereas previous work developed highly specialized and complex mechanisms to often explain only one modulating factor of sequential effects, we propose a far simpler mechanism that explains a wide range of sequential effects. We show that fluctuations in the decision criterion, modelled as an autoregressive process, are sufficient to explain three key sequential effects. Importantly, whereas previous models relied on a causal effect of experimental history to explain sequential effects, these results suggest that sequential effects are the consequence of a fluctuating process independent from experimental history. In order to measure these slow fluctuations in decision criteria in empirical data, we developed the Hierarchical Model for Fluctuations in Criterion (hMFC). To empirically test the slow fluctuations account, we fitted hMFC on 23 datasets from the confidence database. Model fits across datasets showed that indeed slow fluctuations explained some, but not all, of the sequential effects. These results suggest that some sequential effects in decision making are not the result of a causal updating process, but instead result from slow fluctuations in criterion.

122 - TloadDchild : a new task to assess cognitive fatigue and vigilance in children

Author(s): Alexandra Russarollo, Xavier De Tiège, Vincent Wens, Jeromy Hrabovecky, Hichem Slama

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: AIM OF THE STUDY : This study aims at validating in typically developed school-aged children an adaptation of the Time load Dual-back task (TloadDback) used to assess cognitive fatigability in adults. By manipulating processing time based on individual performance, we assessed if the TloadDback adapted for children (TloadDchild) was able to induce cognitive fatigue/sustained attention and sleepiness/vigilance in this population. METHOD : The TloadDchild is a dual task composed of a decision making task and a CPT-X, that was administered to 20 typically developing children (7-12 years old). To ensure that children did not exhibit neurodevelopmental or neuropsychiatric disorders, seven questionnaires were administered (assessed through CBCL, QTAC, BRIEF, Identidys, ADHD-RS, CSHQ, The St.Mary's Hospital Sleep). Cognitive load levels were individually adjusted by pre-assessing the minimal time required to properly carry out the task, providing an index of maximal cognitive load. Participants were then exposed to high cognitive load (to assess cognitive fatigue, with the individually calibrated short stimulus duration time) and low cognitive load (to assess sleepiness/vigilance, by doubling the stimulus duration time) conditions, spread over two days. Subjective assessments of cognitive fatigue, sleepiness, mind wandering, mind blanking, and motivation were obtained at the beginning and at the end of each condition using Likert-type scales tailored for children's comprehension level. RESULTS : Analyses are currently in progress. Results will be presented and discussed at the conference. CONCLUSION AND CONTRIBUTION : Validating the TloadDchild in a pediatric population will provide a novel tool for assessing cognitive fatigue and vigilance in children.

123 - Does social bonding, as a marker of social processing, foster infants' ability to learn?

Author(s): Romane Boulanger, Adélaïde de Heering

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: Infants demonstrate extraordinary social skills which influence their ability to learn. However, neural mechanisms underlying these abilities remain largely unknown mainly because of the challenge of designing compatible neuroimaging paradigms for infant research. This project explores whether social bonding (i.e., interpersonal connection) shapes infants' learning abilities. To investigate this, 24-month-old infants will be first exposed alone to the Rubin Face-Vase illusion and tested under a frequency-tagging protocol in which its elements (faces and vase) will flicker at distinct frequencies (F1, F2) achieved through noise superimposition. Then the amount of social bonding will be manipulated with the caregiver either teaching or not teaching the infant to tell the elements of the illusion apart. At the end of the experiment, the infants will be re-exposed to the illusion to assess the disambiguation process following the intervention. To refine the parameters of the infant experiment, such as the duration of exposure to the illusion, we conducted a preliminary study on 32 adults. Participants were first instructed to press a key when they found "something interesting" about the illusion and then questioned about their familiarity with the illusion. Importantly, the image also stayed on the screen until they explicitly mentioned both elements to evaluate the time needed to disambiguate the illusion. Overall, participants being unfamiliar with the illusion took approximately 90 seconds to perceive both elements. In addition, 100% of the participants alternated between seeing the faces and the vase when being exposed to the illusion.

124 - Are suggestible people more likely to change their belief in the occurrence of autobiographical events?

Author(s): Lyse Gathoye, Valentine Vanootighem

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: A “nonbelieved memory” (NBM) refers to an autobiographical memory that is no longer believed to represent an event that actually took place, despite a vivid recollection of the event. While most studies have sought to characterise NBMs (e.g. their frequency, dating, phenomenological characteristics), very few studies have attempted to differentiate individuals who report these memories from those who do not. The aim of the present study was thus to examine the role of suggestibility on the occurrence of NBMs and on the reasons for changes in belief in the occurrence of an event. One hundred and eighty-three people aged between 20 and 60 first completed the short version of the Multidimensional Iowa Suggestibility Scale and the Gudjonsson Compliance Scale. They were then asked whether or not they could report an NBM. If so, they had to describe the event, explain why they had stopped believing in its occurrence, and rate the phenomenological characteristics of their memory. In addition, participants had to describe an age-matched believed memory (BM) so that the characteristics of both types of memories could be compared. The results showed that a higher level of suggestibility was associated with a greater likelihood of reporting an NBM. However, contrary to our hypothesis that more suggestible people would tend to change their belief due to social feedback, there was no link between reasons for changing one’s belief and individual levels of suggestibility.

125 - Learning by groups

Author(s): Alejandro Macías, Jan De Houwer

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: Psychology has traditionally focused on studying individual organisms. Even within Social Psychology, group studies primarily revolve around how collectives influence individual behaviors, although not exclusively. Nonetheless, there is a growing interest in examining the behavior of groups instead of the behavior of individuals in a group. In our research, we focus on learning by groups. We start from a functional approach in which learning is defined as changes in a system's behavior towards a stimulus resulting from environmental regularities, with the system in question being the group. To proceed, we must conceptually define the nature of the system (i.e., groups), potential states and behaviors of groups, potential changes in the behavior of groups, and the regularities underlying such changes. Our aim is to illustrate this approach by conducting an experiment involving a simple group system, specifically a dyad, in an operant conditioning task. We analyze how the system responds based on differential reinforcement for each response alternative. We present exploratory data and discuss analytical methods. Finally, we address the advantages and challenges associated with this approach.

126 - Investigation of TERM (Treatment by Embodied Reactivation of Memory), an innovative management method of anomia: case studies

Author(s): Melike Semiz, Anne-Marie Alfieri, Vildan Sahin, Valentino Perna, Iris Dubois, Isabelle Simoes Loureiro

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Alzheimer's disease (AD) is a neurodegenerative pathology that has a considerable impact on patients' quality of life. Among other disorders, the memory and language deterioration observed from the beginning of the disease affects importantly the communication skills of patients. The lexico-semantic impairment causes symptoms including anomia, defined as the inability to find one's words. Also, semantic paraphasias, periphrasis and non-responses can be observed both in natural language and standard assessment tasks. The aim of this study is to investigate a new method for treating anomia, TERM (Treatment by Embodied Reactivation of Memory). Based on a non-abstractive model of semantic memory, TERM offers direct sensorial-motor stimulation of concepts (via images, sounds, smells, or videos). 10 patients with early-stage AD (MMSE>20) were recruited. The experimental design is a repeated-measures case study and is composed of four phases lasting 15 weeks (one intervention phase and three assessment phases – pretest, posttest, and follow-up –). During the intervention phase, patients were seen twice a week over an 8-week period. 12 concepts that had failed the naming task were trained on using multisensory stimulation. During the assessment phases, memory, executive and language functions, as well as anxiety-depressive affect and quality of life, were investigated. In conclusion, a new treatment method of anomia is investigated in this study. Data will be analyzed and presented. In the long term, our aim is to propose evidence-based method to treat anomia in early-stage of AD.

127 - Effect of transcranial direct current stimulation (tDCS) on the feeling of social exclusion: influence of the romantic partner's face

Author(s): Marine Saint-Mard, Michel Hansenne

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: Topic and Research Questions. Previous findings have demonstrated that seeing the face of one's romantic partner could help alleviate pain feelings. Some studies have also reported that transcranial direct current stimulation (tDCS) had the propensity to generate analgesia of social pain. This study therefore aimed to investigate the benefits of combining these two effects on reducing social pain.

Method. Forty 'in love' participants played the cyberball game (an inducer of social pain) while being shown a picture of their beloved one or one of their closest friend. TDCS was administered on the right ventrolateral prefrontal cortex to the entire sample. The anode and the cathode were positioned on F6 and Fp1, respectively, following the 10-20 international EEG system. After completing each condition, participants reported their feelings about their game experience. Both image and stimulation conditions were administered in a random counterbalanced way.

Results. Repeated measures ANOVA show no principal effects of picture or tDCS on the feelings reported by the participants. However, in anodal stimulation, higher distress is detected when participants see their friend than their romantic partner. Analyses also reveal that participants felt more positive emotions but not less negative emotions when seeing their loved one compared to their friend.

Conclusion and Contribution. The present findings do not support the previously reported analgesic effects of the romantic partner picture or tDCS. Though, the results suggest that love might induce more positive feelings in such aversive situations, providing thus insight on the contribution of love in emotional experience

128 - Gaze behavior in preterm children with an autism phenotype

Author(s): Sophie Meyvis, Laura Tibermont, Rowena Van den Broeck, Lisa Gistelincx, Gunnar Naulaers, Els Ortibus, Roy Hessels, Bart Boets, Stephanie Van der Donck

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: Gaze behavior plays a pivotal role in face-to-face social interactions, facilitating joint attention and communication. Atypical patterns can be observed in developmental conditions like autism, and may potentially underlie communication difficulties experienced by these individuals. Thus far, most empirical eye tracking studies employed artificial stimuli, measuring gaze behavior at pictures and videos of faces. Although findings are mixed, some studies show reduced attention to faces, increased attention to non-social stimuli and reduced eye contact in individuals with autism. Additionally, they demonstrate atypical face scanning patterns, with reduced attention to core facial features (i.e. eyes, mouth, nose). Recent eye tracking studies started investigating real-life dynamic face-to-face interactions, thereby offering detailed insights into the complexity of the use of social gaze. These naturalistic paradigms are promising in revealing real-life gaze dynamics, as autistic behaviors may manifest more reliably in ecologically valid settings. In the present study, we investigate gaze behavior in 5-year-old preterm children with an autism phenotype as compared to neurotypical children. Gaze behavior is recorded while participants engage in a silent free viewing paradigm with an adult stranger, using a two-way live video feed dual eye tracking setup. We hypothesize that preterm children with an autism phenotype will demonstrate diminished attention towards the eyes and display atypical facial scanning patterns, in contrast to neurotypical peers. Preliminary findings, which are currently being analyzed and will be presented at the BAPS conference, might offer profound insights into the intricate mechanisms underlying social communication difficulties in preterm children with an autism phenotype.

129 - Social Networks during COVID-19 were Differentially Related to Depression and Loneliness Across Age: An Egocentric Networks Analysis

Author(s): Alba Bruggeman Nelissen, Susanne Schweizer

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Evidence shows that the COVID-19 pandemic was associated with a deterioration in people's mental health, especially in young people. The impact of the pandemic on mental wellbeing has been partially attributed to disruptions in social connectedness. The current study examined changes in the structure of social networks and whether they account for changes in mental health. The study included 1278 participants between 11 and 89 years ($M = 37.2$; $SD = 16.2$) from the COVID-19 Risks Across the Lifespan Study, a longitudinal survey study across the first year of the pandemic (May 2020 – April 2021). Social networks were assessed using egocentric networks, where individuals identified up to six close others. These were analysed with egocentric network analysis, which visualises the full network structure and divides it into two types of measures: structural components (e.g. size and density of network, frequency of interaction) and functional components (e.g. emotional support and closeness). The results showed that functional components of egocentric network are more strongly associated with depression and loneliness compared to structural components. These associations varied across age. Retrospective self-reports showed that frequency of interaction (face-to-face, by phone and electronically) decreased during COVID-19 compared with before COVID-19. This decrease was associated with depression and loneliness, particularly concerning interaction with friends and this effect was more pronounced for younger people compared to older people. Together these findings suggest that social networks played a critical role in wellbeing during COVID-19, and help account for age-related differences in the pandemic's impact on mental health.

130 - How relationship serving state motivation of the perceiver moderates the association between empathic accuracy and relationship well-being

Author(s): Cloé Rose Cetko, Liesbet Berlamont, Eva Ceulemans, Lesley Verhofstadt

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Empathic accuracy is the extent to which people accurately perceive another person's thoughts and feelings (EA ; Ickes & Hodges, 2013). It is intuitive to assume that, within intimate relationships, a more accurate understanding of one's partner would be better for the relationship, especially during conflict. This assumption is also supported by the scientific literature (Verhofstadt et al., 2008, 2016 ; Kilpatrick et al., 2002 ; Gordon and Chen, 2015).

The correlation between empathic accuracy and relationship satisfaction, however, is significant but small (Sened et al., 2017) indicating that variables might moderate the association.

The present study examines the hypothesis that, during relationship conflict, the association between empathic accuracy and interaction-based relationship well-being, is moderated by the relationship serving state motivation of the perceiver. To do so, we used data from an observational lab study in which 86 couples were randomly assigned to a control vs. a relationship-serving motivation boost condition. Each couple participated in a videotaped conflict interaction task and video review task. Empathic accuracy was measured with an adapted version of the dyadic interaction paradigm (Ickes et al., 1990). The situational relationship well-being was assessed with the IOS (Aron, et al. 1992) right after the interaction. Statistical analysis is still in progress.

131 - Motivations and barriers of students with a very disabling illness in French speaking Belgian higher education

Author(s): Lucie Erroelen

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: Following the “Décret relatif à l’enseignement supérieur inclusif” (2014), the inclusion of students with disabilities in French speaking Belgian higher education has a precise legislative framework which confirms the international trend to develop the inclusion of people with disabilities in all areas of life. The motivations for studying are different for able-bodied and disabled students. In addition, they face many specific obstacles: environmental, attitudinal, educational, relational, stigma. In order to understand more closely the motivations and difficulties encountered by disabled students due to a very disabling chronic illness, who have the particularity of often living with fluctuating symptoms and having so-called invisible pathologies, we created a questionnaire to interview these students and put their responses into perspective with those of able-bodied students and students with other disabilities. We also analyzed the representations of disability and disabling illnesses of four university professors and the evolution of these following an awareness workshop. The results of this research show that, compared to other students, students suffering from a very disabling illness use studies more to delay their entry into the world of work and that they are more motivated by the idea of doing studies to meet a challenge.

In addition, we note the positive influence of holding awareness workshops on disability and disabling illnesses on university professors’ representations of disability and chronic disabling illness and on their inclination to grant accommodations.

132 - Rapid Formation of Psychological Inertia in Simple Learning Tasks: A View from Visual Working Memory

Author(s): Wenrui Li, Qiang Liu, Ruiqiao Guo, Na Zhao

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: Psychological inertia, commonly referred to as “habit”, denotes the irrational inclination towards initial choices and resistance to change. Previous studies have indicated that psychological inertia may manifest in complex learning tasks involving processes such as long-term memory, reasoning, and decision-making, often assessed through questionnaires. Despite humans’ remarkable ability to adapt flexibly to new environments and rapidly learn new tasks through instructions, it remains uncertain whether psychological inertia could develop in simple learning tasks focusing on working memory. To address this gap, we employed two recall tasks presenting simple stimuli (i.e. color and orientation) to measure working memory performance. The aim was to investigate whether individuals’ allocation patterns of memory capacity became fixed, forming psychological inertia, after brief practice. Additionally, 4 Hz transcranial alternating current stimulation (tACS) was applied to the right posterior parietal lobe to increase memory capacity, starting before or after practice. The experimental results revealed that participants exhibited different memory resource allocation patterns in subsequent tasks only when their memory capacity was enhanced before the practice phase. However, practicing before the increase in memory capacity did not lead to changes in memory resource allocation patterns. Consequently, we conclude that individuals could develop psychological inertia after only a few practice trials in simple learning tasks. However, this inertia does not seem to transfer from one task to another.

133 - Metacognitive Conflict Impairs Both Cognitive Performance and Confidence: Evidence from Behavior and Computational Modeling

Author(s): jintao xing, Stef Herregods, Luc Vermeulen, Kobe Desender

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: It is well established that external feedback is effective not only for enhancing cognitive performance but also for regulating metacognition monitoring. However, external feedback could be detrimental when it conflicts with one's internal feedback signal (i.e. the level of confidence we have in our decisions). At current, however, it is unknown how discrepancies between internal and external feedback ("metacognitive conflict") influence behavior and confidence. In the current study, we examined this question in a random dot motion task in which participants both reported their level of confidence and received feedback about their accuracy. Metacognitive conflict occurs if participants have high (low) confidence in their decision but external feedback indicates that the decision was erroneous (correct). Results showed that participants exhibited lower accuracy and reported lower confidence following metacognitive conflict relative to non-conflict trials. To better characterize the mechanisms underlying this effect, we deployed an evidence accumulation model with additional post-decisional accumulation to quantify confidence. We found that participants became more cautious after experiencing metacognitive conflict, as evidenced by higher decision boundaries, elevated confidence boundaries, and prolonged non-decision time in the model. Together, our findings provide insight into the consequences of metacognitive conflict on both cognition and metacognition.

134 - Polka Dots Could Increase Perceived Waist Circumference by Four Centimeters

Author(s): Benoît Léonard

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: Fashion experts suggest that wearing polka dots makes one appear heavier. Morikawa et al. [(2022). Body size illusions caused by polka-dot dresses. Poster session presented at the European Conference on Visual Perception (ECVP), Nijmegen, the Netherlands] studied the question but showed that smaller dots make a person appear slimmer instead. To investigate this further, I conducted a single-subject study focusing on dot size and perceived body size. Seven dot sizes were chosen, including extremes not resembling polka dots, along with three plain colored patterns for reference. 100 body shapes were constructed with gradually increasing waist circumference. DAZ Studio applied patterns and body shapes to a virtual female model, producing 10 x 100 pictures with no other variation. Each measurement was obtained by adjusting a reference picture's waist circumference to match that of the stimulus picture, using a slider for rough adjustments, and two buttons for fine-tuning. JavaScript managed randomization, presentation, and data recording. A total of 1210 comparison results were recorded across seven sessions. Initial sessions confirmed the impact of dot size, while later sessions addressed potential confounding factors. Analyses revealed a highly significant main effect of dot size, with the intermediate dot sizes increasing apparent waist circumference by up to four centimeters. Body size and color variations created their own illusions but did not interact significantly with dot size. Different colors and dot-to-background proportions could trigger different perception mechanisms and could be further studied in similar settings.

135 - Effects of Financial Incentives on Pro-Environmental Behavior Before and After Incentive Discontinuation: Evidence From a Consequential Online Task

Author(s): Piotr Lipinski, Florian Lange

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: Financial incentives are a popular tool for boosting pro-environmental behavior. However, the evidence on their effectiveness, largely driven by unstandardized field studies with limited experimental control, is mixed. It is particularly unclear whether the effect persists after incentive discontinuation, and if it does, what mechanism determines its persistence. To build a more comprehensive and replicable body of evidence on the effectiveness of incentives on pro-environmental behavior, studies in controlled experimental settings are needed. To this end, we examined the effectiveness of small financial incentives with a recently validated pro-environmental behavior task. We conducted two preregistered online studies (total $N = 1291$) where participants could exert real effort in exchange for donations to a pro-environmental charity organization. We found strong support for a positive immediate effect of financial incentives on pro-environmental behavior in both Study 1 ($d = 0.68$) in a UK sample and Study 2 ($d = 0.51$) in a US sample. A week after incentive discontinuation, the effect persisted in Study 1 ($d = 0.39$) but dissipated in Study 2 ($d = 0.01$). To further understand the mechanism of the effect, we also examined potential spillovers into an unrelated cause while keeping the effort activity constant, and into an unrelated effort activity while keeping the cause constant, but did not find conclusive evidence for such spillovers. This research contributes to the growing evidence base on the effectiveness of incentives in fostering pro-environmental behavior and demonstrates a novel approach to distill the mechanism of the effects of incentives beyond discontinuation.

136 - Impact of mental rehearsal on the retention of extinction learning

Author(s): Sophie-Charlotte Bertrand Van Ouytsel, Sara Scheveneels, Katarina Meyerbroker, Elizabeth Uduwa Vidanalage

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Exposure-based therapies are highly effective for treating anxiety disorders, yet some patients experience a re-emergence of fear after treatment. This underlines the importance of enhancing the retention of therapeutic outcomes. Our study investigates the impact of mental rehearsal—a cognitive strategy involving active engagement with past experiences of facing feared stimuli and the learning derived from these experiences—on the retention of extinction learning (as the laboratory analog of exposure therapy).

Our study employs a mixed design with repeated measures across acquisition, extinction, and two test phases (spontaneous recovery and reinstatement), contrasting two conditions: an experimental group and a control group. The experimental group must engage in daily mental rehearsal of the extinction phase via personal audio recordings for one week, and a control group must listen to unrelated recordings (i.e., their morning routine) for one week as well. Dependent variables are self-reported expectancies regarding the shock and skin-conductance responding during the conditioning phases.

We hypothesize that daily mental rehearsal will enhance the retention of extinction learning, manifesting as a diminished return of fear in both a spontaneous recovery test and a reinstatement test phase, one week after extinction, for the experimental group relative to controls. Data collection is ongoing, with results to be shared at the forthcoming BAPS conference.

137 - Insights into Social Challenges in Very Preterm Birth Survivors: Examining Gaze Behavior and Vagal Tone

Author(s): Samantha Piers, Tiffany Tang, Lisa Gistelinck, Matthijs Moerkerke, Nicky Daniels, Els Ortibus, Kaat Alaerts, Gunnar Naulaers, Bart Boets

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: The rise in survival rates among preterm (PT) infants has shifted attention towards understanding the challenges faced by PT survivors, particularly in the social domain. Very preterm (VPT) birth (< 32 weeks of gestation) is associated with a distinct set of characteristics known as the “preterm behavioral phenotype,” which includes inattention, emotional problems, and social difficulties. However, limited research has explored the interrelation of these factors in VPT children. This study aims to bridge this gap by investigating the association between gaze behavior and autonomic nervous system (ANS) regulation in VPT survivors within a real-life social context.

Employing an ecologically-valid dyadic interaction paradigm, this study examines gaze behavior in 39 8-to-12-year-old VPT children compared to 38 matched full-term controls. Additionally, it explores the potential role of dysregulated ANS functioning, particularly vagal tone as indexed by heart rate variability (HRV), in contributing to socio-emotional difficulties. While previous studies have supported the link between vagal tone and the social domain, no research to date has investigated the association between gaze behavior and stress physiology in preterm-born children.

Participants engaged in live dyadic interactions while their gaze behavior was micro-coded from video data and ANS functioning assessed through HRV recordings. Preliminary findings reveal distinct gaze behavior patterns in VPT children, characterized by reduced mutual gaze duration and increased frequency of gaze aversion. By further exploring HRV measures, this study seeks to elucidate the underlying mechanisms contributing to socio-emotional difficulties in VPT survivors and deepen our understanding of ANS regulation in preterm populations.

138 - Examining Emotion Regulation and Its Relationship with Depression and Anxiety in Post-Treatment Patients

Author(s): Ruth Van Malderen, Melissa Black

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: Emotion regulation has been suggested as playing a key role in the development and maintenance of numerous mental disorders. Research now suggest that emotion regulation not only contributes to the onset of depression but also makes post-treatment patients vulnerable to relapse#_msocom_1. This study investigates the persistence of emotion regulation difficulties among post-treatment patients and their association with symptoms of depression and anxiety. Additionally, itexplores past patients' attitudes towards the need for a post-treatment digital intervention focusing on emotion regulation, which can inform the development of a future intervention aimed at preventing relapse for depression and anxiety. We conducted a single timepoint online survey study among 72 patients who had completed treatment at the Black Dog Institute. The survey utilized both quantitative and open-ended questions to assess emotion regulation, as well as emotion regulation flexibility, symptoms of depression and anxiety, and past patients' need for a post-treatment intervention.Findings indicated persistent challenges in emotion regulation, with post-treatment patients exhibiting high levels of general emotion regulation difficulties and more use of maladaptive strategies than adaptive strategies. These difficulties were significantly associated with heightened symptoms of depression, anxiety and stress. Furthermore,the majority of participants believed that there is a need for digital tools that are tailored specifically for individuals who have completed treatment for depression and anxiety, and expressed that they would find it valuableto have continued support specifically focused on managing emotions after treatment.These findings underscore the importance of addressing emotion regulation in relapse prevention interventions.

#_msoanchor_1

139 - Emotional kaleidoscope: Positive and negative emodiversity and its relation to well-being in daily life

Author(s): Angelique Pershon, Katie Hoemann

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Emodiversity refers to the diversity of one's emotional life in terms of how many different types of emotions are experienced and how evenly these emotions are distributed. Whereas someone with high emodiversity experiences a wider range of emotions with similar frequencies, someone with low emodiversity experiences fewer emotions with dissimilar frequencies. These two dimensions of emodiversity - range and evenness - are inspired by theories of ecological system health and supported by studies showing that greater emodiversity is broadly associated with better well-being. At the same time, the relative contribution of range and evenness to well-being is unknown, and there is conflicting evidence about the utility of diverse positive versus negative emotions. The present study addresses these gaps using data collected from 77 healthy adults in Belgium (aged 18 to 65, 51 women), who provided descriptions of their momentary emotional experiences four times a day for 10 weeks as well as retrospective assessments of well-being every two weeks. Emodiversity was measured in terms of the number of unique emotion words used (range) and the frequency of each (evenness). We predicted that diversity for both positive and negative emotions would be positively associated with well-being, that a composite measure of emodiversity would explain more variance in well-being than a measure of emotional range alone, and that the relationship between emodiversity and well-being would hold when assessed overall and in a cross-lagged panel model.

140 - Association between childhood maltreatment and adult internalizing symptoms: the mediating role of sensory processing sensitivity

Author(s): Samantha Mairesse, Nellia Bellaert, Mandy Rossignol

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Sensory processing sensitivity (SPS), a trait describing inter-individual differences in cognitive and emotional sensitivity to environmental stimuli, may elucidate why individuals vary in their response to aversive environments, such as early maltreatment. While childhood maltreatment is a risk factor for psychopathology, the mechanisms underlying the onset of internalizing disorders remain unclear. Recent evidence suggests that childhood traumas may affect sensory processing skills, and that SPS is linked to higher internalizing symptoms. This study aims to test the mediating role of SPS in the association between childhood maltreatment and anxiety/depressive symptoms in adulthood. An online survey is conducted in which participants (currently N=59, ages 20-60) complete self-reported questionnaires measuring history of childhood traumas (Childhood Trauma Questionnaire; Bernstein et al., 1994), SPS (Highly Sensitive Person Scale; Aron & Aron, 1997), anxiety (Spielberger State-Trait Anxiety Inventory; Spielberger et al., 1970) and depressive symptoms (Beck Depression Inventory; Beck et al., 1961). A mediation model will test the effect of SPS on the association between childhood traumas and adult anxiety/depressive symptoms. We expect individuals with high SPS to show a stronger association between childhood maltreatment and self-reported levels of internalizing symptoms. Data collection is ongoing, and results will be presented at the conference. The present study could help us better understand whether SPS trait plays a role in the development of adult psychopathology following childhood maltreatment, thereby paving the way for interventions targeting SPS (e.g., cognitive-behavioral therapy) to improve the emotional well-being of individuals at risk for psychopathology.

141 - Physiological arousal regulation and verbal communication patterns in preterm born preschoolers and their mothers

Author(s): Lauren Gomes, Lisa Gistelincx, Giovanni Esposito, Rowena Van den Broeck, Maarten De Vos, Bieke Bollen, Els Ortibus, Gunnar Naulaers, Sam Wass, Bart Boets

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Prematurity can have lifelong implications for a child's (mental) health and development. The survival rate of preterm infants has increased over time, but many are at risk of adverse neurodevelopmental outcomes. Due to altered brain maturation, exposure to early stressors in the neonatal intensive care unit and atypical early mother-infant interactions, preterm birth can negatively impact the stress-regulation system as well as verbal communicative abilities. The aim of this study is to investigate socio-emotional development of preterm born preschoolers, by mapping conversation patterns to physiological arousal regulation. The study will contrast physiological arousal regulation, turn-taking behaviour and emotion vocabulary use in 65 preterm versus 25 term-born mother-child dyads. The dyads will discuss a positive and a negative shared event during a semi-structured interaction paradigm. The dyadic interactions are audio and video-recorded and physiological signals are simultaneously measured. Parameters such as heart rate variability, inter/intra-speaker silences, overlapping speech, and the amount of positive and negative emotion vocabulary, will be extracted and analysed. We hypothesise that children born prematurely will exhibit difficulties regulating physiological arousal, engaging in fluent turn-taking behaviour, and expressing emotions through emotion vocabulary, particularly during negative emotional state interaction. We also predict a positive association between maternal and child's physiological arousal and verbal emotional expression in term-born dyads and a reduced association in the preterm dyads. Analyses are ongoing and will be finalized before the conference. These findings will contribute to a better understanding of the socio-emotional development of preterm born preschoolers.

142 - Discrimination in psychosocial risks: a theoretical analysis of the law on well-being of workers

Author(s): Marine Willeput, Caroline Closon

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Objectives: The 2014 Belgian law on well-being of workers highlights 5 components at the origin of psychosocial risks: organisation of the work, content of the work, working conditions, living conditions at work and interpersonal relations at work. Discrimination is classified in the latter by the FPS Employment, Labour and Social dialogue (2016). This presentation offers a theoretical analysis of each component of the law from the perspective of gender-based discrimination.

Method: A search equation was defined for each component of psychosocial risks. Then, we constructed a table grouping different components and potential influence of discrimination on each of them.

Results: As expected, discrimination has an impact on interpersonal relations (see Shin & Kim, 2022). However, we found that discrimination also impacts all the other components of psychosocial risks, which have hitherto been neglected: e.g. unequal distribution of tasks according to gender (organisation of the work) (Campos-Serna et al., 2013), fewer challenging developmental experiences in women's careers (content of the work) (King et al., 2012), fewer promotion and training opportunities for women (working conditions) (Auster & Prasad, 2016), and workstations designed for men and often unsuited to women's physique (living conditions at work) (Messing et al., 2018).

Conclusion: This work highlights other areas where levers for action are possible and necessary. Conceiving discrimination solely in terms of interpersonal relations would be tantamount to blaming individuals and thus denying the existence of structural sexism.

143 - Links, differences, and consequences of coping and emotion regulation in children.

Author(s): Alice Flament, Mareike Kaemmerer, Olivier Luminet, Magali Lahaye

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: This study aims to explore the relationship between coping strategies and emotion regulation in children. While these two concepts undergo major evolutions throughout child development, there is currently no consensus on their interaction and differentiation. The present study aims to understand how coping strategies and emotion regulation manifest during childhood, particularly in the context of increasing demands for cognitive control in children aged 8 to 12 years. The study will recruit a sample of children from this age group in Belgian schools.

Data will be collected using questionnaires assessing coping strategies, emotion regulation, and psychological well-being. Results will be analyzed using exploratory factor analysis, linear regression, and correlation models, to examine conceptual overlap, differences, and comparative impacts of coping strategies and emotion regulation on children's psychological functioning.

By clarifying the distinctions between coping and emotion regulation strategies, as well as their impacts on children's well-being, this study aims at a more nuanced understanding of these concepts. It also aims at offering perspectives for tailored interventions and assessments, shedding light on the complex relationship between these two domains in childhood, with both theoretical and practical implications for promoting children's psychological well-being and development.

144 - Neural sensitivity for facial and vocal emotion expression discrimination: A frequency-tagging EEG study in prematurely born preschoolers

Author(s): Emma Vermeulen, Rowena Van den Broeck, Lisa Gistelinck, Gunnar Naulaers, Bieke Bollen, Els Ortibus, Bart Boets

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract:

Premature birth occurs when a baby is born before 37 weeks of pregnancy. This can pose various (mental) health risks for the infant, and developmental delays. Neonatal intensive care units (NICUs) are equipped to provide specialized care for premature babies to support their development. Yet, the bright lights, constant noise, and medical interventions at the NICU, as well as the immature brain and altered parent-infant interactions may impact their neural, physiological socio-emotional development. Previous research suggests that preterm infants may experience difficulties in self-regulation and emotional expression processing, such as difficulties with recognition of facial expressions and eye contact, which may eventually affect social interactions and the formation of peer relationships. Furthermore, an elevated risk for Autism Spectrum Disorder has been observed, and findings indicating an inverse association between gestational age and the prevalence of psychiatric conditions. In this study, we investigate potential differences in neural sensitivity for emotion processing, specifically for happiness and fear, in a group of 65 prematurely born 5-year old toddlers as compared to a group of 25 matched full-term born peers. We used frequency-tagging EEG to investigate emotion discrimination, both in the visual (faces) and the auditory (voices) domain, leading to a unique opportunity to compare and correlate implicit neural processing of social information in both sensory domains. We hypothesize that preterm children will show reduced neural discrimination of facial and vocal emotions compared to the full-term born group. Results are currently being analyzed and will be presented at conference.

145 - Parental emotional factors and food avoidance in children: a longitudinal study

Author(s): Juliette Taquet

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: Aim: To elucidate the role of interpersonal and intrapersonal emotional factors in the explanation of children's food avoidance. Studying the mechanisms underlying children's food avoidance is imperative as food avoidance pose significant risks for the development and maintenance of eating problems/disorders in children. Therefore, we aim to examine 1) the bidirectional relationship between parental emotional factors (parental distress and their responses to children's emotions) on one hand, and children's food avoidance (food fussiness and emotional undereating) on the other hand, 2) the potential mediating role of child emotion regulation in the relationship between these parental emotional factors and children's food avoidance, and 3) the moderating effect of child emotionality on the interplay between these parental factors, child emotion regulation, and children's food avoidance. Methods: Parents (98) of 2.5 to 8 year-old children completed two online questionnaires six months apart, assessing child food avoidance, child emotion regulation and emotionality, parental distress, and parental reactions (minimization, distress, and punishment) to their child's discomfort. Hypotheses: 1) the presence of bidirectional relationships between parental distress, parental reactions to their child's discomfort on one hand, and children's food avoidance behaviors on the other hand and, 2) the mediating role of child emotion regulation on the relationship between parental distress and children's food avoidance behaviors is moderated by child emotionality, with a stronger indirect effect on food avoidance behaviors for children with higher levels of emotionality compared to children with lower levels of emotionality. Findings and conclusions will be shared at the conference.

146 - Formal and informal/mixed spaces in the school context: analysis of the ergo-architectural factors and their influence on teacher satisfaction

Author(s): Sonia Vermeulen Steyaert, Laurent Jeannin, Béatrice Mabilon-Bonfils, Cécile van de Leemput

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Objectives. Despite the abundance of research on learners (Manca et al., 2020), the impact of ergo-architectural features on teacher satisfaction has been relatively unexplored. This study examines how the characteristics of formal spaces, designed for institutionalized activities such as classrooms (Dugdale, 2009), and informal/mixed spaces, providing a setting for teachers to work and engage in social interactions (Boys, 2010), affect teacher satisfaction. As there is a clear distinction between formal spaces, and mixed/informal spaces, our question is: How do the ergo-architectural aspects of informal/mixed spaces support those of formal spaces in enhancing teacher satisfaction?

Method. A qualitative study was conducted with 12 teachers, employing a combination of observations tools, interviews, and self-reported questionnaires. The data were analyzed using a triangular approach (vertical and horizontal analysis based on verbatims, observation, and self-reported measures).

Results. The results indicate a greater level of satisfaction among teachers regarding the ergo-architectural aspects of their formal environments, as opposed to those in informal spaces. The informal spaces have a more marked adverse effect on teachers' wellbeing compared to formal spaces, which generally have a beneficial influence. Within formal environments, the dimensions and visual comfort stand out as the most influential factors. Conversely, in informal settings, thermal comfort is the most impactful element.

Discussion/Conclusion. Some results affirm the conclusions drawn from earlier studies on office spaces and educational settings (Poitras, 2022 ; Wagner-Lapierre & Zarié, 2021; Leroux et al., 2021). Key factors influencing teachers' well-being in their workspace have been identified as the availability of flexible spaces that can be adapted to a variety of practices.

147 - Affective organizational commitment and wellbeing in the private and public sectors: is there a difference?

Author(s): Nathan Pudles, Marine Willeput, Sabine Pohl, Magali Verdonck, Jean-Michel Decroly, Claire Duchêne, Mathieu Strale, Catherine Hellemans

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Organisations have an important influence on their workers, whether it's by setting high performance standards, which can lead to strain reactions, or by providing resources, which fosters the perception of being supported by their organisation and has a positive influence on their affective organisational commitment (AOC) and their wellbeing (cf. JD-R model; Bakker & Demerouti, 2014). However, we hypothesize that AOC elicited by perceived organisational support (POS) can also lead to overcommitment, which is often considered as a criteria for burnout, as workers will feel the need to be more involved in their organisation, especially in private organisations, where there often is a reward system based on performance (Tweedie et al., 2019). Workers from private ($n = 157$) and public ($n = 134$) organisations completed an online self-report survey, with validated scales measuring POS (Eisenberger et al., 1986), AOC (Meyer & Allen, 1991), effort and overcommitment (Siegrist et al., 2009). Structural equation modelling revealed that POS decreased the workers' overcommitment. However, AOC significantly and competitively mediated the effect of POS for the workers from private organisations, with a positive indirect effect on overcommitment. The mediation was not significant for the workers from public organisations. Effort was used as a control variable for overcommitment. These results imply that private sector workers, via their AOC, seem compelled to overcommit in return for receiving support from their organisation, which is beneficial for the organisation, as it increases the workers' performance, but at the expense of their own health.

148 - Work/life boundaries of university staff in the wake of high demands: what do universities bring to the table?

Author(s): Nathan Pudles, Sandra Billy

Day: Friday

Time: 10:30 - 11:30

Room: I.0.Atrium

Abstract: Research has shown that high job demands increase boundary blurring between work and private domains, and impairs recovery (Glavin & Schieman, 2012; Sonnentag & Fritz, 2007). However, there is a distinction to be made between demands: hindrance demands are associated with exhaustion, while challenging demands would foster engagement; some authors classify the latter as an antecedent of perceived organizational support (POS; Stinglhamber & Vandenberghe, 2004; Van den Broek et al., 2010). The purpose of this study is to investigate how challenge and hindrance demands influence recovery, via POS and boundary blurring. Academics and researchers from five Belgian universities completed an online self-report survey (n = 533) with validated scales measuring POS (Eisenberger et al., 1986), work-family conflict (Wayne et al., 2004), psychological detachment (Sonnentag & Fritz, 2007), and three types of demands: work overload, intensity, and task interruption (Karasek et al., 1998). Structural equation modelling revealed that the three types of demands significantly decreased psychological detachment through work-family conflict, meaning that the blurring of boundaries due to high demands impedes recovery. However, the indirect effect of intensity on detachment was competitively mediated by POS, showing that intensity is indeed a challenging demand rather than a hindrance for this specific population, though the total effect of intensity was still significantly detrimental for detachment. The indirect effect of work overload was complementary mediated by POS, meaning that hindrance demands can decrease the perception of POS. This was not verified for task interruption, as its mediation by POS was not significant.

149 - Modelling or Matching: the effect of maternal vocal response to infant distress

Author(s): Michelle Delaet, Lisa Gistelinck, Bart Boets, Sam Wass, Giovanni Esposito

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: Stress affects our mental condition and behaviour. The way we respond to stress is influenced by the way our parents dealt with our distress when we were young. During a moment of infant distress, the vocal parental response can take different forms, based on arousal and valence. Arousal is the level of physiological activation and intensity associated with an emotional experience. Valence is the positive or negative nature of a vocalisation. The parental vocal soothing response lies on a spectrum between two opposite strategies: matching versus modelling, i.e. matching the infant's negative emotions (high arousal and negative valence) versus modelling a well-regulated calm state (low arousal and positive valence). Here, we study infants and mothers in the home-setting, using wearable devices that record audio and measure the level of arousal through heart rate. We investigate which strategy parents tend to use and which one is the most effective to downregulate the infant's arousal level during a moment of infant distress. We also examine how this relationship changes over development, from 5 to 10 to 15 months. We included 97 infants from 5, 10 and 15 months and their mothers. We hypothesise that parents tend to react to infant distress by modelling a calm state and that this is the most effective to downregulate the infant's arousal at every age category studied, but older infants will be influenced more by the maternal voice. We will finish analysis before the conference to present the findings.

150 - Understanding Physiology and Self-Regulation in Prematurely Born Toddlers

Author(s): Ina Olemans, Lisa Gistelinck, Rowena Van den Broeck, Maarten De Vos, Bieke Bollen, Els Ortibus, Gunnar Nauelaers, Bart Boets

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: Annually, 15 million infants are born prematurely worldwide, constituting a global prevalence of premature births ranging from 5% to 18%. Enhancements in neonatal intensive care have reduced mortality rates in preterm infants, but elevated the prevalence of morbidity, manifesting as socio-emotional challenges and neurological and psychiatric conditions. These conditions can have an influence on the quality of life of these infants, as well as on the caregiver-child relationship. There is also evidence of a dysregulated autonomic nervous stress system within the preterm population, which may be linked to biological and environmental factors, such as early life stress in the neonatal intensive care unit (NICU), and structural and functional brain alterations. Adequate physiological regulation is postulated to be a cornerstone of future cognitive and emotional self-regulation and socio-emotional abilities. Therefore, here, we will investigate physiological self-regulation capacities in 65 prematurely born pre-school children, as compared to 25 matched full-term healthy controls. This autonomic functioning is assessed by measuring heart rate (variability) and galvanic skin response during rest and various interaction paradigms with their biological mother, i.e. non-verbal eye-contact, positive interaction, negative interaction, triadic interaction and still-face paradigm. We expect to observe an enhanced stress response during the more challenging interaction paradigms in both groups, as well as atypical physiological regulation in prematurely born pre-schoolers as compared to term-born peers. Data analysis is ongoing and will be completed before the conference, allowing the results to be presented during the event.

151 - Examining the Influence of Media Depictions of Adolescent Sexting on Parental Practices: an Experimental Study

Author(s): Inès Kasmi, Elli-Anastasia Lamprianidou, Stijn Van Petegem

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: In the age of new technologies, the phenomenon of sexting, that is the electronic sending of self-made explicit sexual or intimate content, has evolved into a new way of expressing intimacy among the youth. Research shows that the prevalence of sexting, has increased importantly these last years among adolescents (Corcoran et al., 2022). As adolescent sexting has received important media coverage, often framed as a new type of risk for adolescents, their parents may be interested, concerned or worried about this new phenomenon. In this experimental study, we examine how media depictions of sexting can influence parents' perceptions of this practice, and whether different types of media discourse can elicit different parental practices. Specifically, we focus on both positive (autonomy support, active mediation) and negative parenting practices (overprotection, control). To do so, we use hypothetical vignettes inspired by newspaper articles, presenting the phenomenon of sexting as either normative or deviant. We expect to observe an increase in parental overprotection and controlling parenting, with a decrease in autonomy support and active mediation in response to the deviant vignette. In addition, we explore the potentially moderating role of conservatism (sexual, political), and religiosity in this link, expecting a strong link between deviant discourse and parental overprotection when the parent is more conservative or religious. Finally, we also explore the potential moderating role of the adolescent's gender, parents' gender beliefs and their adherence to gender essentialism. This is particularly relevant as discussions surrounding sexting often exhibit more negative attitudes towards girls.

152 - Generalization of value-driven attentional capture

Author(s): Deborah Ferrante, Claudio Mulatti, Barbara Treccani

Day: Friday

Time: 10:30 - 11:30

Room: I.O.Atrium

Abstract: Beyond Top-down and Bottom-up attention, growing evidence has highlighted that neutral stimuli could earn attentional priority when paired with stimuli – appetitive or aversive – that are highly relevant to the individual. This phenomenon, called Value-Driven Attentional Capture (VDAC), has been attested across a wide range of procedures. However, little is known about how broadly this attentional priority is generalizable to similar stimuli. To this aim, we carried out a study using a new three-step paradigm: (1) through a matching-to-sample procedure, associations between pairs of abstract stimuli were established (2) one member of the pairs was paired with a (high or low) monetary reward in a visual search task (3) the other member of each pair (that were never directly paired with a reward) was used as a distractor in another visual search task. We hypothesised people would be slower in finding the target in this latter task when the stimulus paired with the high-rewarded one (compared to the stimulus paired with the low-rewarded one) was presented as a distractor. These results would suggest that attentional prioritization could generalize to other related stimuli and may provide a useful model to investigate the failures of cognitive control in clinical syndromes wherein the value assigned to stimuli conflicts with behavioural goals (e.g., addiction).

84 - On The Effectiveness of a Personalized Self-Regulation Training on Comorbid Binge Eating and Binge Drinking in Adolescents

Author(s): Eva Van Malderen, Adriaan Spruyt, Eva Kemps, Laurence Claes, Sandra Verbeken, Lien Goossens

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Background:Comorbid binge eating and binge drinking are prevalent among adolescents, with poor self-regulation (low inhibitory control combined with high attentional bias) proposed as a transdiagnostic explanatory factor. Evidence for the effectiveness of self-regulation training in the context of these behaviors is mixed. The aim of the current study is to investigate the effectiveness of a self-regulation training that is comprehensive (targeting both inhibitory control and attentional bias across multiple sessions) and personalized (tailored to specific vulnerabilities) in a sample of adolescents with comorbid binge eating and binge drinking. Methods:A sample of N = 160 adolescents (14-18 years) with comorbid binge eating and binge drinking will be recruited from the general community. The protocol will consist of a baseline assessment of self-regulation, after which six weekly self-regulation training sessions will be completed, followed by a post assessment of self-regulation (one day after the last session and at two-weeks follow-up). The protocol will consist of a two (active versus sham condition) by two (personalized versus non-personalized stimulus set) by nine (time-points) design. Findings and Discussion:Findings and discussion will be added after data collection. It is predicted that there will be a significant three-way interaction between training condition, stimulus set, and time, such that participants who receive the active training with personalized stimuli will show the greatest benefit from the training (greatest increase in inhibitory control, greatest decrease in attentional bias, and greatest decrease in binge eating and binge drinking), both one day after the training and at two-weeks follow-up.

92 - Exploring the effect of music and metacognition on memory enhancement in amnesic Mild Cognitive Impairment

Author(s): Elisa Balthasart, Anaïs Servais, Renaud Coppalle, Marie Geurten, Christine Bastin

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Introduction:

Given that musical memory and metacognition seem to be preserved in the early stages of Alzheimer's disease, we aim to explore their value as techniques for improving memory in patients with amnesic Mild Cognitive Impairment (aMCI).

Method:

Inspired by Simmons-Stern et al. (2012), we created a task which consists of listening attentively to short texts evoking daily activities in either spoken or sung modality. Of the 40 participants per group expected at the end of the study, we compared 18 aMCI patients and 36 healthy older participants on their performance in recognising the general theme (based on familiarity) and specific information (based on recollection) relating to each extract heard. Half of the participants performed an metamnesic judgment, which focused on their estimation of their learning of each extract at the encoding phase ("Judgment of Learning", JoL).

Preliminary results:

The aMCI showed better performance in the recognition of general themes when the texts were sung than spoken. Their performance normalised (mean benefit=10.5%) when musical encoding was accompanied by JoL. As expected, music and JoL showed no effect for specific information.

Conclusion:

In view of the promising preliminary results, music seems to allow aMCI to improve their familiarity-based recognition performance, but not their recollection-based performance, in accordance with Simmons-Stern et al. (2012). This effect would be greater when music is combined with metamnesic judgement. We are hopeful that this research will open up prospects for the rehabilitation of episodic memory by exploiting skills spared by the neurodegenerative process.

97 - Acceptance and commitment therapy and mindful self-compassion as remedies for students' mental well-being during the Covid-19 pandemic: A benchmarking study

Author(s): Imke Baetens, Peter Theuns, Lydia Castiglione, Zahra Azadfar, Kassiani Styliani Tsantzalou

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: The impact of Covid-19 on students' mental health has been decisive, leading to increased rates of anxiety, depression, and stress. Self-compassion is known as an important resilience factor in difficult times. In this study, we aim to investigate (1) whether mindful self-compassion (MSC) and acceptance and commitment therapy (ACT) are effective for improving self-compassion skills as a primary outcome and promoting subjective well-being, concurrently reducing psychological distress as a secondary outcome, and (2) whether ACT and MSC are similarly effective for improving self-compassion and psychological outcomes in vulnerable university students. To this end, a 2-groups before-after quasi experiment was performed with 160 students, who had been experiencing stress, anxiety, depression, and low self-esteem. All students received a treatment that was organized in 8 sessions (8 weeks) of training, which was either ACT (n = 80) or MSC (n = 80). Pre- and post-treatment assessments were obtained from the participants. Our null hypothesis is that the ACT and MSC interventions are equally effective in increasing self-compassion and well-being and decreasing psychological distress in university students. Data analysis will be conducted using structural equation modelling (SEM) with cross-lagged effects in R Studio.

153 - PhD-project: prevention of and response to sexual violence in secondary schools

Author(s): Rienske Geens, Els Consuegra

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: In this contribution, a PhD-project is presented. The project seeks to achieve two main research objectives: assessing the effectiveness of a multiple-session sexual health education intervention in early adolescence within Flemish secondary schools, and exploring collaborative approaches between schools and external stakeholders to respond to sexual violence experienced by students. Youth health literacy (HL), in general, has received increased attention from researchers and policymakers within public health circles. It encompasses the knowledge, skills, and attitudes necessary for individuals to foster and sustain good health, with a particular focus on youth due to their critical cognitive, physical, and emotional development stages, during which health-related behaviors and skills are established (Bröder et al., 2017). Conceptualizations of ‘sexual literacy’ or ‘sexual HL’ appear largely undeveloped, public health practitioners thus emphasize the importance of school-based sex education in promoting youngsters’ sexual health and well-being (Goldfarb et al., 2021). This project aims to design, implement, and assess the effectiveness of a sexual HL program that is responsive to the diverse needs of 14-year-old adolescents in culturally diverse secondary schools. Sexual violence in schools often prompts inadequate responses from the school due to insufficient guidance (Dupont, 2022). To address this, our project will establish a network surrounding the school to facilitate multi-disciplinary and multi-stakeholder responses. This project advances an underexplored research area that integrates literature on sexual violence and gender-based violence, aligning with the dual approach: emphasizing and enhancing the competencies of youngsters while adapting structures and reinforcing the skills of teachers and other key stakeholders.

154 - How meningiomas affect cognitive functions?

Author(s): Sara Goffinet, Florence Lefranc, Hichem Slama, Patrick Fery, Vincent Wens, Antonin Rovai, Nicola Trotta, Gil Leurquin-Sterk, Niloufar Sadeghi-Meibodi, Xavier De Tiège, Julie Bertels

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Cognitive impairments are associated with primary brain tumors in 30-100% of the patients. Alterations in high-level cognitive functions, such as attentional and executive functioning, are most commonly observed. Due to their extra-axial localization and slow-growing pattern, cognitive impairments in meningioma patients are understudied and typically neglected in clinical practice. This study aims at better characterizing the cognitive disorders induced by meningiomas in adults.

Patients diagnosed with a meningioma underwent a preoperative comprehensive neuropsychological assessment, that evaluated attentional and executive functions, long-/short-term verbal and visuospatial memory, language, visuospatial abilities, and premorbid intelligence.

So far, 38 patients have been included (31 women, mean age: 55.3 ± 9.46). Thirty-four patients had scores under threshold (defined as a p-value associated to Crawford-Howell modified t-test $< .05$) in at least one cognitive test, 25 in at least two. Most frequent cognitive impairment were flexibility disorders – both reactive (Trail Making Test, $n=25$) and spontaneous (verbal fluency, $n=13$) –, inhibition difficulties (Stroop, $n=8$), verbal and visuospatial episodic memory disorders (RLRI-16 and La Ruche, $n=8$ and 6), attentional slowdown ($n=6$), impairment in visuo-constructive abilities (Rey figure, $n=5$), and in verbal short-term and working memory (forward and backward spans, $n=2$).

This study demonstrates that cognitive dysfunction is frequent in adults with meningioma. A detailed neuropsychological assessment enabled to specify the type of executive impairments (i.e., flexibility and inhibition). Findings highlight the need to include a neuropsychological management in the clinical care to maximize quality of life and socio-economic integration and stress the need to investigate the impact of treatments on preoperative cognitive disorders.

155 - Investigation of the effects of semantic interference and facilitation on lexical retrieval: evolution in healthy aging

Author(s): Sarah Gilis, Laurent Lefebvre, Isabelle Simoes Loureiro

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Healthy elderly people often report difficulties finding words, although the underlying cause of these problems is not well understood. In recent years, much research has focused on understanding the cognitive mechanisms underlying language production (Bürki et al., 2020). Semantic interference is a key phenomenon for a better understanding of these mechanisms (Upadhye & Futrell, 2023) but the potential beneficial effect of semantic context on this retrieval remains to be explored (Python et al., 2018). Interference is frequently caused by unrelated concepts (e.g. cow-computer). Nevertheless, even when concepts are interconnected, we can observe divergent effects. Indeed, an interference effect would be more marked when the relation between concepts is taxonomic (e.g. cow-horse), whereas a thematic relation (e.g. cow-milk) would facilitate lexical retrieval. The aim of our study is to explore how semantic links can facilitate or interfere with lexical retrieval, while examining how these effects evolve with age. Two groups will be formed: (1) 30 participants aged 18 to 25 and (2) 30 participants aged over 65. Our experimental protocol will include four conditions relating to the link between the image to be named and the word written over it: (1) a taxonomic condition (image and word belonging to the same category), (2) a thematic condition (image and word sharing a temporality, spatiality, causality or functionality), (3) an unrelated condition (image and word are not semantically linked) and (4) a control condition (image and neutral symbol). The protocol is currently being pre-tested and we will present the preliminary results.

156 - Training Relational Behavior and Cognitive Abilities with SMART

Author(s): Zita Meijer, Jamie Cummins, Jan De Houwer

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: Cognitive development in childhood profoundly influences educational and life outcomes. This emphasizes the importance of structured learning processes to enhance cognitive development. In line with Relational Frame Theory (RFT; Hayes et al., 2001), recent research highlights the role of relational responding skills in the development of human cognition and language (McLoughlin et al., 2020).

Among interventions targeting relational responding, the SMART program (Strengthening Mental Abilities through Relational Training; Colbert et al., 2018) stands out. SMART applies progressive learning phases to improve abstract relational responding through showing premises about relations between nonsense-stimuli followed by a yes/no question. Despite its potential, methodological limitations in existing literature, such as small sample sizes and absence of control conditions, underscore the need for further validation. Additionally, studies often lack assessments of real-world outcomes like school performance.

This project aims to rigorously examine SMART's effectiveness by focusing on specific cognitive abilities and assessing far-transfer effects. Currently, we are running a RCT study in elderly adults, comparing the training effect of SMART on cognitive abilities with a control training. We are also planning a single case experimental design in children between the ages of 10 to 12, to systematically map out the impact of SMART training on their arithmetic skills. By employing group studies alongside single-case experimental designs, we aim to provide comprehensive insights into SMART's potential to enhance real-life cognitive outcomes across the lifespan, with implications for both education and clinical practice. Results are pending, and we hope to provide valuable contributions to the field.

157 - The impact of social reward on imitative tendencies in virtual reality

Author(s): Maura Nevejans, Emiel Cracco, Jan De Houwer, Jan R. Wiersema

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: According to motivational theories of imitation, humans imitate because they have learned from past experiences that this leads to social reward, such as positive reactions by others. However, one prerequisite for a positive reaction is that the imitated person sees the imitative behavior. The current study investigated the impact of the imitated person's eyesight and reaction to imitation on imitative tendencies using an ecologically valid imitation task in virtual reality. Participants (N = 110) were placed in a virtual art gallery together with two virtual agents. To manipulate the agents' eyesight, the agents were sometimes blindfolded during the task. Participants were instructed to react to two different auditory cues with a head movement to the left or right. At the same time, one of the virtual agents also made a left or right head movement. When the agents could see the participant, they reacted to the participant's movements: one agent smiled whereas the other frowned when participants looked in the same direction as them. We expected participants to imitate the agent who liked being imitated - but not the agent who disliked being imitated - more when the agent could see them compared to when they were blindfolded. The results revealed that participants had the tendency to imitate the agents, but, contrary to our expectations, this tendency was not influenced by the emotional reactions of the agents nor their eyesight. The absence of social influences prompts us to consider imitative tendencies as habitual behavior.

158 - Recommendations to manage organizational, operational, and individual stress factors among police: A narrative literature's review.

Author(s): Arthur Dehon, Emilie Telle, Audrey Vicenzutto, Thierry Pham H.

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: Improving the psycho-professional well-being and reducing stress factors (individual, organizational, and operational) among police officers represent key challenges highlighted by literature. However, little consensus remains on the effectiveness of psychological interventions (Desjardins, 2018). This literature review summarizes the recommendations from the literature preventing the three main stress factors identified in police. Among the models for psychological assistance (e.g. prevention, intervention, postvention), we develop recommendations according to the three organizational levels (individual, team, and organization). At an individual level, the literature highlights the implementation of “marital” programs. They are aimed at police officers’ spouses to manage several individual and social risk factors, e.g., bring awareness to police’s profession, enhance work-life balance, bring awareness to the police’s profession, enhance work-life balance, and promote personal social support (Nadeau, 2002). At a team level, there are cognitive self-control techniques. Working in teams, these techniques improve individual and collective coping strategies, such as problem-solving using role-play activities (Caroly, 2011). Notably, these strategies contribute to the development of shared professional values. At an organizational level, the literature points to the relevance of establishing a connection between supervisors and officers. Indeed, supervisors play a role in providing psychological assistance when facing potentially traumatic events and in support to officers seeking psychological services (Ouellet, 2021; Rodrigue et al., 2019). We outline that these intervention strategies are not exclusive to a single organizational level. Finally, this literature review investigates other psychological intervention strategies and discuss them in light of the literature.

159 - The effect of emotional valence on nonbelieved memories.

Author(s): Valentine Vanootighem

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: The phenomenon whereby people remember events that they know never happened is called “Nonbelieved memory” (NBM). Several studies have investigated the characteristics of NBMs by comparing them to typical (i.e., believed) memories (BMs). Although some phenomenological differences have been observed, NBMs are often experienced as “memory-like” despite the change in belief. The purpose of this study was to examine whether the characteristics of NBMs is influenced by the emotional valence of events, like BMs. Participants aged from 20 to 60 years ($N = 220$) were asked to describe an NBM, to explain the reason for belief change, and to rate its phenomenological characteristics. Whenever an NBM was retrieved, they also described an age-matched BM of the same valence so that the characteristics of both types of memories could be compared. The results showed that phenomenological ratings of NBMs and BMs are minimally influenced by their valence. Interestingly, an examination of emotional valence and intensity ratings at the time of the events and during retrieval revealed that the fading affect bias previously demonstrated for autobiographical memories was also apparent for NBMs.

160 - Using Mouse Tracking to Unravel Sequential Effects in Decision Making

Author(s): Ibrahim Vefa Arslan, Robin Vloeberghs, Kobe Desender

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: In decision making research, trials and decisions are typically assumed to be independent. However, the existence of sequential effects proves this assumption to be invalid. Sequential effects, refer to the observation that previous decisions influence the current decision. This influence for example manifests as an attraction/repulsion bias towards the previous choice. In the Signal Detection theory framework, this pattern of results is typically explained by assuming systematic changes in decision criterion. An alternative account, however, posits that sequential effects are the mere consequence of slow, unsystematic fluctuations in the decision criterion. To dissociate between both accounts, we obtained an online read-out of the decision-making process using mouse-tracking, which allows us to observe the dynamic evolution of the decision within the course of a trial. We analysed the data using time-resolved regression analysis of mouse trajectories. The results from this study will be discussed in depth. This study aims to untangle the differences between these competing accounts as well as provide a novel way to examine how sequential effects evolve throughout the decision process.

161 - Issues, Efficiency, and Limitations of the Safe Offenders Strategies Therapeutic Program with Individuals Who Have Committed Sexual Offenses: A Narrative Literature Review

Author(s): Florian Cornez, Luca A. Tiberi, Xavier Saloppé, Thierry H. Pham

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Prevention of sexual offending is a public health key concern. Meta-analyses highlighted that treatments following Risk-Need-Responsivity (RNR) principles are efficient in reducing sexual recidivism (Schmucker & Lösel, 2017). These principles rely on the risk level empirically assessed, the dynamic risk factors, and the clients' characteristics (Andrews & Bonta, 2017). The literature identifies socio-affective functioning, i.e., the way we relate and interact with others, as a relevant dynamic risk factor (Thornton, 2002). It embraces self-regulation processes, such as emotion regulation, highlighted as an impaired mechanism associated with antisocial behavior (Gillespie et al., 2018). A therapeutic program focusing on self-regulation designed explicitly with individuals who have committed sexual offenses (ICSOs) was proposed: Safe Offender Strategies (SOS; Stinson & Becker, 2013). This literature addresses its content, efficiency, and limitations within forensic settings. SOS is a 10-module program covering treatment domains such as emotion regulation and sexual behavior. So far, little research has been undertaken on the efficiency of SOS, yet with promising results (Stinson et al., 2016, 2017). After two years of SOS treatment, ICSOs exhibited less violent and sexual behaviors, more self-regulation, and were more compliant with treatment. Compared with other treatment programs, six to thirty-six completion months of SOS therapy was associated with a lower prevalence of rearrest or rehospitalization. SOS seems to be efficient with ICSOs exhibiting mental disorders or intellectual disability, common in forensic settings. Nevertheless, the scarcity of research, including small sample sizes, treatment moderators, and small follow-up periods, constitutes principal limitations.

162 - Effect of pretest measurements of alcohol craving: lessons from a replication study.

Author(s): Michelle Heck, Etienne Quertemont

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: In a previous study during lockdown, we investigated whether a pre-test measurement of alcohol craving could alter its posttest assessment and tested its relationship with social desirability (SD) and demand effects (the consequences of participants trying to uncover the aim of a study). Results suggested that the first craving measurement increased its post-experimental levels in heavy drinkers. No evidence was found for a relationship with SD or demand effects. Exploratory analyses suggested an association between engagement toward the alcohol-video and craving. The present study aimed to test whether these findings are replicable three years later outside the lockdown context.

Hundred and thirty-six psychology students were randomly allocated to either a “pre-post” or a “post-only” craving assessment group. They watched an alcohol-related video. SD, demand effects, engagement toward the video, and alcohol consumption levels were also assessed.

The interaction between first craving measurement and alcohol consumption was not replicated. However, the present sample being composed of 91% females, the statistical analyses of the previous study were re-run with gender stratification. The results confirm that the effect was significant only in men, explaining the discrepancies between studies. The association between video engagement and craving was shown in both studies. Interestingly, in this sample, sensitivity to demand characteristics positively correlated with craving in the “pre-post” group.

In addition to the unsuspected gender effect, this study confirmed the role of video-engagement in craving and suggested that a pretest measurement of craving impacts the participant willingness to discover the aim of the study.

163 - Exploring the role of Perceived Value Incongruence in Burnout: A Survey Study

Author(s): Paul Castelijns, Lesley Verhofstadt, Peter Kuppens

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: The current research explores the role of perceived value incongruence in both personal and professional relationships and burn-out complaints. Perceived value incongruence holds promise in its clinical applicability, by offering insights into the relational dynamics within both professional and personal relationships that might underly burn-out complaints. Nonetheless, the nuanced interplay between perceived value congruence across diverse relationships such as those with supervisors, colleagues, partners, and parental figures and burnout remains relatively unexplored. Consequently, we have conducted a comprehensive survey study (n=400-500) investigating the associations between perceived value incongruence in multiple relationships and burnout complaints. To further deepen our understanding of these associations we have included well known mediating burn-out development factor such as role overload, role conflict, role ambiguity, intersender conflict. In our presentation, we will share our preliminary results and discuss their implications for the design and implementation of targeted interventions to mitigate burnout effectively.

164 - Mechanisms of interoceptive-exteroceptive integration during cardio-audio synchrony

Author(s): Matthieu Koroma, Kevin Nguy, Andria Pelentritou, Marzia De Lucia, Athena Demertzi

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Interoceptive-exteroceptive integration can happen via different mechanisms, i.e. predictive processing, active inference or dynamical coupling (Palmer et al., 2022). In this preregistered study (osf.io/6fvuw [<https://osf.io/6fvuw>]), we are testing which mechanisms support interoceptive-exteroceptive stimulus integration during cardio-audio synchrony. To do so, we ran two experiments using the same within-subject 2x2x2 factorial block design. We recorded reaction times (behavioral, n=10) and multi-modal physiological responses (physiological, n=40; EEG, ECG, EMG, EDA, respiration, pupil size) to deviants that varied in terms of a) cardio-audio synchrony (synchronous or asynchronous), b) type of deviation (rare tone or omission) and c) predictability (regular or random).

The behavioral experiment revealed that reaction times depended on deviants' type ($\beta = 0.07$, $p < 0.001$) and regularity ($\beta = 0.22$, $p < 0.001$) with an interaction between both ($\beta = -0.16$, $p < 0.001$), but no effect of synchrony ($\beta = 3.86$, $p = 0.15$). On the contrary, the physiological experiment revealed that cardiac responses slowed down in response to synchronous deviants only ($\beta = 0.07$, $p < 0.001$, post-hoc Wilcoxon test: synchronous: z-value=-1.09, corrected $p < 0.001$; asynchronous: z-value=-0.04, corrected $p = 0.80$), replicating previous observations (Pelentritou et al., 2024), without other interaction ($p > 0.05$).

We propose here that cardiac deceleration to synchronized deviants reflect parasympathetic action (Roelofs 2017), as for the freezing response (Livermore et al. 2021), that would occur when stimuli are associated with self-related internal signals like heartbeats (Sel et al., 2017). Understanding better the mechanisms underlying cardio-audio synchrony and their dissociation at the behavioral and physiological levels is particularly informative for studies probing the preservation of self-related processes in states of reduced behavioral responsiveness, such as sleep and disorders of consciousness.

165 - Priming Prosocial Disobedience

Author(s): Louise De Meulenaer, Emilie Caspar

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: Milgram's obedience experiments highlighted the influence of situational and social factors on behaviour. Caspar (2021) introduced a novel paradigm devoid of cover stories, adaptable to neuroscientific methods, focusing on disobedience research. Their findings revealed that awareness of Milgram's experiment isn't the primary determinant of participants' decisions to (dis)obey, despite explicit mentions during the experiment. This led us to explore whether priming (dis)obedience could impact behaviour and specific neural aspects.

Conducting a neuro-behavioural between-subject study, we will explicitly prime (dis)obedience in participants. The second study aims to prime disobedience differently. These studies collectively address the research question: 'Can we prime prosocial disobedience?'. Each study will involve approximately 80 participants or 40 pairs (working with dyads), employing the same paradigm as introduced by Caspar (2021). While results are pending, we anticipate observing effects in both brain activity and behavioural responses due to the priming of disobedience. We will take a closer look at the actual rate of disobedience, feeling of Responsibility, Empathy and Sense of Agency, as well as ERP components and specific brain waves on the EEG.

This research contributes to my PhD's overarching theme: an exploration of neurocognitive processes and disobedience to immoral orders, providing insights and potential interventions to enhance resistance. Understanding these dynamics provides valuable insights for navigating moral dilemmas and developing interventions to enhance prosocial resistance. By unravelling the intricacies of priming effects on behaviour and neural responses, this study contributes to our understanding of human decision-making in morally challenging contexts with real-world applications.

166 - Physiological Measures of Emotion, Arousal, and Attention: Effectiveness and Feasibility for Marketing Insights.

Author(s): Audrey Verrall, Eveline Smolders, Nele De Witte, Fien Buelens, Dieter Struyf

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: Background: Fundamental research has provided extensive support that physiological and behavioral measurements can provide relevant insights relating to the measurement of emotions and attention processes. Technological advances now allow us to capture this data, such as eye tracking, facial expressions, EEG, and skin conductance, in real life settings. This has resulted in an increased interest in the field of neuromarketing techniques, where such measurements are used to assess marketing message effectiveness. However, scientific evidence for these techniques varies, and the fit with current marketing practices in Flanders is yet to be established. This study aims to assess the usability and value of neuromarketing techniques in the Flemish marketing sector.

Methods: 48 participants viewed six advertisement videos while undergoing neuromarketing assessments: skin conductance, eye tracking, facial expressions, and EEG. Recognition and recall tests, self-report questionnaires, and interviews were conducted.

Results: Self-report measures correlated significantly with ad content recognition and recall. Dwell time fixation percentage correlated significantly with recognition. Other measures showed more complex and/or inconsistent relationships. Some techniques complemented each other, while others conflicted, indicating consumer response complexity.

Conclusions: Self-reporting remains valuable in ad strategy optimization. Neuromarketing could provide additional insights depending on campaign design, but the complexity of data collection and interpretation may hinder scalability.

Implications for Practice: Surveys remain reliable for marketing insights. Neuromarketing can supplement but it is essential for marketers to carefully weigh the costs and benefits of these techniques in their implementation.

Keywords: Neuromarketing, Eye Tracking, EEG, Facial Expressions, Skin Conductance, Advertising Effectiveness, Consumer Behavior.

167 - The dual influence of interpersonal bonding on the cognitive processes supporting disobedience

Author(s): Nicolas Coucke, Daniele Marinazzo, Salvatore Lo Bue, Emilie Caspar

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: Most humans have a strong tendency to obey the orders of superiors, even when these orders may cause harm to others. Previous studies pointed out that prosocial disobedience to such orders might be supported by empathy towards a potential victim. Conversely, a close relationship with a superior may increase the tendency to obey orders. We hypothesize that both one's relationship with a potential victim and one's relationship with a commander might modulate the ease with which individuals obey or disobey immoral orders. To explore this, we designed an experimental paradigm where 3 participants were each assigned a fixed role of either victim, agent, or commander. Initially, the agent engaged in a joint drawing task with both the victim and the commander to establish interpersonal relationships. In a subsequent phase, the agent was instructed to either obey or disobey the commander's orders to administer moderately painful shocks to the victim. Simultaneous EEG recordings of the 3 participants were made during the entire experiment. Preliminary results indicate that cognitive conflict, as indicated by mid-frontal theta activity, during antisocial obedience is positively correlated with the subjective strength of the agent-victim relationship, while cognitive conflict during prosocial disobedience is positively correlated to the agent-commander relationship. These findings shed light on how complex social situations influence cognitive processes related to obedience and disobedience.

168 - Impact of emotions and motivation on learning and memory consolidation processes in children: application to the education for climate issues

Author(s): Yulia Chernyshkova, Marine Thieux, Amandine Roelandt & Charline Urbain

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: The objective of this study is to investigate whether emotional valence (positive, P vs. negative, N) and motivational salience (high, H vs. low, L) embedded in the to-be-learned material impact the learning and memory consolidation of climate-related information in children. Forty (7 to 11 years-old) participants learn 40 associations between novel objects and their functions, with either a H (e.g., this object sorts your trashes) or a L (e.g., this object saves polar bears) personal reward. Immediately after, participants learn either a short P or N emotional narrative related to nature (i.e., how is a planet in good vs. bad health). Immediate retrieval (IR) performance is assessed after each learning task (motivational and emotional) and during a +24-hour and a +1-week delayed retrieval (24h, 1W, DR) sessions. Preliminary results obtained in 9 participants suggest that N (vs.P) narratives are less accurately remembered, both at IR(-, $\mu=5.75$; $=3.8$ vs. +, $\mu=8.7$; $=1.79$) and at 24h DR (N, $\mu=6.62$; $=4.4$ vs. P, $\mu=9.3$; $=1.48$). Additionally, objects with L (vs. H) personal reward are less likely to be remembered at IR, as evaluated by the number of objects recalled (L, $\mu=8.21$; $=7.08$ vs. H, $\mu=11.3$; $=7.27$). Although a reasonable sample size remains to be reached (40 children expected in May) to conduct proper statistical analyses, these preliminary findings suggest that positive emotional valence and high personal reward improve the memorization of climate-related information in children with implications for the optimal development of educative programs and fostering pro-environmental behaviours.

169 - External Incentives Change the Relation Between Confidence and Curiosity under Different Learning Opportunities

Author(s): Yue Yin, Liang Luo, Kobe Desender

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Curiosity has long been considered as the essence of science. A wealth of research has documented that subjective confidence drives human curiosity. However, there is no consensus on the pattern of the relationship between these two variables. Preliminary findings show that the structure of the environment determines whether curiosity is driven by low or medium confidence stimuli. This study focused on two environmental variables, exploring the relation between confidence and curiosity under different learning opportunities with and without external incentives. In Experiment 1, a purely intrinsically motivated learning scenario was created, in which no external incentives were provided. The results showed that learning opportunity did not alter the relation between confidence and curiosity. Experiment 2 introduced external incentives, and its results showed that learning opportunity modulated the relation between confidence and curiosity. Our findings reveal important differences between pure curiosity and externally-driven information seeking behavior, and thus call for a reinterpretation of previous findings using external incentives.

170 - Perception of support received by Adoption Agencies in new adoptive families in Western Europe and North America.

Author(s): Aurélien Papart, Paul-Emile Huet, Deniz Eren, Alessio Gubello, Samantha L. Tornello, Olivier Vecho, Sara Bressanutti, Salvatore D'Amore

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Topic and research question : Adoptive parents often describe their experiences with the adoption process in very different ways. This study explores what adoptive parents report as being supportive experiences when working with the adoptive agencies. Method: This study examined the experiences of 583 adoptive parents (Mage = 45.20 years, SD = 7.47; 77.5% assigned female; N = 390 heterosexual and 193 LGBTQIA+) with a child aged 4–17 years. All participants were recruited through social media, adoption, and LGBTQIA+ associations, and word-of mouth. All participants completed an online survey consisting of questionnaire with open-ended response questions. Parents were from the USA (301) and from several European countries (159 Belgium, 80 France, 30 Spain, 7 the Netherlands, 3 Luxembourg), of whom majority were in a committed relationship (79.41%), with fewer being single (20.59%). Qualitative responses were analyzed using Thematic Analysis. Results: The results suggest that most adoptive parents felt adequately supported throughout their adoption process. Notwithstanding, the perception of support varied by the country the adoption occurred and by family structure, such that same-sex parents and single parents experienced less welcoming and supportive attitude by adoption agencies. In many instances the adoption process was described as very complex and lengthy. Conclusion and contribution : Adoption agencies should consider how to best support adoptive parents by understanding how these families feel best supported and their experience with the adoption process. These findings can be used to improve the way social workers and professionals are trained, to provide better support during the adoption process and to improve the management of follow-up with adoptive parents and their families.

171 - Exploring heart rate parameters as potential biomarkers for objective quantification of obsessive-compulsive symptom severity

Author(s): Anke Timmers, Xena Serifova, Stephanie Van der Donck, Laura Luyten, Chris Bervoets, Bart Boets

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Obsessive-Compulsive Disorder (OCD), a prevalent psychiatric condition characterized by intrusive obsessions and time-consuming compulsions, affects ~2.3% of adults worldwide. The development and assessment of effective treatments for OCD is challenging, as, currently, no objective biomarker has been identified to assess (changes in) the symptom severity. OCD is associated with heightened stress levels, wherein the autonomic nervous system plays a crucial role in influencing heart rate (HR) and heart rate variability (HRV). Against this background, the present study aims to design a method for objectively quantifying the presence and severity of OCD-related symptoms, capitalizing on HR and HRV as sensitive biomarkers of arousal (regulation). The study employs a symptom provocation task comprising three different stimulus conditions: neutral images, OCD-related images, and generally aversive images. Cardiac responses are recorded via electrocardiography (ECG). We hypothesize that individuals with OCD exhibit elevated HR and reduced HRV in response to OCD-related stimuli compared to neutral stimuli, as well as compared to healthy controls in general. Additionally, increased HR and diminished HRV are anticipated for both groups in response to aversive stimuli, with stronger responses predicted for individuals with OCD compared to healthy controls. Data analysis is ongoing. At BAPS we will present data of 12 adult OCD patients versus 16 healthy controls for the three stimulus conditions. With our study, we aim to pave the way for a novel biomarker that can objectify and enhance diagnostic accuracy and provide valuable insights into treatment responses. This can ultimately optimize treatment strategies for this challenging psychiatric condition.

172 - Inner speech in insight and non-insight problem-solving

Author(s): Hans Stuyck, Aleksandre Fadeev, Eva Van den Bussche

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: Inner speech is a cognitive process of silent communication with oneself. Inner speech is driven by natural language and thus is deeply rooted in human culture while it pursues cognitive functions such as thinking and memory. Reaching more holistic knowledge of our inner voice requires integrating the approaches of semiotics, culture studies, linguistics, psychology, and neuroscience. Exploring the functions and experience of inner speech in everyday situations drives the development of inner speech methodologies and raises awareness of the role of culture in human cognition. One of the distinguishing features of human cognition is its unique problem-solving ability. While previous research has indicated the connections between inner speech and problem-solving, it remains unclear whether inner speech is experienced similarly in different types of problem-solving, such as analytical problem-solving (non-insight) or a sudden Aha! effect (insight). To explore this connection, we presented participants (N=60) with 70 word puzzles solvable with insight and non-insight. After each solved word puzzle, we requested participants to indicate via an open question the type of inner speech they experienced while problem-solving. Preliminary results indicate that inner speech is involved in both insight and non-insight problem-solving. However, the type of inner speech in insight is less articulated and more fragmented in nature, whereas inner speech in non-insight comprises full-articulated words and sentences. Our results regarding inner speech in insight and non-insight align with the idea of insight as being a more intuitive, unconscious process and non-insight as a deliberate conscious one.

173 - Origins disclosure in new adoptive families in Western Europe and North America.

Author(s): Paul-Emile Huet, Aurélien Papart, Deniz Eren, Alessio Gubello, Samantha L. Tornello, Olivier Vecho, Sara Bressanutti, Salvatore D'Amore

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Topic and research question: Parents have various approaches and timings for informing their adopted children about their story. Understanding how parents decide to disclose - or withhold - information about their child's adoption journey is crucial and represents the aim of this study.

Method: 583 adoptive parents (Mean age = 45.20 years, SD = 7.47; 77.5% assigned female; N = 390 heterosexual and 193 LGBTQIA+) with a child aged 4–17 years were recruited through social media, adoption and LGBTQIA+ associations, and completed an online questionnaire which included survey and open-answer questions. Adoptive parents lived in the USA (301) and several European countries (159 Belgium, 80 France, 30 Spain, 7 the Netherlands, 3 Luxembourg, of whom the majority were in a committed relationship (79.41%), with fewer being single (20.59%). Qualitative data were analyzed using Thematic Analysis.

Results: The results showed that most adoptive families are open regarding their child's origins, even when they don't have information about biological family because of non-open adoption, and were willing to disclose information to the child as developmentally appropriate. However, this willingness to disclose may vary by adoption type (national vs. international) and due to the reason the child had entered the adoption system.

Conclusion and contribution: Most adoptive parents believe it is important for their children to have access to their origins, providing a narrative that incorporates the child's biological family. Specifically, parents are aiming to preserve the relationship with the biological mother, to assist their child in integrating their adoption into different aspects of their identity.

174 - Investigating dual stress physiological measures and intervention strategies in autistic children during real-life interactions.

Author(s): Ruth Op de Beeck, Laura Tibermont, Stephanie Van der Donck, Jean Steyaert, Kaat Alaerts, Bart Boets

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Similar to synchronization required in partner dance, effective social interaction relies on the spontaneous alignment of behavioral and biological processes with one's partner. This phenomenon, known as biobehavioral synchrony, relies on sensitivity to the partner's social cues and adept self-regulatory stress management and allows the sharing of emotions and physiological parameters such as heart rate and arousal between individuals. Previous research suggests atypical or reduced synchronization in individuals with autism, potentially underlying difficulties in social interaction. Despite autism being primarily characterized by interaction difficulties, there is a notable lack of research on biobehavioral synchronization during real-world social exchanges. The current project aims to address this gap by comparing the biobehavioral synchronization of 8-to-12-year-old autistic children versus matched typically developing peers, as they interact individually with an experimenter. To achieve this, we will record dual autonomic nervous system measures, such as heart rate and skin conductance, across a series of innovative real-life dyadic child-experimenter interaction paradigms. These paradigms encompass (free) viewing tasks, natural conversations, and games. Additionally, we will explore the unique and combined effect of single-dose intranasal oxytocin administration and the impact of an imitation game, which both have been shown to enhance attunement and reduce social stress. This comprehensive approach will provide significant insights into the atypical social synchronization observed in autism and open avenues for novel combination therapies addressing its core social challenges. At the conference, we will present the research design of this new study.

175 - Neural representations underlying the perception of social scenes: An fMRI study

Author(s): Deniz Erdil, Laurent Mertens, Joost Vennekens, Jan Van den Stock, Hans Op de Beeck, Elahe' Yargholi

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Social perception is involved in most daily life activities, so it is crucial to understand the underlying neural processes. However, most social perception studies have employed simple stimuli far from what we face in reality. Here, we composed a stimulus set consisting of 48 distinct natural social scene images and measured neural responses using functional magnetic resonance imaging (fMRI). Images differed in terms of the people's valence, setting valence, and interaction among the individuals. Images were further categorized into congruent (matching valence between people and setting) and incongruent (mismatch valence between people and setting) images. We employed univariate group-level analyses to determine the consistent neural representations in participants ($n=22$). For valences of people, set, and the image as a whole, we investigated contrasts between positive vs. negative and negative vs. positive incorporating all stimuli or subsets of (in)congruent stimuli. We obtained clusters of activations surviving Family Wise Error correction ($p < 0.05$) for contrasts in which a subset of stimuli with negative set valence was compared with a subset of stimuli with positive set valence such as the contrast for set valence-negative vs. positive incorporating all/congruent/incongruent stimuli, people valence-negative vs. positive incorporating congruent stimuli, image valence-negative vs. positive incorporating congruent stimuli. This large effect of negative set valence in the univariate group level shows a consistent brain response for sets with negative valence in participants. This consistently elevated sensitivity to negative set valence highlights the potential significance of negative settings in human social life through evolution.

Keywords: fMRI; social perception, congruency

176 - The impact of imprisonment on the sense of agency and outcome processing

Author(s): Elodie Kox, Emilie Caspar

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: Prison is characterized by coercion and a reduction in the autonomy of inmates. This study investigates the hypothesis that significant reduction in autonomy, coupled with submission to a coercive framework during incarceration, may impede an individual's ability to regain control of their life after their release from prison. In this study, we investigated the impact of various types of prison regimes on the sense of agency and outcome processing among inmates. Participants were inmates recruited in Belgian prisons and were detained under different detention regimes including closed, semi-opens, and open regimes, each imposing distinct levels of coercion and restrictions on freedom. They were compared with free control participants who had never been incarcerated. Participants could inflict a financial pain to their co-participant, thereby increasing their own gain, either freely or following the orders of the experimenter. We measured the implicit sense of agency with the method of time interval estimates following each action, and auditory outcome processing was measured with the amplitude of the auditory N1, as previous studies showed that obeying orders reduces the neural processing of the outcomes of one's own action. Behavioural and electroencephalography results will be presented. These results will provide insights into how restrictions in action choices related to prison may affect cognitive processes directly associated with social behaviour and freedom to take control of one's life.

177 - EEG predictors of language development in young children with autism

Author(s): Anouk Matthys, Roeljan Wiersema, Jean Steyaert

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: EEG PREDICTORS OF LANGUAGE DEVELOPMENT IN YOUNG CHILDREN WITH AUTISM Anouk Matthys; Promotor: Prof. Dr. Roeljan Wiersema; Copromotor: Prof. Dr. Jean Steyaert

In the Belgian Language in Autism Study (BeLAS), we will examine language development in children with autism aged between 2 and 5 years. The study will involve a longitudinal follow-up over a span of 2 years, including many different measurements. To explore neural variables we will use four different EEG-paradigms. The first one will focus on task-free (resting state) EEG. The second will concern the mirror neuron system, investigated with a paradigm involving both action observation and action execution of mouth movements, rather than the often used hand movements. The third paradigm looks into the neural response to the own name, comparing the response to the own name, a familiar name and an unfamiliar name. Our last paradigm will investigate the attention given to the eyes- or mouth-region of a speaker using frequency tagging. For all four of these paradigms there is evidence for the literature in their involvement in language development and/or autism. Language development will be examined with (semi-)structural language assessment tools at different data collection timepoints.

This study holds the potential to further our insights into the role of multiple variables measurable with EEG in young children with autism and its association with language development, which may contribute to early identification and intervention strategies for children with autism.

178 - The Influence of Parental Touch on Infant Physiological Regulation: A Comparative Study of Maternal and Paternal Effects

Author(s): Louise Staring, Martine Van Puyvelde

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Introduction: Affective touch plays a crucial role in early infant development, particularly through C-Tactile afferents, which are key in transmitting emotional information about interpersonal touch. Research has consistently shown that gentle maternal stroking, stimulating C-Tactile afferents, increases infant psychophysiological regulation both in the short and long term. Traditionally, the focus has been on mother-infant dyads, underpinned by the belief in a maternal physiological advantage in nurturing care. This study questions such conventional views by comparing the physiological impacts of stroking touch administered by both mothers and fathers on infant self-regulation.

Objective: This study aims to examine the presumed physiological advantage of maternal care by comparing the effects of maternal and paternal touch on infants' physiological self-regulation in terms of respiratory sinus arrhythmia (RSA).

Method: We compared the impact of a 3-min stroking period with a pre-stroking and post-stroking baseline of 25 (unrelated) mothers and 25 fathers on their infants (aged 4–16 weeks). We registered infant electrocardiogram and respiration to calculate RR-interval (RRI), respiration rate (fR) and RSA.

Conclusions: Infants showed a significant increase in RSA (mediated by heart rate and respiration) during and after stroking touch, regardless of whether the touch was delivered by the mother or the father. These findings do not support the hypothesis of a maternal physiological advantage in the context of affective touch. Instead, they advocate for a reevaluation of the role of paternal touch, suggesting that both parents play equally vital roles in the affective and physiological development of infants.

179 - Frequency of intergenerational transmission of personal memories memories within the family: How much is transmitted, how much is received ?

Author(s): David Baudet, Aline Cordonnier, Christine Bastin

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: Family is a privileged social context for transmission. Since very young age older family member tell stories about their past to the younger generations, allowing feeling of belonging, identity construction, and a better world understanding. However, few studies measured how frequent this intergenerational occurs in daily life. We created an online study asking parents and grandparents to report how frequently they share memories from the past with younger generations (top-down) and children and grandchildren to report how frequently older generations talk to them about their past (bottom-up). Frequency of transmission was probed for public and personal events. Results suggest that transmission from older generations to younger ones is perceived differently from bottom-up or top-down perspective. Surprisingly, correlations between perceived frequency of transmission, frequency of communication, and feeling of closeness between individuals of different generations also vary among the combinations. All together, these results suggest different functions of transmission within the family.

180 - Social Attention and Attention Disengagement in Infants at Elevated Likelihood of Autism

Author(s): Sander Meers, Laura Tibermont, Stephanie Van der Donck, Lyssa de Vries, Steffie Amelynck, Thijs Van Lierde, Maidé Erdogan, Julie Segers, Melinda Mađarević, Lotte van Esch, Luke Mason, Petra Warreyn, Herbert Roeyers, Ilse Noens, Gunnar Naulaers, Jean Steyaert, Emily Jones, Bart Boets

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: Autism is a neurodevelopmental condition characterized by challenges in social communication and interaction and the presence of restricted, repetitive behaviours and interests. Theoretically, these difficulties have been related to a reduced social bias, in line with the social motivation theory, as well as to altered attentional processes, such as reduced attentional disengagement. Although some signs can already be observed at the age of two, the diagnosis cannot be reliably made before the age of three, as the core behavioural features can often not be observed clearly in early childhood. However, early diagnosis may enable early support and may thereby enhance social wellbeing of child and family. Eye-tracking has been suggested as a method to pinpoint early markers of autism. In the current prospective longitudinal study, we assessed social bias using a face pop-out task and flexibility in attention switching by a gap-overlap task. Participants were two groups of infants, which we assessed with eye-tracking at 5, 10 and 14 months of age, and followed up until three years of age. We included 33 infants from the general population and 200 infants at elevated likelihood of autism (EL), due to prematurity or having an older sibling with a formal autism diagnosis. At three years, a best-estimate autism research diagnosis was established for EL infants, allowing retrospective diagnostic group comparisons within this group. We are currently processing the eye-tracking data. At the conference, we will present findings on developmental trajectories across time-points and possible group differences.

181 - Investing cognitive effort for a pro-environmental cause

Author(s): Ruth Krebs, Aayala Denul, Sarah Kusch, Anne Urai

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: Psychological research can help enable climate transitions by investigating barriers and facilitators of pro-environmental behavior (PEB). Cognitive effort is a crucial factor in implementing PEB. However, the role of cognitive effort in this context has largely been neglected, or has indirectly been assumed to exclusively be a barrier. Contemporary frameworks of cognitive effort have reevaluated its function as a barrier, and show that effort can also add value. The current study investigated in how far cognitive effort takes on either of the two roles in the pro-environmental domain. Participants performed the cognitively demanding Stroop task and could either receive a reward for themselves, for a pro-environmental organization or no reward. On some trials, participants had the opportunity to switch the reward type after or before spending effort. Performance results show that the motivational value of eco rewards is lower compared to personal rewards, showing that effort can act as a barrier for PEB. Furthermore, the switch rates after having spent high effort are smaller than after low effort investment for eco rewards. This can be seen as a first indication that effort can also add value in the pro-environmental domain. This research shows how experimental measures can test PEB without relying on self-report and reveals the role cognitive effort can play in PEB.

182 - Left ventral occipito-temporal regions encodes phonological representation from auditory and visual speech.

Author(s): Alice Van Audenhaege, Stefania Mattioni, Filippo Cerpelloni, Remi Gau, Arnaud Szmalec, Olivier Collignon

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Speech is a multisensory signal that we can extract from the voice and the lips. Previous studies suggested that some regions of the ventral occipito-temporal cortices (VOTC) encode auditory and/or visual speech features. However, which specific regions in VOTC are involved in these speech processing functions remains unknown. In this study, we focus on the minimal abstract units of language, i.e. the phonological level and aim to explore the auditory and visual phonological representations in specific regions of the VOTC. We functionally defined, in each individual, the left temporal visual speech area (TVSA), the left and right fusiform face area (FFA), the left visual word form area (VWFA) and left and right para-hippocampal place area (PPA, control region). In these regions of interest, we performed multivariate patterns classification of phonemes presented either auditorily (speech) or visually (lipreading). The TVSA and the VWFA represent phonological information from both vision and sounds, but cross-modal decoding did not reveal aligned phonological representations across the senses. FFA represent visemes but not phonemes and PPA do not code for phonology in any modality. Altogether, these results indicate that auditory and visual phonological processing take place in the VWFA and TVSA, revealing the multisensory nature of these regions in phonological processing.

183 - Employee evaluation of gender equality policies in organizations: from belief in gender discrimination to perceived organizational hypocrisy

Author(s): Joseph Mumbanza Ngeke, Laurent LICATA, Claudia TOMA

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: Perceptions of progress towards gender equality in the workplace can vary widely. While some employees believe that the issue of gender inequality has already been resolved, others feel that there is still some way to go, with a notable disparity between the views of men and women. In line with social identity theory, previous studies showed that women are more likely than men to support gender equality policies in their organizations. Furthermore, research in organizational psychology showed that inconsistency between an organization's commitments and its actions can induce a perceived organizational hypocrisy among employees. How does perceived organizational hypocrisy influence employees' evaluation of gender equality policies? In this research, we examined the mediating effect of perceived organizational hypocrisy on the link between belief in gender discrimination in the workplace and employees' evaluation of gender equality policies. Two studies were conducted: an online survey of employees from various organizations in the USA (N=420), followed by a survey of employees from a single academic organization in Belgium (N=700). The results of both studies suggest that belief in gender discrimination in the world of work in general (Study 1) or within one's own organization (Study 2) leads to a more negative evaluation of gender equality policies, and that this effect is mediated by perceptions of organizational hypocrisy, either uniquely for women (Study 1) or particularly for women (Study 2). Implications for the implementation of gender equality policies in organizations are discussed, including the importance of consistency between organizational discourse and action.

184 - Associations between locomotor rest-activity rhythm and language development in autistic children: Preliminary results

Author(s): clara rapp, Deliens Gaétane

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Numerous studies have linked sleep patterns to children's language proficiency. Within the spectrum of autism (ASD), language acquisition stands out as a central symptom and often face more sleep disturbances, including shortened sleep and circadian rhythm irregularities. Based on typically developing children (TD), we expect that the rate at which sleep mature overtime will predict language growth. Specifically, longer sleep time, heightened levels of interdaily stability (IS) – stability of the sleep-wake rhythm and relative amplitude (RA), denoting increase in daytime wakefulness and nighttime sleep, alongside diminished intradaily variability (IV) – reflecting less fragmented rhythms – are anticipated to correlate with superior language proficiency.

This longitudinal study take part of the “Belgian language in Autism study” A cohort of 56 (data included = 27) ASD children, aged 2 to 5 years were recruited. Participants completed 14 days of actimetry recording and sleep diaries. Sleep parameters were extracted with Actilife and Pyactigraphy, language abilities with various assessments, IQ with the SON-R, and sleep disorders with the CSHQ. The severity of autism was assessed using the ADOS.

Results shown a non-significant positive correlation between total sleep time and receptive and expressive vocabulary, a non-significant negative correlation for IV and both language measures, a non-significant positive correlation with RA and both languages measures. Results also shown a non-significant positive correlation for IS and receptive vocabulary and a non-significant negative correlation between IS and expressive vocabulary.

185 - Who Fits the Glass Slipper? Adolescent Dispositional Profiles and its Link with Instant Messaging Social Support and Mental Health

Author(s): Karen De Raeymaecker, Imke Baetens, Martijn Van Heel

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: This study applied a group-differential approach ($n = 1014$) to construct adolescent dispositional profiles and compare them with regard to the distal outcomes (a) instant messaging social support and (b) mental health.

A latent profile analysis (LPA) identified four profiles based on adolescents' big five personality traits, social anxiety level and social comparison orientation (SCO). Average adolescents (33.80% of the total sample) obtained average scores on all three indicators. Average-resilient individuals (44.08%) showed average scores with a trend towards low social anxiety, low neuroticism and low SCO. Sensitive adolescents (18.52%) were socially anxious, rather neurotic, rather introvert and had a rather strong SCO. The extravert-indifferent profile (3.60%) included extravert, emotionally stable adolescents with a low SCO who were not open for new experiences. They were extremely unfriendly, rather unconscientious and rather socially fearless.

Unconditional LPA with the manual BCH three-step method provided insight in the outcomes while taking several covariates into account. Adolescents with an average profile experienced more loneliness and depression compared to the average-resilient group. Although sensitive individuals perceived more IM informational and instrumental support than the average(-resilient) group, a comparison with the same group(s) showed an increased vulnerability to loneliness, depression, and past and prospective non-suicidal self-injury (NSSI). While extravert-indifferent adolescents generally reported less IM emotional and instrumental support than other profiles, they acknowledged less loneliness than average and sensitive individuals. Remarkably, they previously used NSSIs more often than all other groups. Implications of the current findings are covered from an IM social support perspective.

187 - Screening for mental health in early adolescence: The Psychological Referral Optimization (PRO) questionnaire

Author(s): Lila Fieremans, Martijn Van Heel, Imke Baetens

Day: Friday

Time: 13:00 - 14:00

Room: I.0.Atrium

Abstract: Since the COVID-19 pandemic, the number of adolescents with psychopathological symptoms has increased significantly. It is therefore important to take a preventive approach and identify adolescents in need of mental health care. The Psychological Referral Optimization (PRO) screening questionnaire (based on the dual-factor mental health model) is a method for targeted referral for adolescents with mental health problems. Following a 20-minute online questionnaire, students are triaged into four groups: green (indicating no mental complaints and good well-being), orange (indicating a risk profile for onset psychopathology), red (indicating a psychopathological profile), and black (indicating acute danger). Based on this screening and assigned colour code, students receive a personalized advice and, if required, are guided towards mental health services. The questionnaire is currently being administered to 400 adolescents between the ages of 12 to 15 from five secondary schools in Brussels. At present, 186 adolescents have completed the questionnaire. The average age of the participants is 12.65 years (min. = 12, max. = 15, SD = .652). The sample consists of 107 females (57.5%), 87 males (41.9%) and one non-binary person (0.5%).

Preliminary reliability was determined by analysing the internal consistency of the questionnaires. Preliminary frequencies of assigned colour codes were established and will be further analysed. A future objective is to further study the reliability and validity of the screening questionnaire. The usability of the screening questionnaire will also be evaluated in the future. Furthermore, the study aims to describe the prevalence of psychopathological symptoms among adolescents and to get a picture of their profile trajectories.

188 - Capturing the Rhythm of Time: Introducing Dynamic Time Warping in I-O Psychology

Author(s): Juul Vossen, Evy Kuijpers, Joeri Hofmans

Day: Friday

Time: 13:00 - 14:00

Room: I.O.Atrium

Abstract: The use of high intensity time series data has substantially grown in recent years. As such, lag models are increasingly used to detect delayed effects. A common approach to studying lagged effects is shifting one of the focal variables to match past observations to future observations. However, this approach does not account for the fact that on different moments, the same behaviour can elicit different responses, both in onset and length. To date, research in the field of I-O psychology has not utilized statistical methods that accommodate variations in lagged effects across individuals and situations. To address this issue, the current study introduces Dynamic Time Warping (DTW) as a technique that allows for inspecting individual differences in the variations in these lagged effects. To illustrate its relevance, we use two Experience Sampling Method (ESM) datasets on state conscientiousness and depletion. Specifically, we find that applying a traditional fixed-lag approach incorrectly supports evidence for the absence of a lagged relation between depletion and conscientiousness, while the DTW shows an increase in the explained variance when incorporating both lagged and concurrent effects. Moreover, we show that there exist strong individual differences in the extent to which this relationship is best captured as a concurrent or lagged effect. Lastly, we illustrate how the flexibility of the DTW algorithm enables psychological researchers to answer questions about the timescale at which (psychological) processes unfold, the frequency and timing with which changes occur, and the overall duration of these processes.

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