

**Heymans
Symposium
2022**



Research Worth Spreading

Wednesday, 30 March 2022

12.00 – 17.00 hrs

Nieuwe Kerk

Nieuwe Kerkhof 1, Groningen

Heymans Institute for Psychological Research

The Heymans Institute for Psychological Research is founded to integrate and strengthen psychological research within the Department of Psychology at the University of Groningen. The research within the Heymans Institute is organized within 9 expertise groups. In addition, as we aim to understand human behavior from the biological to the societal level, we encourage collaborations between the different expertises within psychology as well as with other disciplines.

The Heymans Institute for Psychological Research was named after professor Gerard Heymans. He was a supporter of empirical methodology and continually introduced experiments where possible. In 1892 he established the psychology lab in Groningen, the first one in the Netherlands. In 1909, Heymans held a famous speech on “the future century of psychology”, telling of a far-off future in which a matured psychological science could solve many of humankind's problems. This resonates with the mission of the Heymans Institute to do ground breaking scientific and socially relevant research in which we try to understand human behavior from the biological to the societal level.

Mission

The mission of the Heymans Institute is to conduct ground breaking and impactful research in the main fields of psychology, with a special focus on collaborative projects; these collaborations include different areas of psychology working together, interdisciplinary research, and cooperation with non-academic partners.

Vision

Fundamental curiosity driven research expands our knowledge of human behavior and obtains societal relevance by providing a foundation for applied psychological research.

Application and fundamental scientific progress mutually reinforce each other, making this interaction pivotal to psychological science.

Truly exciting innovations tend to emerge bottom-up through collaborations among intelligent, creative and focused researchers within the entire academy.

Programme

12.00	Lunch / Welcome
13.00	HI Keynote + Mindwise prize
13.40	SK award + talk SK-prize winner
14.00	Poster session 1
14.20	Heymans talks
15.30	Poster session 2
15.50	Poster prize
16.00	Small Collaborative Grant pitches
16.45	Grant voting and award
17.00	Closing

Talks

Keynote

Lessons learned from gas extraction in Groningen: Risk perception and risk management

Prof. Dr. Tom Postmes

Social Psychology

The Ukraine war has underlined Europe's dependence on extractive energy sources such as gas. Residents of Groningen live above gas reserves that are still quite large, but mining is being stopped because earthquakes induced by gas extraction cause widespread damage. Indeed, psychological research may have played some role in this decision. Since 2016, we examined the psychosocial impact with a dedicated panel (N>1600), qualitative research and translational research. We assembled a unique dataset: a 'natural experiment' of an unfolding disaster with repeated measures. We used this data, among others, to explain levels and fluctuations of risk perception. The longitudinal dataset enabled us to disentangle long-term and short-term effects of exposure environmental hazards (objective ground motion) and personal hazards (damage caused). This gives a very rich insight in the ways individual risk perceptions rise and fall: earthquakes triggers acute increases in risk perception, followed by a distinctive pattern of decay. Earthquake damage, by contrast, leads to chronically elevated risk perception. The talk then zooms out: we argue that the social context can explain why environmental and personal exposure have such markedly different impacts on the decay of perceived risk. A mix of societal factors make damage to homes a chronic stressor. We conclude that awareness and salience of earthquake consequences drive risk perception fluctuations, that the decay of risk perception is similar to forgetting and that a key reason for amplified risk perceptions in Groningen lies with society's poor risk management. The talk will end by reflecting on what this means for resuming gas extraction: what lessons can we learn from this past disaster? Can gas be extracted responsibly?

Heymans Talks

Thinking Faster and Slower

Joost de Jong, Hedderik van Rijn, Elkan Akyürek

Experimental Psychology

Our surroundings contain rich and complex temporal structures, such as speech and music. Humans are able to quickly adapt when these events unfold at a faster or slower pace. For instance, musicians are able to flexibly speed up or slow down the tempo of a song, while listeners can still recognise it is the same song. How can our brain cope with these variations in speed? One possibility is that, when information arrives at a fast pace, the brain stores information at a faster pace too. In a series of experiments, we indeed found that humans are able to increase the speed at which they store information in memory. When participants expected information to be presented for only a brief period of time, they encoded more information per second. Our results are in line with findings in the literature that suggest that a range of cognitive processes, such as timed action, decision-making and learning may speed up or slow down according to the pace of the environment. In sum, converging evidence suggests that humans are able to think faster and slower.

2022 Heymans Symposium

Research worth spreading

Making Sense of Colour Coded Personality Profiles

Carine Metselaar

Theory & History of Psychology

The immense popularity of type-based personality questionnaires in organizations, such as the so called *colour tests*, has led to a scientist-practitioner divide, resulting in a lack of research interest of I/O psychologists in what these instruments mean to people who are affected by them. Whereas a large part of the community of human resource development professionals assumes that the use of such instruments increases self-awareness and generates insight, it remains unclear what this increased self-awareness looks like for people who receive a type-based personality profile. In this PhD research project, I explore the experiences of people who have filled in a personality questionnaire in the context of their work, received their profile and had their profiles clarified by a coach or consultant. I will describe the results of the first part of the study, related to the experiences of 25 people who were interviewed about their colour coded personality profiles. The focus is on how these profiles made sense to people in relation to their self-awareness, and how they dealt with a variety of discrepancies they encountered between the model theory and their personal experiences.

Sanne van Doornik

Clinical Psych. & Exp. Psychopathology

Anorexia Nervosa (AN) is a severe eating disorder marked by emotional distress, psychosocial impairment, and physical morbidity. As current treatment options are relatively limited in their effectiveness, it is important to develop new evidence based treatments that focus on the maintaining factors of AN. Recently, meaning in life has been proposed as an important factor in the persistence of AN. Meaning in life can be defined as the extent to which life is experienced as making sense, as being directed by valued goals, and as mattering in the world. Several authors suggested that it could be beneficial to add a treatment component focused on life meaning to current psychotherapies for AN. Therefore, we adapted meaning-centered psychotherapy (MCP), an intervention originally developed for individuals with advanced cancer which has been shown to be effective in improving life meaning, to be suitable for individuals with ED symptoms (MCP-ED). A randomized controlled trial with 134 first-year female students who were at risk of developing an eating disorder showed that MCP-ED was effective in increasing meaning in life at post-assessment and follow-up. Secondary analyses also showed positive effects of MCP-ED on eating disorder symptoms, satisfaction with normative life domains, and general distress. Thus, we found evidence that MCP-ED is effective in increasing meaning in life in individuals at risk of developing an eating disorder. The results of the present study point to the relevance of examining whether adding MCP-ED to current treatment options might optimize treatment effectiveness in individuals with an eating disorder.

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Research worth spreading

Understanding individuals' reactions to negative feedback from an emotion-regulation perspective: The model of motivated feedback disengagement.

Felix Grundmann, Susanne Scheibe, Kai Epstude

Social Psychology

We simultaneously love and hate negative feedback. It highlights sub-standard performance and thereby allows us to change our behavior in performance-conducive ways. Yet, it also makes us feel bad. Its affective consequences are particularly intriguing, as they could inform our understanding of why negative feedback does not always improve performance. That is, we synthesized feedback theory and the emotion regulation literature to develop the model of motivated feedback disengagement. According to this model, individuals may disengage from negative feedback for hedonic reasons (to feel good). While this may be functional from an emotion-regulation perspective, such disengagement may reduce feedback processing. Across four preregistered online experiments ($N = 949$), we tested the model's key propositions. Consistent with them, a) negative feedback increased hedonic-goal salience via negative affect (Studies 1- 2) and b) salient hedonic goals were associated with more feedback disengagement and less feedback engagement in negative-feedback situations (Study 3). Unlike predicted however, we found no evidence that feedback disengagement facilitates hedonic-goal attainment (Study 4). Yet, as expected, feedback disengagement undermined feedback processing. Together, these results showcase the importance of regulatory, affect-driven processes in feedback contexts. Moreover, they have implications for scholars as well as all stakeholders in the performance domains (education, sport, and work). They challenge two assumptions that underlie most research on the feedback-performance gap – namely that individuals want to improve when receiving negative feedback and therefore engage with it. Moreover, they enable feedback senders to design more effective feedback and feedback recipients to adapt their reactions to it.



Best Mindwise Post for 2021

Nominees

- [I am a Monist \(clearing up a misconception\)](#)
by Jan Hülsewiesche
- [The Intimate Link Between Sexual Shame and Religiousness](#)
by Lena Bogdanska
- [Welcome to hotel California! You can check out any time you like, but you can never leave...](#)
by Barbara Wisse
- [The Magic Healing Powers of Rapid Eye Movement Sleep](#)
By Juliana Nimz
- [Why is there no revolution?](#)
by Isabella Lanza Turner
- [Autonomy and Developmental Trajectories of Transgender Adolescents](#)
by Lina Hävacker
- [In algorithms we trust: The illusion of objectivity and the dangerous reality of implicit bias](#)
by Lea Kutscher
- [The Disillusioning Reality of Obama's Not-So-Post-Racial America](#)
By Karina Fröhner
- [COVID-19 and well-being at work: How to create control around your work, help yourself and others](#)
By Iustina Armasu
- [Feigning ADHD and stimulant misuse among BSS students](#)
By Anselm Fuermeier



Snijders-Kouwer Award 2021

Jury: Yasin Koc, Chantal D'Amore

Nominated papers

- Linde, M.**, Tendeiro, J. N., Selker, R., Wagenmakers, E.-J., & van Ravenzwaaij, D. (2021). Decisions about equivalence: A comparison of TOST, HDI-ROPE, and the Bayes factor. *Psychological Methods*. Advance online publication. <https://doi.org/10.1037/met0000402>
- Marah Butzbach**, Anselm B. M. Fuermaier, Steffen Aschenbrenner, Matthias Weisbrod, Lara Tucha & Oliver Tucha (2021) Metacognition, psychopathology and daily functioning in adult ADHD, *Journal of Clinical and Experimental Neuropsychology*, 43:4, 384-398, DOI: 10.1080/13803395.2021.1940104
- Ernst, A.**, Albers, C.J., Jeronimus, B.F. & Timmerman, M.E. (2021). Insight into individual differences in emotion dynamics with clustering. *Assessment* 28(4): 1186-1206. doi:10.1177/1073191119873714
- Hilger, K.**, Scheibe, S., Frenzel, A., & Keller, M. (2021). Exceptional circumstances: Changes in teachers' work characteristics and well-being during COVID-19 lockdown. *School Psychology*, 36(6), 516-532. <https://doi.org/10.1037/spq0000457>
- Ackermans, M. A.**, Bennik, E. C., de Jong, P. J., & Jonker, N. (2022). Hunger increases negative and decreases positive emotions in women with a healthy weight. *Appetite*, 168(1), [105746]. <https://doi.org/10.1016/j.appet.2021.105746>
- Salet, J.**, Kruijne, W., & Rijn, van, H. (2021). *fMTP: A computational framework of temporal preparation*. DOI: 10.1037/revo000356
- Neumann, N.**, Van Yperen, N. W., Brauers, J., Frencken, W., Brink, M., Lemmink, K. A. P. M., Meerhoff, R., & den Hartigh, R. (2021). Nonergodicity in Load and Recovery: Group Results Do Not Generalize to Individuals. *International journal of sports physiology and performance*. <https://doi.org/10.1123/ijsp.2021-0126>
- Muradchanian, J.**, Hoekstra, R., Kiers, H., & van Ravenzwaaij, D. (2021). How best to quantify replication success? A simulation study on the comparison of replication success metrics. *Royal Society Open Science*, 8(5), [201697]. <https://doi.org/10.1098/rsos.201697>
- Schino, G.**, van Klaveren, L-M., Gallegos González, H., & Cox, R. F. A. (2021). Applying bodily sensation maps to art-elicited emotions: An explorative study. *Psychology of Aesthetics, Creativity, and the Arts*. <https://doi.org/10.1037/aca0000444>

Posters

1. Satisfaction with Normative Life Domains and the Course of Anorexia Nervosa

Sanne F. W. van Doornik

Nienke C. Jonker | Klaske A. Glashouwer | Brian D. Ostafin | Peter J. de Jong

Objective: Satisfaction with normative life domains has been proposed to be important in the persistence of anorexia nervosa (AN). Non-clinical research showed that satisfaction with normative life domains was inversely related to eating disorder symptoms. Using a cross-sectional design, this study tested whether adolescents with AN report lower satisfaction with normative life domains than adolescents without an eating disorder. Furthermore, using a longitudinal design, we also examined whether improvement in AN symptoms is paralleled by an increase in satisfaction with normative life domains.

Method: During baseline, adolescents with AN ($n = 69$) and healthy controls matched on age, gender and educational level ($n = 69$) completed the Brief Multidimensional Students' Life Satisfaction Scale to assess satisfaction with five life domains (family, friendships, school, self and living location) and life in general. Furthermore, eating disorder symptoms and BMI were measured. At one-year follow-up, the adolescents with AN completed the same measures again.

Results: Adolescents with AN reported lower satisfaction with normative life domains than the comparison group. Subsequent analyses showed that this overall group difference was primarily driven by adolescents with AN reporting lower satisfaction with the self, school experience, and life in general. Furthermore, improvement in eating disorder symptoms was paralleled by an increase in satisfaction with normative life domains. **Conclusions:** Our findings provide evidence that satisfaction with normative life domains is a malleable factor which fluctuates with symptom severity in AN, pointing to the potential relevance of examining whether targeting satisfying engagement with specific life domains optimizes treatment effectiveness.

2. Applying Bodily Sensation Maps To Art-Elicited Emotions: An Explorative Study

Gemma Schino

Lisa-Maria van Klaveren | Héctor G. Gallegos Gonzalez | Ralf F. A. Cox

Art is well-known for its emotional effects on perceivers. These emotions consist of physical reactions to the artwork, felt in various regions of the body, as well as an articulation of subjective feelings towards it (cf. Cupchik, 2016). The current study is the first to apply Bodily Sensation Maps (BSMs, Nummenmaa et al., 2014) in encounters with new media visual art. Through a web survey, 90 participants viewed 36 figurative artworks. Upon displaying each artwork, participants were asked (1) to indicate on two body silhouettes where they felt strong and weak activity (respectively called 'activations' and 'deactivations'); (2) to select, if appropriate, up to two primary emotional words (anger, disgust, fear, happiness, sadness, or surprise), and (3) to rate the intensity of these subjective feeling(s) on a continuous scale. A combination of two primary emotional words was interpreted as complex emotions. Bittersweetness, delight, despair, and repugnance were the complex emotions that occurred the most during the study. Results showed activations in the body were overall reported more than deactivations, possibly suggesting they are perceived in a more accessible and extensive fashion by the viewers. More specifically, activations at the head area represent a common feature in every emotion-specific BSM regardless of the artworks' subject, whether depicting human figures or non-human contents (food, landscapes, and monsters). The present research found BSMs as a helpful methodology to provide insights into the nature of art-elicited emotions, particularly to investigate bodily sensations of subjective feelings of simple and complex emotions in visual art engagement.

3. Adult ADHD Symptoms and Executive Functioning: The Role of Need for Cognition and Mental Effort-Reward Imbalance

Saleh M. H. Mohamed
Norbert A. Borger

Background and objective: Research on patients with Attention-Deficit/Hyperactivity Disorder (ADHD) has frequently reported poor executive cognitive functioning in ADHD patients. Yet, factors that may contribute to the association between ADHD symptoms and poor executive functioning are not well-defined. The present study aims to explore the contribution of Need For Cognition ((NFC); i.e., being motivated and willing to be engaged in cognitive activities) and mental Effort-Reward Imbalance ((ERI) i.e., spending a high amount of effort to complete cognitive activities and getting an inadequate experience of achievement/reward in turn) to such an association.

Methods: 70 university students (44 females and 26 males) with a mean age of 20.23 (SD = 2.59) have completed the Adult ADHD Self-Report Scale Symptom (ASRS), Executive Function Index scale (EFI), Need for Cognition scale (NFC), and Effort-Reward Imbalance Questionnaire (ERI).

Results: Correlational tests showed a significant association between ASRS and EFI scores ($r = -.431$). Moderation regression analyses showed that neither NFC scores nor ERI scores significantly moderate the association between ASRS and EFI scores. However, the correlations between NFC and both the ASRS ($r = -.281$) and the EFI ($r = .285$) scores were significant. Likewise, the correlations between ERI and both ASRS ($r = .468$) and the EFI ($r = -.277$) scores were significant.

Conclusion: Although the study highlights the relevance of cognitive motivation and effort/reward experiences in adult ADHD symptoms, there is no evidence that these factors explain the association between severity of ADHD symptoms and poor executive functioning.

4. The acute effects of alcohol on social cognition: a systematic review of the literature

Isabelle Cristina Bulai

Violeta Enea | Jan Kaffenberger | Lena Maria Duiverman | Marije aan het Rot

Rationale: Alcohol consumption in social situations can have both positive and negative effects. Social cognition and social drinking comprises the study of facial emotion recognition, empathy, theory of mind (ToM) and the perception of sexual aggressive behavior after various alcohol doses.

Objectives: To analyze and narratively synthesize experimental studies that explored the effects of alcohol (or placebo/ control) on social cognition variables.

Methods: The PICO strategy was used for identifying participants, interventions, comparators, and outcomes. Participants were adults and interventions consisted of acute alcohol administration. Comparators included placebo, a control condition, or the lowest dose of alcohol. Outcomes included social cognition variables: facial emotion recognition, empathy, ToM, and perception of sexual aggressive behavior. The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) was used as a guiding tool and a narrative synthesis was appropriate to analyze the outcomes.

Results: The systematic review resulted in thirty-four studies, measuring facial processing (67%), empathy and ToM (24%) and the perception of sexual aggressive behavior (9%). The outcomes underlined that alcohol in moderate doses improves the recognition of positive emotions and ToM but in higher doses affects the recognition of negative emotions, empathy, and the processing of sexual aggressive cues.

Conclusions: The evidence in this review points to a partial confirmation of the fact that social cognition mediates the alcohol -aggression link only in higher alcohol doses. The understanding and treatment of alcohol addiction may benefit from this literature review by overcoming research gaps and designing interventions based on developing social cognition abilities.

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5. Young Refugee Students in Primary Education: Relation between Trauma Symptoms and Second Language Skills

Hanneke Leeuwestein

Elisa Kupers, | Marieke Boelhouwer | Marijn van Dijk

Worldwide, many refugees seek safety away from their home country, around one third of them being primary school-aged children. The school environment is often the first place where refugee children can safely settle in the new country. However, these children face a double challenge: learning a new language, and coping with the adverse events they experienced prior, during or after their flight. Both host country language skills and well-being are of crucial importance for child development and educational success. Although the effects of traumatic stress on children's mental health are well-investigated among young refugee children (Bronstein & Montgomery, 2011; Davidson et al., 2008; Fazel et al., 2005; Henley & Robinson, 2011; Lustig et al. 2004), no empirical studies have yet investigated how the two main educational challenges for young refugee students – second language learning and trauma related symptoms – are related (Graham et al., 2016; Kaplan et al., 2016). The current study examined the relation between trauma-related symptoms and Dutch country language skills. 132 four- to eight-year old refugee students participated in receptive vocabulary, active vocabulary, and morphological tests in Dutch. Their teachers completed a questionnaire regarding trauma related behaviors of these students. Additionally, the possible moderating role of trauma protective factors is also explored. Insights on the role of such protective factors in this relation can gain useful insights on support of young refugee students in the classroom. All preliminary findings will be presented at the poster at the Heymans symposium.

6. Telediagnosis of executive functions by new test battery utilizing dual mechanisms of cognitive control (DMC) paradigm

Jaroslav Krc

Stefanie Enriquez-Gepperta | Tomas Kasparek

Objectives: Executive functions (EF) are higher cognitive functions that control and regulate lower cognitive processes as memory or attention to enable efficient cognitive functioning and behaviour. Deficits in EF are associated with many psychopathological and neurological conditions. New EF assessment methods are urgently required to apply new theoretical frameworks for more precise monitoring, diagnosing, and training of impaired functions. In our study we developed novel EF tests that cover four core components of EF and that assess dual mechanisms of cognitive control as the important aspect that can provide broader information about one's executive functioning.

Methods: OpenSesame software was used to create our EF test battery that is applicable for on-line measurements. Ninety-two healthy and English speaking participants in the age range 18-60 years were measured via the prolific.co platform. Behaviour Rating Inventory of Executive Function – Adult Version (BRIEF-A) was used to compare the performance in the test battery with the executive functioning in everyday life.

Results: The first results are being analysed at the moment and will be presented on the symposium.

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7. Autism spectrum disorder symptoms and functional somatic symptoms: longitudinal relations in adolescence

Elske Hogendoorn

Catharina A. Hartman | Sarah M. Burke | Marijn W.G. van Dijk | Judith G.M. Rosmalen

Objective: Autism spectrum disorder (ASD) symptoms and functional somatic symptoms (FSS) frequently co-occur. It remains unknown how ASD symptoms and FSS affect each other and develop throughout adolescence. A better understanding of this may inform preventive and treatment strategies. This study examined reciprocal relations between ASD symptoms and FSS in adolescence. **Methods:** Participants were 2227 adolescents (52.5% male) from the Tracking Adolescents' Individual Lives Survey population and clinical cohort. Data from four waves were included, covering the entire adolescence (11 to 19 years). ASD symptoms were measured using the Children's Social Behavior Questionnaire. FSS were assessed using the Youth Self Report and Adult Self Report, respectively. We examined longitudinal relations using the random intercept cross-lagged panel model (RI-CLPM). To explore differences in relations between different problem domains of ASD symptoms and FSS, three separate RI-CLPMs were run in secondary analyses for social and communication behaviors, repetitive behaviors, and self-regulatory behaviors.

Results: Correlational analyses indicated high stability across the waves for ASD symptoms (intraclass correlation: 71.3%); FSS were less stable (intraclass correlation: 28.0%). We found a stable positive, moderately strong between-persons association between ASD symptoms and FSS across the waves. No within-persons reciprocal effects from wave to wave were observed. The relation with FSS was consistent for the different domains of ASD symptoms.

Conclusion: Throughout adolescence, the co-occurrence between ASD symptoms and FSS is stable. We found no evidence for a reciprocal influence. Clinicians working with adolescents with ASD symptoms should be alert to the presence FSS, and vice versa.

8. From Polarization to Ambivalence: The case of abortion in the USA.

Gonneke Marina Ton

Martijn van Zomeren | Katherine Stroebe

Discussions about contentious topics often result in polarized debates in which only two positions seem possible, for example, either "pro-life" or "pro-choice". This overlooks those who feel ambivalent about the topic. Our previous work already found that polarized societal debates can be breeding grounds for felt ambivalence because people feel "caught in the social crossfire" of the debate. As polarization emphasizes the differences between groups and can make people feel pressured by those in their network to belong to take sides, we examine whether polarizations' pressure predicts felt ambivalence among people that feel connected with both sides of the abortion debate in the US and have not (yet) decided. We thus aimed to examine the relation between perceived polarization and felt ambivalence, in the context of the abortion debate, by surveying (Ns = 430; 433) women from the US. We found that stronger polarization positively predicts stronger felt ambivalence.

9. The revolting body: Self-disgust as a key factor in anorexia nervosa

Klaske A. Glashouwer

Peter J. de Jong

In this poster, we present a theoretical model that points to disgust-induced avoidance as a mechanism that can help explain the persistent and excessive food restriction in individuals with anorexia nervosa (AN). Disgust is characterized by intense negative feelings of revulsion and an overwhelming and irresistible urge to avoid potential disgust elicitors. When eating, or even the prospect of eating, elicits overwhelming feelings of disgust in individuals with AN, this could explain why food restriction persists even when someone is in a state of starvation. Following this model, disgust is elicited by the expected impact of food on the own body (“becoming fat”) resulting in body-related self-disgust. We argue that limiting food intake may serve to avoid self-disgust. This implies that when self-disgust remains unchanged after treatment of AN, residual levels of self-disgust after treatment could make individuals vulnerable to relapse.

10. Let’s talk money: subjectively reported financial performance of people with neurodegenerative diseases

Akke-Marij D. Ariesena

Roosa E. Tuomainen | Peter P. De Deyn | Oliver Tucha | Janneke Koerts

Neurodegenerative diseases (NDDs), such as Alzheimer’s disease (AD) and Parkinson’s disease (PD), are widespread disorders generally characterized by progressive cognitive decline and neuropsychiatric disturbances. One of the abilities that seems particularly vulnerable to the impairments in NDDs is the capability to manage one’s finances. Indeed, people living with NDDs were shown to consistently present with more problems on performance-based financial tasks than healthy individuals. Whilst objective tasks provide insight into the financial competence of people living with NDDs in a controlled, standardized setting; relatively little can be said, based on these tasks, about their degree of success in dealing with the financial demands, issues, or questions of everyday life (i.e., financial performance). The aim of this systematic review is to provide an overview of the literature examining self and informant reports of financial performance in people living with a NDD. In total, 22 studies were included that compared the financial performance of people living with mild cognitive impairment (MCI), AD, PD, or multiple sclerosis to a (cognitively) normal control group. Overall, the results indicate that people living with NDDs are more vulnerable to impairments in financial performance than cognitively normal individuals, and that the degree of reported problems seems to be related to the severity of cognitive decline. As the majority of studies however focused on MCI and/or AD and made use of limited assessment methods, future research should aim to develop and adopt comprehensive assessments to study strengths and weaknesses in financial performance of people living with different NDDs.

11. A Network Approach To Study Individual-Specific Performance Dynamics In Sports

Niklas D. Neumann

Nico W. Van Yperen | Carolin R. Arens | Jur J. Brauers | Wouter G.P. Frencken | Laurentius A. Meerhoff | Ando C. Emerencia | Michel S. Brink | Koen A.M.P. Lemmink | Ruud J.R. Den Hartigh

So far, research in the field of sports performance has mostly been conducted 1) at one or a few points in time, 2) on a group level, 3) monodisciplinary, and 4) as a causal-chain of fixed predictor and outcomes variables. In the present study, however, we argue that sports performance should be approached as 1) dynamic, 2) individual-specific, 3) multidimensional, and 4) emerging from interactions between multiple factors (Den Hartigh et al., 2016; Glazier, 2017; Neumann et al., 2021; Phillips et al., 2010). The purpose of this research is to present and apply a novel analytical method, that is, (time-varying) vector-autoregressive (TV-VAR) modeling, that may capture the individual-specific dynamic networks of (changing) interactions within and between the multidimensional performance factors (Bringmann et al., 2018). Therefore, we measured important psychological (e.g., confidence, motivation) and physiological (e.g., load, recovery) variables of youth male players from a professional football club on a daily basis across one season. We assessed the temporal dynamics (i.e., autoregressive and cross-lagged effects) of those variables and visualized the findings in changing network graphs. Results show individual-specific interactions within and between the performance factors with sometimes changing effects over time. Hence, TV-VAR modeling is a suitable method to approach performance regarding the four above-stated elements. The model may further allow researchers and practitioners to know which knob to turn for which athlete and to detect when relations between variables change to explain and predict performance transitions (Hill et al., 2020; Scheffer et al., 2018).

12. Subjective disgust and facial EMG responses towards unedited and morphed overweight self-pictures in women with varying levels of eating disorder symptomatology.

Irina Masselman

Peter J. de Jong | Klaske A. Glashouwer

Individuals with an eating disorder (ED) often report to be disgusted by their body. Body-related self-disgust could play an important role in the development and maintenance of EDs. We investigated if women with relatively high ED symptom scores indeed respond with disgust upon exposure to their body as indexed by facial electromyography (fEMG) of the m. levator labii superioris and self-report. Given that one's self-disgust may increase/decrease depending on the relative distance of the own body to the thin ideal, we also assessed women's disgust for overweight- and thin-morphs of their body. Female undergraduate students ($N = 104$) were photographed and presented with their (morphed) body pictures, next to disgust-relevant and overweight body control pictures. Higher levels of ED symptoms were associated with stronger self-reported disgust to unedited body-pictures and overweight-morphs. Disgust to thin-morphs was unrelated to ED symptoms. Participants generally showed heightened facial disgust towards overweight morphs, yet the strength of facial disgust was unrelated to ED symptoms. Thus, the findings provide evidence for the involvement of heightened body-related self-disgust in ED symptomatology, albeit only on the basis of self-report.

13. Examining the Efficacy of Combining Cognitive Training and Non-Invasive Brain Stimulation: A Systematic Review and Meta-Analysis.

Anika Poppe

Franziska D.E. Ritter | Leonie Bais | James Pustejovsky | Marie-José van Tol | Branislava Ćurčić-Blake | Gerdina Hendrika Maria Pijnenborg | Lisette van der Meer

Cognitive training is an intervention that is often applied with the aim to improve cognitive functioning. An innovative treatment strategy is combining cognitive training with non-invasive brain stimulation (NIBS) to increase its learning effect. We conducted a meta-analysis to investigate how effective this treatment combination is in improving cognition and minimizing associated problems people experience in daily life. We performed a systematic search across electronic databases, registries and reference lists. We integrated 653 effect sizes from 60 controlled studies in healthy and clinical populations (e.g., mild cognitive impairment, schizophrenia) that compared NIBS with cognitive training to cognitive training alone. We investigated whether the treatment combination results in additional improvements in cognitive functioning, clinical symptoms, and everyday functioning at post-intervention and follow-up compared to cognitive training alone. Using random-effects meta-analyses with robust variance estimation, we found that global cognition, working memory, learning/memory, and executive functioning improves when adding NIBS to cognitive training compared to cognitive training alone. Everyday functioning and clinical outcomes did not seem to benefit from adding NIBS to cognitive training. However, only 8 of 60 studies assessed functional outcomes. We found significantly better effects of cognitive training combined with NIBS on multiple cognitive outcome measures. However, we do not know whether these cognitive benefits transfer to everyday life. Future studies should focus on assessing the clinical relevance of the treatment combination by designing the cognitive training with a focus on improving everyday functioning, adding functional outcome measures, assessing long-term effects, and using validated cognitive outcome measures.

14. Facilitating integration of migrant newcomers through a language buddy program: the effects of positive intergroup contact on belonging and cultural knowledge.

Eline Heikamp

Nina Hansen | Greta Grosseck | Sabine Otten | Liesbet Heyse

The integration of migrant newcomers is a complex, multifaceted process. Speaking the local language and building social connections with host society members are considered key facilitators of successful integration. Volunteer initiatives that connect newcomers with native volunteers to practice the local language combine both aspects. Therefore, we investigated the interactions between newcomers and Dutch volunteers, and their effect on newcomers' psychological integration (*sense of belonging*) and cultural learning. Our sample comprised of 119 newcomers from diverse cultural backgrounds who participated in an online language buddy program called "Kletsmaatjes" ("chat buddies"); through this program they engaged in regular one-on-one conversations with a matched Dutch volunteer. Our findings suggest that different aspects of positive intergroup contact (e.g. self-disclosure, respect, pleasantness) relate to newcomers' sense of belonging to Dutch society and their increase in cultural knowledge. More specifically, we found that experiencing mutual respect is most relevant for a sense of belonging, while self-disclosure is most relevant for cultural learning. To gain further insights in the interactions between buddies, we conducted two qualitative thematic analyses about (1) common conversation topics and (2) prevalent learning effects of newcomers. Results show that culture and cultural differences dominate conversations and hence, newcomers most notably increase their knowledge about Dutch culture. This poster will present a first inquiry into the role of language buddy programs in migrant newcomer integration; it may inspire scholars and practitioners to further investigate how interactions between migrant newcomers and Dutch majority members are fostered – both within and outside the volunteer domain.

Small Collaborative Grant proposals

1. Psychological factors in the interpretation of religious metaphor

To test (1) whether an awe affect induction increases likelihood of interpreting religious passages metaphorically rather than literally and (2) both increased perception of uncertainty and increased intuitive processing as potential mechanisms of the main effect.

Brian D. Ostafin, Clinical Psychology and Experimental Psychopathology
André Aleman, Clinical and Developmental Neuropsychology

The proposed research serves as a first step to examine (neuro)psychological mechanisms regarding the extent to which Biblical text is read, ranging from propositional-literal to symbolic-metaphoric. A variety of scholars have noted that the Scientific Revolution and other Western cultural movements have contributed to the rise of a secular-scientific worldview and a concomitant decline of a religious worldview over the last 500 years. One consequence of this has been an increased likelihood of interpreting Biblical texts as literal-historical propositions with truth value rather than as symbolic-metaphoric text that facilitate connection with the transcendent⁴.

Metaphor research suggests that the use of metaphor is more likely under conditions of uncertainty, is related to an intuitive (versus rational) processing mode, and facilitates an experience of meaning. The proposed research builds on previous findings by examining the extent to which an awe-emotion induction facilitates metaphorical interpretation of religious texts. Given that awe involves *vastness* and thus perceived uncertainty, metaphor use should be more likely in this condition. Further, recent research from our lab has shown that an awe induction may lead to being more emotionally moved by metaphors and that this effect is mediated by increased reliance on intuition for decision making.

The interdisciplinary nature of this research involves expertise regarding awe-emotion inductions, life meaning and metaphors (Ostafin) and expertise regarding neural measures of affect and cognition as well as their application to religious cognition (Aleman).

Use of funds: We have a grant application (that has passed the first round of reviews) to develop a research program on this topic area with a focus on neural mechanisms. The budget of the current proposal will be used for participant payment in studies that (1) establish valid research materials and (2) provide an initial test the main effect and mediator hypotheses, both of which will provide important foundations for developing the larger research program.

2022 Heymans Symposium
Research worth spreading

2. How do attitudes towards ingroup transgressions differ based on differences in motivational beliefs (i.e., beliefs in minority collusion & privilege awareness), dispositional factors (i.e., empathy) and group identification?

Hakan Çakmak, Social Psychology Department
Tasja Sophie Mueller, Organizational Psychology Department

When White perpetrators harass Black people in the street and workplace, which factors shape other White people's attitudes towards perpetrators and victims? We propose a model aiming to understand the commonalities underlying perceptions of individuals from the perpetrators' group towards such transgressions in *organizational* and *social* settings. We suggest that attitudes towards perpetrators and victims are shaped by *individuals' empathic ability* and *identification with perpetrators' group*. We conceptualize *empathic ability* as individuals' dispositions to understand (cognitive empathy) and feel (emotional empathy) others' sufferings. These dispositions may affect people's attitudes towards others. However, group affiliation also plays a role in whom to care for: The use of empathic abilities may partly depend on ingroup identification. *Identification* refers to an individuals' degree to identify with the perpetrators' group. We expect identification will interact with empathic abilities in attitude formation towards perpetrators and victims. We postulate that individuals' high empathic ability will mainly predict positive attitudes towards victims. However, considering group identification, high empathic ability will also predict positive attitudes towards perpetrators in case of high identification with the perpetrators' group. Accordingly, low identification will predict negative attitudes towards the perpetrator and positive towards the victims. Therefore, we consider emotional and cognitive empathy as moderators of these effects. Specifically, we expect a combination of high cognitive empathy with low emotional empathy will increase positive attitudes towards the perpetrator in high identifiers and negative attitudes towards the perpetrator in low-identifiers. We collect our data via MTurk and perform moderated regression models for the main analyses.

Use of Funds:

- Data collection expenses (i.e., payment of participants)
- Conference expenses

2022 Heymans Symposium

Research worth spreading

Heymans talks

Heymans talks are 12-minute presentations in which a number of people present their research to a broad psychology audience that represents research of people working in any psychology sub-discipline and at varying levels of seniority, from PhD student to full professor.

To promote science communication, all talks will be filmed and published on the Heymans Institute [website](#) and [YouTube channel](#).

Snijders-Kouwer Award

Every year the Heymans Institute presents the Snijders-Kouwer Award. The award is given to a PhD student for the most innovative and outstanding scientific journal article accepted for publication in the previous year.

Mindwise Award

Mindwise, which showcases the latest in research and education from the Psychology Department, asks her readers to vote for the best post of the past year. The prize is awarded to the author of the winning post at our symposium.

Poster Award

The annual Poster Award recognizes a PhD student's poster, which presents excellent research and is characterized by clarity as well as creativity.

Small Collaborative Research Grant

Pairs or small groups of members of the Heymans Institute (staff and PhD students) and have an appointment that includes research time have applied for this grant of €2000.

The winner of the Collaborative Research Grant will be decided during the Symposium, after each selected proposal is presented to the audience.

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