



**INTERNATIONAL
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CONTEMPLATIVE
RESEARCH**

ABSTRACT BOOK



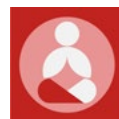
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Master in
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S1.1 - Queering the dharma for the benefit of all: multidisciplinary views on how queer perspectives intersect with Buddhist meditation and concepts in contemporary societies.

Julieta Galante ¹, Ana Dragojlovic ¹, Oscar Lecuona ², Sara De Rivas ³, Gabrielle Lim ⁴

¹ University of Melbourne, ² Faculty of Psychology, Universidad Complutense de Madrid, ³ Faculty of Health Sciences, Universidad Rey Juan Carlos, ⁴ University of Sydney

Summary

This panel will focus on how queer perspectives intersect with Buddhist concepts and practices in contemporary societies. We will investigate trans and queer youth perspectives and experiences of mindfulness smartphone applications. We will examine how some mindfulness teachers employ a queer lens to reinterpret Buddhist concepts for healing and social justice. We will present an interdisciplinary comparison of the concepts of compersion in consensual non-monogamies and Buddhist muditta.

Details

This panel will focus on how queer perspectives intersect with Buddhist meditative concepts and practices in contemporary societies.

Gabrielle Lim and Julieta Galante will investigate trans and queer youth perspectives and experiences of mindfulness smartphone applications via thematic analysis on a series of interviews, illuminating the appeal of mindfulness apps in a context of limited access to healthcare, and helping to clarify the extent to which this resource is capable of addressing the mental health challenges that these populations disproportionately experience.

Ana Dragojlovic will use an intersectional feminist and queer perspective to examine the development of queer dharma in the teachings of mindfulness practitioners like Jacoby Ballard and Michael Lobsang Tenpa, among others. Specifically, the presentation will delve into how these mindfulness teachers employ a queer lens to reinterpret the Buddhist concepts of self, emptiness, embodied presence, and empathy, with the goal of promoting personal healing and advancing social justice. Ana will also moderate the panel.

Sara de Rivas will present how consensual non-monogamies intersect with the Buddhist tradition. Concretely, how the constructs of compersion and muditta share profound similarities despite coming from different cultural contexts. An interdisciplinary comparative analysis will review the psychological and philosophical literature to outline constructs' similarities and differences, and their potential to foster altruism and tackle current societal challenges. A prototype measurement instrument will be put forward.

This panel will contribute a blend of novel, imaginative, and inclusive interdisciplinary perspectives that will directly address the conference focus on embodied cognition and intersubjectivity in an uncertain world.

S1.2 - Impact of mindfulness meditation on neurophysiological, cognitive, and behavioural indices of self-related processing

Ivan Nyklíček¹, David Vago², Karin Matko³, Fynn-Mathis Trautwein⁴, Rael Cahn⁵

¹ Tilburg University, ² Brigham & Women's Hospital/Harvard Medical School, ³ Chemnitz University of Technology, ⁴ University of Freiburg, ⁵ Keck School of Medicine of USC, Department of Psychiatry & Brain and Creativity Institute

Summary

In this panel, the state of the art regarding the role of meditation in self-related processing (SRP) is explored. Scholars from different disciplines will discuss their latest findings in this area, ranging from neurophysiological to cognitive and behavioural indices of SRP, mindfulness processes and psychological wellbeing in studies using different methods and samples. Discrepancies in findings will be discussed in the context of current theories of SRP.

Details

We will explore the state of the art regarding the role of meditation in self-related processing (SRP) and related processes. SRP refers to many different processes on different levels, ranging from neurophysiological via cognitive-affective to behavioural. Research on SRP therefore requires thorough theoretical embedment (see related panel by Giommi, Gallagher and Berkovich-Ohana) and multi-method approach.

First, David Vago will discuss a meta-analysis on mindfulness-based intervention (MBI) RCTs, which (1) identified six domains of SRP theorized as mechanisms of MBI, (2) evaluated the current degree of evidence on SRP outcomes, and (3) identified gaps in SRP measurement specific to embodied and interdependent factors. Some of these gaps will be addressed in the following contributions.

Rael Cahn will present findings from an ERP study conducted in India. Control subjects demonstrated elevated P300 response to self-name vs. other-name, while meditators showed no such self-enhancement. The self-name P300 amplitude correlated with enhanced negative affect and decreased mindfulness. Mathis Trautwein will show results from an associative shape-matching task evidencing different mindfulness-related differences in SRP: faster responses to self vs. other correlated positively with trait mindfulness and decentering in two studies; the effect was larger in meditators compared to matched controls. Karin Matko will present results of an experimental study on the effects of a brief mindfulness meditation on self-reported self-enhancement and wellbeing. No effects were found on most outcomes, except a small effect on a better-than-average measure of self-enhancement. However, meditators displayed higher levels of self-enhancement and wellbeing compared to meditation-naïve participants. Ivan Nyklíček will discuss two studies: one using the same design as Matko's and finding similar effects in a different population, the other in the context of an 8-week MBI: some aspects of SRP showed an increase, while other aspects showed a decrease from pre-to-post intervention with meaningful correlations with changes in wellbeing.

S1.3 - The neurophenomenology of Jhana meditation: Neuroscientific, computational, and phenomenological perspectives on meditative absorption

Mark Miller¹, **Jonas Mago**², **Matthew Sacchet**³, **Joshua Brahinsky**², **Michael Lifshitz**²

¹ Monash University, University of Toronto, Hokkaido University, ² McGill University, ³ Harvard Medical School / Massachusetts General Hospital

Summary

This panel brings together interdisciplinary perspectives on the Jhanas - states of profound meditative absorption described by some practitioners as the most blissful states they have ever experienced. Panelists will explore Jhana from various angles, presenting new neuroscientific data alongside fresh computational and anthropological perspectives. We will discuss how meditative absorption sheds light on the plasticity of human consciousness and may open new paths to well being.

Details

This panel brings together interdisciplinary perspectives on the Jhanas-states of profound meditative absorption. Panelists will explore Jhana meditation from various angles, integrating new neuroscientific data and computational modeling with phenomenological and anthropological perspectives.

Mark Miller will frame the discussion through a novel computational approach to meditative absorption. By leveraging principles from the active inference framework, he will explore how the brain's predictive mechanisms facilitate heightened attention and regulate affective and perceptual states during Jhana. This computational lens will offer fresh insights into some of the more radical benefits of these practices.

Jonas Mago will then present findings from a neurophenomenological study directly examining the effects of Jhana on the brain's perceptual priors. EEG recordings were obtained from 10 expert Jhana practitioners over a 10-day retreat. Results revealed a reduction in mismatch negativity during Jhana, compared to regular mindfulness of breath, suggesting a loosening of cortical priors that aligns with the phenomenology of loosened perceptual patterning.

Matthew Sacchet will describe complementary data from an fMRI case study of an intensively sampled expert Jhana meditator. This study identified distinctive patterns of brain activity that were linked to absorptive qualities of attention and reductions in narrative processing. These findings further illuminate how Jhana may temporarily suspend the brain's higher-order modelling of the perceptual field.

Psychological Anthropologist Joshua Brahinsky will compare Jhana meditation to the Christian practice of speaking in tongues. Drawing on rich interviews with practitioners from each tradition, he will propose that, despite their apparent differences, both practices seem to leverage an "arousal spiral"-in which attention, arousal, and a releasing of control intertwine to generate positive affective feedback loops.

Michael Lifshitz, serving as moderator, will highlight the value of integrating neuroscientific, phenomenological, and anthropological approaches to advance our understanding of meditative absorption.

S1.4 - Contemplative practices and skills in preservice teacher education: Research from Mexico, Germany, and the United States

Matthew Hirshberg¹, Summer Braun², Alison Hooper², Tenzin Sonam³, Robert Roeser⁴, Corina Aguilar-Raab⁵, Lisa Flook¹, Richard Davidson¹

¹ University of Wisconsin-Madison, ² University of Alabama, ³ Emory University, ⁴ Pennsylvania State University, ⁵ University of Mannheim

Summary

SUMMARY: Contemplative training offers an innovative approach to preservice teacher education by strengthening skills and dispositions associated with positive teacher outcomes. Results from different countries show how contemplative practices can be feasibly and acceptably implemented in teacher education, and that the framing is important to engagement. Contextually appropriate MBIs may improve preservice teacher's wellbeing and occupational outcomes.

Details

BACKGROUND AND AIMS: Panelists will present four studies, drawn from different disciplinary lenses and geographic locations, that together make the case that contemplative practices are critical to teachers' professional development.

METHODS: In Paper 1, associations between skills targeted in many contemplative interventions (e.g., mindfulness, emotion regulation) and occupational health and wellbeing are examined in 158 preservice teachers in the US. Paper 2 presents results from a pilot study integrating the Social, Emotional and Ethics (SEE) Learning Program into preservice teacher education in Mexico ($n=90$). Paper 3 presents the formative process of developing a course integrating the SEE Learning Program into preservice teacher education in Germany ($n=28$). Paper 4 reports on a randomized controlled trial involving 98 preservice teachers and three-years of follow-up in the U.S.

RESULTS: Results from Paper 1 identify specific skills contemplative practices should cultivate in preservice teachers and how to frame such practices to be maximally engaging. Paper 2 reports on the acceptability and efficacy of the first of three courses aimed at preservice teacher wellbeing and social-emotional competencies in Mexico. Results from Paper 3 provide evidence of acceptability of a course aimed at preservice teacher wellbeing and social-emotional competencies in Germany. Results from Paper 4 suggest that integrating contemplative practices into teacher education in the US improves pedagogy, reduces teacher race bias, and increases early career persistence.

CONCLUSIONS: Developmentally informed and contextually appropriate contemplative practices may improve preservice teacher health, wellbeing and occupational outcomes.

S2.1 - Tibetan Contemplative Practices: Interdisciplinary Frameworks

Michael Sheehy¹, Maria Kozhevnikov², Jim Rheingans³, Julian Schott³, Nicole Willock⁴

¹ University of Virginia, ² National University of Singapore and Harvard Medical School, ³ Vienna University, ⁴ Old Dominion University

Summary

This panel spotlights cutting-edge research on neuroscientific, philosophical, text critical, and pedagogical frameworks for understanding Tibetan Buddhist contemplative practices and emergent experiences. Panelists present on meditation that enhances awareness by stimulating the brain, “Open Presence” as a framework in Dzogchen and science for understanding nondual awareness, a typology of the Indo-Tibetan notion of reality, and contemplative pedagogies of the feminine divine in the university classroom.

Details

This panel spotlights cutting-edge research on neuroscientific, philosophical, text critical, and pedagogical frameworks for understanding Tibetan contemplative practices and emergent experiences. The first panelist presents a novel scientific framework of meditation that includes a style of practice aimed at enhancing awareness by stimulating the brain. This discussion will compare Sutra with Tantric Mahamudra practice in terms of methodologies and neurological effects, linking these contemplative practices with findings in neuroscience. Combining Tibetan instructions with science, the second panelist discusses “Open Presence” as an empirical and theoretical framework for understanding nondual awareness (NDA) in Dzogchen meditation manuals and neuroscience. This presentation critically examines the original Tibetan phrase, *rikpa chokzhag*, embedded in Dzogchen presentations of pure awareness. The third presentation is co-led by scholars who are developing an interdisciplinary terminology for visualized forms of Buddhist tantric meditations. The example presented will be a “reality-framework” relevant for contemplative sciences based on the Indo-Tibetan notion of reality (*tattva*). The final panelist will consider Tibetan content in a university classroom and its pedagogical impact to enhance transformational learning. This discussion will focus on the presenter’s experience using Tibetan narrative, poetry, and art to invoke the feminine divine figure Yangchenma. The panel assesses the state of the field regarding Tibetan contemplative practices to move the needle forward on related interdisciplinary research.

S2.2 - Health Economics Research in Contemplative Studies

**Cate Bailey¹, Julieta Galante¹, Anne Speckens², Jonathan Davies³, Adam Wagner⁴,
Géraldine Dufour⁵, Garry Barton⁶, Maris Vainre⁷, Peter B Jones⁸, Jan Stochl⁹,
Annelieke Van Velthoven¹⁰, Ben Wijnen¹¹, Marloes Huijbers¹², Maud Jansen¹³, Imke
Hanssen¹³, Silvia Evers¹³**

¹ University of Melbourne, ² Radboud University Medical Centre, ³ Contemplative Studies Centre, University of Melbourne, ⁴ University of Cambridge, ⁵ European Association for International Education, ⁶ Charles University, ⁷ Cambridge University, ⁸ University of Cambridge, ⁹ University of Cambridge ¹⁰ Center for Mindfulness¹¹ Centre of Economic Evaluations & Machine Learning, Trimbos Institute, Netherlands Institute of Menta, ¹² CAPHRI Care and Public Health Research Institute, ¹³ Radboud University Medical Center

Summary

This symposium presents findings from 4 recent studies of contemplative practices from Australia, UK and Netherlands that showcase the potential for economic evaluations to inform decision making around the cost-effectiveness and cost-utility of contemplative practices in public health, clinical, university and digital settings.

Details

Health economics is essential for improving decision-making when allocating healthcare resources. However, health economics has been near absent from contemplative studies, with less than 0.1% of papers including economic evaluation. This symposium presents findings from 4 recent studies that showcase the potential for economic evaluations to inform decision making around the cost-effectiveness of contemplative practices in public health, clinical, university and digital settings.

Julieta Galante will present an economic evaluation of a pragmatic randomised controlled trial, assessing the cost-effectiveness of providing university students with a mindfulness-based intervention to reduce psychological distress. Results suggest the intervention significantly improved outcomes at a moderate additional cost, making the intervention cost-effective as per the UK's national cost-effectiveness threshold for public health interventions.

Cate Bailey will present data from a nationally-representative Australian dataset with quality-of-life data comparing contemplative-practitioners to non-practitioners using a new preference-based instrument (EQ-HWB-S) as quality-adjusted life years (QALYs), alongside costs associated with contemplative practice and health service use.

Anne Speckens will present a cost-effectiveness and cost-utility study comparing mindfulness-based cognitive therapy plus treatment as usual (TAU) compared to TAU alone in adults with bipolar disorder. From a societal perspective, results suggested there were lower costs in the treatment group, and a slight improvement in QALYs, leading to likely cost-effectiveness.

Jonathan Davies will present recent survey data on whether mindfulness apps are cost-effective treatments for mental health, wellbeing, and quality of life. Results show limited evidence that money spent on mindfulness apps is associated with reductions in health care expenditure.

S2.3.1 - Beyond Standard Mindfulness-Based Interventions: Investigating the Effects of Sustained Mindfulness Practice in Patients with Persistent Depression

Thorsten Barnhofer¹, Jonathan Hamilton¹, Anne Speckens²

¹ University of Surrey, ² Radboud University Medical Centre

Summary

This symposium will i) introduce a blended mindfulness-based intervention to support depressed patients in sustained practice, ii) present evidence on feasibility, acceptability and preliminary efficacy of this intervention, iii) report findings on psychological and brain changes from a study that followed patients over six months of practice, iv) discuss findings from qualitative interviews of patient and therapist experiences and conclude with reflections from an expert discussant.

Details

Standard mindfulness-based interventions have proven to be effective in the prevention and treatment of depression. However, effects often remain limited as patients find it difficult to maintain practice after the end of interventions, an observation that contrasts with the potential of meditation to support long term trajectories towards better mental and physical health. The series of studies presented in this symposium builds on the assumption that sustained practice may provide a means of achieving more complete recovery and remission, which is important particularly in patients who have entered a recurrent or persistent course of depression.

This panel will consist of 4 presentations followed by reflections from an expert discussant. We will

- i. introduce a novel individual blended mindfulness-based intervention that is aimed at supporting patients in sustained practice and justify its rationale from the perspective of more recent developments in the understanding of depression as a wider dysfunction in allostatic regulation (Thorsten Barnhofer),
- ii. present evidence from an initial study of feasibility, acceptability, and preliminary efficacy in which 24 patients with persistent depression were randomly assigned to either practice with standard length or shorter more frequent practices over a period of three months and compared to a wait list group of 24 depressed patients (Jonathan Hamilton),
- iii. report trajectories of change in psychological and brain outcomes (structural MRI and functional connectivity gradients) as tested using latent change score modelling from a study in which 44 patients with persistent depression were supported to engage in regular practice over six months (Thorsten Barnhofer), and
- iv. summarise results of qualitative analyses of patient and therapist reports of their experiences with this intervention (Trial therapist, to be confirmed).

A distinguished expert in the field (Anne Speckens), will serve as a discussant and provide reflections and comments before we open to Q&A.

S2.4 - Integrating Mindfulness and Compassion in Education: Comparative Insights and Global Perspectives from the Whole School Mindfulness and PRICES Frameworks

**Tyralynn Frazier¹, Sebrina Doyle Fosco², Sebrina Doyle Fosco², Pier Paolo Eramo³,
Constance Miller⁴**

¹ Emory University, ² Penn State University, ³ Romagnosi Classical and Linguistic High School, ⁴ Associazione educazione Etica, Emotiva e Sociale

Summary

This panel focuses systemic implementation of mindfulness and compassion in education. By bringing together diverse voices of researchers, educators, and contemplative practitioners working in education, we aim to deeply explore insights on building compassionate schools across global contexts from the US to India. This highlights the fusion of and contemplative theory and education practice and provides pivotal evidence for integrating mindfulness and compassion into educational systems.

Details

In our fragmented world, nurturing contemplative skills within educational settings is important. This panel presents whole school frameworks for implementing mindfulness and compassion-based development programs in schools. Panelists will examine the integration of mindfulness and compassion in educational settings through two models: Whole School Mindfulness (WSM) and PRICES. Tyralynn Frazier will moderate. This will include a discussion on the PRICES model's structure in cultivating compassionate schools across international contexts. Sebrina L. Doyle Fosco will present the WSM model's role in fostering whole school mindfulness. Pier Paolo Eramo will share insights, as a school principal, on implementing contemplative-based whole school programs, and Constance Leigh Miller, as a nun and leader will explore organizational supports needed for such initiatives to be sustainable. The panel emphasizes holistic approaches and contributes to the conference's diversity through this interdisciplinary and multicultural collection of panelists including researchers, education specialists and contemplative practitioners focused on the systemic integration of compassion and mindfulness into schools. The WSM and PRICES models are integral frameworks promoting well-being in educational settings. The WSM model emphasizes cultivating mindful and compassionate school environment through Exploration, Preparation, Implementation, and Sustainment, focusing on emotional awareness and compassion. The PRICES model - encapsulating Preparation and access, Restoration, Integration, Connection and community, Educator support, and Strengths-based cultivation and student voice - is a structured approach for educational wellbeing promotion. The panelists will explore model similarities and differences in fostering school-wide well-being, discussing implementation challenges and strategies in various educational contexts, and drawing interdisciplinary insights from neuroscience, psychology, and education. The panel will present empirical evidence supporting these models' effectiveness and identify future research directions in school-wide mindfulness and compassion-based programs.

S3.1.1 - Cultivating Compassion in Education Across Borders: The Preliminary Impact of Implementing a Compassion-Based Prosocial Development Program in Schools in the United States, Colombia, and India

Tyralynn Frazier¹

¹ Emory University

Summary

The study investigates the effects of the Social, Emotional, and Ethical (SEE) Learning on elementary school-aged children across the U.S., Colombia, and India. Results indicate significant improvements in empathy, motivation, academic mindset, and self-compassion among students who participated in the program, demonstrating its effectiveness across diverse cultural contexts. The research highlights the potential of compassion training in critical developmental stages and emphasizes the need for further studies on its long-term impacts.

Details

BACKGROUND AND AIMS: Existing research supports the developmental benefits of compassion-based social-emotional learning (SEL), encompassing cognitive, social-emotional, and ethical growth. Compassion training enhances attention, emotional awareness, and empathy, leading to improved prosocial behavior. This period in elementary school is crucial for cognitive and emotional development, suggesting the need for further research on the impact of compassion-based programs. This includes data from recent publications on the impact of compassion training on late elementary school students in the United States, Colombia, and India.

METHODS: In the U.S., the study involved 344 students across 33 classrooms, with half receiving the SEE program over 13 weeks and the rest serving as a control group. Colombian cohorts included 341 students, half having received SEE Learning and the other half in a waitlisted control group. In India, the study encompassed 1500 students across 9 schools. The research focused on comparing the outcomes of students exposed to SEE Learning with those in control groups, assessed at multiple intervals.

RESULTS: In the U.S., SEE Learning led to improved perspective-taking, empathic concern, intrinsic motivation, and self-compassion. Colombian students showed gains in intrinsic motivation, academic growth mindset, and perceived classroom support. In India, the intervention positively impacted empathic concern, emotional reactivity, and academic self-efficacy, while reducing negative self-assessment measures. These results demonstrate SEE Learning's potential impact in enhancing social and emotional outcomes across cultural contexts.

CONCLUSIONS: This research adds to the field of compassion-based social and emotional development, emphasizing the potential for compassion training to improve empathy and well-being in crucial developmental stages. Future studies are needed to replicate these findings and to determine the long-term impacts of such programs on student development.

ACKNOWLEDGEMENTS AND FUNDING: This work is supported by funding from the Gadan Phodrang Foundation, Yeshe Khorlo Foundation, and Templeton Foundation.

S3.1.2 - Building Resilience and Social-Emotional Competencies in Elementary School Students Through a Compassion-Based SEE Learning Curriculum

Hee Jung (Hyeju) Min ¹, Sang Hee Park ², Seunghee Won ³

¹ Dongguk University, ² Daegu Student Suicide Prevention Center, Kyungpook National University Chilgok Hospital, ³ Kyungpook National University

Summary

This pioneering study assessed the effects of a modified 6-week compassion-based SEE Learning (Social, Emotional, and Ethical Learning) curriculum. Utilizing Student's t-tests and Repeated Measures Analysis of Variance (RMANOVA), we found that SEE Learning has positive effects on the improvement of elementary students' resilience, emotional regulation, social skills, empathy, and social tendency. Furthermore, there is evidence of sustained improvement in social skills at a 3-4 month follow-up.

Details

Resilience and social-emotional competencies—such as emotional regulation, social skills, empathy, and social tendencies—are key predictors of students' healthy living and well-being. Despite the increase in depression, anxiety, and loneliness among students, and a surge in demand for social-emotional learning (SEL) during and post the COVID-19 era, few studies have been conducted on new SEL programs, including SEE Learning, often referred to as SEL 2.0. This pioneering study, the first of its kind in South Korea, assessed the effects of a modified 6-week compassion-based SEE Learning (Social, Emotional, and Ethical Learning) curriculum, enriched with mindfulness and trauma-informed approaches. In collaboration with the local Metropolitan Office of Education, 348 third and fourth graders from 15 public elementary schools in a South Korean metropolitan area participated. Pre-, post-, and follow-up intervention assessments of resilience and social-emotional competencies were performed and analyzed using Student's t-tests and Repeated Measures Analysis of Variance (RMANOVA). The results indicated significant improvements in resilience, emotional regulation, social skills, empathy, and social tendencies following the SEE Learning intervention, with social skills showing sustained improvement at a 3-4 month follow-up. These outcomes affirm the SEE Learning program's effectiveness in enhancing elementary students' resilience and social-emotional competencies. Future research should explore the effects of SEE Learning in diverse settings and across different age groups.

S3.1.3 - For Compassionate Living: A scientific approach to developing an ethical socioemotional program in Brazil

Tatiana Amato ¹, Emérita Opaleye ², Juliana Grasso ², Nyanda McBride ³, Ana Regina Noto ²

¹ UNIFESP, ² NEPSIS - Núcleo de Pesquisa em Saúde e Uso de Substâncias, Department of Psychobiology, Universidade, ³ National Drug Research Institute, enAble Institute, Faculty of Health Sciences, Curtin University

Summary

Socioemotional learning grounded in ethical frameworks, such as the Culture of Peace, can extend benefits beyond individual growth to encompass social transformation. This study describes the co-design methodology utilized in developing For Compassionate Living, an online socioemotional, contemplative, and ethical program for adolescents, teachers and families in Brazil. The program enables interpersonal connections, self-regulation, flourishing, and compassionate living.

Details

Background

Contemplative practices can enrich SEL programs. Additionally, programs grounded in ethical frameworks, such as the Culture of Peace, can extend benefits beyond individual growth to encompass social transformation.

Aim

This study describes the co-design methodology utilized in developing Formar para Conviver (FO-CO), an online socioemotional, contemplative, and ethical program for adolescents and teachers in Brazil.

Method

Stage 1 involved a literature review and expert interviews to establish a theoretical foundation, emphasizing contemplative practices, emotional regulation, non-violent communication, and cooperative pedagogy. Stage 2 comprised action-research cycles with the target population, including planning workshops, implementation, data collection, and analysis. Qualitative data from field diaries, focus groups, and participant feedback underwent content analysis by three independent researchers.

Results

The FO-CO program consisted of weekly, two-hour online workshops over four weeks, supplemented with texts, videos, and weekly homework. Four cycles of action-research with adolescents (n=60) and two cycles with teachers (n=83) refined the program. Content analysis revealed participant engagement and acceptance of activities, delivering empathy, self-regulation, and interdependence concepts.

Conclusion

The participative action-research methodology proved effective in developing FO-CO, showing promise in enhancing interpersonal connections, self-regulation, flourishing, and compassionate living. A version of the program for adolescents and teachers is prepared for effectiveness evaluation.

Acknowledgements and funding

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S3.1.4 - Empathetic Dialogue: Lessons from Cultivating Compassionate Communication in Clinical Interactions with Marginalized Communities

Jessica Carrasco¹

¹ Jennifer Moreno Veterans Affairs Hospital

Summary

This talk highlights the importance of understanding and improving communication experiences for marginalized communities in psychology research and clinical practice. The author, drawing from personal experiences as a member of various marginalized groups, emphasizes the need for practices such as compassionate communication to rebuild trust and improve mental health care.

Details

Background and Aims: As we move toward more inclusive research and clinical methodologies, we must better understand the communication experiences of our most marginalized communities. Historically, the field of psychology has participated in socially unjust practices that have contributed to the mistreatment of communities of color and subsequent mistrust of the field. Through our navigation of correcting historical wrongs, we must not only acknowledge our role as an active participant in these institutions but also consider the need to rebuild trust. Practices such as compassionate communication can begin to build a bridge to improving mental health care by allowing a space where individuals feel they are being heard and understood.

Methods: These lessons come from serving in different research and clinical settings. They are further amplified as I am a member of various marginalized groups including the proud daughter of migrant parents, bicultural, bilingual, and Chicana.

Conclusions: Insights gained from implementing compassionate communication practices will be shared, drawing from firsthand experiences of engaging with diverse populations, including individuals seeking asylum at the US-Mexico border, those grappling with serious mental illness, and historically marginalized ethnoracial communities.

Acknowledgments: I extend my heartfelt gratitude to all the individuals who, despite enduring ongoing challenges, courageously opened their hearts and shared their stories. Your resilience and willingness to be heard are deeply appreciated and serve as powerful reminders of the strength inherent in the human spirit.

Quiero expresar mi sincero agradecimiento a todas aquellas personas que, a pesar de seguir enfrentando adversidades, valientemente abrieron sus corazones y compartieron sus historias. Su resiliencia y disposición para ser escuchados son profundamente apreciados y sirven como recordatorios poderosos de la fuerza inherente al espíritu humano.

S3.2.1 - Cultivating a Grammar of Non-Confrontation in Contemplative Practice, Education, and the World

Ferdinand Von Muench¹

¹ Colgate University

Summary

This presentation (which will include a brief contemplative practice) is an interdisciplinary project situated at the crossroads of philology, psychology, pedagogy, and politics. How can contemplatively grounded shifts in our use of words-like replacing personal and possessive pronouns with demonstrative pronouns, and finite verb forms with gerunds or infinitives-bring more equanimity and compassion towards ourselves and others to the world of education, and perhaps to the world at large?

Details

BACKGROUND AND AIMS:

Based on my individual background in contemplative practice and higher education and on the institutional background of the developing field of Contemplative Studies, this presentation asks three questions:

- 1) What can humanistic disciplines like philology contribute to Contemplative Studies?
- 2) How can a contemplative “no-person perspective” (H. Roth) be put into words and to work?
- 3) What are the benefits of such a change in language for reducing intrapersonal and interpersonal tension and conflict in education (and perhaps in politics)?

METHODS:

Changing the conventional format and language of evaluative feedback in a college course by replacing personal pronouns with demonstrative pronouns and finite verb forms with gerunds. Anchoring this linguistic and experiential shift in a guided breathing meditation in which the same shift is gradually being made.

RESULTS:

Personal observation indicates reduced personal defensiveness and tension between faculty and students, and a greater willingness and ability to evaluate work (one’s own and other people’s) with dispassion and compassion.

CONCLUSIONS:

- 1) Contemplative Studies can benefit from a widening circle of academic disciplines.
- 2) Contemplative practices can inform, introduce, and anchor alternative educational practices, including grading protocols.
- 3) Verbal encoding and expression of a contemplative “No-person perspective” can lead to reduced individual defensiveness and interpersonal conflict.

ACKNOWLEDGMENTS AND FUNDING:

Thank you to Harold Roth, Jon Kabat-Zinn, Mirabai Bush, Arthur Zajonc, Susan Bloom, and my students and colleagues for inspiring this project, and to Chapel House and the Center for Learning, Teaching and Research at Colgate University for institutional and financial support.

S3.2.2 - Towards a Critical Mindfulness Pedagogical Approach to Anti-Racist and Anti- Oppressive Education

Gio Iacono¹, Spencer Evans^{1,2}, Leah Holle^{1,2}, Emily Loveland^{1,2}, Cindy Pan³, Tyler Haggerty^{1,2}

¹ University of Connecticut, ² University of Connecticut School of Social Work, ³ University of Connecticut School of Medicine

Summary

Preparing students in human service professions to engage in dialogue and social action is critical. Mindfulness can enhance wellbeing, interconnectedness, and critical consciousness. This presentation explores utilizing mindfulness to help students in a required diversity course engage in difficult content/dialogue (e.g., racism). Findings support mindfulness in promoting dialogue/critical consciousness. Implications explored will relate to social action to reduce global tribalism.

Details

BACKGROUND AND AIMS: Cultivating capacity to skilfully engage in polarizing dialogue and social action (i.e., organized action toward social change) is critical as interdisciplinary human service professionals (Fook, 2022). Mindfulness, regarded as a basic human capacity, has been shown to promote wellbeing, empathy, presence, compassionate awareness, interconnectedness and interbeing, and critical consciousness (Le et al., 2019; van Agteren, 2021). Fundamental to anti-racist (AR) and anti-oppressive (AO) education, critical consciousness represents analysis of inequities and one’s motivations and actions to address inequities (Diemer et al., 2015). This presentation explores utilizing mindfulness from a critical theoretical foundation to support Master’s of Social Work students engaging in difficult dialogue (e.g., racism/white supremacy, social identity/positionality) in a required diversity course.

METHODS: Data was collected (Qualtrics) across three semesters from 2022. Students practiced mindfulness and critical reflection to promote dialogue, explore strategies for social action and preventing burnout, and provided qualitative feedback.

RESULTS: Qualitative content analysis revealed three themes: 1) Mindfulness supports engaging in divisive content/dialogue: “allowed me a moment to get in touch with why I was there”; “helped me feel prepared to tackle the content”; 2) Burnout prevention: “helped me stay grounded when triggers came up in field and when getting overwhelmed”; “reminding me that rest is essential to being engaged, and that rest is resistance against capitalism”; 3) Being more present/engaged with clients: “as a future clinician it is important to develop a familiarity with sitting in/with discomfort”.

CONCLUSIONS: Considering the importance of AR and AO education that can support societal flourishing, reduce harmful global tribalism, developing capacity to engage in dialogue and social action, and sustainability at the frontlines, this study provides preliminary support for mindfulness to promote critical dialogue, critical consciousness, and social action. Implications for interdisciplinary research related to AR/AO education will be explored.

S3.2.3 - Embodied wisdom: are there common categories of experience that help humans learn and point toward connection and freedom?

Judson Brewer¹

¹ Brown University

Summary

Embodied cognition posits that our thinking is shaped by physical interactions with our environment, affecting our actions and learning. Ancient and modern theories agree on bodily engagement's importance in learning, but conceptual thoughts may cloud our experiences and learning quality. A new framework may identify universal mental states (open vs. closed) without definitions, suggesting a biological drive towards altruism and connection, away from suffering.

Details

Embodied cognition suggests that human thought processes are deeply influenced by aspects of the physical body's interaction with its environment. As such, bodily engagement plays a significant role in shaping our thoughts and perceptions, and therefore actions and engagement with the world- importantly, our interactions with other living beings. Both ancient Buddhist and modern psychological theories point toward conditioning as a core mode of learning, with bodily engagement being critical in this process. However, conceptual overlays may complexify and obscure direct experience with ourselves (i.e. bodily engagement), directly affecting our perception of our embodied experience and therefore reducing the quality and depth of learning. In addition, these conceptual overlays may also make it challenging to describe our experience to others- such as meditation teachers- reducing the quality of feedback that is often critical for learning. In this talk, I will outline a simple framework (open/closed) that may tap into universal embodied experience and provide evidence for its pragmatic utility. Our data suggest that the general population converges in categorization of multiple mental states (open vs. closed) in *the explicit absence of definition*- thereby bypassing the need for conceptual overlay. Importantly, we now have evidence that supports an innate biological mechanism that moves

humans away from selfish action, toward connection and possibly more freedom from mental states that keep us bound in suffering.

S3.2.4 - Making Sense: A Contemplative Quest Towards an Emotive Epistemology

Alberto Pulido¹

¹ University of San Diego

Summary

This presentation explores practices that lead to the “resolution” of unresolved contradictions. We utilize an emotive epistemology where contemplative expressions of both thinking and feeling seek new truths. This presentation seeks answers to: 1) How might we account and resolve intergenerational trauma that was inherited via our ancestors? 2) Is it possible to find guidance and orientation in a unresolved state of personal and historical contradictions that Chicana scholars describe as a state of Nepantla?

Details

Alberto Lopez Pulido

University of San Diego

S3.4.1 - The effectiveness of a mindfulness-based intervention on the executive functions and mental health in children at a vulnerable school

Carlos Garcia Rubio¹, **Catherine Andreu**², **Jacobo Albert**³, **Kimberly Schonert-Reichl**⁴

¹ Nirakara Lab - Complutense University of Madrid, ² University of Valencia, ³ Faculty of Psychology, Autonomous University of Madrid, ⁴ Department of Psychology, University of Illinois at Chicago

Summary

This study aims to examine the effects of a mindfulness-based intervention (MBI) on the EFs and mental health of children from a vulnerable school (i.e., low socioeconomic status) in Santiago, Chile. Results showed that a brief MBI at school may be effective in improving the executive functions, mental health, and mindfulness skills of children with low resources. Findings highlight the potential role of school MBIs in promoting children's healthy development in vulnerable contexts.

Details

BACKGROUND AND AIMS: Executive functions (EFs) are essential cognitive skills for mental health. Compared to non-vulnerable contexts, children in vulnerable contexts have shown worse EFs and mental health. Therefore, effective interventions are necessary for its promotion. This study aims to examine the effects of a mindfulness-based intervention (MBI) on the EFs and mental health of children from a vulnerable school (i.e., low socioeconomic status) in Santiago, Chile. **METHODS:** A cluster-randomized controlled trial was designed. Children (age=9,79; 50,7% females) from two 4th classrooms and two 5th-grade classrooms were randomly assigned to a 9-week MBI (N=67; Growing Up Breathing Program) or to an active control group (N=61; Social Skills Program). Pre and post-intervention, children completed self-reports of EFs, mental health and mindfulness. Additionally, teachers and parents completed questionnaires of children's EFs and mental health. **RESULTS:** Children who received the MBI, compared to children in the active control group, self-reported significant improvements in their EFs ($p=0.014$, $\eta^2=0.049$), mental health (anxiety, $p=0.030$, $\eta^2=0.039$; negative affect, $p=0.039$, $\eta^2=0.035$) and mindfulness skills ($p=0.016$, $\eta^2=0.048$). Likewise, teachers and parents reported significant improvements in EFs (teachers: $p=0.022$, $\eta^2=0.044$; parents: $p=0.007$, $\eta^2=0.073$) and mental health (teachers: internalizing symptoms, $p=0.000$, $\eta^2=0.101$, and hyperactivity, $p=0.029$, $\eta^2=0.041$; parents: internalizing symptoms, $p=0.038$, $\eta^2=0.044$, and externalizing symptoms, $p=0.034$, $\eta^2=0.046$). **CONCLUSIONS:** An MBI at school may be effective in improving the EFs, mental health, and mindfulness skills of a children population with low resources. The improvements reported by the children seem visible to their teachers and families. The current empirical study underscores the importance of early intervention to promote mental health. **ACKNOWLEDGEMENTS AND FUNDING:** A special appreciation is expressed to the children and school community who participated in this study. This work was funded by a Varela Award from the Mind and Life Europe (Grant #2016-EVarela).

S3.4.2 - Mindfulness and acceptance training to improve student mental health during exam period

Karoly Schlosser 1, Juanjo Macias 2

1 Goldsmiths, University of London, 2 University of Malaga

Summary

Brief ACT intervention improves mental health in exam context.

Details

INTRODUCTION: This paper aims to analyse the effectiveness of an acceptance and commitment therapy (ACT) based intervention to improve the psychological well-being of secondary school students in the context of challenge, at the time of their final exam period. This intervention represents a model grounded in contextual behavioural science with the intervention focusing on processes such as mindfulness, values, acceptance, and adaptive behaviours (Macias et al, 2022). **METHOD:** A total of 136 high-school students from Hungary volunteered to be randomly selected and participate in either ACT

training or a control study group just 2-4 weeks ahead of their final exams, a highly stressful period of their lives. The training totalled 5 hours over three sessions, including data collection (pre-post-followup), and intervention. The variables measured were exam performance (grades), psychological distress (GHQ12), satisfaction with life (SWLS), experiential avoidance (AAQ2), and mindfulness (FFMQ). RESULTS: Preliminary results of ANOVA showed significant improvement in mental health, significant effects were found for group and time interaction effects (group x pre-post), with a high effect size ($\eta^2 = .816$). The experimental group showed lower scores ($M = 12.7, SD=5.7$) on the post-test than the control group ($M = 14.25, SD=6.08$), which indicates a decrease in distress. At the pretest, the experimental group had significantly higher scores on the GHQ, indicating lower mental health of the experimental group at the start. CONCLUSIONS: The findings show that even brief ACT-based interventions have promising possibilities in the educational sector. The brief intervention was delivered simultaneously in two countries among a diverse student population, and it proved consistently effective in improving student mental health in a highly stressful final exams context. The intervention had consistently greater benefits for girls than for boys. This study emphasizes the importance of process-based interventions.

S3.4.3 - Intersubjectivity in clinically distressed families: Mindfulness and its role in connection and relationship

Katarina Tabi 1, 2, 3

1 UBC; Centre for Mindfulness, Reproductive Mental Health Program, CW Hospital, 2 BCCH Centre for Mindfulness, Reproductive Mental Health Program, 3 The University of British Columbia; Centre for Mindfulness

Summary

Postpartum depression and anxiety are common and seriously impact both parents and children. Predictors include marital dissatisfaction and perceived lack of support. As a novel development, we aimed to support these families using an interpersonal mindfulness approach. We explored the impact of involving both partners in Mindfulness-Based Interventions on their relationship, interactions, compassion and connection.

Details

Background and aims: Postpartum depression and anxiety (PPDA) is experienced by 1 in 5 families in the first year, affecting both children and parents. Predictors of PPDA include marital dissatisfaction and perceived lack of support. As a novel development, we aimed to support these families using interpersonal mindfulness approach. We aimed to explore the impact of involving both partners in Mindfulness-Based Interventions (MBI) on their relationship and interactions. Methods: Two online MBI groups ran for 8 weeks: one for mothers diagnosed with PPDA and one for their partners. Outcome measures included couple interactions and relationship satisfaction. Results: Mothers in families with both partners practicing mindfulness reported higher pre-post improvements than mothers practicing alone, in the following areas: perceptions of partner showing her love, compassion, and acceptance; support received from partner; relationship satisfaction, and increased comfort towards sharing deep

thoughts and feelings. Conclusion: Interpersonal mindfulness has potential to improve family relationships, fostering compassion and connection. Acknowledgements and funding: This work was supported by the BC Children's Hospital Centre for Mindfulness, Mind & Life Institute Varela Grant, BC Children's Hospital Foundation, and BC Women's Hospital Foundation.

S3.4.4 - The effects of mindfulness based cognitive therapy on psychological distress in people with Parkinson's disease – a randomized controlled trial

Franziska Goltz 1, Anouk Van Der Heide 2, Anne Speckens 3, Rick Helmich 2

1 Donders Centre for Cognitive Neuroimaging, Radboudumc, 2 Radboud university medical centre, Department of Neurology, Nijmegen, the Netherlands, 3 Radboud University Medical Centre

Summary

Parkinson's disease (PD) is a neurodegenerative disorder with symptoms like tremor and motor slowness. Beyond that, many people with PD experience stress-related symptoms like depression and anxiety. In the MIND-PD-study, we investigate the impact of stress reduction through mindfulness-based cognitive therapy in PD. In a longitudinal RCT, the effects and working mechanisms of stress-reduction (by MBCT) are assessed by means of questionnaires, biochemical samples and (f)MRI.

Details

BACKGROUND: Parkinson's disease (PD) is a neurodegenerative disorder with cardinal symptoms like tremor, motor slowness, and muscle stiffness. Beyond the typical motor symptoms, many people with PD experience neuropsychiatric symptoms like depression and anxiety. Presumably, this is due to an increased sensitivity to stress. Mindfulness-based cognitive therapy (MBCT) is a promising way to reduce stress in PD, by training participants to pay attention to the present moment, in a non-judgmental and friendly way. Previous studies suggest that this may lower depression and anxiety in PD, whereas effects on motor symptoms are less clear, and underlying cerebral mechanisms remain fully unclear. The aims of this trial are to test whether MBCT improves psychological distress and clinical symptoms in PD, and to explore the cerebral and biochemical mechanisms underlying stress(-reduction) in PD. **METHODS:** The MIND-PD-study is an ongoing randomized controlled trial investigating the impact of stress-reduction through MBCT in PD. 62 patients receive their usual treatment plus MBCT, 62 patients get treatment as usual. The main endpoint is psychological distress post-intervention (HADS). Further effects and working mechanisms of MBCT are assessed using questionnaires and biochemical samples at baseline, post-intervention and after a 1-year follow-up period; (f)MRI will be acquired at baseline and follow-up. **RESULTS:** Preliminary results of this trial are expected by June 2024. Network analyses (independent component analysis) on resting-state fMRI will be used to analyze the cerebral response to acute stress in PD. Results will include stress-related functional connectivity maps and their relation to subjective markers of psychological distress. **CONCLUSIONS:** MIND-PD aims to determine the effects of stress and stress-reduction (with MBCT) on PD, both in terms of clinical symptoms and its underlying biological mechanisms. This knowledge may pave the way for novel treatment development. **FUNDING:** This trial is supported by the Netherlands Organization for Scientific Research.

S4.1.1 - Feeding Your Demons: An embodied practice, historical context, and contemporary research on turning towards and transforming difficult emotions

Eve Ekman¹, Lopon Dorje Chandra Easton², Kate Greer Dickson³

¹ Greater Good Science Center, ² Tara Mandala, ³ Pacifica Graduate Institute

Summary

This panel will review the history of Chöd practices of ritual song, music, symbolic offering, and visualization and explore the contemporary secular adaptation of Chöd, “Feeding Your Demons”, FYD including results from a pilot RCT. Analysis of a the daily diary suggests FYD supports perspective-taking and increased compassion for self. Panelists will discuss the libratory potential for the FYD to transform individual emotional distress and societal/collective wounding.

Details

Contemplative science has made great strides in the empirical investigation of meditation practices, however, meditation practices from the Vajrayana Buddhist tradition that use mental imagery to transform distressing beliefs and emotions have been little explored. This panel will review the history of the Vajrayana Chöd practices of ritual music and visualization and explore the contemporary secular adaptation of Chöd, “Feeding Your Demons”(FYD), including results from a pilot, waitlist-controlled randomized controlled trial (RCT). The 30-day RCT was a mixed-method community-based participatory research study examining effects on psychological well-being among 61 participants (70% female, 44% white). In addition to pre and post survey data, participants completed a meditation journal with questions detailing the experience of the FYD practice. Overall, participants expressed an ability to reframe, or transform, their relationship to distressing thoughts, emotions, and experiences as they gained personal insights, self-compassion, and acceptance through the meditation process which in turn shaped their future intentions for action in the world. Dorje Lopon, Chandra Easton, an author, scholar, and a senior Feeding Your Demons teacher will provide a historical background of Chöd and guide participants through the five-step visualization process of meeting and transforming difficult emotions. Eve Ekman, co-PI on the RCT, is a contemplative social scientist and teacher who focuses on contemporary and contemplative approaches to emotion awareness will share the participant voices through diary entries from the study. Through her background in depth psychology, and as a Feeding Your Demons teacher, Kate Greer Dickson will lend some context applied therapeutic implications. All panelists will discuss the libratory potential for the practices to heal individual and societal/collective wounding.

S4.1.2 - Transforming Empathy-Based Stress to Compassion: Skillful Means to Preventing Teacher Burnout

Helen Min ¹, Patricia Jennings ¹

¹ University of Virginia

Summary

We examine empathy-based stress in the prosocial classroom model, which proposes that teachers' social and emotional competence and well-being are key to their ability to create and maintain supportive learning environments. Recent neuroscience and education research findings support teachers' development of these competencies. Shifting from empathy-based stress to compassionate responding may aid teachers in effectively meeting student needs while safeguarding their own well-being.

Details

BACKGROUND AND AIMS:

Teachers play a critical role in preparing our children and adolescents for a successful future. However, despite the large number of students impacted by trauma and adversity, teachers are often not well prepared to provide trauma-sensitive support and may experience empathy-based stress (EBS) exacerbating already high levels of stress among them.

METHODS:

This narrative review explores the issue of empathy-based stress within the context of the Prosocial Classroom Model (Jennings & Greenberg, 2009) which proposes that teachers' social and emotional competence and well-being are key to their ability to create and maintain supportive learning environments critical to student academic and behavioral outcomes. Recent findings in neuroscience and education research are applied to support teachers' development of these competencies.

RESULTS:

Teachers need context-specific social and emotional competencies to handle classroom demands. During tough times, highly competent teachers can manage their arousal without harming relationships. These competencies involve recognizing students' needs and cultivating compassion to address them while safeguarding against EBS effects.

In addition, neuroscience research suggests that the capacity to intentionally cultivate compassion may serve as a skillful means to protect against EBS (Klimecki et al., 2014). Shifting from empathy-based stress to compassionate responding may help teachers respond effectively to their students' needs while protecting their own wellbeing.

CONCLUSIONS:

We propose that professional learning that introduces the skill to intentionally shift EBS to compassion may be a critical component of the social and emotional competencies teachers need for their profession.

S4.2 - Neural mechanisms of mindfulness-based interventions promoting mental health and resilience

Guusje Collin¹, Clemens Bauer², Jiahe Zhang³, Ivana Buric⁴, Anne-Maj Van Der Velden⁵, Willem Kuyken⁶, Andreas Roepstorff⁷, Susan Whitfield-Gabrieli⁸, Roshan Cools⁹, Anne Speckens¹⁰

¹ Radboud University Medical Centre and Donders Institute for Brain, Cognition and Behavior, ² Northeastern University; Massachusetts Institute of Technology, ³ Northeastern University, ⁴ University of Amsterdam, ⁵ Radboud University Medical Centre; University of Oxford, ⁶ University of Oxford, ⁷ Aarhus University, ⁸ Northeastern University, ⁹ Donders Institute for Brain, Cognition and Behavior, ¹⁰ Radboud University Medical Centre

Summary

The world faces a mental health crisis that affects youth in particular. Mindfulness-based interventions foster mental health and resilience, but underlying mechanisms remain elusive. Elucidating these mechanisms may promote targeted preventive interventions. This panel features work on the intersection of clinical/educational research and contemplative neuroscience, to illustrate how mindfulness training may modulate mechanisms of mental illness development and promote resilience.

Details

The world faces a mental health crisis that affects in particular young people. Mindfulness-based interventions represent a promising strategy to foster mental health and resilience, but underlying mechanisms remain elusive. Elucidating these mechanisms may promote targeted (preventive) intervention and attenuate the development of mental illness.

This intercontinental, majority-female panel of early-career researchers will feature work on the intersection of clinical/educational research and contemplative neuroscience to probe neural mechanisms of mental health and resilience, with a focus on youth.

Dr. Bauer will present an RCT on mindfulness (versus coding) training in middle-school children and show effects on stress, sustained attention and neural plasticity. Dr. Zhang will discuss mindfulness-based fMRI neurofeedback to target intrinsic brain networks associated with onset and maintenance of depression in adolescents. Dr. Buric will feature work on mindfulness training as part of the university curriculum and discuss how trait mindfulness affects psychological well-being and emotion regulation. Dr. Collin will then present an ongoing RCT on mindfulness training in help-seeking youth and its effects on underlying neurocognitive mechanisms including self-referential processing, experiential avoidance and controllability estimation. Finally, Dr. van der Velden will present an fMRI RCT assessing effects of

MBCT for recurrent depression on static and dynamic functional connectivity and how they impact mental health.

Together, the featured work illustrates how mindfulness training modulates mechanisms associated with mental illness development. The panel will discuss how these findings may promote targeted mindfulness-based interventions to foster mental health and resilience.

S4.3.1 - Cultivating Humanistic Education: Ongoing Studies in Contemplative Pedagogy

Galia Patt-Shamir ¹, Raquel Shaoul ¹, Naomi Lossin ¹, Galia Patt-Shamir ¹, Naomi Lossin ¹

¹ Tel Aviv University

Summary

We have witnessed a transformative shift in the attitudes of both students and teachers towards all subjects of study by intertwining the depth of East Asian contemplative traditions with the principles of humanistic education. We investigate how the cultural adaptation of East Asian contemplative techniques unfolds within local educational contexts. And present concrete examples of contemplative tools derived from our field experience, exploring how they either diverge or complement East Asian practices.

Details

We propose a panel discussion that explores the integration of humanistic education and contemplative practices, aiming to harness the profound insights from Eastern Studies for fostering a better, more serene, and secure environment. Our panel will offer practical strategies derived from two educational programs we have developed and implemented over the years, demonstrating how contemplative practices can be seamlessly integrated into school routines.

Our panelists aspire to initiate a dialogue advocating for a humanistic approach to education, while also exploring an interdisciplinary approach to contemplative studies. The conference participants will contribute their extensive experience in applying contemplative tools in education, coupled with their academic background in East Asian studies, particularly focusing on philosophy and the humanities.

Our presentation seeks to broaden the concept of diversity by acknowledging and embracing the various ways cultures and individuals perceive the world. Within the realm of Contemplative Education, we recognize that no single method can fully grasp the complexity of reality. Therefore, we emphasize the enrichment of our understanding through the consideration of diverse perspectives.

Central to our approach is prioritizing the well-being of both students and teachers, viewing it as essential for fulfilling the essence and purpose of education. By intertwining humanistic values with contemplative practices, we aim to create a nurturing educational environment that fosters holistic growth and understanding.

S4.4 - Relational Awakening. The liberative power of spiritual friendship (kalyana mitta)

Fabio Giommi¹, Janet Surrey², Stefano Poletti³, Antonella Commellato⁴

¹ Nous- School of Specialization (PsyD) in Psychotherapy mindfulness-oriented, Milano, ² Insight Dialogue Community [insightdialogue.org/teachers], ³ Stefano Poletti Centre de Recherche en Neurosciences de Lyon Bron, Rhone-Alpes FRANCE, ⁴ AIM-Associazione Italiana per la Mindfulness; Insight Dialogue Community Retreat Teacher

Summary

Relational contemplative practices - as Insight Dialogue (ID) - that directly explore and intensify awareness during intersubjective experience, offer a unique potential to promote healthy changes in social interactions and spur societal transformation. In addition, a “radically relational” perspective might bring novel and deep insights to contemplative science and research, both at the theoretical and pragmatic levels.

Details

With a multidisciplinary approach, this panel focus on different yet interrelated dimensions.

Janet Surrey and Fabio Giommi related contributions are based on their view of Radical Relationality (RR) that describes a territory at the convergence of ID, “Buddhist Psychology”, and psychotherapy. Surrey’s *“Relational Awakening”* consider how deeply in the Buddhadharma is embedded the liberative possibility and power of human relationality: in the teachings on spiritual friendship (kalyana mitta) named by the Buddha as the “whole of the holy life”, as well as in the *sangha* as one of the fundamental jewels of the Path. Giommi’s *“What is truly healing in relationality?”* articulates how the insights inspired by RR, by ID, and by “Buddhist Psychology” may foster a deeper understanding of healing in contemporary western psychotherapy, and possibly in other human healing practices, across cultures and traditions.

Stefano Poletti’s *“Meditating in the Storm”* offers data from a qualitative study that explored the phenomenological features unique of ID. An ID retreat was stopped abruptly because of the pandemic outbreak in Europe, this experience became in itself part of the practice. Interpretative-Phenomenological Approach (IPA) was adopted as the methodological framework.

Antonella Commellato's "*Presence in poetry and relational insight meditation*" inquires the quality of "presence" in poetry and ID, and their profound yet hidden relatedness.

S5.1 - From Mindfulness and Psychedelics to Nature Therapy: Exploring the Spectrum of Integrative and Contemplative Interventions in Oncology

Linda Carlson ¹, Haley Mather ¹, Hanna Conradi ¹, Jamie Petersson ¹, Julie Deleemans ¹

¹ University of Calgary

Summary

Integrative Medicine therapies, incorporating contemplative/mind-body practices, are widely utilized by both the general public and people with medical conditions. In this panel, members of the Carlson research group will present ongoing, cutting-edge research projects, including studies on a mindfulness app, the impact of mindfulness on the microbiome, psychedelic-assisted therapy, biofield therapies, and nature therapy. The discussion will also cover current research methodologies and trends.

Details

Complementary and Integrative Medicine (CIM) therapies, including contemplative and mind-body practices, are commonly used by people living with cancer, with over 50% reporting their use. These therapies include evidence-based mind-body interventions such as mindfulness meditation, yoga, taichi/qigong, acupuncture, music therapy and others, and more experimental modalities such as psychedelic-assisted and biofield therapies.

In the Carlson research group, we study a broad range of CIM therapies with ongoing studies across many modalities. This panel will highlight novel research currently underway, including the SEAMLESS Canada-wide randomized controlled trial evaluating a mindfulness-based cancer survivorship app, and a pilot study investigating the impact of mindfulness on the gut microbiome, gastrointestinal and psychosocial outcomes. Another compelling area is the application of psychedelic-assisted therapies for addressing existential anxiety at the end of life in people with advanced cancer. In this domain, we've initiated a clinical trial and gathered survey data from hundreds of patients, healthcare providers, and policy makers to delve into perceptions of this innovative treatment approach. We are also beginning to evaluate the Kundalini Activation Process (KAP) biofield therapy, which is first-of-its-kind research. Finally, we are developing a project on nature therapy to explore how meditating in natural environments impacts psychosocial and biomarker outcomes.

Through this discussion, we will illustrate the application of a host of different research methodologies to address these topics and questions. Attendees will acquire a broad understanding of CIM interventions, delivery modalities, outcome collection methods and current trends in CIM research topics.

S5.2 - Emptying ourselves, sustaining the planet: How contemplative sciences can help tackling global challenges through deconstructing the self

Oscar Lecuona¹, Sara De Rivas², Ausias Cebolla Marti³, Raquel Rodríguez-Carvajal⁴, Maja Wrzesien⁵, Joana Vidal⁶, Catherine Andreu⁶, Tim Wood⁷, Merle Kock⁸, Nicholas Van Dam⁷, Julieta Galante⁷, Jasmine Childs-Fegredo⁹

¹ Faculty of Psychology, Universidad Complutense de Madrid, ² Faculty of Health Sciences, Universidad Rey Juan Carlos, ³ University of València, ⁴ Faculty of Psychology, Universidad Autónoma de Madrid, ⁵ University of Valencia (Spain), ⁶ University of Valencia, ⁷ University of Melbourne, ⁸ University of Leuven, ⁹ York St John University

Summary

This panel focuses on current global challenges and how contemplative sciences provide scalable impacts through the deconstruction of the self. Specifically, how meditation practices can impact the self to foster increases in ecological, physical, mental and societal health. Theoretical models on the self and its deconstruction are proposed, followed by reviews of instruments and first evidence on impacts of meditation on the self. Finally, ways forward are outlined for global sustainability.

Details

This panel focuses on current global challenges, and how contemplative sciences provide impactful frameworks for scalable impacts through the self. Through interdisciplinary approaches, evidence is presented towards how the deconstruction of the self could impact individuals and societies to overcome global challenges.

Oscar Lecuona will present a review of current global challenges (e.g., climate change, violent conflicts, recessions, pandemics) and “global health” as an encompassing construct to tackle them. Moreover, how contemplative sciences provide promising impacts on their scalability as a bridge to global health, which limitations are currently in literature, and ways forward.

Maja Wrzesien will present an overview of hypo/hyper-egoic functioning, a framework with explanatory potential. More specifically, how over-identification with the self is frequently proposed as a transdiagnostic factor, and conversely, how promoting a hypo-egoic functioning could positively impact individuals. Thus, addressing other global challenges through this framework.

Ausiàs Cebolla will present a systematic review of literature is presented on behavioral and psychometric instruments aimed to measure selflessness, ego dissolution, and related constructs. Psychometric properties were examined. Finally, recommendations and ways forward on measurement are highlighted.

Tim Wood will present how intense meditation-related experiences involve changes in the sense of self. In a phenomenological study, meditation-related experiences caused participants to change their worldviews, relationships, and self-narratives. No-self, changes in self-other boundaries, insights, and psychological changes are described.

All in all, how contemplative sciences can provide feasible frameworks that can be researched and applied at scale. To, ultimately, offer a pathway to a more sustainable future.

S5.3 - Implementation and impact studies of a college course on human flourishing: Results from three universities across three years

**Blake Colaianne¹, Matthew Hirshberg², Robert Roeser³, Karen Inkelas⁴, John Dunne²,
David Germano⁴, Mark Greenberg³, Richard Davidson²**

¹ Penn State University, ² University of Wisconsin-Madison, ³ Pennsylvania State University, ⁴
University of Virginia

Summary

To address the “campus mental health epidemic”, U.S. universities have introduced a range of interventions to improve student health and wellbeing. In this panel, we describe four studies on bringing mindfulness and compassion training into higher education through a novel college course: Art and Science of Human Flourishing. Results showed that despite variation in instructors, implementation and instructional formats, the course showed consistently positive impacts on student outcomes in the near- and longer-terms.

Details

BACKGROUND AND AIMS:

To address the “campus mental health epidemic,”, U.S. colleges and universities have introduced a wide range of interventions to improve student health and wellbeing. In this panel, we describe current research on efforts to bring contemplative training into higher education through a novel, for-credit college course: Art and Science of Human Flourishing. The course was co-developed by an interdisciplinary team of scholars from Pennsylvania State University, the University of Virginia, and the University of Wisconsin-Madison. Results from implementation and impacts studies of the course are presented in this panel.

METHODS:

Study 1 consisted of a two-wave, multi-site, propensity-score matched controlled trial (treatment n = 217, control n = 434) to test course impacts on attentional and social-emotional skills, health, and well-being. **Study 2** examined how a digital version of the course impacted these same outcomes in students during the COVID-19 pandemic (treatment n = 56, control n = 112). **Study 3** was a follow-up to Study 1. Participants were recontacted during the COVID-19 pandemic lockdown to examine the long-term course impacts on students’ mental health outcomes during the height of the pandemic in Spring 2020. **Study 4** examined variation in course implementation and the relation of this variation to student outcomes.

RESULTS:

Results indicate that the course improved students’ attentional and social-emotional skills and well-being when taught in both in-person (Study 1) and virtual, synchronous formats (Study 2). Results of

Study 3 demonstrated the longer-term impact of the course on student mental health and resilience 7-17 months later during the pandemic lockdown. Study 4 documented variation in course implementation across the three universities that nonetheless resulted in similar student impacts.

CONCLUSIONS:

A scalable university course on human flourishing may effectively promote student skills, health, well-being, and resilience.

S5.4 - Capturing the ineffable: Overcoming barriers of measurement in contemplative sciences

Oscar Lecuona¹, Sara De Rivas², Raquel Rodríguez-Carvajal³, Nicholas Van Dam⁴, Jessica Targett⁵, Alex Burger⁵, Jonathan Davies⁶, Julieta Galante⁵, David Martínez-Pernía⁷, Alejandro Troncoso⁸, Sergio Chaigneau⁹, Nicolás Marchant⁹, Kevin Blanco⁸, Antonia Zepeda⁹, Anaís Aluicio⁸, Leonardo Pérez¹⁰, Ylenia D'elia¹¹, Ausias Cebolla Marti¹², Desirée Colombo¹³, Catherine Andreu¹¹, Rocío Herrero¹⁴, Maja Wrzesien¹⁵

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Summary

This panel focuses on describing and overcoming current challenges in measurement of contemplative sciences. Psychometric reviews of literature are presented with recommendations for researchers and applied users. Then, new proposals based on artistic inspiration, phenomenology, artificial intelligence, and theoretical advancements to provide. In addition, showcases of a self-report, qualitative Interviews, and a pictographic scale are presented.

Details

This panel focuses on challenges in measurement of contemplative sciences. From a psychometric perspective, contemplative research has shown relevant challenges in measurement with standard methods. Thus, a more diverse view from psychometric development, artistic inspiration,

phenomenology, and artificial intelligence can generate promising initiatives to overcome barriers in measurement.

Oscar Lecuona will present a psychometric review of a major corpus of contemplative sciences (i.e., mindfulness assessment) to describe current challenges. Informed recommendations for state-of-the-art are presented, and two causes for these challenges are proposed: (1) Contemplative phenomena are not grounded equally across cultures, and (2) contemplative phenomena are ineffable to a certain degree. Therefore, amplifying the scope to non-verbal formats and first-person experiences is encouraged.

Nicholas Van Dam will present pre-registered development of a self-report aimed to measure contemplative phenomena related to meditation, the Inventory of Unusual Experiences (IUE). Several psychometric analyses are presented to propose the IUE as a preliminary reliable and valid instrument to measure.

David Martínez-Pernia will present how Artificial Intelligence can serve as a tool to process, analyze and organize thematically phenomenological data (e.g., transcripts of interviews) to extract valuable insights. Thus, exploring its potential as an instrument to measure contemplative phenomena.

Leonardo Pérez will present his work as an audiovisual artist, how his creative processes have been impacted by meditation practice, and how artistic works can express more effectively contemplative phenomena. The author will then illustrate with a wide-spread film (“The tree of life”, by Terrence Malick) and some of his work regarding these aspects.

Ylenia D’Elia will present a pre-registered development of a pictographic scale of contemplative phenomena. More concretely, using non-verbal and embodied items to gather qualitative and quantitative evidence on reliable and valid psychometric properties. A showcase of the scale is presented along with first evidence on its properties.

S6.1.1 - Operationalizing Mindful Co-Regulation to Promote Social Connectedness in Secondary Schools

Desiree Murray¹, Rachel Mills-Brantley¹, Jill Hamm¹

¹ University of North Carolina at Chapel Hill

Summary

This research shares a model for operationalizing mindfulness-based co-regulation among secondary educators and presents preliminary data on a measure that can be reliably coded and is associated with indicators of students’ sense of belonging. This work makes a theoretical contribution to translational research on mindfulness and informs educator training approaches.

Details

BACKGROUND AND AIMS: Evidence suggests that mindfulness can promote teachers' self-awareness, empathy, and emotion regulation and decrease implicit bias ([Chang et al., 2023](#); [Schonert-Reichl and Roeser, 2016](#)). However, little is known about how such processes translate into teacher actions to promote student wellbeing and how such skills can be systematically trained and evaluated ([Berkovitch-Ohana, 2019](#)). This is a critical need in the context of our current international youth mental health crisis ([WHO, 2021](#)). We address these gaps by operationalizing co-regulation based on the Self-Regulation Promotion Model ([Murray et al., 2019](#)) and exploring indicators of reliability and validity.

METHODS: Across two pilot studies with 24 teachers from 9 middle and high schools, we developed the Mindful Co-Regulation Observation (MCRO) measure that assesses *mindful teaching, student connections, supportive environments, and promoting students' mindfulness application*. Observations were conducted during teacher delivery of a mindfulness-based social-emotional learning program called [Be CALM](#).

RESULTS: The MCRO showed strong internal consistency and inter-rater reliability (Cronbach's alpha = .80; ICC = .89). Scores were associated with student perceptions of their relationship with their teacher ($r = .70$), social responsibility ($F = 4.71, p = .03$) and engagement ($r = .36 - .40$). Trained teachers had higher scores than non-trained teachers ($\hat{\eta}^2 = .23$) and improved over time with consultation ($\hat{\eta}^2_p = .58$).

CONCLUSIONS: Mindful co-regulation can be reliably observed in schools and predicts socially important outcomes related to school belonging. Operationalizing mindful co-regulation also informs educator training approaches to promote connections that are critical for adolescent wellbeing.

ACKNOWLEDGEMENTS AND FUNDING: All our school partners and the U.S. Departments of Education (R305A170172) and Health and Human Services (90ZD0023-01-00).

S6.1.2 - Teacher Mindfulness as a Collective “View,” Not an Individual “Do”

Rebecca Baelen¹, Lindsay Romano², Blake Colaianne³, Patricia Jennings⁴, Chelsea Rubin⁵, Flor Giuliani⁴

¹ Center for Reaching and Teaching the Whole Child, ² New York University, ³ Penn State University, ⁴ University of Virginia, ⁵ Harvard University

Summary

Mindfulness-based programs (MBPs) in schools and for teachers have traditionally been individual-focused. Based on findings from a qualitative study, we identified the centrality of relationships in promoting teacher wellbeing through mindfulness. Through this new orientation, teachers can be guided on ways to not only relate to their thoughts and emotions with non-judgement, curiosity, and kindness, but also relate to their colleagues and students with the same mindful stance.

Details

BACKGROUND AND AIMS: Current teacher mindfulness-based programs (MBPs) emphasize an “individual-doing” of mindfulness grounded in the aim of self-care where teachers are taught a variety of meditation practices to engage with on their own time (e.g., Hwang et al., 2017; Jennings et al., 2017). This framing places the responsibility on teachers to practice, and as such, mindfulness can easily become “one more thing” for a teacher to do. We suggest a re-orientation of the way mindfulness is typically conceptualized within MBPs for teachers. Framed with a “collective view,” mindfulness becomes both a personal and relational practice (Ainsworth et al., 2023). The aim of this talk is to offer 1) the findings from a qualitative study with educators that supports this perspective, and 2) recommendations for offering a more culturally and relationally-attuned approach to teacher MBPs that cultivate a new mindful “view.”

METHODS: Across two studies, interviews were conducted with pre- and in-service teachers to explore their perspectives on self-care, mindfulness, and mindfulness-based programs. Teachers were recruited based on their affiliation to a state university (Study 1) or a K-12 school district (Study 2) on the east coast. The interviews were coded and analyzed for emergent themes.

RESULTS: Several key themes emerged from the data analysis that we will present in this presentation: 1) the centrality of relationships in supporting teachers' wellbeing; 2) the emergence of mindfulness and awareness as important competencies for teachers to have; and 3) strategies that support peer relationships.

CONCLUSIONS: Encouraging mindfulness as a way of being frames the practice as more than individual meditation but also as a collective action that can support the cultivation of compassionate teaching communities. This new perspective can lead teachers to a new type of “doing,” one that shifts beyond individual meditation and includes building more equitable and compassionate teaching communities in schools.

S6.1.3 - Mindfulness-Informed Practices for Digital Wellness in Open, Digital & Distance Education

Agnieszka (Aga) Palalas ¹

¹ Athabasca University

Summary

A digital wellness framework is provided to guide educators in creating online learning that fosters a meaningful learning process and holistic wellbeing of digital learners. A systematic literature review and interviews with online learners from three graduate courses using mindfulness-based practices resulted in an eight-part practice-oriented framework that applies contemplative pedagogy practices into digital learning that enhances learners’ physical, mental, cognitive, spiritual, and emotional health.

Details

BACKGROUND & AIMS: The ever-changing digital habits and practices, demands and pressures, particularly in the context of attention economy and capitalist structures, often contribute to learners experiencing burnout, stress, fatigue, cognitive overwhelm, and work-life imbalance, just to mention a few issues identified in literature. Educators across diverse contexts and disciplines are faced with questions pertaining to the optimal experience and design for open, digital and distance education promoting digital wellness (DW) - using technologies to support learners flourishing while avoiding harms associated with digital technology. The study aimed to provide a mindfulness-informed framework to guide educators in creating online learning, its content and delivery, to foster holistic wellbeing of digital learners-meaningful learning process for the mind, body, and soul.

METHODS: A systematic literature review and secondary data analysis was conducted of a qualitative dataset from interviews with online learners in three graduate courses which incorporated mindfulness-based practices (2018-2022). Data analysis resulted in: identifying what constitutes DW through a whole-person perspective; determining what beliefs, attitudes, and digital habits contribute to or deter DW among online learners; identifying how the various dimensions interact/interrelate; reviewing related existing frameworks and how they integrate the constituent parts into a whole-person pedagogical approach.

RESULTS: Findings included a digital wellness for designing online learning framework and a list of contemplative pedagogy/mindfulness-based practices that can be adapted across educational levels and disciplines. Guided by the mindfulness-based conceptual lens, eight key dimensions were distilled to form the eight-part framework.

CONCLUSIONS: The study put forth a new evidence-based practice-oriented framework that applies contemplative pedagogy practices into the design of online learning that enhances learners' physical, mental, cognitive, spiritual, and emotional health.

S6.1.4 - Examining teachers' uptake of mindfulness practices: Insights from CARE implementation during COVID-19

Helen Min ¹, Karime Cameron ¹, Tara Hofkens ¹, Dana Sox ¹, Patricia Jennings ¹

¹ University of Virginia

Summary

Mindfulness and compassion-based programs have been found effective for promoting teacher well-being and reducing teacher stress. This paper examines teachers' experiences of participating in the Cultivating Awareness and Resilience in Education (CARE) program to develop mindfulness practices during the pandemic using a concurrent exploratory mixed methods research design. Latent profile analysis and thematic coding determined key trends among low, middle, and high uptake groups.

Details

BACKGROUND AND AIMS:

Mindfulness and compassion-based programs have been found effective for promoting teacher well-being and reducing teacher stress. This paper examines teachers' experiences of participating in a randomized control trial of the Cultivating Awareness and Resilience in Education (CARE) program to develop mindfulness practices during the pandemic.

METHODS:

We employed a concurrent exploratory mixed methods research design. Thirty-four schools participated in the RCT, 18 randomly assigned to CARE (n=542 PK-8th grade teachers). Surveys collected teacher reported goals, experiences, and uptake of mindfulness. Cut-scores of the uptake were used to identify low, middle, and high groups. Qualitative data were used to better understand and compare groups who indicated different levels of practice.

RESULTS:

Latent profile analyses were conducted to determine differences among low, middle, and high uptake groups. Open coding and thematic analyses illuminated four key themes: (1) teachers applied mindfulness strategies most often when they interacted with students, (2) teachers' experience in the classroom was most influenced by uncomfortable emotions, (3) CARE skills have supported teachers in developing awareness and mindfulness, (4) teachers most valued mindfulness activities and also found them to be most challenging.

CONCLUSIONS:

To support teachers to sustain mindfulness practices amidst stress, teachers reported needing a structured routine. Programs like CARE can support teachers to learn mindfulness practices and establish a consistent mindfulness practice. Future research should consider how CARE supports teachers' sustainability of mindfulness practices across time.

ACKNOWLEDGEMENTS AND FUNDING:

Institute of Education Sciences, U.S. Department of Education

S6.2.1 - Neurochemical correlates of psilocybin-based therapy for chronic phantom limb pain

Jon Dean¹, Ethan Hurwitz¹, Daniel Barrows¹, Aaron Jacobson¹, Arwynn Mckinty¹, Briana Farrell¹, Joel Castellanos¹, Timothy Furnish¹, Patrick Coleman¹, Cassandra Vieten¹, Gabriel Riegner¹, Lora Khatib¹, Stephanie Knatz¹, Julie Trim¹, Elowyn Samadhi¹, Gordon Renwick¹, Robert Mudge¹, Albert Lin¹, Mark Geyer¹, Adam Halberstadt¹, Richard Harris², Fadel Zeidan¹

¹ University of California, San Diego, ² University of California Irvine

Summary

Phantom limb pain (PLP) is a debilitating condition impacting up to 80% of amputees. Recently, it has been proposed that the psychedelic psilocybin (the active compound in “magic mushrooms”) may afford PLP relief. Here, we conducted the first ever randomized, double-blinded, placebo-controlled proton magnetic resonance spectroscopy (¹H-MRS) pilot study to test the unknown behavioral and neurochemical mechanisms supporting psilocybin-induced PLP relief in amputees.

Details

BACKGROUND AND AIMS: Phantom limb pain (PLP) has no known treatments and affects ~80% of the world’s 40 million amputees. Prior work suggests that psychedelics (e.g., psilocybin) may relieve PLP, as well as reduce neural and glutamatergic activity in brain regions with a role in pain and vestibular processing that are hyperactive in PLP (e.g., posterior insula). Our randomized, double-blinded, proton magnetic resonance spectroscopy (¹H-MRS) pilot study (NCT05224336) tests the hypothesis that psilocybin (n=5) vs. niacin (n=5) reduces PLP and glutamate+glutamine (Glx) levels in the posterior insula of amputees with chronic PLP.

METHODS: At baseline, ¹H-MRS single-voxel PRESS spectra of Glx were acquired in the posterior insula contralateral to the amputation site. PLP was assessed using visual analog scale (VAS): 0=“no pain”; 10=“most intense pain imaginable” and McGill Pain Questionnaire (MPQ) ratings. Upon randomization, volunteers participated in three psilocybin-focused preparatory sessions and then received either 25 mg psilocybin or 100 mg niacin po. Post-intervention ¹H-MRS session methods were matched to baseline.

RESULTS: We estimate study completion by April 2024. For the present abstract, paired samples t-tests were performed across all participants/groups currently completed (n=8) to reveal reductions in VAS PLP intensity [-84%, $t(7)=2.29$, $p=.06$, $d=.81$] and MPQ [-50%, $t(7)=3.69$, $p=.008$, $d=1.30$] ratings post-intervention vs. baseline.

CONCLUSIONS: Following unblinding and standard ¹H-MRS processing (e.g., Fourier transformation, eddy-current correction), fitting and quantification (LC-Model), a 2 (group) X 2 (pre vs. post intervention pain ratings) x 2 (pre vs. post intervention Glx levels) ANOVA will test study hypotheses. A full powered follow-up study (n=30) will investigate correlations between psilocybin-induced changes in PLP and posterior insula Glx levels to determine the utility of and neurochemical mechanisms supporting psilocybin for PLP relief.

ACKNOWLEDGEMENTS AND FUNDING: Steven & Alexandra Cohen Foundation.

S6.2.2 - The shape of pain: microphenomenology interviews reveal varieties of painful experience after mindful interoceptive exposure training for chronic low back pain

**Wolf Mehling¹, Rick Hecht¹, Christiane Wolf², Wendy Hartogensis¹, Kirsten Rogers¹,
Veronica Goldman¹, Emily Murphy¹, Sergio Guerra¹, Irina Strigo¹**

¹ University of California San Francisco, ² Insight LA

Summary

SUMMARY: Most patients with chronic low back pain habitually cope by distraction and ignoring. Can an opposite attention style, mindful interoception to the felt pain experience itself be beneficial? Over 2/3 of 62 participants in 2 trials reported >30% reduced pain and on a variety of pain experiences (incl. the shape of pain) in microphenomenology interviews. Changes in interoceptive self-report were associated with brain responses. Mindfulness approaches to chronic pain may benefit from incorporating interoceptive exposure to pain.

Details

BACKGROUND: The common coping style with chronic low back pain (cLBP) is distraction and ignoring. Mindfulness approaches to cLBP practice awareness of thoughts, emotions, and general body sensations but rarely focused attention into the pain sensation itself. Can sufferers from cLBP learn a new coping style: mindful interoceptive attention sensing into the center of pain? Can this help with cLBP?

METHODS: Microphenomenological exit interviews (Petitmengin) with cLBP patients after two 8-week clinical trials that taught practicing a mindful attention focus into the pain experience. Study 1: a 2-minute phone app 2x/day over 8-weeks guiding focused attention into the felt pain sensations; Study 2: a modified 8-week MBSR program online teaching the same attention focus. Participants received 1 hour of neurophysiological pain education. We assessed standard pain outcomes (PEG), conducted exit interviews, Reflexive Thematic Analysis, and report findings from interoception self-report, pain-related fMRI brain responses, and micro-phenomenological interviews.

RESULTS: 44 of the 62 participants with cLBP (3/4 F; 49 y; most pain >5 years) reported clinically meaningful >30% pain reduction and described a variety of pain experiences in terms of shape, feeling tone, density, transparency, color, temperature, and clarity. Participants could overcome their usual habit of ignoring pain and appraised pain as less threatening. Pain-related brain response interacted with interoceptive awareness scales.

CONCLUSION: Mindful interoceptive exposure directed to the felt pain experience may offer a complementary coping style for patients with cLBP that could be integrated with mindfulness approaches to chronic pain.

S6.2.3 - The feasibility and acceptability of integrating an online mindfulness-based stress reduction program for chronic musculoskeletal pain management within Pain Clinics in Australia

Anita Barros Carlos De Amorim¹, Trudy Rebbeck¹, Nicholas Van Dam², Charlotte Johnstone³, Claire Ashton-James¹, Nathalia Costa⁴, Talia Barnett-Happles¹, Matthew Jennings⁵, Kathryn Refshauge¹, Evangelos Pappas⁶

¹ The University of Sydney, ² University of Melbourne, ³ Sydney Local Health District, ⁴ The University of Queensland, ⁵ South Western Sydney Local Health District, ⁶ University of Wollongong

Summary

This study explores the integration of an online Mindfulness-Based Stress Reduction (MBSR) program for chronic musculoskeletal pain patients on Australian pain clinic waitlists. Using a mixed-methods pilot randomized clinical trial approach with 32 participants, it aims to evaluate the program's feasibility, acceptability, and preliminary efficacy. This initiative seeks to offer preliminary insights into incorporating MBSR into Australia's public healthcare for chronic MSK pain management, guiding future comprehensive trials.

Details

BACKGROUND AND AIMS

Chronic musculoskeletal (MSK) conditions affect millions of people worldwide and place a significant burden on individuals and the healthcare systems. Mindfulness-Based Stress Reduction (MBSR) is a mind-body approach developed specifically to reduce the distress of living with chronic conditions, such as chronic MSK pain. Offering an online MBSR program to patients who are on waitlists to attend a multidisciplinary pain clinic in Australia's public healthcare system could improve health outcomes. This study aims to assess the feasibility, acceptability, and potential efficacy of this approach using a pilot study design with a mixed-methods approach.

METHODS

This is a mixed-methods pilot randomized controlled trial with an embedded qualitative study. Participants will be recruited from waitlists at two multidisciplinary pain clinics within the Sydney Local Health District in New South Wales, Australia. This pilot trial will include 32 individuals with chronic MSK pain randomly assigned to either an online MBSR group or a usual care control group. Feasibility outcomes, patient-reported outcomes, adherence to mindfulness practice, and adverse events will be assessed using validated questionnaires. Semi-structured interviews will be conducted with participants in the MBSR group to explore their experiences and assess acceptability, and barriers and facilitators of engagement with the intervention.

DISCUSSION

This pilot study will evaluate a novel approach to integrating MBSR into the Australian public healthcare system as a mechanism for providing support to individuals with chronic MSK pain who are waitlisted for a multidisciplinary pain management program. Findings from this study will indicate the feasibility, acceptability, safety, and preliminary efficacy of this approach in terms of patient-reported outcomes to guide the design of future large-scale clinical trials.

ACKNOWLEDGEMENTS AND FUNDING

This trial was prospectively registered in the Australian New Zealand Clinical Trials Registry (ACTRN12622000822785) and is funded by the Sydney Health Partners Implementation Science Grants.

S6.2.4 - Novel mechanisms supporting the modulation of pain by mindfulness and placebo

Fadel Zeidan¹

¹ University of California San Diego

Summary

Dr. Zeidan will present unpublished data from recently completed clinical trials. He will present data from the largest fMRI, placebo-controlled and chronic pain study to date. We found that mindfulness uniquely assuages pain by modulating nociceptive-specific and negative affective brain signatures and that mindfulness meditation is more effective at lowering chronic pain than placebo. We found, for the first time, that human males and females engage separate endogenous systems to reduce pain.

Details

The active mechanisms supporting mindfulness-based analgesia remain poorly characterized. The proposed presentation will delineate novel, unpublished findings from recently completed clinical trials demonstrating the mindfulness-meditation uniquely assuages pain through a unique subset of mechanisms.

Study 1: Across 2 clinical trials (n=98; 47 males) in pain-free and cLBP samples to examine sex-differences during opioidergic-blockade and meditation. After a 4-session mindfulness- or sham-mindfulness-meditation training, noxious heat (49°C; calf) was applied during meditation and intravenous high-dose naloxone (opioid antagonist) and saline. Visual analog pain (VAS) ratings were acquired after each heat series.

Study 2: Brain-based machine-learned multivariate pattern classifiers (MVPA) were used to disentangle nociceptive-specific, negative-affective, and placebo-based dimensions of pain and applied across two clinical trials that employed overlapping pain testing procedures (49°C; VAS) but distinct fMRI techniques (BOLD; perfusion). Ninety-five participants were randomized into a 4-session mindfulness (n = 37), placebo (n=19), or book-listening intervention (n=39). After each intervention, noxious heat was administered during fMRI, noxious heat and each manipulation.

Study 1: Males reported analgesia ($p < .001$) during meditation and saline but not naloxone ($p = .23$). Females exhibited analgesia during saline ($p = .07$) and naloxone ($p = .008$).

Study 2: Meditation produced greater reductions in VAS pain, nociceptive-specific and negative-affective pain classifiers ($ps < .001$) when compared to placebo. Placebo reduced pain and the placebo-based pain signature ($p < .05$).

The present work is the first to demonstrate that mindfulness-based analgesia is mediated by 1) separate MVPA signatures as compared to placebo and 2) endogenous opioids in human males but not females.

S6.3.1 - The effect of Tibetan monastic debate on emotion regulation

Marieke Van Vugt¹, Sudhakar Mishra², Jampa Gyaltzen³, Bryce Johnson⁴, Jampa Khechok³, Jampa Soepa³, Jampa Thakchoe³, Lobsang Phuntsok³, Losang Donyo³, Kalden Gyatso³, Ngawang Norbu³, Ngawang Sherab³, Thabkhe Thakbhe³, Jampa Tsering³, Robin Nusslock⁵

¹ University of Groningen, ² Indian Institute of Technology Kanpur, ³ Sera Jey Monastic University, ⁴ Independent, ⁵ Northwestern University

Summary

We studied the effects of Tibetan monastic debate, a staple in monastic education, on emotion regulation in two studies. In one study we compared beginners and more experienced monks and find lower negative affect and improved emotion regulation. In the second study, we compared non-monastics before and after they learned to practice monastic debate. We observed reduced negative affect, improved positive affect and improved emotion regulation. Beyond this, the study raised important questions about the intercultural study of emotions.

Details

BACKGROUND AND AIMS: Emotion regulation is an important human skill, and research has shown that contemplative practices can improve this ability. Yet, most of this research focuses on practices such as mindfulness meditation. In this project, we explore how Tibetan monastic debate may affect emotion regulation. Monastic debate is a staple in monastic training in Tibetan monasteries, and requires individuals to investigate the logical consistency of philosophical positions. Subjectively, it has been reported that the practices allow one to “see things from many different angles.” If this is the case, then it is likely that it can also improve emotion regulation, because one becomes aware of many different perspectives on a situation, thereby reducing the intensity of the emotional reaction.

METHODS & RESULTS: We report data from two studies. In one study, we compared less and more experienced monks, and showed that the more experienced group had lower negative affect, as well as improved ability to regulate emotions. In the second study, we examined a group of non-monastics longitudinally as they followed a month-long monastic debate training. This group showed reduced negative affect, increased positive affect, and improved emotion regulation ability.

CONCLUSIONS: Apart from these findings, the project also resulted in a better understanding of cross-cultural challenges in emotion research, including different valuation of the various emotions.

FUNDING: Bial Foundation, AFOSR

S6.3.2 - Scientist-practitioner collaborations to advance research into religious contemplative practices: The case of Hitbodedut

Aaron Cherniak¹

¹ Stockholm University

Summary

I present an effort to scientifically study the Jewish relational, dialogical meditative practice of Hitbodedut and its effect on mental health and flourishing. I will discuss the methodological and conceptual features of Hitbodedut that motivate its scientific study and possible flourishing intervention. I will describe the process our team has undergone to develop a rigorous study, including using intensive longitudinal methods, based on scientist-practitioner collaboration.

Details

Contemplative practices based in religious traditions may be used in effective wellbeing interventions insofar as individuals can, by training their mental abilities to cultivate sustained attention, pursue lives that are more consistently aligned with their values. However, there has been limited research on the mechanisms of religious practices, how to optimize them for desired outcomes, expand them beyond their cultural context, and cope with potential adverse effects. Consequently, some religious practices remain esoteric and inaccessible to many who stand to benefit, even within those faith communities. I will present an effort in its early stages to examine Hitbodedut -the Jewish practice of dialogical meditative prayer (i.e., conversing with God as if speaking to a close confidant). I will briefly review the Jewish meditative traditions, the practices' intended goals, phenomenological descriptions, and early emic attempts to systematize their implementation. Then, I will discuss a range of research questions that can be investigated by studying Hitbodedut as a contemplative practice and as an intervention to promote flourishing. I will explore, from both practitioner and scientist perspectives, elements of the practice that may be effective as an intervention with an organized protocol and generalizable. I will share the process our team has gone through to pilot methods, including brief experiments and daily diary studies to accompany the intervention over time. I will describe some of the challenges we have encountered and our strategies for handling them. I aim to convey the value of scientist-practitioner partnerships and anchoring clinical and flourishing interventions based on contemplative practices in culturally or personally meaningful values.

S6.3.3 - A Modal Approach to Cultivating Intersubjective Values

Theodore Locke¹

¹ University of Massachusetts Boston

Summary

I argue we can cultivate intersubjective values like compassion by meditating on *metaphysically possible worlds*, i.e., on ways the actual world could have been. For example, following the Buddhist scholar Buddhaghosa, I can think about someone I feel anger towards in the actual world and meditate on a real possibility where that person takes great care of me as an infant. As a result, I relax my feelings of anger and begin to feel compassion for that person.

Details

I develop and defend a *modal alternative* to the Buddhist practice of cultivating compassion by meditating on past lives. On the approach I offer, we cultivate intersubjective values such as compassion by meditating on *metaphysical possibilities*, i.e., different ways the actual world could be. Buddhaghosa recommends cultivating compassion by removing feelings of resentment and anger towards others. One should recall past lives where the resented person was one's primary caregiver and made great efforts to protect and care for them (*Vishuddhimagga*). One then begins to see beyond their resentment and anger. One becomes thankful for this person's past care and concern and starts to cultivate feelings of compassion. A drawback to Buddhaghosa's meditation is its reliance on the doctrine of birth and rebirth. Whether or not the doctrine is metaphysically sound, from a *phenomenological* point of view the doctrine does not easily fit with culturally established beliefs many people implicitly use to make sense of their moral and practical lives. However, nearly everyone has the ability to think about how the world could be different from the way it actually is. Suppose I feel extreme anger for my neighbor, Donald, who inconsiderately holds me hostage in the hallways of our building to subject me to his political diatribes. I can meditate on Donald's actual *modal properties* by reflecting on the fact there is a *real possibility* (a *possible world*) where I was quite vulnerable, yet Donald cared for me. I then start to see beyond my political and social incompatibilities with Donald, I relax my feelings of resentment and anger and begin to feel compassion. Thus, applying our capacity for modal thought to Buddhaghosa's meditation is powerful tool for cultivating intersubjective values.

S6.3.4 - Examining the Dyadic Impact in Daily Life of Individual Participation in a Meditation-Based or an Active-Control Well-Being Program

Christopher May¹, Marieke Van Vugt¹, Rhoda Schuling², Liv Ziegfeld¹, Fanni Kleilein¹, Haneen Abou El Hessen¹, Amber Bunting³

¹ University of Groningen, ² Hanzehogeschool Groningen, ³ Macquarie University

Summary

We conducted an 8-week daily diary study examining the dyadic effects of individual participation in one of two well-being programs in romantic couples. We attempted to replicate previous research demonstrating reduced negative affect in partners and examine putative mechanisms for partner effects. We present the results of our analyses and discuss the implications of our findings for understanding the interpersonal effects of meditation.

Details

BACKGROUND AND AIMS:

We extended previous research (May, Ostafin, & Snippe 2020) demonstrating that meditation practice was associated with decreased negative affect in the relationship partners of meditators. We carried out a conceptual replication study of this research, with a focus on investigating putative mechanisms for partner effects of meditation practice.

METHODS:

We conducted an 8-week daily diary study of the impact of participation in a well-being program on a relationship partner. Romantic couples were randomized to either a meditation condition or an active-control condition, both branded as “well-being programs”. One member of each dyad participated in a program, and both members completed daily diary surveys assessing positive and negative affect, positive and negative relationship qualities, mindfulness, and interpersonal mindfulness. Data from 38 couples in the meditation condition and 28 couples in the active-control condition met criteria for analysis.

RESULTS AND DISCUSSION:

In this talk, we will present the results of our dyadic analyses of negative affect (primary outcome) as well as positive affect, mindfulness, interpersonal mindfulness, and relationship dynamics (secondary outcomes and mediators). We then discuss the implications of our findings for understanding how the benefits of meditation spread between individuals.

ACKNOWLEDGEMENTS AND FUNDING:

Funding provided by the Mind and Life Institute P.E.A.C.E. Grant. Any views, findings, conclusions, or recommendations expressed in this talk do not necessarily reflect those of the Mind & Life Institute.

S6.4.1 - Contemporary art and contemplative action

Tim McHenry¹

¹ Rubin Museum of Art

Summary

The Rubin Museum created a [lab](#) based on teachings of a Tibetan Buddhist mandala in which a visitor can register emotions such as envy and anger and translate those energies into states more conducive to pro-social behavior. Visitors encounter Laurie Anderson’s scent memories. Musicians like Peter Gabriel contributed gongs that are struck and dipped into water to transform anger into patience. Each experience is informed by a neuroscientific study that fosters empathy and societal flourishing.

Details

BACKGROUND AND AIMS:

The [Mandala Lab](#) for the Rubin Museum of Art draws a through line from the wisdom traditions of Tibetan Buddhist tantra -specifically the Vairocana Mandala practice -to current researches in contemplative neuroscience. The presentation aims to demonstrate the use of artist-inspired experience to help translate otherwise obscure practices in contemplative wisdom traditions enables the public to better appreciate the cultural value, but also the psychological benefits of the tradition when made accessible and experiential.

METHODS:

The [Mandala Lab](#) functions as an interactive set of experiences aimed at helping us all better understand some of our emotions like anger, envy and pride, and learn how we can better navigate them. The Lab's emphasis is by learning through embodied experience and is the sole focus of the Rubin's international curriculum on Social, Emotional and Ethical Learning it has developed in partnership with Emory University.

RESULTS:

The four locations of the Mandala Lab (New York City, Bilbao, London, Milan) have produced early evaluations and anecdotal evidence of the potential of these embodied experiences to shift self-awareness and move the participant from self-centered view to a more collective view.

ACKNOWLEDGMENTS:

Advisors on the Mandala Lab include Dr. Richie Davidson at Madison-Wisconsin, Dr. Lila Davachi at the Memory Lab, Dr. Stuart Firestein at the Olfaction Lab at Columbia University, and emotions researcher Dr. Tracy Dennis-Tiwary at Hunter College. Palden Weinreb's sculpture is based on Luciano Bernardi's University of Pavia entrainment studies of 2001 and 2003. The travelling Mandala Lab was commissioned by the Wellbeing Project; it is funding by the Robert H. N. Ho Family Foundation (Global).

S6.4.2 - Contemplative Polyphony - Aesthetic Contemplation as a Conceptual Leitmotiv for Musical Composition

Jakob Stillmark¹

¹ Zurich University of the Arts / University of Music and performing Arts Graz

Summary

My research explores whether aesthetic contemplation could inform my compositional work and which techniques this would require. I combine artistic experimentation and critical reflection, aiming to document contemplative experience by the use of composition. I will discuss how experimentation was influenced by sound meditation, leading to the realization that polyphony is the main field to be explored. Lastly, I want to question if aesthetic and contemplative experiences are connected.

Details

By using musical quotations and fragments within repetitive structures in my compositions, I discovered an aesthetic tension that arises through the change of listening focus from the inherent significance of the quotations to their bare emergence as present sonic materiality. According to the philosophers Dieter Mersch and Martin Seel, this shift of attention is characteristic of aesthetic contemplation, which does not focus on a meaning within, but on the purely sensory appearance of the sound. Fascinated by this concept, I began to artistically explore whether the concept of aesthetic contemplation and contemplative practice could inform my compositional work and which techniques this would require.

The conduct of my research followed two main methods: artistic experimentation and critical reflection. While the former focused on compositional and improvisational practice, the latter was to be achieved through stimulated recall, evaluative listening, comparison to other compositions, and philosophical contextualization. In my presentation, I want to show how my experimentation was influenced by the practice of sound meditation and how this led me to my main realization that I had overlooked an important technique of composing time structure from the very beginning: polyphony. I will argue that composition can exemplify the poly-temporal givenness of momentary experience, as described by Husserl in his phenomenology of time-consciousness and in Elberfeld's analytical translation of Dogen's Shōbōgenzō Uji.

Through my artistic works, I will demonstrate how composition can be used to document and reflect on contemplative listening experiences. Finally, I want to raise the question of whether aesthetic and contemplative experiences are connected, and if so, in which way.

S6.4.3 - Coupling philosophical frameworks with embodied practices: integrating body and mind, me and others, in higher education.

Chiara Robbiano¹

¹ Utrecht University

Summary

Dōgen's Zen Buddhism serves as a framework to rethink ourselves as embodied, relational and transformable. I analyse the beginning of Gyōji (Continuous Practice), and extract 3 concepts pointing at integrative attitudes of body-mind, me-others -1. Integrating bodymind between earth and sky; 2. Decentering in a place; 3. Embracing disorientation. To each of them, I couple embodied practices to be carried in class, and refer to students' responses.

Details

Chiara Robbiano, University College Utrecht.

"Coupling philosophical frameworks with embodied practices: integrating body and mind, me and others, in higher education".

”この行持の功德 われを保任し、他を保任す the merit of this continuous practice sustains me and sustains others” Dōgen, *Gyōji*

Polarisation, conflicts, loneliness, fear, mental health issues affect university students and teachers. Hidden causes might be assumptions about body-mind separation; me-others separation; and habits conducive to dis-integrating body-mind, me-others.

Dōgen’s Zen Buddhism serves as a framework to rethink ourselves as embodied, relational and transformable. I analyse the beginning of *Gyōji (Continuous Practice)*, and extract 3 concepts pointing at integrative attitudes of body-mind, me-others, to which I couple embodied practices to be carried in class, and refer to students' responses:

1. *Integrating bodymind between earth and sky*. Beginning of class: breathing practices with imagery allow us (embodied beings) to cast our mind to our body (Nishihira 2024: 87), and see ourselves as channels between sky and earth. Dōgen enjoins us not to create gaps (Jp: 間隙 *kangeki*) —not to see one’s bodymind as lacking integration in itself or with other beings.
2. *Decentering in a place*. Practices of reciprocal positioning in the room, allow us (relational beings) to realise how we are positioned, and to take the role of listener (or guest, *waki* in Noh theatre) as seriously as the one of presenter (or host, *shite*). Dōgen reminds us: we came here from somewhere; practice always involves other beings.
3. *Embracing disorientation*. Engaging in drawing, journaling, “help-now strategies” (SEE Learning), allow us (transformable beings) not to disconnect when unsettling texts or conflicts threaten our sense of who we are; engaging in “leading and following finger-tips” prepares students for co-authoring assignments, accepting the disorientation of leading and following at once. “磨鏡破鏡、それ行持にあらざるなし Polishing a mirror or breaking a mirror is no other than this practice (Tanahashi)” Dōgen encourages not to see any moment of practice as failure; to see this place as home, and make sure it feels like home to us and others.

S6.4.4 - Body Politic and the Art of Perception: a case study of contemplative liberal arts pedagogy in a North American public university honors college context

Kate Mondloch¹

¹ University of Oregon

Summary

This presentation explores integrating embodied cognition and intersubjectivity into liberal arts education through a case study of a co-taught course at the University of Oregon. The course combines theoretical analysis with experiential “perception labs” to deepen understanding of the body's social and political significance. Drawing on diverse disciplines, it aims to enhance perceptual awareness and navigate power dynamics. The presentation outlines course methods and proposes adaptations.

Details

How might we bring the concepts of embodied cognition and intersubjectivity alive in undergraduate liberal arts courses? This presentation takes a new, co-taught interdisciplinary course on “Body Politic and the Art of Perception” at the University of Oregon Honors College as its central case study. The course bridges contemplative approaches and social concerns through exploring the body’s significance in everyday life as well as in the social realm. It combines critical analysis of writing on the subjective and political implications of bodily experience with “perception labs”--perceptual exercises and embodiment practices designed to evaluate first-hand the ways in which we see and experience ourselves and others. Course readings and discussions draw on interdisciplinary research from modernity to the present, including the fields of Political Theory, Visual Studies, Art History, Media Studies, Indigenous, Race and Ethnic Studies, Queer Theory, Psychology, and Trauma Studies. The course provides opportunities to explore these intellectual theories through experiential practices designed to increase students’ perceptual capacity for sensing their own bodies, cultivate awareness of how implicit and explicit bias and racism move through bodies and thoughts, and nurture a deeper comprehension of the intricate relationship between power dynamics and corporeal resistance. By cultivating interoceptive and exteroceptive awareness, students develop skillsets to navigate the world and to be in relation with each other during these challenging times. This paper will outline the course methods, share art-based practices, and propose ways in which the course design could be adapted by others interested in contemplative pedagogy and collaboration.

S7.1 - A Longitudinal Study on Time, Space and the Self in a Postgraduate Program in Contemplative Studies: Psychological, Philosophical and Educational Insights and Implications

Chiara Mascarello¹, Elisa Paluan^{2,3}, Bianca Ventura⁴

¹ Ca' Foscari University of Venice, ² University of Padova, ³ University of Padua, ⁴ University of Ottawa

Summary

Our panel reveals initial insights from a longitudinal study exploring meditation’s impact on time, space, self and music perception through multidisciplinary and multi-method approaches, and to discuss its philosophical and educational relevance. Conducted within the Program in Contemplative Studies and supported by Padua University and the Italian Buddhist Union, the research offers insights into the transformative effects of contemplative practices on personal and interpersonal flourishing, in the educational endeavors.

Details

The panel offers psychological, philosophical, and educational insights from a longitudinal study on the impact of meditation on thought dynamics, time-space experience, and music and self perception.

The research is being conducted within Padua University’s two-year Program in Contemplative Studies. Along with various theoretical perspectives on meditation, the Program includes meditative training in

both traditional (such as vipassanā, śamatha, kōan meditation, and Tibetan analytical meditation) and modern practices (MBSR, CCT, CEB), promoting a participatory learning approach.

Using quantitative and qualitative methodologies, the research explores the potential of contemplative practices for personal and societal flourishing, in educational endeavors.

Chiara Mascarello, serving also as the moderator, will examine the Program's contemplative practices. Tapping into Indo-Tibetan conceptual frameworks, she will delve into the transformative potential of those practices, focusing on attention and emotional regulation, and metacognition. She will elucidate the philosophical underpinnings of these practices and provide insights into their educational applications.

Elisa Paluan will outline foundational hypotheses and share preliminary findings derived from a mix of self-report questionnaires and first-person accounts collected through semi-structured interviews. She will explore how mixed methods reveal the effects of contemplative practices on subjective experiences, self-perception, and prosocial tendencies.

Bianca Ventura will present evidence on the relationship between contemplative practices and spatio-temporal dynamics, using a novel approach to investigate how these dynamics vary among participants with differing levels of meditative experience. She will then examine how the data analysis method employed, combining experimental tasks and thought-probe self-reports, can integrate third-person observation with first-person experience.

This multi-method panel, integrating psychological analysis, empirical research, and philosophical inquiry, aims to provide both epistemological and institutional diversity, along with novel insights for Contemplative Education.

S7.2 - Self as process and its effacement: Western and Buddhist psychology views

Fabio Giommi¹, Shaun Gallagher², Aviva Berkovich-Ohana³

¹ Nous- School of Specialization (PsyD) in Psychotherapy mindfulness-oriented, Milano, ² Department of Philosophy, University of Memphis and SOLA, University of Wollongong, ³ University of Haifa

Summary

The panel focuses on self and self-effacement and provides an interdisciplinary perspective from “Buddhist psychology”, the phenomenology of the self-pattern (PTS), and psychopathology. It is based on a framework developed by an effort of 12 collaborators (see related panel by Nyklíček, Vago, Trautwein et al.). It offers insights into understanding self-processes, which holds also implications for questions about enabling conditions allowing personal, collective, and societal harmonization.

Details

Shaun Gallagher's No self in the self-pattern: Buddhist psychology and dynamical phenomenology relates some core insights from "Buddhist psychology" to the notion of the self-pattern as developed in PTS. The self-pattern is characterized by dynamical interactions among a plurality of mental and bodily processes. What we call the self just is the self-pattern, but, consistent with a core Buddhist notion, no one element in the self-pattern is equivalent to a self. Although there is no one-to-one mapping there are important similarities. Aviva Berkovich-Ohana's A theoretical model of self-liberation: How meditation may transform the self-pattern considers how Eastern and Western contemplative and philosophical traditions have argued for centuries for the existence of non-self experiences. However, in psychology the importance of a healthy self is often emphasized, and the idea of 'selfless' modes of functioning is sometime dismissed. The proposed heuristic model addresses this issue. Six transformations are experienced through meditation, which contributes to self-pattern reorganization in a nonlinear and iterative manner. Fabio Giommi's Fluidize on the Path. The therapeutic implication of self-rigidity vs self-flexibility considers how transdiagnostic processes contribute to psychopathology, and rigidity appears the core feature of most transdiagnostic pathological processes. Self is a primary domain where rigidity plays a role. Decreasing self-rigidity may prove important to restore mental health in pathological conditions, and then to gradually approach self-effacement. This has implications for societal health: any expression of fundamentalism and discrimination is inherently rigid. But self-effacement needs to be gradual in order not to become pathogenic.

S7.3 - Yoga for Improving Mental Health and Functioning: Relevance for Contemplative States

Sat Bir Khalsa¹, Helen Lavretsky², Shirley Telles³

¹ Harvard Medical School, ² University of California Los Angeles UCLA, ³ Patanjali Research Foundation

Summary

Yoga is an ancient contemplative mind-body practice for developing and enhancing mental health and functioning; the ultimate goal is achieving the unitive state of consciousness known as Samadhi. Dr. Shirley Telles will review her research relevant to yoga for cognition and anxiety, Dr. Sat Bir S. Khalsa will review his research relevant to yoga for trauma, anxiety and sleep disorders and Dr. Helen Lavretsky will review her research relevant to yoga for cognition and mood states in the elderly.

Details

Yoga is an ancient contemplative practice that allows for the development and enhancement of mind body skills and behavioral factors including physical functioning, awareness/mindfulness, self-regulation of internal physiological and psychological states, and life meaning and purpose. This is achieved through yogic physical exercises/postures, breath regulation, relaxation, and meditative practices. The

ultimate goal of yoga is the achievement of contemplative states and spirituality, specifically the unitive state of consciousness called Samadhi; one of the attributes of Samadhi is perfect control over both physical and mental states. As an important step towards the achievement of this state, yoga practices optimize mental state including both cognitive and emotional functioning, through the achievement of self-regulation of attention and thought processes, and metacognition. This symposium will present research on the efficacy of yoga for mental health functioning and for clinically significant psychological conditions, which are impediments to the optimization of mental and emotional functioning. Dr. S. Telles will discuss research supporting the efficacy of yoga practices in improving cognitive functioning and anxiety, Dr. S.B.S. Khalsa will discuss research supporting the efficacy of yoga for improving trauma/PTSD symptoms, and anxiety and sleep disorders, and Dr. H. Lavretsky will discuss research on the improvement in cognitive functioning and mood states in the elderly. Although the achievement of contemplative states and improvements in spirituality occur more typically after regular long-term practice in healthy individuals, patients and subjects in short term yoga studies have also reported improvements consistent with the experience of contemplative states and spirituality. This panel will contribute to the diversity of the ISCR Conference by introducing the practice and efficacy of yoga and the related importance of mental health conditions and functioning to contemplative states.

S7.4.1 - Floatation Therapy as a Gateway to Improved Interoception, Mindfulness, and Body Image in Anorexia Nervosa

Sahib Khalsa¹, Emily Choquette¹

¹ Laureate Institute for Brain Research

Summary

Floatation-REST, a well-tolerated, non-pharmacological intervention, enhances the positive perception of heartbeat and breathing sensations, contributing to sustained improvements in body image and symptom severity in women with anorexia nervosa. This underscores the potential benefit of interoceptive therapies focused on nurturing positive mindful states of internal body awareness.

Details

Anorexia nervosa (AN) is a psychiatric disorder that challenges current treatment paradigms due to high mortality and relapse rates. In a recent randomized clinical trial, we examined the efficacy of floatation-REST (Reduced Environmental Stimulation Therapy), which diminishes external sensory input to enhance internal bodily sensation awareness, on body image disturbance in 68 inpatients with AN. This intervention led to persistent body image improvements at a 6-month follow-up (Choquette et al. (2023), *EClinicalMedicine*). This secondary analysis examined longitudinal associations between floatation-induced changes in interoceptive awareness and changes in body image dissatisfaction and eating disorder severity. Linear mixed-effects models revealed that those in the floatation-REST group experienced enhanced sensations of heartbeat and breathing and reduced stomach/digestive sensations, alongside a more positive appraisal of these interoceptive sensations (all condition by time interactions $p < 0.0001$). Notably, acute changes in interoceptive awareness were associated with reductions in body dissatisfaction and eating disorder severity at 6-months post-intervention (r 's=0.5 to 0.6, p 's=0.003 to

0.002). These findings indicate that therapies focused on positively enhancing interoceptive awareness may offer a promising avenue for treating body image and associated symptoms in individuals with anorexia nervosa. Future work using the framework of float-assisted psychotherapy will examine the synergistic potential of combining floatation-REST with mindful awareness practices, aiming to establish a new trajectory in AN treatment.

S7.4.2 - Longitudinal dose-response effects for meditation on mental health and well-being

Nicholas Bowles¹

¹ University of Melbourne

Summary

This study explores the longitudinal dose-response effects in 614 meditators engaging in self-directed practice over a period approximating two years. Significant dose response effects were found for one of two measured well-being outcomes (satisfaction with life but not positive affect) and both mental health outcomes (psychological distress and negative affect). These findings underscore the importance of consistent meditation practice and potential benefits for those who practice more.

Details

Background and Aims: Studies investigating dose-response effects for meditation, including meta regression models in the domain of mindfulness-based programs, have thus far shown mixed results. However, because this evidence-base is predominantly from brief standardized interventions, it is unclear whether and to what extent dose-response effects are applicable to longer periods of practice outside the context of such interventions. This study sought to examine dose-response effects relating to cumulative practice time over a period of approximately two years on measures of mental health and wellbeing.

Methods: Six hundred and fourteen meditators responded to a follow-up questionnaire approximately two years after their participation in an earlier study. We explored longer term associations between meditation practice dose and outcomes relating to mental health (psychological distress and negative affect) and wellbeing (positive affect and life satisfaction).

Results: Meditation practice dose was significantly predictive of favorable changes for satisfaction with life ($\hat{\tau}^2 = .15, p < .001$), negative affect ($\hat{\tau}^2 = -.13, p < .001$), and psychological distress ($\hat{\tau}^2 = -.14, p < .001$), but not positive affect ($\hat{\tau}^2 = .07, p = .06$), indicating a dose-response relationship for mental health outcomes, and for one of the two measured wellbeing outcomes. For all outcomes, practice frequency was a stronger predictor of favorable outcomes than session duration.

Conclusions: Benefits of meditation appear to continue accruing in the longer term in line with practice dose, with more practice being associated with favorable outcomes in three of four measured domains. The finding that practice frequency was a stronger predictor of favorable outcomes than session

duration highlights the importance of daily or near-daily practice. These results highlight the importance of understanding how the benefits of meditation accrue outside the context of formalized programs, for self-directed practice over a broad range of practice doses, in the short and long term.

S7.4.3 - ENIGMA-Meditation: A New World-wide Meditation Neuroscience Consortium

Anthony King¹

¹ The Ohio State University

Summary

ENIGMA-Meditation is a new international consortium founded at 2023 ISCR in San Diego that aims to conduct large-scale mega-analyses and worldwide collaborations to elucidate the neuroscience of meditation. We have >65 member researchers on 4 continents (and seeking more) with datasets including structural and functional MRI scans from neuroimaging studies with adept meditators and before / after meditation interventions with healthy novice and persons with clinical conditions (e.g. depression, PTSD, chronic pain).

Details

BACKGROUND AND AIMS: ENIGMA-Meditation is a new consortium founded at the 2023 ISCR in San Diego that aims to conduct large-scale mega-analyses through worldwide collaborations to elucidate the neuroscience of meditation. We now have >65 independent member researchers on 4 continents (and seeking more members). Datasets available include structural and functional MRI neuroimaging studies with ~N=200 adept meditators and before and after meditation interventions (e.g. MBSR, MBCT etc.) with ~N=800 healthy novice meditators and ~N=350 persons with clinical conditions (depression, PTSD, dissociation, chronic pain, etc.).

METHODS: Upon obtaining institutional / ethical permissions, de-identified structural and functional MRI datasets (including resting state for functional connectivity analyses - rsFC) and associated meta-data from persons before and after meditation interventions will be transferred to the Ohio Supercomputer Center (OSC) and/or other central computing systems/ All datasets will be pre-processed using the identical ENIGMA Halfpipe MRI preprocessing pipeline, including semi-automated QC, PCA-based physiological and ICA-AROMA motion correction, and ComBat data harmonization. Initial analyses will include (i) acute effects of meditation on rsFC, (ii) enduring effects of meditation on rsFC, and (iii) enduring effects on sMRI. "Proof-of-concept" prospective analyses are being conducted on currently available datasets with rsFC and structural 3T MRI scans acquired from 3 independent sites.

RESULTS: Initial results indicate an increase in rsFC between posterior cingulate (PCC), a central node in default mode network (DMN), and dorsal anterior cingulate (dACC) and dorsolateral prefrontal cortex (DLPFC), nodes of the salience and central executive networks, respectively, in patients with PTSD and healthy people. Dynamic functional neural connectivity (dfNC) analyses suggest a meditation-induced decrease in a dfNC state associated with DMN-CEN anti-correlation.

CONCLUSIONS: ENIGMA-Meditation is poised to facilitate large-scale international collaborations in meditation neuroimaging scientists world-wide.

S7.4.4 - Do contemplative practices make us moral?

Kevin Berryman¹, **Jakob Hohwy**², **Sara Lazar**³

¹ Monash Centre for Consciousness and Contemplative Studies, Monash University,²

Monash Centre for Consciousness & Contemplative Studies, Melbourne, Australia,³

Harvard Medical School, Boston, USA

Summary

Contemplative practices have complex effects on various aspects of moral psychology, improving some while hindering others—an overlooked dimension in cognitive science. To empirically investigate, our multi-factor Moral Functioning Framework (MFF) integrates different factors of moral psychology. Through the MFF, we examine mindfulness, revealing both positive and negative moral impacts across responses related to oneself, others, or social issues.

Details

Aim: The widely held belief that contemplative practice universally promotes moral values and prosocial activity requires careful analysis. We consider the evidence to determine whether different contemplative practices, like meditation, influences our morality, and if it does, ask which aspects of our moral psychology it helps or hinders. **Method:** Building on previous models in moral psychology, cognitive science, and philosophy, we introduce a comprehensive Moral Functioning Framework (MFF), which incorporates various moral psychological factors into one construct of moral functioning expressed over dimensions of self, others, and social responses. Different practices can be inserted into the MFF to review, or predict, how each impact individual psychological factors and overall moral functioning. **Results:** Using the MFF, we gain insight into how mindfulness meditation has mixed influences on our moral functioning. Analysis through the MFF reveals a critical yet underexamined phenomenon: different methods of meditation improve some individual aspects of our moral psychology yet has a neutral or even negative influence on others. **Conclusion:** The MFF offers a systematic approach for contemplative science to explore relationships between their practices and morality. Comprehensively understanding the influence of contemplative practices on moral action in an open-minded and empirically rigorous manner enables us to customise specific practices for diverse demographics, like educational or incarcerated populations. This approach ensures the most effective means of nurturing individual and interpersonal moral flourishing and fostering socially healthy connections.

S7.4.5 - Modelling the self in relation to meditation practice: can different interdisciplinary views ever be reconciled?

Tim Wood ¹, Julieta Galante ¹, Nicholas Van Dam ¹

¹ University of Melbourne

Summary

Meditation has shifted from a practice nearly exclusively religious to largely secular. Unreconciled worldviews underpin approaches to practice, teaching, and evaluation--particularly conceptions of the self, which are central to understanding and researching meditation experiences. Self-concepts are drawn from science and religion, without coherence regarding who or what is changing, which most impacts meditators encountering adverse effects. This presentation surveys philosophical and applied models of the self.

Details

Meditation has shifted from a practice nearly exclusively religious to largely secular. While research demonstrates a range of outcomes for many people, inherently unreconciled worldviews sit at the heart of the way these practices are undertaken, taught, and evaluated. At the center of many of these conflicts is the conceptualization of the self, which varies considerably based on culture, context, and purpose of the practice undertaken. The self is central to how meditation works, how meditators make sense of their experiences, and how researchers understand the mechanisms of practice. Self-concepts are drawn from disparate and potentially incompatible scientific, religious, and/or cultural worldviews, with little consultation among stakeholders. Disparate assumptions regarding who or what is changing and how that change is meant to manifest is a source of confusion and disagreement. The impact of this incoherence is most keenly felt by meditators encountering adverse effects (and to a lesser extent self-transcendent experiences), who then construct ad hoc interpretive frameworks from elements of science and religion to make sense of their experience-to whatever degree possible. Although studies show larger numbers of people benefiting from meditation than those reporting disabling impacts, problems of conceptual incoherence are made urgent as more people are accessing meditation than any other time in history, especially via automated digital practices. This presentation will introduce the evidence supporting the statements above, consider several philosophical approaches to "the self" in psychology, and discuss two different models currently being used to understand meditation effects on the self: predictive processing and self-transcendence.

S7.5 - Beyond Wellbeing: The intersection of art and technology to catalyze contemplative consciousness and deep relating

Eve Ekman ¹, Emiliana Rodriguez ², Ausias Cebolla Marti ³, Fleming Jesse ⁴, David Vago ⁵

¹ Greater Good Science Center, ² Made For Joy Virtual Reality, ³ University of València, ⁴ University of Nebraska-Lincoln, ⁵ Brigham & Women's Hospital/Harvard Medical School

Summary

The integration of art with technological innovations holds immense potential to enhance contemplative and immersive experiences, offering new dimensions to the exploration of human consciousness and well-being. The panel explores the potential balance between innovation and traditional methods, and the challenge of equitable tech design and dissemination. The goal is to enrich human consciousness and ensure innovation enhances rather than diminishes human experience.

Details

This interdisciplinary panel will explore the implications and potential of contemplative practices being propagated through technology. The panel is an interdisciplinary and international group of contemplative practitioners, educators, artists, and scientists working at the intersection of technology and consciousness. Professor of psychology Ausiàs Cebolla of Spain will share his laboratory-based research to test the efficacy of a multi-person virtual reality experience to induce a selflessness experience and analyze its impact on positive emotions and mystical experience. Emiliana Rodriguez, a contemplative educator from Mexico will share her work in education and private sector developing programs that support the cultivation of joy and dignity through virtual reality journeys and how she introduces VR technology to vulnerable populations. Eve Ekman, a contemplative social scientist from North America, will share insights on how daily emotion and mood logging support awareness and mental health. Contemplative Neuroscientist, David Vago, will share an EEG hyperscanning research proposal to investigate neural correlates of shared visualization and compassion during a large music festival (Burningman) and in response to immersive sound and Chenrezig compassion meditation visualization. Contemplative Artist from North America Jesse Flemming will share an AI-assisted platform to develop attention through large language models. The panel will highlight the ethical questions which arise from various forms of technology while envisioning a greater dream of what is possible through these platforms including reducing historic and current inequalities through education and opportunity, and the promotion of compassion in action through the training of the heart and mind.

S7.6 - Redefining Resilience to End Oppression and Support Intersectional Equity and Prosociality in Contemplative Research and Praxis

Sarina Saturn¹, Kamilah Majied², Christa Tinari³

¹ ADVANCE Journal for Individual and Institutional Transformation for Social Justice, ² California State University, Monterey Bay, ³ Garrison Institute

Summary

This panel will provide a multifaceted discussion of ways to reimagine and reclaim the term “resilience” from an individualistic focus to one that also emphasizes social, collective and systemic approaches. Attendees will be invited to experience contemplative inquiries that provide opportunities for reflection and embodied responses to the key insights arising from this personal and political investigation of resilience. Panelists will also provide suggestions for future research and action.

Details

Resilience has been defined as an individual characteristic with bio-psycho-social elements that anyone can and should cultivate in order to handle challenges. However, critical analysis of systemic injustice highlights the need to approach resilience as belonging not only to individuals but to social groups, organizations, and systems. Moreover, individual resilience alone is not a panacea for addressing unjust social systems, and it should not be used as a way to mollify real concerns about social injustice. The overemphasis on building resilience in marginalized communities has resulted in an “adapt to harm” approach to resilience in clinical science research, education and practice. We propose an intersectional equity approach to well-being informed by diverse cultural, communal and contemplative traditions that centers resistance to oppression as key to resilience amidst systemic injustice. To explore this, the panel will highlight the strengths and challenges from previous influential research (e.g., Bonanno, 2004; Sivilli & Pace, 2014). From there we will redefine resilience to articulate it as a collective means to defeat oppression on the internalized, institutionalized and interpersonal levels.

The panelists expertise encompasses the disciplines of clinical social work, health and human service policy analysis, community organization and advocacy, contemplative pedagogy and clinical practice, neuroscience, mindfulness in education, cultural humility, and trauma-informed equity work, with shared experience in and commitment to antiracism, feminism, disability, gender, environmental, economic and sexuality justice. Panelists are engaging in an ongoing collective dialogue and collaborating on a research project that focuses on expanding the understanding and applications of resilience for the Garrison Institute’s Contemplative-Based Resilience Project.

S8.1.1 - On becoming aware that one is dreaming: A micro-phenomenological investigation of signal-verified lucid dream experiences

**EMA DEMSAR¹, MAHDAD JAFARZADEH ESFAHANI², MARTIN DRESLER², THOMAS ANDRILLON³,
JENNIFER WINDT⁴**

¹ Monash University, ² Donders Institute for Brain, Behaviour, and Cognition, Radboudumc,
³ Paris Brain Institute, Sorbonne Université, Inserm-CNRS, ⁴ Monash Centre for
Consciousness and Contemplative Studies, Monash University

Summary

We present findings from an investigation of lucid dreaming (LD) that combined neurophysiological measures with post-session micro-phenomenological interviews. We focus on a subset of 24 interviews that examined signal-verified REM-sleep LD episodes, identifying distinct patterns of temporal progression and salient phenomenological structures characterizing pre-lucidity and the onset and maintenance of lucidity. We conclude by discussing the relevance of our findings for contemplative studies.

Details

Lucid dreaming (LD) is an experience in which the dreamer is aware that they are currently dreaming. LD has been reported for millennia across different cultural contexts. Some contemplative traditions, like Tibetan Buddhist Dream Yoga, even developed specific techniques to cultivate LD and to harness lucidity for actively engaging in contemplative practices while asleep.

With the development of the eye-signaling protocol, where dreamers signal the onset of lucidity with intentional eye movements during REM sleep, researchers can now study the neurophysiology of LD in controlled settings. However, neuroscientific progress is hampered by the underexplored phenomenology of LD. It appears that lucidity is not an all-or-nothing phenomenon but comes in different types and degrees and is often characterized by complex temporal dynamics. Thus, a systematic investigation is necessary for elucidating the detailed phenomenology LD and advancing its neuroscience. One method that allows for such investigation is the micro-phenomenological (MP) interview method.

Here, we present phenomenological findings from a neurophenomenological EEG study employing an LD induction protocol, where participants utilized eye signals to verify lucidity and provided free dream reports and questionnaire responses after each REM period. Subsequent MP interviews (N=38, 60-90 minutes) investigated the experiential structures and dynamics associated with lucid insight and the onset and progression of lucidity.

We present the results from the qualitative analysis of a subset of 24 MP interviews that examined signal-verified REM-sleep LD episodes. We identify distinct patterns of temporal progression leading to lucid insight and outline salient phenomenological structures characterizing phases of pre-lucidity, semi-lucidity, and full dream lucidity.

We specifically focus on the quality of attention and awareness in LD, meta-cognitive processes, the sense of self, and the link between lucid insight and embodiment. We consider implications for future research into sleep and dream lucidity and discuss the relevance of our findings for contemplative practices.

S8.1.2 - Lucid Dreaming VR: Exploring the potential of virtual reality in fostering lucid dreaming according to Tibetan dream yoga

Francesco Tormen¹

¹ Ca' Foscari University of Venice

Summary

This presentation explores the use of virtual reality (VR) in enhancing lucid dreaming through a study led by Francesco Tormen, in collaboration with the Italian Buddhist Union's Research Center and the University of Trento. It examines VR's capacity to mimic the dream state, facilitating metacognitive training for lucid dreaming by employing strategies inspired by Tibetan dream yoga. The aim is to assess VR's effectiveness in procedural learning for dream state interaction, potentially revolutionizing lucid dreaming training.

Details

The presentation investigates the promising role of virtual reality (VR) as an innovative tool in lucid dreaming training. Supervised by Francesco Tormen, this ongoing research project emerges from a collaboration between the Italian Buddhist Union's Research Center and the University of Trento (Italy). It stands out for its interdisciplinary approach, leveraging a VR application inspired by Tibetan dream yoga's contemplative practices. This application, a creation of the mentioned Research Center, draws from the principle that engaging in frequent reality checks during the day enhances lucid dreaming, a concept also foundational to modern methodologies developed by pioneers like P. Tholey and S. LaBerge. The core objective of this research is to validate the hypothesis that VR offers an optimal environment for metacognitive lucid dreaming training, effectively simulating the dynamic nature of the dream state. Specifically, the trials set at the University of Trento aim to assess VR's effectiveness in facilitating procedural learning of targeted dream environment interaction strategies. These strategies involve sequences of cognitions and actions aligned with dream state response patterns. Ultimately, the training is designed to cultivate and reinforce cognitive and behavioral scripts tailored for lucid dreaming, based on the hypothesis that their accessibility to individuals could significantly improve the recognition and control of the dream state. The talk invites discussion on the integration of VR technology in contemplative studies, highlighting its potential to revolutionize traditional approaches to lucid dreaming training, and potentially to other states of consciousness.

S8.1.3 - Modulation of Neural Responses to Heartbeats during a Novel Meditation Practice Targeting Manipulation of Bodily-Self Consciousness

Hang Yang¹, Chuong Ngo², Erkin Bek², Loup Vuarnesson¹, Bruno Herbelin¹, Olaf Blanke¹

¹ Laboratory of Cognitive Neuroscience, Neuro-X Institute and Brain-Mind Institute, EPFL, ² All Here SA

Summary

Experienced meditators report altered self-consciousness, lacking empirical evidence. We innovated by integrating VR into meditation to modulate bodily self-consciousness in real-time. Results revealed reduced self-identification and altered neural responses, bridging meditation, BSC neuroscience, and VR.

Details

Experienced meditation practitioners often report altered states of self-consciousness, including states of non-dual awareness and non-self states. However, there have only been very few studies providing empirical evidence supporting these effects, especially from the recently introduced neuroscientific theory of the minimal self referred to as bodily self-consciousness (BSC). Here we aimed to address this gap by developing a novel meditation practice that integrates traditional meditation with Virtual Reality (VR) technology, allowing to modulate BSC in real-time during meditation practice. BSC was manipulated through focused attention practice centered on bodily awareness that we combined with a shift of the first-person perspective in VR. Twenty-three participants without prior experience of regular meditation practice were tested sequentially with an intervention meditation condition and the control meditation condition. We recorded 64-channel electroencephalography (EEG) and electrocardiography (ECG) during both conditions. After each meditation condition, participants completed selected questionnaires and performed an established BSC task (the full-body illusion, FBI, to measure self-identification). In the intervention condition, participants reported stronger experiences of disembodiment and reduced salience of perceived body boundaries. The FBI results suggested reduced self-identification in the intervention condition compared to the control, especially during the asynchronous FBI. EEG data revealed differential neural responses during the intervention vs. control condition, characterized by more negative amplitude of heart-beat evoked potentials (HEP), likely reflecting insula activity and compatible with the decreased BSC level. Bridging traditional meditation, neuroscience of BSC, and VR, we experimentally modulate BSC in non-meditators, corroborated by behavioral and neural changes, including dissolution of the self-boundary, reduced self-identification, and the modulation of the bodily signal measured by the HEPs.

S8.1.4 - Breathing bio-feedback during meditation in virtual reality enhances meditation experience and bodily-self effects

Monika Stasytyte¹, Hang Yang², Erkin Bek¹, Loup Vuarnesson², Chuong Ngo¹, Bruno Herbelin², Olaf Blanke²

¹ All Here SA, ² Laboratory of Cognitive Neuroscience, Neuro-X Institute and Brain-Mind Institute, EPFL

Summary

We recently introduced a novel meditation platform that integrates traditional meditation with automatized stimulations using Virtual Reality (VR) technology, designed to modulate BSC during meditation. Our results reveal novel links between the BSC and meditation practice and may allow in future work novices to attain deeper meditative states involving modulations of one's minimal bodily self.

Details

Background and aims: Altered states of self-consciousness are commonly reported by experienced meditators. However, only a few experimental group studies investigate these links, especially within the context of minimal self or bodily self-consciousness (BSC). We recently introduced a novel meditation platform that integrates traditional meditation with Virtual Reality (VR) technology, designed to modulate BSC during meditation (Yang et al., in preparation). The present study aims to achieve meaningful changes in BSC and disembodiment state by exposing meditation novices to a VR scenario.

Methods: In the intervention condition, participants maintained focused attention centered on bodily awareness and breathing, combined with online and asynchronous breathing bio-feedback of the avatar, seen from a third-person perspective. This differed in the control condition, where breathing bio-feedback remained synchronous and the avatar was seen from a first-person perspective throughout meditation. After each condition, questionnaires were used to assess the level of disembodiment. The impact of meditation was further explored with a behavioral BSC task (full-body illusion), and the perceived body boundaries scale.

Results: Preliminary results indicate the successful induction of OBE-like sensations characterized by disembodiment. Participants reported a reduction in perceived body boundaries following intervention meditation versus the control condition. In the full-body illusion, the effect of stroking synchrony was consistent with existing studies, but differed between both conditions.

Conclusions: By integrating breathing bio-feedback, based on the latest research in BSC, with meditation practice tailored for novices, the present study bridges meditation research, neuroscience of the sense of self, and VR. Our results reveal novel links between the BSC and meditation practice and may allow in future work novices to attain deeper meditative states involving modulations of one's minimal bodily self.

S8.1.5 - Cultivating Mental Stillness: EEG-Based Neurofeedback Training for Upregulating Non-Harmonic Alpha-Theta Cross-Frequency Interactions During Focused Attention Meditation

Hendrik-Jan De Vuyst¹, Angeliki-Ilektra Karaïskou¹, Javier R. Soriano¹, Jelle Pergens¹, Katleen Van Der Gucht^{1,2}, Filip Raes¹, Maarten De Vos¹, Carolina Varon¹, Kaat Alaerts¹

¹ KU Leuven, ² Tilburg University

Summary

Research links focused attention meditation with non-harmonic alpha-theta brainwave patterns. We explored the ability of EEG neurofeedback to assist meditation by training these patterns in 30 adults. Results indicate that neurofeedback training significantly upregulates these brainwave patterns compared to sham training, with durable effects. This supports neurofeedback's potential to enhance meditation outcomes, offering new avenues for exploring neurofeedback-assisted meditation training.

Details

BACKGROUND AND AIMS: Neurofeedback is an intervention involving real-time monitoring and self-regulation of neural activity. Such interventions have been widely employed in the context of meditation. In this regard, research has revealed focused attention meditation to be associated with non-harmonic relationships between alpha and theta waves, suggesting a cross-frequency decoupling. However, the potential of training these brainwave patterns to enhance meditation outcomes remains unexplored.

METHODS: We assessed the trainability of non-harmonic alpha-theta relationships through neurofeedback training during focused attention meditation. Thirty individuals underwent 20 minutes of both experimental and sham training. During experimental training, participants were instructed to practice focused attention meditation while receiving auditory feedback whenever their brain displayed non-harmonic alpha-theta relationships. During sham training, feedback was unrelated to the measured brainwaves.

RESULTS: Mixed model analyses showed a significant interaction effect between trainings over time, indicating that the incidence of non-harmonic alpha-theta relationships across the scalp increased during experimental training but remained stable during sham training. Notably, this training effect remained evident when measured during a post-training resting period.

DISCUSSION: In this study, we demonstrate the potential of neurofeedback to upregulate non-harmonic alpha-theta cross-frequency relationships during meditation with durable effects. By doing so, we set the stage for investigating the effectiveness of multiple-session neurofeedback-assisted mindfulness training.

ACKNOWLEDGEMENTS AND FUNDING: This work was supported by a KU Leuven Interdisciplinary Networks Grant (IDN/21/022).

S8.2.1 - How do meditators find meaning in meditation-related adverse experiences?

**Merle Kock¹, Tim Wood², Jasmine Childs-Fegredo³, Julieta Galante², Filip Raes¹,
Nicholas Van Dam²**

¹ KU Leuven, ² University of Melbourne, ³ York St John University

Summary

Appraisal of meditation-related adverse experiences may determine whether the experience is interpreted as adverse or as an opportunity for growth. This interpretative phenomenological analysis (IPA) study explored the process of appraisal and meaning-making, and the influence of childhood experiences with regard to such experiences. Nine out of ten participants reappraised their initially adverse meditation-related experience as positive and/or a growth opportunity.

Details

BACKGROUND AND AIMS: Contrasting the popular opinion that mindfulness meditation is solely beneficial, multiple studies have shown that adverse experiences related to meditation practice are common. Previous research indicates that the appraisal of such experiences may determine whether a meditator continues to interpret the initially adverse experience as adverse or starts interpreting their experience as an opportunity for psychological growth. This study investigated the process of appraisal and meaning-making, and the influence of childhood experiences with regard to initially adverse meditation-related experiences.

METHODS: Meditators between 18-65 years of age residing in Australia who experienced a meditation-related adverse experience within the past 5 years were recruited. Employing an Interpretative Phenomenological Analysis (IPA) methodology, semi-structured interviews were conducted online to explore the lived experiences of meditators engaged in mindfulness meditation.

RESULTS: At time of submission, ten participants have been interviewed. Nine participants reappraised their initially adverse meditation-related experience as positive and/or a growth opportunity while one participant continued to understand their experience as negative.

CONCLUSIONS: Although data collection is ongoing, the results of this study are expected to provide valuable insights into the process of meditators' appraisals with regard to initially adverse meditation-related experiences and the extent to which they engage in meaning-making. Moreover, the anticipated results may identify skills that allow adaptive coping with adverse meditation-related experiences.

ACKNOWLEDGEMENTS AND FUNDING: Merle Kock was supported by a SofinaBoël fellowship (V437523N) and a FWO PhD fellowship (1111622N).

S8.2.2 - Nonlinear Path or Pathology? A Culturally Sensitive Complex Systems Approach to Meditation-Related Difficulties in Abrahamic Traditions

Nathan Fisher¹

¹ Brown University

Summary

Recently a group of researchers have begun to document distressing and impairing meditation-related experiences and how some are appraised as normative within contemporary meditative traditions. This presentation will argue that distressing meditation-related experiences in Abrahamic traditions can be understood in a culturally sensitive manner in terms of enactive and other complex systems approaches to cognitive and clinical science.

Details

BACKGROUND AND AIMS: Clinicians and psychologists of religion have long discussed how to distinguish normal from pathological symptoms in relation to spiritual experiences, including those occurring within the context of meditation, under the heading of ‘differential diagnosis.’ One of the primary criteria for psychopathology more broadly, and one of the criteria by which spiritual experiences have been distinguished from pathological ones, has been whether the experience is distressing and causes impairment of functioning. However, recently a group of researchers (including this author) have begun to document distressing and impairing meditation-related experiences and how some are appraised as normative within contemporary meditative traditions. In light of this, how can clinicians striving to be culturally sensitive make sense of meditation-related difficulties without doing harm? What kind of etic frameworks can explain how sometimes things get worse before they get better, whereas other times things get worse before deteriorating even more? And how might we begin to understand some of the causal factors that distinguish one trajectory over the other?

RESULTS AND CONCLUSIONS: If we follow practitioners and teachers in viewing the Abrahamic contemplative paths as nonlinear, then etic frameworks for meditation-related difficulties will need to explain both normative and non-normative experiences, as well as help distinguish them from each other. In this presentation I argue that distressing meditation-related experiences in Abrahamic traditions can be understood in a culturally sensitive manner in terms of enactive and other complex systems approaches to cognitive and clinical science which acknowledge the pivotal nature of contemplative states of absorption and their involvement in nonlinear change processes that culminate in changes to trait senses of self. Doing so will help clinicians provide better culturally sensitive care and, at the same time, help them to distinguish distressing experiences that will ultimately be beneficial from those that will not be.

S8.2.3 - A Qualitative Study Examining the Lived Experiences of Stress Among Female Sexual Assault Survivors in an 8-Week Trauma-Sensitive Yoga Intervention

Nicole Nicotera¹, Megan Connolly¹, Lenna Jawdat², Laura Ostrow¹

¹ University of Denver, ² Supportive Embodied Therapy, Washington, District of Columbia, United States

Summary

This qualitative study examined the lived stress-experiences of sexual-assault survivors in an 8-week Trauma Sensitive Yoga group. Participants (n = 28 women) provided a rationale for their stress level via check-in/check-out sheets at the beginning and close of each group. Findings indicate three themes: Stress, Sense of Wellbeing, and Group Effects. Results suggest participants simultaneously processed stress and integrated connections to their bodies and minds over the 8 weeks.

Details

Background-Trauma Sensitive Yoga (TSY) is built to be physically and emotionally gentle, however, mindfulness practices like yoga can intensify trauma-related experiences such as hyperarousal and intrusive memories. There is a dearth of evidence for how participants experience stress over the course of a TSY group. Our study addressed this gap by examining the lived stress-experiences of sexual-assault survivors during an 8-week TSY group.

Methods-The IRB approved study was conducted in collaboration with a non-profit that offers TSY groups for sexual-assault survivors. Participants' (N=28, average age 29 years) identified as White (78.6%), Multiracial (10.7%), Latina (7.1%) with 3.6% not reporting ethnicity/race.

The TSY group applied Trauma Center-Trauma-Sensitive Yoga principles and Herman's three-stage model of trauma therapy. The group met for eight weekly-1.5 hour sessions. Each session focused on a theme, such as, Self-Regulating, Making Choices, Exploring the Breath. A Yoga Alliance Registered Yoga Teacher and a licensed mental health clinician co-taught each session.

Data were gathered from check-in/check-out worksheets completed by group members at the beginning and close of each session. Two questions were posed at each check-in/check-out: 1) "Using a scale where 0 = low distress, feeling relaxed-content and 10 = high distress, feeling upset-stressed, indicate your number before starting group/after completing group today. 2) Why did you choose to rate yourself with that number?"

Data analysis followed the Constant Comparative Approach and was conducted in Atlas-ti.

Results-Findings indicate three themes: Stress (common stress, emotion stress, extraordinary stress, stress pile-up), Sense of Wellbeing (coping, self-care, feeling good, taking-action, letting go, relaxation, connection, new awareness), and Group Effects (processing, integration, triggers).

***Conclusion**-Results suggest participants simultaneously processed stress and integrated connections to their bodies and minds over the 8 weeks. Further study is required to understand more about the impact of TSY on stress experiences of sexual-assault survivors.*

S8.2.4 - Progress in meditation practice: A Delphi consultation study with Buddhist and secular meditation teachers

Lillian Ward¹, Tim Wood¹, Cullan Joyce¹, Ana Dragojlovic¹, Nicholas Van Dam¹, Julieta Galante¹

¹ University of Melbourne

Summary

This study examined how different meditation traditions understand progress in meditation. Seventy-one meditation teachers from four Buddhist and secular traditions participated in a Delphi consultation study. Themes relating to progress were identified and their importance to each tradition was assessed. The impact of teachers' experience was also explored. Preliminary results will be presented. Finding will provide empirically-grounded hypotheses for future research, and reassure prospective practitioners on what to expect from meditation.

Details

BACKGROUND AND AIMS: Public interest in meditation has grown rapidly over the past two decades, with millions practicing meditation aiming to progress towards health and/or spiritual goals. While there is extensive information held by scriptures, teachers, and practitioners, little empirical research has examined contemporary understandings of progress in meditation, and variation between traditions. This study aimed to understand how contemporary meditation teachers in popular Buddhist and secularised meditation traditions identify and understand how a meditation practitioner is progressing, and whether there are points of consensus within and between traditions. **METHODS:** The study employed a three-round Delphi method, supported by an advisory group of experienced meditation teachers. Seventy-one ($f = 41$, $m = 30$, *average years of experience = 12*) meditation teachers or clinicians were consulted from four traditions: Vipassana/Theravada (22), Mindfulness Based Stress Reduction or Mindfulness Based Cognitive Therapy (17), Mindfulness integrated Cognitive Therapy (17), and Zen (15). Participation in the first round was by semi-structured survey (57) or interview (14). Thematic analysis was performed, and themes identified were presented to participants for feedback in subsequent rounds. **RESULTS:** At the time of submission, thematic analysis is being performed. Preliminary results will be presented. Common themes identified so far as important for progress include processing challenging experiences and detached introspection. Patterns related to experience have also emerged, with less experienced teachers/clinicians citing disengagement with practice as the main indicator a practitioner is not progressing well, whereas more experienced participants often mentioned mental health and social functioning concerns. **CONCLUSIONS:** Identifying how traditions conceptualise progress in meditation will provide empirically-grounded hypotheses about outcomes, mediators, and moderators of meditation practice for future research. Results will also inform

meditation teachers' professional development and reassure prospective practitioners about what to expect from meditation.

S8.2.5 - Ananda & Sukha: Indian model of happiness & its mental health implications

Jyotsna Agrawal ¹

¹ National Institute of Mental Health and Neuro Sciences (NIMHANS)

Summary

Summary: Multiple types of happiness has been discussed in the Indian psycho-spiritual tradition. These ranges from Ananda, to 3 sub-types of Sukha (Satvika, Rajasika and Tamasika). Further different pathways to these have also been discussed. There are similarities and differences with the modern ideas of happiness.

Details

Abstract

Ananda, along with Sukha (3 sub-types: Satvika, Rajasika and Tamasika) are different types of happiness as discussed in the Indian tradition. Further different pathways to these have also been discussed such as Nishreyas, Shreyas and Preyas path. While Ananda is experienced on existential liberation, most people in the world experience Sukha, although its type differs based on the path taken. In a series of empirical studies on happiness of Sukha type, with urban Indian adults, it was found that most people at any point of time are happy. Satvikaqualities and shreyas type of activities were associated with happiness. In general people preferred a mix of both shreyas and preyas type of activities, with higher frequency of shreyas type.

Rajasika and Tamasika qualities, along with preyas type of activities were related to more unhappiness. High preyas focus in terms of alcohol dependence was associated with high tamas, low sattva and more frequent experience of negative emotions. These studies suggest development of sattva by taking a shreyas pathway may be associated with better mental health, on the other hand predominant focus on preyas pathway may be associated with rajasika-tamasika qualities and poor mental health. The similarities and differences with the modern ideas of hedonic and eudaimonic happiness will be discussed.

S8.3.1 - William & Mary Interdisciplinary Contemplative Research & Education ~ An overview

Mark McLaughlin¹, Anne Ryan Gareis²

¹ College of William and Mary, ² William & Mary

Summary

This paper presents a case study in the rewards and challenges of developing a robust institutional space for interdisciplinary research and teaching on consciousness. It discusses ongoing efforts at the College of William & Mary (W&M) to (a) conduct a collaborative, transdisciplinary study of contemplative practices and (b) make contemplative education a sustainable part of the university curriculum, in the context of developing a new academic program in Consciousness Studies.

Details

This paper presents a case study in the rewards and challenges of developing a robust institutional space for interdisciplinary research and teaching on consciousness. It discusses ongoing efforts at the College of William & Mary (W&M) to (a) conduct a collaborative, transdisciplinary study of contemplative practices and (b) make contemplative education a sustainable part of the university curriculum, in the context of developing a new academic program in Consciousness Studies. We hope to learn from constructive conversation with others at the conference engaged in similar developments.

I represent a 7-member team from the disciplines of Applied Science, Neuroscience, Philosophy, Psychology, and Religious Studies studying contemplative practices in a research project funded by a major internal grant. Our interdisciplinary project studies the cultural and social forces affecting contemplative practices today, the different impacts of secular-biomedical versus spiritual-ethical motivations for contemplation, and the neural mechanisms underlying calming effects of meditation and breathwork. This pilot study is meant to provide data that will support a major (>\$1 million) external grant proposal that will extend and deepen this work.

This paper reflects upon the benefits and difficulties of merging ideas and expertise from different disciplines and discusses some of the challenges we faced when researchers from different disciplines were making decisions about methodology. Beyond research, this paper discusses our efforts to develop contemplative studies-and more broadly the interdisciplinary study of consciousness-at W&M through curriculum development and the establishing of a "Mind, Brain & Wellness" faculty seminar. I will discuss the pedagogical structure and impact of what has become one of the most popular and transformative courses on campus: "Meditation & Wellness." An undergraduate student will discuss her experience in the course as well as the research project it inspired, giving an overview of her 2024 summer fieldwork at Thich Nhat Hanh's Plum Village Monastery.

**S8.3.2 - The Uneven Terrain of Sociology's Articulations with Contemplative Practice,
Yoga and Martial Arts, with a Proposal for a Field's Consolidation**

Michael Kennedy ¹

¹ Brown University

Summary

Drawing on engagements with martial arts, yoga and Contemplative Studies curricular development, alongside analyzing their sociologies, I propose a dialogue between Sociology and Contemplative Studies centering power and violence in this emergent conjunction of fields. I elaborate the place of racism and misogyny in contemplative studies as well as how redirecting violence through apparently, but less actually, violent methods extends contemplative methods in martial arts training and analysis.

Details

BACKGROUND AND AIMS: Over the last decade plus I have been developing an approach called Knowledge Cultural Sociology. I've applied that to institutions like universities and fields like security studies. In the last 5 years, I have become involved with developing the contemplative studies program at Brown University, most notably by drawing on my martial arts and yoga sociology instruction. In this paper, I explain how sociology as a field might bring contemplative studies more squarely into its curriculum, and how the latter might benefit from sociology's engagement, notably around polarization's address in racism, political conflict, and war.

METHODS: Critical autoethnographic methods as well as the analysis of my Brown University classes and students in Power, Knowledge and Justice in Global Social Change and Martial Arts and Yoga Sociology,

RESULTS: Most students can't articulate the potential link between contemplative practice and social conflict beyond vague notions of awareness. Pointed questions like "under what conditions is redirecting violence through apparently violent methods appropriate" leads to more productive questions about the conjunction in question.

CONCLUSIONS: Contemplative studies can realize its broader ambitions by taking the sociological imagination more seriously, not only as a complement but a challenge to how we envision the connection between these two fields of scholarship.

ACKNOWLEDGEMENTS AND FUNDING: Engagements with scholars in Brown University's Contemplative Studies Initiative and with Hiro Saito at University of Tokyo and Kumu Ramsay Taum from Hawaii have been central to the development of this paper.

S8.3.3 - Cultivating Attention Through Literary Engagement: Developing a Mindful Reading Curriculum, which Encourages Intersections between Literature and Contemplative Practice

Anton Krueger¹

¹ Rhodes University

Summary

Ella Berthoud claims that “the reading brain is calmed and slowed while reading, in a way that is very similar to the effects of meditation.” I would like to develop a new undergraduate module for the Department of Literary studies in English at Rhodes University, South Africa, which uses meditation as a means of cultivating literary appreciation. Drawing on a range of literary works used on meditation retreats, I would like to propose a methodology, theory and practise of mindful reading.

Details

As the newly appointed Head of Literary Studies in English at Rhodes University, South Africa, I’d like to develop a new undergraduate module which uses shamatha meditation as a means of cultivating literary appreciation.

Ella Berthoud claims that “the reading brain is calmed and slowed while reading, in a way that is very similar to the effects of meditation” and experiments by Mar and Oatley have demonstrated that “individuals who frequently read fiction seem to be better able to understand other people, empathize with them and see the world from their perspective”. Furthermore, Henrich writes about ways in which reading rewires the brain and strengthens “alternative pathways,” while Lusnig et al have demonstrated that “meditation improves attention capacity and text comprehension” (2023). C.A. Bansen explores the vital role played by literature in “the affective development of young people” leading them towards “an awareness of themselves” and “an appreciation of their society and those of others.” There’s no doubt that immersive literary experiences have the capacity to enhance mindfulness: attention and empathy.

In developing a Mindful Reading curriculum, I’ll draw on approaches to Contemplative Poetics by Allen Ginsberg, Chögyam Trungpa and Reed Blye from Naropa University, as well as more contemporary programmes at the University of Colorado and other institutions. I’ll be drawing on selections of poems from the Mindfulness Africa curriculum in their Mindfulness Based Living Course (MBLC) as well as poems used by Donal Creedon on his Kagyu Vajrayana meditation retreats. Other sources for theory and practise on the curriculum would come from the Foundation for Bibliotherapy, Ella Berthoud’s The Art of Mindful Reading and poets such as Gary Snyder, Andrew Harvey and David Whyte.

S8.3.4 - Contemplative Pedagogy, Student Learning and Wellness, and Contemporary Social Issues

Judson Murray¹

¹ Capital University

Summary

This presentation reports a qualitative study involving student-practitioners in seminars taught at two Midwestern American colleges, and explores the impact of contemplative pedagogy that employs Asian contemplative practices as the primary method of experiential learning. The research demonstrates their effectiveness in enhancing student learning, in contributing to student wellness, and in facilitating students' critical reflection and activism regarding different contemporary social issues.

Details

This presentation shares findings from qualitative research, involving courses taught at two colleges, that explores the impact of contemplative practices on student learning and wellness. One aim is to assess the effectiveness of contemplative pedagogy as a method of experiential learning. I utilized practices primarily from Asian traditions but included others from the West. The types of contemplative pedagogy that students practiced include meditation sessions, contemplative journaling, and contemplative arts. The data collected reveals their effectiveness as experiential learning tools in aiding student learning, in contributing to student wellness, and in facilitating their critical reflection on contemporary social issues. Enhancements in learning relate to their attentiveness and concentration, subject comprehension, study habits, creativity, and task performance. Regarding wellness, benefits reported include stress-management, moral development, and a healthier self-image. Contemplative pedagogy also empowers their critical thinking and their activism regarding various social issues, including social justice; social media; materialism, commercialization, and corporatization; and cultural appropriation and intellectual imperialism. The research shows, in fostering wellness, contemplative pedagogy can partner constructively with the social sciences and with STEM. It also suggests ways contemplative pedagogy can form useful synergies with contemporary discourses on identity, gender, moral psychology, values-based education, and social-political activism. As education becomes increasingly vocational, it underscores the value of students understanding and applying diverse humanistic values and practices to ensure their professional success and personal fulfillment.

S8.3.5 - Embodied Pedagogy for Emerging Contemplative Researchers

Jenna Faith Mcclear ¹, Shumo Wang ¹, Jack Dugoni ¹, Joseph Diehl ¹

¹ Duke University

Summary

How do we effectively move from abstract intellectual analysis to embodied practice in contemplative education? This presentation will demonstrate a unique embodied approach to contemplative education formed by an interdisciplinary educational team at Duke University. This presentation will detail our pedagogy, reveal efficacy through survey data and student testimonials, and equip our target audience with the tools necessary to foster thriving contemplative communities on their college campuses.

Details

How do we effectively move from abstract intellectual analysis to embodied practice in contemplative education? Our interdisciplinary team from the fields of theology, religious studies, psychology, and engineering, developed through Duke University's Bass Connections program, will demonstrate how an embodied pedagogical approach to contemplative education facilitates a more holistic, engaging, and effective educational experience among undergraduate students. Over the course of one academic year, students engaged in weekly lessons on contemplative practices from a diverse range of traditions, engaging not only intellectually with Buddhism, Christianity, Stoicism, and Confucianism, but also experientially through the practice of specific contemplative exercises. This blending of theory and embodiment encouraged students to explore contemplative practices outside of the classroom as well, facilitating a personal and experiential learning journey. In addition to classroom and personal contemplative exploration, students participated in a psychological research project measuring the effects of a meditation intervention on undergraduate students' quality of life. In their participation in this project, students gained hands-on experience in various measures in psychological research, including EEG, heart-rate variability, ecological momentary assessment, and qualitative data, such as self-report. This integrative approach allowed students to apply their classroom knowledge to empirical psychological research, reinforcing the embodied nature of their learning experience. In this presentation, we will present survey data on our year-long pedagogical project, testing our hypotheses that students' ability to integrate contemplative knowledge with personal practice enhanced their connection to their research projects and increased personal well-being. This presentation will detail our embodied pedagogical practices, report on the efficacy of our approaches through survey data and student testimonials, and equip our target audience with the tools necessary to foster thriving contemplative communities on their college campuses.

S8.4.1 - Proactive control enhances reappraisal efficacy, especially among low mindfulness individuals

Bruna Martins-Klein¹, Ziyuan Chen¹, Aarthi Ganapathi¹

¹ University of Southern California

Summary

This study examined the effect of trait mindfulness on pupil responses during proactive versus reactive reappraisal of negative images in 81 adults (age 18-81). Proactive versus reactive preparation reduced pupil responses during subsequent reappraisal of negative images, and low trait mindful individuals showed the greatest benefit. Findings highlight reappraisal instruction timing as an important future interventional target to enhance attentional control and reappraisal efficacy.

Details

BACKGROUND: Mindfulness is associated with enhanced cognitive control and emotion regulation. Greater ability to decenter from stimuli is considered to be a precursor to regulatory strategies like reappraisal that rely on cognitive control. Cognitive control can be implemented either in response to a predicted future task (proactive), or as task demands arise in real-time (reactive). Mindful individuals show enhanced reactive and proactive performance on cognitive tasks, such as the AX-Continuous Performance Test. However, the impact of mindfulness on proactive versus reactive emotion regulation has never been examined.

METHODS: In this study, 81 adults (aged 18-81) completed the Mindful Attention Awareness Scale (MAAS) and were cued to either reappraise or view negative images following a long proactive (4s) or short reactive delay (0.5s). Pupil responses were tracked as a metric of physiological arousal and cognitive effort.

RESULTS: Multilevel models controlling for age revealed a main effect in which proactive reappraisal led to reduced pupil responses compared to reactive reappraisal ($p < .001$). A significant interaction revealed that this proactive benefit was strongest among low mindfulness individuals ($p < .001$).

CONCLUSIONS: Findings highlight a global benefit of proactive preparation in reappraisal and the importance of clarifying temporal dynamics between mindfulness, cognitive control, and reappraisal. Greater engagement of proactive control may promote greater emotion regulation efficacy, especially among low mindfulness individuals who are more vulnerable to poor reappraisal efficacy, as outlined by Mindfulness-to-Meaning theory.

ACKNOWLEDGMENTS/FUNDING: We would like to thank Myna Chadalavada for her assistance with pilot analyses.

S8.4.2 - Mindfulness and metacognitive monitoring accuracy in young meditators compared to non-meditators

Regula Neuenschwander¹, Janina Eberhart², Donna Bryce³

¹ University of Bern, ² University of Tübingen, ³ University of Augsburg

Summary

We expected young meditators ($n=61$; 18-30 yrs, at least 3 years of formal practice) to show more accurate metacognitive monitoring compared to controls ($n=62$). No group differences were found in monitoring accuracy (relationship between confidence judgments and working memory recall). However, trend-level group differences for less monitoring bias and lower confidence judgments in meditators suggest that a differentiated view on metacognition as an underlying mechanism of mindfulness is needed.

Details

BACKGROUND AND AIMS: Given that theoretical models propose metacognition to be one of the main underlying cognitive mechanisms of mindfulness, we expect those who meditate to show higher metacognitive monitoring accuracy than controls. To date, only few meditation studies have assessed metacognition with behavioral tasks and to the best of our knowledge, no study has looked at metacognitive monitoring accuracy in young meditators.

METHODS: $n=61$ meditators (18-30 yrs, at least 3 years of formal practice) and $n=62$ non-meditators completed a visuo-spatial working memory task and provided metacognitive monitoring judgments after each trial (confidence judgments [CJ] regarding their recall performance). Monitoring accuracy was operationalized as the relationship between CJ and objective performance. Additionally, all participants completed a self-report mindfulness questionnaire (MAAS), and meditators a questionnaire on meditation depth (MEDEQ).

RESULTS: Overall monitoring accuracy was significant ($r=.55$, $p<.001$), indicating that participants were sensitive to variations in their memory performance. However, no group differences between meditators and non-meditators were found. There were trend-level group differences in mean CJ and monitoring bias, indicating slightly higher CJs in the non-meditators and slightly less bias from meditators. Additionally, there was a significant correlation for monitoring accuracy and MAAS scores ($r=.29$, $p<.05$) as well as a trend-level correlation for monitoring accuracy and MEDEQ scores ($r=.21$, $p \hat{=} .10$) among meditators.

CONCLUSIONS: Possible reasons for non-significant group differences in metacognitive monitoring will be discussed with regard to the particularities of the sample of young meditators and the basis of monitoring judgments.

S8.4.3 - Neural Signatures of Mindfulness: Decoding the Transient and Enduring Effects of an Intensive Meditation Retreat on Brain Connectivity

Sébastien Czajko¹, Arnaud Poublan-Couzardot¹, Antoine Lutz¹

¹ Lyon Neuroscience Research Center, INSERM, Lyon 1 University

Summary

This study probes the lasting effects of a 10-day mindfulness retreat on brain connectivity. Immediate post-retreat fMRI showed increased network segregation, suggesting reduced mind-wandering. However, two-week follow-up scans indicated these effects were not sustained, underscoring the transient nature of such alterations.

Details

BACKGROUND AND AIMS: There is a growing interest in investigating the neurocognitive mechanisms of mindfulness meditation practice. Little is still known about the plasticity of meditative states. In this study, we aim to distinguish the neural correlates of mindfulness meditation across different time points: before, immediately after, and three weeks following an intensive ten-day mindfulness retreat.

METHODS: We collected longitudinal self-report and fMRI data from 51 experienced meditators pre-retreat, post-retreat, and at a follow-up two weeks after the retreat. We embedded whole-brain functional connectivity into low-dimensional gradients, from which we derived various network metrics including voxel-wise, multivariate, and graph-based metrics at rest (RS) and during a focused-attention (FA) meditation session.

RESULTS: The participants reported enhanced meta-awareness, and decreased mental stickiness, and subjective realism in FA compared to RS at all time points. Post-retreat, participants reported decreased mental stickiness during FA meditation, while this was not found during RS. At pre-retreat, we found increases in network segregation during FA meditation compared to RS, especially in the default mode network, suggesting reduced mind-wandering. These effects were more pronounced immediately post-retreat. However, at the three-week follow-up, these increases in network segregation were no longer detectable, indicating no lasting changes in brain connectivity patterns or eccentricity due to the retreat.

CONCLUSIONS: The findings suggest that an intensive mindfulness meditation retreat can acutely impact processes associated with mind-wandering and can enhance segregation in brain networks implicated in mind-wandering. However, these effects were not found at the 2-week follow-up visit. The absence of long-term changes underscores the reversible nature of the neurophysiological effects of intensive mindfulness practice within this timeframe.

ACKNOWLEDGEMENTS AND FUNDING: This work was funded by a European Research Council grant (ERC consolidator grant AL).

S8.4.4 - Meditation engages imaging biomarkers of the neurofluid circuit (i.e., glymphatic pathways) similar to sleep and potentially different from paced breathing

David Vago¹, Manus Donahue², Bryce Keating³, Daniel Claassen⁴, Ciaran Considine⁴, Colin McKnight⁴, Maria Garza⁴, Alex Song⁴, Caleb Han⁴

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Summary

We applied multi-contrast MRI to provide evidence in support of mindfulness meditation altering neurofluid flow similarly to deep sleep, with preliminary evidence supporting that this relationship differs for paced breathing with vs. without MM. These findings are discussed in the context of our expanded understanding of the neurofluid circuit, which facilitates cerebral waste clearance along novel perivascular (i.e., glymphatic) pathways. Our data provide evidence for the interconnectedness of physical health and mental experience.

Details

BACKGROUND: Mindfulness meditation (MM) is associated with cognitive-emotional and health-related benefits, however, outcomes in MM trials are often insufficiently sensitive to the physiological changes that these interventions induce. Cerebrospinal fluid (CSF) inflow at the level of the fourth ventricle increases during deep sleep, which may assist in clearance of metabolic waste along traditional bulk, or more recently-proposed, perivascular (i.e., glymphatic) neurofluid circulation pathways. We hypothesize that, like sleep, MM suppresses cortical cerebral blood flow (CBF) and increases CSF motion, which we evaluate here using CSF-weighted phase contrast, resting functional connectivity, and CBF-weighted MRI performed in sequence in advanced-practitioner meditators. **METHODS:** Participants (n=20; age=39.9 \pm 11.1 yrs; lifetime meditation experience>500 hrs) were assessed during 25-minutes of mind wandering, and separately, a focused-attention MM. CBF from arterial-spin-labeling, CSF inflow and functional connectivity in the salience network, and CSF flow-velocity were assessed with during each state using MRI. We sought to (i) evaluate how MM-induced changes relate to lifetime meditation experience and (ii) quality of MM and CSF flow velocity. An exploratory repeated measures analysis (n=15) was conducted during normal and slow self-paced breathing matched to MM respiration rate. **RESULTS:** Inflow effects, quantified as power of the T_2^* -weighted signal in the frequency band of 0.1-0.12 Hz, correlated with (1) lifetime meditation experience (r=0.69; p<0.001), and (2) change in maximum CSF flow through the aqueduct (r=0.50; p=0.025), and (3) with the change in the functional connectivity of the salience network (r=0.48; p=0.032) between mind wandering (respiration=13.0 \pm 2.1 bpm) and MM (respiration=10.5 \pm 2.8 bpm). Similar changes in CSF flow were not observed during slowed respiration. **CONCLUSIONS:** MM may alter CSF and associated neurofluid flow along novel perivascular or glymphatic activity pathways in a similar manner as deep sleep. These relationships appear to be stronger during MM than during matched-breathing without MM.

S8.4.5 - Evaluating the protective effects of a brief mindfulness instruction towards food cravings triggered by food Advertising

Constanza Baquedano ¹, Antonia Zepeda ², David Martinez-Pernia ¹, Jaime Silva ³, Eugenio Guzman ³, Vladimir Lopez ⁴, Alvaro Rivera ⁵

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Summary

This study investigates if brief mindfulness can reduce food cravings triggered by advertising. Results show that video-delivered mindfulness does not prevent automatic attraction to advertised foods in young adults without prior meditation experience.

Details

BACKGROUND AND AIMS: Subjective realism towards food pictures is common in our daily life's, for example, just seeing attractive food items is enough to trigger activation in the taste and reward areas of the brain, increase food craving, and salivation. On the contrary, dereification, that is, realizing that this experience with food stimuli is a mere transient mental event, reduces reward simulations and automatic approach behaviors toward food. It been found that a brief mindfulness instruction, which promotes dereification, decreases salivation and automatic approach impulses towards foods, in an approach and avoidance task compared to a control or immersion instruction. Food advertising displays images and messages that encourage the acquisition and consumption of food. "obesogenic" environments are known to play an important role in overweight and obesity. This study, wish to assess whether a brief mindful instruction can counteract the food desire induced by advertising and understand the neurophysiological mechanisms underlying this modulation. **METHODS:** We recruited 60 participants and assign them either to a brief-mindful instruction or a control instruction towards advertised food, followed by an Approach Avoidance Task (AAT). Behavioral, salivary volumes, EEG and Self-report measurement where assessed. **RESULTS:** We found that reaction time where slower for avoiding the advertised food in both instructions. Saliva volumes increase in both instructions. In the EEG-ERP measurements we found that N1 and P2 had more amplitude for attractive than neutral food. **CONCLUSIONS:** A Brief mindfulness instruction delivered via video does not protect young people without previous meditation experience from automatic approach tendencies to advertised foods. **ACKNOWLEDGEMENTS AND FUNDING:** This work was supported by the National Fund for Scientific and Technological Development (FONDECYT), through an "ANID_FONDECYT postdoctoral grant NÂ° 3210170" and a Mind & Life Institute Francisco J. Varela Research Award (2020) to CB.

S9.1.1 - Looking Within: Contemplation and Body Cultivation in Early China

Christopher Yang¹

¹ Brown University

Summary

This paper examines the relationship between early Chinese medical traditions and their techniques of everyday hygiene and the emergence of interoceptive activity in early Chinese contemplative practice.

Details

Recent work in the study of early China (e.g., Harper 1998, Roth 1999, Raphals 2023) has flagged the intimate albeit often antagonistic relationship between early medical traditions and traditions of contemplative practice, such as those attested in early Daoist texts like the *Zhuangzi* and *Laozi*.

In this paper, I will show how early practices of "macrobiotic hygiene," daily regimens (calisthenic, sexual, breath-cultivational) by which practitioners tended to their vital matter (most notably, qi, essence, and spirit), gave rise to a way of relating to otherwise intangible processes and elements within the body and supplied contemporaneous and later Chinese traditions of contemplation with a practical vocabulary and framework for what we today refer to as interoceptive activity. Tracing the historical processes by which such practices and their conception of the self emerged not only raises issues of historiographical value but also usefully touches on live issues regarding the relationship between the mind and body.

S9.1.2 - The Scope of Transformation in Daoist Practice

Larson Di Fiori¹

¹ Brown University

Summary

Contemplative practices are known for their capacity to change people, usually for the better. But are we adequately taking account of the scope of that capacity? Daoist traditions strongly emphasize transformation, both as part of the nature of the cosmos, and as a feature of the practice. We will explore some of the at times radical behavioral and psychophysical transformations described in a selection Daoist texts, ranging from the well-known ones from the classical period, to much later inner alchemy (*neidan*) manuals.

Details

Contemplative practices are known for their capacity to change people, usually for the better. But when we teach them and research modern applications for them, are we adequately taking account of the scope of that capacity? As just one example, Daoist traditions strongly emphasize transformation, both

as part of the nature of the cosmos, and as a feature of the practice. This paper will explore some of the at times radical behavioral and psychophysical transformations described in a selection Daoist texts, ranging from the well-known ones from the classical period, to much later inner alchemy (*neidan*) manuals, in preparation for, during, and as a result of their contemplative practices.

BACKGROUND AND AIMS:

On the first day of a class I taught on Daoist meditation, a student came to me with worries about the practices. Might sitting in meditation change his understanding of himself so much that he could no longer pursue the sorts of career goals and models of success that had brought him to college? While we often discuss the role of contemplative practices to support current-world normative lifestyles, such as reducing stress, improving focus and mood regulation, and increasing positive engagement with others, are we adequately presenting the full scope of change possible through deep contemplative practice? The emphasis in some parts of Daoist traditions of near total psychophysical transformation, and the celebration of it, makes it a particularly useful illustration of this potential.

S9.1.3 - Active while in Contemplation: the Integration of Contemplative and Active Life in the Christian Tradition

Daniele Gunetti¹

¹ University of Turin

Summary

The integration of the contemplative and the active life is an important goal in the Christian mystical tradition. Arguably, this notion reached its highest expression in 16th-century Spain, and was based on a spiritual practice known as “recollection”. This work aims to highlight the remarkable similarities between mindfulness-based meditative practices and the original teaching of recollection.

Details

BACKGROUND:

A fundamental tenet of Buddhism is that the state of presence and un-distraction cultivated during meditation should be gradually integrated into ordinary life. Albeit less known, a similar principle has been formulated within the Christian tradition at least since Meister Eckhart and, very likely, it reached its highest expression in the Spain of XVI century, when Ignatius of Loyola coined the expression "active while in contemplation". The main contemplative practice leading to this state was known as “recollection”, a term that, today, has unfortunately lost most of its original meaning.

Recollection was extensively practiced both by lay and ordained people, including mystics of the rank of Teresa of Avila and John of the Cross, and it inspired some of the greatest masterpieces of the mystical

literature of the time. Recollection was understood as a practice for stabilizing consciousness, and to prevent it from being at the mercy of inner and external events. In the most important and widespread manual on recollection, written in 1527 by Franciscan friar Francisco de Osuna, the author teaches that “the opposite of recollection is distraction, or wandering thoughts”, and that we can be recollected even while engaged in daily chores, no less than when we kneel in solitude.

AIMS AND CONCLUSIONS:

“Soft perennialism” claims that differences between mystical experiences occur more at the level of interpretation and conceptualization than in phenomenology. This standpoint is strongly supported by recognizing similar practices within different traditions. If we want to foster cross-cultural understanding, and contrast any sectarian and divisive view of the contemplative path, it is fundamental to rediscover and underline what spiritual traditions have in common, beyond their socio-cultural and doctrinal differences. Therefore, this presentation aims to highlight the remarkable similarities between mindfulness-based meditative practices and the original teaching of recollection.

S9.1.4 - “You have no need to travel anywhere – journey within yourself” making space for Sufism in Contemplative research

Andrea Pintimalli¹

¹ University of Padova

Summary

Buddhism's crucial contribution to Contemplative Studies delayed other contemplative traditions from contributing to research. Starting with a case study of Sufi contemplative practices, I will hint at historical, anthropological, and cognitive problems raised by the possible investigation: (1) historical links across traditions, (2) cultural framing of contemplative traditions, and (3) cognitive elements. I will conclude by proposing strategies to include Islamic traditions in Contemplative Studies.

Details

Buddhism has significantly influenced the rise of Contemplative Studies and remains a key element in their advancement. The crucial importance of this tradition and its understanding of inner experiences led to postponing the exploration of other contemplative traditions. Nonetheless, it is important to consider how various traditions can stimulate research to enhance analytical methods and increase their independence from cultural influences. Within this context, I suggest doing an initial examination of contemplative practices from the Islamic tradition -specifically Sufism -which share similarities with Buddhist traditions that are well recognized in the cognitive sciences. Based on the case study of the “Khwajagan” (Master of wisdom) and their practices still applied today, in this talk, I will seek to elucidate the questions that arise when these traditions are taken into consideration with a multidisciplinary approach encompassing historical, anthropological, and cognitive aspects. Questions related to: (1) historical interactions between traditions; (2) framing of contemplative tradition within different cultures and how this affects contemplative practices; (3) cognitive features included in the

considered contemplative tradition. Finally, I will suggest further steps to include Islamic traditions in the investigation of Contemplative Studies.

S9.1.5 - Christian Apophatic Tradition in the Latin Catholic Church and Contemplative Studies

Rossano Zas Friz ¹

¹ Santa Clara University

Summary

In order to establish a dialogue with the discipline of contemplative studies, the paper proposes an updated vision of the Christian lived experience. The first point justifies the importance of such a dialogue, the second determines the methodological advantages of such a relationship, and the third suggests studying the subjective transformative experience of those who practice the Spiritual Exercises of Ignatius of Loyola as a method of research in the first and second person.

Details

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Christian lived experience has a consolidated apophatic tradition in the Catholic Church.

However, in the Catholic theological academy, the main emphasis is on a cataphatic perspective. The problem of the apophatic tradition for the theological academy is the methodological problem of approaching subjective experience.

Contemplative studies, as a new field of research is a great opportunity for studying the Christian apophatic tradition for its methodological offer to research in first- and second-person in order to explore the subjective experience, which is the methodology needed.

This is the reason why I want to combine the two areas: to clarify the methodological possibilities of contemplative studies in relation to the apophatic research in the Christian theological academy.

A concrete example of what I am referring to is the possibility of analyzing the subjective experience of those practicing the Spiritual Exercises of Ignatius of Loyola and translating the transformative process of such practice into a decision-making process as a research method in the first and second person.

Thus, the subjective experience can be taken into account within the theological academy as valid data because of a valid methodology.

The paper explores contemplative studies as a research area and its possibilities for implementing subjective transforming experience study in the Christian theological academy.

S9.2.1 - Contemplative Ecological Educational Practices from Ancient India

Pooja Sahni¹

¹ Indian Institute of Technology Delhi

Summary

This is a mixed method study to understand how ancient educational practices in India fostered ethical and sustainable ecological living. The study is a part of project funded by Mind an life Institute, USA

Details

Contemplative ecological education is embedded in the intersections and integration of contemporary ecological and contemplative scholarship. The focus is on ways that education (broadly defined) can respond to the existential urgency of this planetary moment by fostering life-sustaining and life-serving approaches to collective wellbeing for humans and the more-than-human world. In the context of the ancient Indian education system, particularly systems like Gurukula and Nalanda, contemplative practices like meditation, mindfulness, reflection and awareness of the interconnectedness with nature were integrated within the academic curriculum. Students in Gurukulas were encouraged to observe and learn from the natural world. Teachers would use the natural environment as a classroom, incorporating elements like plants, animals, and natural phenomena into the learning process. This approach fostered a deep connection with nature and instilled reverence for the environment. Meditation, yoga, and introspection were integral parts of the daily routines, helping students develop inner awareness, mental discipline, and a sense of interconnectedness with the universe. The pedagogical approach encouraged experiential and inquiry-based learning, where students actively engaged in questioning, exploration, and discovery. Self-inquiry (Atma Vichara) and philosophical discourse (Satsang) were used to stimulate critical thinking and intellectual growth. These practices also helped to instill values such as compassion, empathy, humility, and integrity and guided students towards a life of righteousness and service to humanity. In this study we present case studies from four different schools that incorporates integrated contemplative ecological educational practices with modern day academic curriculum.

S9.2.2 - Psychedelics and Environmental Virtues

Nin Kirkham¹, Chris Letheby¹

¹ The University of Western Australia

Summary

We argue that responsible psychedelic use can reliably catalyse the key environmental virtues including respect for nature, proper humility, and aesthetic wonder and awe. Our account advances the environmental virtues debate by introducing a relevant practical proposal, and advances the psychedelic moral enhancement debate by providing a much-needed conceptual framework.

Details

The urgent need for solutions to critical environmental challenges is well attested, but often environmental problems are understood as fundamentally collective action problems. However, to solve these problems, there is also a need to change individual behaviour. Hence, there is a pressing need to inculcate in individuals the environmental virtues -virtues of character that relate to our environmental place in the world. We propose a way of meeting this need, by the judicious, safe, and controlled administration of “classic” psychedelic drugs as a form of moral bio-enhancement. Recent evidence shows that psychedelics can be given safely in controlled environments, and can induce vivid experiences of unity and connectedness. These experiences, in turn, can durably increase feelings of nature-relatedness and pro-environmental behaviours. Therefore, we argue that responsible psychedelic use can reliably catalyse the development of a key environmental virtue known as living in place. This is a “master environmental virtue” that subsumes the qualities of respect for nature, proper humility, and aesthetic wonder and awe. Our account advances the environmental virtues debate by introducing a relevant practical proposal, and advances the psychedelic moral enhancement debate by providing a much-needed conceptual framework.

S9.2.3 - The Path of the Ecosattva in Uncertain Times

Karsten Struhl^{1,2}

¹ New School for Public Engagement, ² The New School

Summary

I will argue that the ecosattva path needs to go beyond early Buddhism, since early Buddhism is ambivalent about the value of nature. I will also consider the ways in which the ecosattva path cannot be fully realized by drawing on Buddhism alone, since it needs to develop an understanding of the social, political, and economic causes of the crisis. I will conclude that in these uncertain times, the goals of the path need to be continually discussed and revised.

Details

The ecological crisis is a fundamental existential crisis, because it poses the question of the survival of our species as well as the survival of many other species and ecosystems that now exist. It is also a spiritual crisis, because it poses the question of the relation of our species to the existence of other species and to the biosphere in general. In this talk, I will consider a number of ways in which Buddhism is positioned to address the spiritual and existential dimension of the ecological crisis.

However, I will also argue that the ecosattva path needs to go beyond early Buddhism, since early Buddhism is ambivalent about the value of nature as well as containing an anthropocentric dimension both in theory and in practice. I will further argue that the modern ecosattva path must supersede the ideal of the Bodhisattva while nonetheless drawing on its insights. I will consider the ways in which the ecosattva path cannot be fully realized by drawing on Buddhism alone, since it needs to develop an understanding of the social, political, and economic causes of the crisis; and I will consider the ways in which twenty-first century ecosattvas need to join with, learn from, and inform other ecological radicals to develop a vision of a prefigurative praxis for an ecosocialist society. I will conclude that the path of the ecosattva must avoid an attachment to what it hopes to accomplish; and, in these uncertain times, the goals of the path need to be continually discussed and revised.

S9.2.4 - Opening (to) the Sacred: The Ecology of Contemplation in the Tibetan Treasure Tradition

Oriane Lavole ¹

¹ Stanford University

Summary

This presentation calls for an ecological approach to contemplation, which recognizes the inherently embodied and emplaced nature of contemplative practice. A case study of the place-based activities of Tibetan contemplative master and Treasure revealer Chokgyur Lingpa (Mchog gyur gling pa, 1829–70). offers a model of contemplative engagement with the environment that challenges the current, prevalent disengagement enabling the ecological crisis.

Details

BACKGROUND AND AIMS: This presentation calls for an ecological approach to contemplation, which recognizes the inherently embodied and emplaced nature of contemplative practice, in contrast to many secular, modern approaches to mindfulness. It does so by exploring the role of sacred geography in the Tibetan revelatory tradition of Treasures (*gter ma*), as exemplified by the New Treasures of Chokgyur Lingpa, a Treasure lineage dating back to nineteenth-century Kham, Eastern Tibet, and headed by Chokgyur Lingpa (Mchog gyur gling pa, 1829–70). Chokgyur Lingpa and his collaborators introduced a network of sacred sites in Kham that still shapes the identity of the region to this day, notably by revealing Treasures from and guides to many old and new sacred sites. This process is known as “opening the door to the sacred sites” (*gnas sgo ‘byed*), an understudied phrase that this presentation explores as a gateway to understanding the entanglement of mindscape and landscape in Tibetan Buddhism.

METHODS: The presentation foregrounds textual sources from the Chokling Tersar tradition, surveying site guides (gnas yig) and biographical narratives of Chokgyur Lingpa’s place-based activities. In particular, it argues that site guides should be read as contemplation manuals in which the landscape becomes a medium for contemplative practice. The implications of this analysis are drawn out with reference to the ecological approaches proposed by psychologist James Gibson and anthropologist Tim Ingold.

CONCLUSIONS: To read site guides as contemplation manuals is to acknowledge the environment’s central role in contemplative practice, blurring the strict distinction between a nature devoid of intrinsic meaning structures, and a culture that would impose such meaning structures on the otherwise-neutral landscape. It is a move towards an ecology of contemplation that opens up the possibility for a re-engagement of humans with their environments, with implications that hopefully reach beyond the theoretical.

**S9.3.1 - Beyond “mindfulness” and toward a science of advanced meditation:
Neurophenomenological investigations of absorption and cessation**

Matthew Sacchet ¹

¹ Harvard Medical School / Massachusetts General Hospital

Summary

We study advanced meditation: states and stages of meditation that unfold with mastery and time. We propose to present neural studies of advanced meditation. This research lays a foundation for studying these states using neuroscience toward clinical and non-clinical applications.

Details

Matthew D. Sacchet

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Meditation Research Program, Mass General & Harvard

TITLE:

Beyond “mindfulness” and toward a science of advanced meditation

BACKGROUND AND AIMS:

Advanced meditation includes deep states and stages of practice that unfold with expertise over time. We will present several of our recent findings including using EEG and MRI combined with neurophenomenological approaches to study advanced concentration and investigative meditation including jhana, or ‘absorption’, and nirodha, or ‘cessation’.

METHODS:

Absorption is characterized by profound joy, clarity, and openness, and cessation is described as complete discontinuation in awareness. We intensively sampled these practices in a single advanced

meditator (>23,000 h meditation training). Our results include spectral and connectivity analyses of EEG data, and whole-brain 7T fMRI regional homogeneity (cortex/subcortex/brainstem/cerebellum).

RESULTS:

Results include that jhana is associated with a complex pattern of altered brain activity including a shift of activity from anterior to posterior. Cessation was marked by significant alpha-power decrease starting around 40 seconds before onset and lowest around cessation.

CONCLUSIONS:

By relating jhana and cessation to objective and intrinsic neural measures that are related to psychological functioning, these results provide evidence for adept meditators voluntarily modulating their consciousness and lay foundations for studying advanced meditation using neuroscience toward health-related applications in both clinical and non-clinical contexts.

ACKNOWLEDGEMENTS AND FUNDING:

Dimension Giving Fund, Ad Astra Chandaria Foundation, BIAL Foundation (Grant Number 099/2020), and individual donors

S9.3.2 - MEDITATION BEYOND RELAXATION: Wakeful Alertness, Alpha Suppression and Peak meditative states studied in a meditation expert

Chuong Ngo¹, Hang Yang², Erkin Bek¹, Bruno Herbelin², Olaf Blanke²

¹ All Here SA, ² Laboratory of Cognitive Neuroscience, Neuro-X Institute and Brain-Mind Institute, EPFL

Summary

To advance the scientific understanding of different meditative states, we recorded physiological and EEG data in an expert meditator with approximately 20 years of meditation experience in the yogic tradition. We have observed alpha suppression as a potential biomarker of practice wherein the meditator has suppressed mind wandering and reached the state of inner alertness. Further work is needed on gamma and infralow activity.

Details

Background: To advance the scientific understanding of different meditative states, we recorded physiological and EEG data in an expert meditator with approx. 20 years of experience in the yogic tradition. We aim to investigate potential bio-markers of the various stages of practice, from relaxation to focusing to peak states of samadhi. **Methods:** The expert meditator performed six sessions consisting of distinctive meditative states reported by the meditator: the silent state in which attention has shifted from outer to the inner and the peak meditative state in which a state of elation was reported. A 3-minute resting state as baseline were recorded before the sessions. EEG and ECG were recorded using a 64-channel system (ANT Neuro). **Results:** During the silent state a significant reduction in alpha band power (8-12 Hz) was observed that predominated over posterior scalp regions. Reduced alpha

oscillations typically mark increased attention and alertness (Keefe et al., 2021), in contrast with relaxation associated with increased alpha-band power (Dobrakowski et al., 2014). Our finding underscores different sides of alpha band (increase vs suppression) and rather mark a stage of heightened alertness that lies beyond relaxation stage. The peak experience was accompanied by changes in gamma oscillations (>30 Hz) and infra-low frequency activity (< 1Hz), which were consistently observed across all sessions. Such infralow observations are often written off and considered as artifacts due to muscle movement and therefore continue to be subject to further research. **Conclusions:** We have observed alpha suppression as a potential biomarker of practice wherein the meditator has suppressed mind wandering and reached the state of inner alertness (suppressed alpha), thereby avoiding states of sleepiness. Further work is needed on gamma and infralow activity.

S9.3.3 - Cessations of consciousness during meditation

Ruben Laukkonen¹, Heleen Slagter²

¹ Southern Cross University, ² Vrije Universiteit Amsterdam

Summary

Cessations of awareness during meditation can result in significant changes to lived experience. We collected EEG data and found converging evidence that cessations accompany alpha desynchronization and reductions in alpha and broadband EEG power. We suggest that deconstructive meditation reduces predictive abstraction and ‘desynchronises’ normally bound qualities of experience. I discuss potential positive and negative implications for intersubjective being following cessation.

Details

BACKGROUND AND AIMS:

Absence of consciousness can occur due to a concussion, anesthetization, seizure, or other syncope episode caused by lack of blood flow to the brain. Intriguingly, some meditation practitioners also report that it is possible to undergo a total absence of consciousness during meditation, lasting up to 7 days. Over two separate experiments we investigated the neural and physiological correlates of cessation compared to resting state and NREM sleep using electroencephalography (EEG) and other physiological measures.

METHODS:

Experiment 1: A Theravada Buddhist meditator was assigned to 3 conditions: (1) focused attention, (2) resting state, and (3) cessation. Conditions were repeated twice for 10 mins while recording EEG, EMG, EOG, and various physiological measures. We presented a series of words and sounds during the conditions using an oddball paradigm. Experiment 2: The participant entered into a longer (90 mins) cessation, a NREM sleep condition (90 mins), and a resting state condition (10 mins).

RESULTS:

Preliminary results show a marked reduction in alpha synchronisation, alpha power, and broadband EEG power in the cessation condition compared to the resting and nap conditions. No meaningful differences were found in oddball responses. Heart rate was lowest in the nap condition compared to both the cessation and resting states. Interestingly, the meditator was able to accurately time the length of the 90min cessation event.

CONCLUSIONS:

It's possible that cessation 'tunes down' neural activity. The notable alpha de-synchronisation during cessation is consistent with the effects of drugs that cause an absence of consciousness, such as ketamine and propofol. However, the brain still tracks statistical regularities in the world as evidenced by a normal prediction-error response. We interpret our findings using the predictive-processing framework and argue that cessation reduces hierarchically deep processing aided by deconstructive meditation that 'desynchronises' normally bound qualities of conscious experience.

ACKNOWLEDGEMENTS AND FUNDING:

BIAL foundation grant #357/20

S9.3.4 - Meditators' brains show an acceptance of death which predicts positively-valenced self-dissolution experiences

Yair Dor Ziderman¹, Aviva Berkovich-Ohana¹, Antoine Lutz², Yoav Schweitzer¹, Ohad Nave³, Fynn-Mathis Trautwein⁴, Abraham Goldstein⁵, Stephen Fulder⁶

¹ University of Haifa, ² Lyon Neuroscience Research Center, INSERM, Lyon 1 University, ³ Hebrew University of Jerusalem, ⁴ University of Freiburg, ⁵ Bar Ilan University, ⁶ The Israel Insight Society (Tovana)

Summary

Meditation is shown to be associated with a reduction in the brain's defensiveness towards mortality, in a manner predicting trait well-being, and positive self-dissolution meditation states. The findings suggest that the neural mechanisms underlying the human tendency to avoid death are not hard-wired but are amenable to mental training, and furthermore, that death acceptance may impact the valence of meditative self-dissolution experiences.

Details

BACKGROUND AND AIMS: We recently showed using a MEG visual mismatch-response paradigm that self-specific prediction-based neural mechanisms shield the self from existential threat by attributing death to the 'other'. Here we test the hypothesis that lifetime meditation is associated with a reduction

in the brain's defensiveness towards mortality. Furthermore, we examine the putative link between death acceptance and the phenomenology of meditative self-dissolution experiences. METHODS: 38 meditators pooled from a neurophenomenological project investigating self-dissolution underwent the MEG task. RESULTS: Meditators' brains responded to the coupling of death and self representations in a manner indicating acceptance rather than denial, corresponding to increased well-being. Importantly, death acceptance was not correlated with meditation experience nor with afterlife beliefs, thus licensing interventions not requiring large amounts of training nor adoption of certain ontological beliefs. MEG death acceptance also predicted more positively-valenced meditation-induced self-dissolution experiences, thus shedding light on possible mechanisms underlying wholesome vs. pathological disruptions to self consciousness. CONCLUSIONS: These results provide initial evidence that the neural mechanisms underlying the human tendency to avoid death are not hard-wired but are rather amenable to mental training. They echo Buddhist contemplative wisdom regarding the importance of coming to terms with one's mortality as complementary and perhaps preliminary to self deconstruction practices. FUNDING: This research was supported by the Bial Foundation, Israel Scientific Foundation, the Foundational Questions Institute, and the Tiny Blue Dot foundation.

S9.3.5 - The contemplative practice involved in Thukdam: A Post-Clinical Death Meditation Observed Among Certain Tibetan monks

Tenzin Bhuchung¹

¹ Princeton University

Summary

Certain Tibetan monks display signs of vitality or awareness for 10-20 days after clinical death. Scientists are now investigating this occurrence by observing their brain activity during the thukdam meditation phase. This paper will explore the three main contemplative practices associated with thukdam meditation: tantric, Mahāmudrā, and Dzogchen practices. Following that, I will analyze them from a broader Buddhist philosophical and soteriological perspective.

Details

Certain Tibetan monks demonstrate signs of being "alive" for up to 10-20 days following clinical death. In recent years, scientists have initiated studies on this occurrence, monitoring their brain activity during what is referred to as their thukdam meditation phase.

However, what exactly is this contemplative practice, and within what context is such a post-clinical death meditation undertaken? Mahāyāna Buddhism emphasizes that meditation focused on perceiving reality and cultivating compassion is significantly more potent when conducted with the "subtle mind" rather than the "gross mind," wherein conceptual states, including dualism, persist. The subtle mind (referred to as clear light) refers to innate clarity of the mind that is nonconceptual and nondual.

Tibetan Buddhist tradition maintains that there are three primary practices and contexts through which the subtle mind can be accessed: the practice of dissolution (thims rim) that happens within the context of the two stages of tantric practice—the generation (skyed rim) and completion stage (rdogs rim). The other two practices occur within the context of Mahāmudrā and Dzogchen practice.

Within the tantric Vajrayāna tradition, practitioners leverage the natural process that occurs during death. Gross concepts and emotions naturally dissolve into the subtle mind until the subtlest mind, known as "clear light," is experienced due to the force of prior meditation.

Mahāmudrā and Dzogchen practices take a different approach to experiencing clear light. They assert that the subtlest mind, referred to as nature of the mind (sems nyid) or ordinary mind (tha mal gyi sems) in Mahāmudrā, and "intrinsic awareness" (rig pa) can be experienced even while gross concepts and senses are fully operational. Through a lifetime of practice intrinsic awareness naturally dawns at the time of death. The goal of my paper is to elucidate these contemplative practices and explain them from a Buddhist philosophical perspective.

S9.4.1 - Unraveling the science of Tonglen meditation: A psychophysiological study of active compassion in healthcare professionals

**Catherine Andreu ¹, Joana Vidal ¹, Ylenia D'elia ¹, Rosa Baños ^{1,2}, Gonzalo Brito ³,
Philippe Goldin ⁴, Ausias Cebolla Marti ⁵**

¹ University of Valencia, ² Polibienestar Institute, University of Valencia, CIBERobn, ³ Cultivar la Mente, Chile, ⁴ University of California Davis, USA, ⁵ University of València

Summary

The aim of this randomized-controlled study is to determine the psychophysiological outcomes of Tonglen meditation in healthcare professionals who have frequent contact with the suffering of others. The results show that this practice increased self-report compassion and heart-rate variability, as well as affective responses to the suffering of others. Results suggest potential general applicability of this active compassion meditation to populations experiencing empathic distress and burnout.

Details

BACKGROUND AND AIMS: Several compassion-based interventions have been developed to train compassion through the practice of meditation. One of the most commonly practiced compassion meditations is Tonglen, a visualization practice from Tibetan Buddhism that has not been scientifically investigated yet. The aim of this study is to determine the psychophysiological outcomes of Tonglen meditation practice in healthcare professionals, a group who have frequent contact with the suffering of others.

METHODS: A repeated-measures randomized controlled study was carried out. Participants (N=60) were healthcare professionals and were randomly assigned to a Tonglen group or an active control group.

Participants listened to a 15-minute audio (either Tonglen practice or a story for the controls) and completed assessments before and after. The outcome measures consist of (a) electroencephalogram and electrocardiogram; (b) affective responses in the socio-affective video task (SoVT); and (c) self-report questionnaires to measure compassion. Data were analyzed using iMotions v9.0 and SPSS v26.0.

RESULTS: The results suggest that, compared to the control group, Tonglen increased heart-rate variability ($p=0.004$, $\hat{\rho}^2=0.138$) and self-reported compassion state ($p=0.039$, $\hat{\rho}^2=0.072$). Furthermore, in response to the suffering of others in the SoVT, Tonglen meditation increased empathy ($p=0.017$, $\hat{\rho}^2=0.094$), sensitivity to suffering ($p=0.034$, $\hat{\rho}^2=0.075$), tenderness and care ($p=0.006$, $\hat{\rho}^2=0.121$) and willingness to help ($p=0.043$, $\hat{\rho}^2=0.069$).

CONCLUSIONS: This is the first study to show the effectiveness of Tonglen meditation to increase compassion and affective responses to the suffering of others in a population of healthcare professionals. Results suggest potential general applicability of this active compassion meditation to populations experiencing empathic distress and burnout.

ACKNOWLEDGEMENTS AND FUNDING: Special appreciation is expressed to the study participants who made this research possible. This work was supported by a María Zambrano postdoctoral grant from the Ministry of Universities of the Spanish Government to CIA (Reference number: ZA21–056).

S9.4.2 - "Ready to help, no matter what you did": responsibility attribution and compassion in expert Buddhist practitioners

Enrico Fucci¹, Oussama Abdoun^{2,3}, Constanza Baquedano⁴, Antoine Lutz⁵

¹ Institute for Globally Distributed Open Research and Education (IGDORE), ² INSERM - Centre de Recherches en Neurosciences de Lyon, ³ Centre de Recherches en Neurosciences de Lyon, ⁴ Universidad Adolfo Ibañez, ⁵ Lyon Neuroscience Research Center, INSERM, Lyon 1 University

Summary

Buddhist traditions maintain the possibility of cultivating and embodying universal forms of compassion, unconditioned by cost-benefit appraisals. We collected self-report and behavior data from expert Buddhist practitioners and trained novices in an experiment manipulating contextual information to influence moral judgment toward suffering other. Moral attributions and prosocial attitude were dissociated in Buddhist practitioners only, challenging Western psychology's accounts of compassion.

Details

BACKGROUND AND AIMS:

Within western social psychology and neuroscience, compassion is described as being conditioned by cost-benefit appraisals, such as the attribution of responsibility for the causes of suffering. Buddhist traditions maintain the possibility of cultivating and embodying unconditioned and universal forms of

compassion. Whereas a growing body of empirical literature suggests that Buddhist-inspired compassion-based programs foster prosociality and well-being in healthy and clinical populations, there is no evidence that such compassionate disposition toward others can become unconditioned from moral judgment.

METHODS:

We collected and integrated self-report and behavioral data from expert Buddhist practitioners and trained novices using a previously validated within-subject experiment that manipulates contextual information to influence moral judgment toward suffering others and a newly designed approach-avoidance task.

RESULTS:

Context manipulation impacted responsibility and blame attribution in both groups but experts' reported willingness to help was higher and less influenced by context, compared to novices. Partial correlation networks highlighted a negative relationship between blame attribution and willingness to help in novices, but not in expert practitioners. Self-reported willingness to help was correlated to reaction times when approaching suffering stimuli. Approach behavior was modulated by context in novice, but not in experts.

CONCLUSIONS:

In line with Buddhist theories on compassion and contemplative training, this study provides initial evidence of a dissociation between moral attributions and prosocial attitude in expert Buddhist practitioners and challenges established evolutionary accounts of compassion in western social psychology.

ACKNOWLEDGEMENTS AND FUNDING:

This study was supported by a ERC Consolidator Grant to Antoine Lutz and a Mind & Life Institute Varela Award to Enrico Fucci. Constanza Baquedano was partially funded by the Chilean National Fund for Scientific and Technological Development. The authors thank Olga Klimecki for sharing the original set of video stimuli, from which the stimuli used in the study are derived.

S9.4.3 - The quality of practice matters: Exploring the effect of Tonglen meditation practice in daily life

Aida Palacios^{1,2}, **Desirée Colombo**^{3,4}, **Catherine Andreu**⁵, **Ausias Cebolla Marti**⁶, **Rosa Baños**⁷, **Maja Wrzesien**⁸

¹ Instituto del Polibienestar, Universidad de Valencia, ² Instituto Polibienestar, University of Valencia, ³ Department of Basic Psychology, Clinic and Psychobiology, Universitat Jaume I (Spain), ⁴ Universitat Jaume I (Spain), ⁵ University of Valencia, ⁶ University of València, ⁷ Polibienestar Institute, University of Valencia, CIBERobn, ⁸ University of Valencia (Spain)

Summary

Little is known about the role of quality of compassion practice (QCP) in Tonglen meditation. This study used an ecological momentary assessment design to explore the effect of QCP in enhancing meditation benefits (N=90). Results suggest that QCP predicts the positive outcomes in the following day. Furthermore, these associations are moderated by the visual and sensory enhancement of QCP, pointing out the importance of QCP in enhancing compassionate practices.

Details

BACKGROUND AND AIMS: When it comes to compassion meditation, adherence has been recognized as an important factor to maximize the benefits of the practice. However, a recent perspective emphasizes the importance of quality in compassion practice (QCP) to further enhance its benefits. This study aims to ecologically explore the reciprocal association between QCP and the outcomes of Tonglen meditation, as well as to examine how the enhancement of different facets of QCP (sensory, or visual) moderates these relationships.

METHODS: Ninety subjects (N=90) were randomly assigned to practice Tonglen meditation in the laboratory setting in three different groups: (a) fostering mental imagery abilities through Virtual Reality (VR), (b) fostering the sensory experience with sensory priming (SP), and (c) control group (only Tonglen meditation). After the laboratory session, the participants were invited to practice Tonglen meditation daily for 14 days. Using an experience sampling method, we collected daily measures of sensory and visual QCP, positive and negative affect, and compassion and criticism toward others.

RESULTS: Results revealed that increased visual and sensory QCP on a given practice day predicted enhanced positive affect and compassion, as well as decreased negative affect and criticism, on the following day. These associations were moderated by the experimental groups. Specifically, QCP predicted subsequent higher levels of positive affect only in VR and SP groups. Furthermore, QCP was associated with lower negative affect and criticism in the VR group.

CONCLUSIONS: While adherence has traditionally been emphasized in meditation practice, these findings suggest that QCP may be crucial for enhancing its benefits. This study opens up new research perspectives, pointing to the importance of emphasizing the QCP to enhance its positive impact on mental health and emotional well-being.

ACKNOWLEDGEMENTS AND FUNDING: Beatriz Galindo grant by the Spanish Science and Education Ministry (MW: BEAGAL18/00111), and Valencian Council grant (MW: CISEJI/2022/46).

S9.4.4 - Challenges of Measuring and Conceptualizing Self-Compassion Among Tibetan Population

Tenzin Sonam¹, Shawn Chen¹, Tyrallynn Frazier¹, Tsondue Samphel¹

¹ Emory University

Summary

Self-Compassion as a construct has been conceptualized and measured largely in the western context. In this study, we translated the widely used self-compassion scale into Tibetan and administered it to 723 adult Tibetans including monastics and laity. The six dimensions model of self-compassion by Neff (2016) could not be replicated for Tibetans. We discuss the challenges of using global measures of self-compassion, and ways to create a more culturally appropriate measure of Self-compassion.

Details

To validate the original 26-item Self-Compassion Scale (SCS-O) by Neff (Neff, 2016) in Tibetan, we translated the items, performed cognitive interviews, and delivered the translated SCS-O survey to 723 adult Tibetans including monastics and laity. We added 10 new items to SCS-O which we hypothesize would be a more valid measure of the six dimensions described in the original self-compassion scale. These items were developed based on how self-compassion is conceptualized in the Tibetan population and previous studies that show either overlap or negative correlation of items of opposite dimensions (Zeng et al., 2016). In our initial analysis using CFA, we could not replicate the proposed six dimensions using the original 26-items ($\chi^2= 589.700^*$ df=284, RMSEA=0.053, CFI=0.874, TLI = 0.855, SRMR=0.063). Subsequently, we ran EFA on both the 26-item and the 36-item, which generated a six factor model as best fit for our dataset but the factors did not correspond to the original six dimensions. The items in the positive and negative dimensions are cross loaded, for example, the self-judgment, overidentification, and isolation items are cross loaded over each other in the 6-factor model. We found a better fit 6-factor model after removing some of the problematic items that are below the loading threshold or are cross loading. Interestingly, half of the new items we generated loads significantly better in the new six-factor model than the original items. Further qualitative analysis of the problematic items revealed that the negative dimension items are being interpreted positively among the Tibetan population and we discuss how these interpretations are culturally embedded in this study. Further, we will discuss the challenges of measuring and conceptualization of self-compassion among the Tibetan population and how we might generate a culturally appropriate self-compassion measurement for such groups.

S9.4.5 - We are in This Together: Ascetic Practice and Cultivating Compassion in Nyungne Retreat

Renee Ford ¹

¹ Aarhus University

Summary

This paper examines ascetic practices in a contemplative practice that focuses on cultivating compassion. I suggest that these ascetic practices are an integral component to embodying and enacting compassion in and after the retreat. My research is based upon ethnographic fieldwork at Tekcholing nunnery in Nepal. My objective in this conversation is to understand how difficult practices may link stressed or pain with cultivating a positive effect of compassion for all beings.

Details

- **BACKGROUND AND AIMS:** There is a Buddhist meditation retreat, called Nyungne, that incorporates ascetic practices of prostrations, fasting, silence in cultivating compassion for all living beings. These retreats are completed in community settings and also as individual practices for two and a half days at a time. I derived this inquiry while conducting ethnographic research in the Kathmandu valley during my fieldwork throughout 2023, which focused on individual experiences and cultivations of “heart openings,” which include but not limited to compassion, love, and expressions of joy. During my time in Nepal, I spent several days participating in this nyungne retreat. Several retreat participants, resident nuns and lay people, shared their experiences with me. I wish to put these experiences into conversation with a cursory examination of ascetic conduct and cultivating compassion throughout the retreat to understand the impact this practice has on the participants.
- **METHODS:** Ethnography: participant observation, interviews; Affect theory; pain and love
- **RESULTS:** Approaching this study from an ethnographic perspective along with affect theory provides first-hand accounts of integrating and embodying difficult activities with a community that is also cultivating an intersubjective experience of compassion that is to be cultivated and stabilized in these retreats.
- **CONCLUSIONS:** Primarily, my research elucidates how community is strengthened and demonstrates care as activities that cultivate compassion that align with ascetic practices.
- **ACKNOWLEDGEMENTS AND FUNDING:** ERC funded "heart openings project" Aarhus University, PI Christian Suhr

P1-2 - Contemplative Research Methods: Beyond Research, Reach, and Application

Aizaiah Yong¹

¹ Claremont School of Theology

Summary

The presenters are pioneers in developing innovative contemplative research methods from the fields of Indigenous contemplative sciences, compassion-based spirituality, and the medical sciences. They will share an array of visions, insights, and challenges as they advance how we approach, promote, and expand research in contemplative studies.

Details

This interdisciplinary panel is a unique opportunity to hear from those at the frontiers of designing research methodologies in spirituality and contemplative studies. It grows from contributors in the forthcoming Routledge International Handbook of Research Methods in Spirituality & Contemplative Studies (2024) co edited by Kerri Clough and Bernadette Flanagan and follows on from the very successful previous publication, The Routledge International Handbook of Spirituality in Society and the Professions (tinyurl.com/yar4xze8).

The presenters are pioneers in developing innovative contemplative research methods from the fields of Indigenous contemplative sciences, compassion-based spirituality, and the medical sciences. They will share an array of visions, insights, and challenges as they advance how we approach, promote, and expand research in contemplative studies. The panel surely promises to ignite original discussion and strengthen the current pathways of contemplative research across Peoples, fields, and settings.

Kerri Clough will speak on contemplative research methods within medical professions.

Yuria Celidwen will speak on Indigenous contemplative practices that inform new ways of contemplative method.

Aizaiah Yong will speak on the importance of integrating a contemplative practice of compassion as key and integral to the entire research process across disciplines.

P1-3 - Could mindfulness-based programmes improve work performance?

Maris Vainre¹, Tim Dalgleish¹, Please Refer To The Abstract For The Remaining Authors²

¹ University of Cambridge, ² and their affiliations

Summary

Mindfulness-based programmes (MBPs) are suggested to improve work performance despite scarcity of evidence. In pre-registered systematic review and meta-analysis, we synthesised randomised controlled trials (RCTs) assessing the impact of MBPs on adults' academic and work performance. Then, in pre-registered feasibility RCT, 242 were randomised to 4 weeks of either online light physical exercise MBP. Multiple measures evaluated potential mediators of intervention effects on work performance.

Details

BACKGROUND AND AIMS: Mindfulness-based programmes (MBPs) are suggested to improve work performance despite scarcity of evidence.

METHODS: We conducted two studies. In the systematic review and meta-analysis, we synthesised randomised controlled trials (RCTs) assessing the impact of MBPs on adults' academic and work performance. The pre-registered primary outcome was task performance. Secondary outcomes were contextual performance, adaptive performance, and counter-productive work behaviours. We updated the search in May 2022.

In the feasibility RCT, 242 employees were randomised to four weeks of either light physical exercise or MBP online. The primary outcome was work performance (WP) at post-intervention. Multiple measures evaluated potential mediators of intervention effects. The trial was pre-registered (NCT04631302) and its protocol published.

RESULTS: The data analysis of the meta-analysis is on-going at the time of submission. We will present the updated results. In the RCT, 122 employees were randomised to mindfulness and 120 to light exercise. Courses had high acceptability and typical retention rates. MBP, compared to the control, offered negligible benefits for WP (PostInt ($d=0.06$, 95% CI $-0.19-0.32$); 12wFUP ($d=0.02$, 95% CI $-0.30-0.26$)).

AUTHORS: Maris Vainre¹, Tim Dalgleish^{1,2}, Tia Bendriss-Otiko³, Amelia Kirkpatrick⁴, Nana Kosugiyama⁵, Fabiana Mariscotti⁶, Candelaria Martinez-Sosa³, Athena Sideri⁷, Sebastian SÅ¶nksen⁵, Tim Wood⁵, Peter Watson¹, Christina Haag⁸, Quentin Dercon¹, Julieta Galante^{2,5}, Caitlin Hitchcock^{1,4}

P1-4 - Cultivating Identity Development and Mindfulness: Exploring Embodied Cognition at Historically Black Colleges and Universities

Marybeth Gasman¹

¹ Rutgers University

Summary

I will explore how contemplative practices, such as mindfulness meditation and embodied awareness exercises, contribute to the holistic development and well-being of students of African descent at Historically Black Colleges and Universities (HBCUs).

Details

Background and Aims: Through interviews with HBCU students, I elucidate the ways mindfulness practices foster resilience, promote cultural pride, and enhance interpersonal understanding within HBCUs (Conrad & Gasman, 2015; Leitan & Chaffey, 2014; Shapiro, 2019).

Methods: I conducted qualitative interviews with 30 individuals, specifically the use of mindfulness, embodied awareness exercises, holistic development, and identity development (Gasman & Esters, 2024; Morton, 2021; Williams et al., 2019). Research questions included: How do HBCU students perceive and experience mindfulness practices within their educational environment? What are the perceived benefits of mindfulness among HBCU students? How do mindfulness practices influence the exploration of cultural identity among students at HBCUs?

Results

1. Mindfulness practices enhance students' awareness of embodied experiences, fostering a deeper understanding of self and others within their social environments.
2. Mindfulness practices facilitate self-reflection and self-acceptance, leading to a more grounded sense of identity and belonging within HBCUs.
3. Mindfulness practices equip students with coping mechanisms to manage academic pressures and racial microaggressions, commonly experienced in college.
4. Mindfulness practices cultivate a greater sense of empathy and connection with peers and faculty, fostering a supportive culture and solidarity within HBCUs.

Conclusion: I underscore the impact of contemplative practices on identity development, well-being, and intersubjective understanding within the HBCU context, and offer insights into how HBCUs can nurture students' holistic growth and empower them to thrive in uncertain times. No funding.

P1-5 - A randomized clinical trial of Mindfulness-Based Relapse Prevention (MBRP) for opioid use disorder (OUD): Interpreting drug-use cessation and Environmental Reward from an Embodied Cognition Perspective

Michael Gawrysiak¹, Stevie Grasseti¹, Ebony White², Alice Laughlin¹, Michelle Yoong¹, Sebastian Ehmann¹, Sam Wayne¹, Hortencia Correa¹, Michael Szczechowski¹, John Cuzzupe¹

¹ West Chester University of Pennsylvania, ² Drexel University

Summary

As the US opioid epidemic continues to wreak devastating consequences, continued efforts must focus on understanding how novel treatments ameliorate drug misuse. This presentation will discuss data collected from an ongoing clinical trial investigating Mindfulness-Based Relapse Prevention (MBRP) as an intervention intended to reduce drug-use and improve life meaning through contemplative meditation practices. Study results will be interpreted from an embodied cognition perspective.

Details

BACKGROUND: The US opioid epidemic is a critical crisis marked by innumerable overdose deaths. Addiction, conceptualized by embodied cognition models, is a reciprocal and learned process of cognitive narrowing between the individual and their environment, leading to diminished cognitive agency and environmental reward. Mindfulness-Based Relapse Prevention (MBRP) is an evidenced-based treatment that provides training in coping skills and meditation to increase recovery and wellness. Presented here are data from an ongoing clinical trial that tests if MBRP (vs Treatment-As-Usual; TAU) increases environmental reward and reduces drug-use and craving.

METHODS: Participants carried an OUD diagnosis and were recruited from and received treatment during a 60-day residential treatment program. Those randomized to MBRP ($n=43$) participated in 2x/week 90-min group meetings focused on meditation training and relapse prevention. TAU participants ($n=38$) received group therapy exposure equal to MBRP. Assessments were collected at pre-randomization, prior to discharge, and 3 months (1x/month) post residential discharge and included well-validated measures of drug-use and environmental reward. Group comparisons evaluated differences between groups across all assessment timepoints.

RESULTS: The MBRP cohort (vs TAU) evidenced improved outcomes on drug-use cessation, craving, and perceived availability of (non-drug) environmental rewards.

CONCLUSIONS: Results suggest that MBRP and contemplative practices promote drug-use cessation and may foster change in embodied cognition by promoting a reciprocal opening to environmental rewards.

ACKNOWLEDGEMENTS AND FUNDING: Research reported here was supported by NIH-NIDA (Award R15DA050102).

P1-6 - Embracing Mindfulness-Based Professional Development in Early Childhood Education

Drew Giles^{1,2}

¹ San Francisco Unified School District, ² Oakland Unified School District

Summary

This presentation addresses the pressing need for education organizations to support early childhood educators in managing work-related stress. This study employs a video documentary methodology to better understand how early childhood educators experienced a mindfulness-based professional development (MBPD) program specifically designed for ECE staff. Learn from the voices of educators themselves about what leaders should understand about MBPD in ECE settings.

Details

BACKGROUND AND AIMS: This doctoral dissertation research study aimed to describe, critically evaluate, and better understand how early educators experience mindfulness-based professional development designed for early childhood educators. It explored beliefs about early childhood educators' knowledge expectations for education leaders concerning mindfulness-based professional development in early childhood education settings.

METHODS: Qualitative exploratory design, specifically video documentary methodology

RESULTS: The following themes emerged in the study: (1) ongoing coaching support is critical in participants' perceptions of effective professional development factors, (2) increased awareness of using one's breath as a self-regulation strategy, and (3) MBPD opportunities should be integrated into job-embedded professional development opportunities.

CONCLUSIONS: By prioritizing mindfulness-based professional development, educators can create more supportive, compassionate, and effective learning environments for young children. This study reinforced the importance of integrating ongoing coaching connected to professional development opportunities and the need to integrate opportunities for cohorts to stay connected post-professional development series by offering boosters or PLCs that cultivate self-development, self-awareness, self-regulation, and social relationships. Both experts and staff participants identified the need to integrate mindfulness into the classroom curriculum, which can be done at little or no additional cost to schools. Additionally, staff and expert participants noted the importance of leaders integrating mindfulness into their leadership style.

ACKNOWLEDGEMENTS AND FUNDING: This research received no outside funding.

P1-7 - Bildungsroman and contemplative practice: an analysis of Pablo d'Ors novels

Alonso Varo Varo¹

¹ Christopher Newport University

Summary

I will analyze the narrative work of Spanish writer Pablo d'Ors. D'Ors is currently one of the main voices in contemplative literature. In my study, I argue that d'Ors responds to today's extended dystopic and apocalyptic literature with his own luminous and optimistic approach and points to contemplative practice as a way to transform our disoriented and itinerant existence into a journey with a horizon of certainty.

Details

- Alonso Varo Varo, Assistant Professor of Spanish, Department of Modern and Classical Languages and Literatures, Christopher Newport University, USA
- Title: *Bildungsroman and contemplative practice: an analysis of Pablo d'Ors novels*

P1-8 - Towards an Active Inference Account of Deep Meditative Deconstruction

Shawn Prest¹, **Kevin Berryman**²

¹ Monash University, ² Monash Centre for Consciousness and Contemplative Studies,
Monash University

Summary

We illustrate how deep meditative deconstruction, in particular the Buddhist defabrication process and its phenomenology, can be understood in terms of hierarchical computational mechanisms under the active inference framework. In the process we show how states such as the jhānas and the Buddhist notions of equanimity and meditative stillness may be interpreted under the framework.

Details

TITLE: Towards an Active Inference Account of Deep Meditative Deconstruction

AUTHORS: Shawn Prest¹, Kevin Berryman¹

AFFILIATIONS:

1. Monash Centre for Consciousness and Contemplative Studies, Monash University

BACKGROUND AND AIMS:

Deep meditative experience has long been associated with conceptual attenuation and a pacification of the tendency to cling to phenomena. However, the mechanisms underlying the process are not well understood. We aim to illustrate how deep meditative deconstruction, in particular the Buddhist defabrication process and its phenomenology, can be understood in terms of hierarchical computational mechanisms under the active inference framework.

METHODS: Interdisciplinary: phenomenological investigation, conceptual analysis, theoretical interpretation.

RESULTS: An account of plausible computational mechanisms underlying deep meditative deconstruction.

CONCLUSIONS: Buddhist defabrication as a deconstructive process drives inference ever lower in an agent's hierarchical generative model by the repeated release of mental tensing associated with clinging and aversion. This release corresponds to a hierarchical level-specific reduction in belief precision, permitting the interpretation of Buddhist notions such as equanimity and meditative stillness. Deconstruction concludes with a cessation of phenomenal experience. This work represents a step towards 'translating' Buddhist meditation-based phenomenology into computational neurophenomenology.

ACKNOWLEDGEMENTS AND FUNDING: We thank Jakob Hohwy for his thorough comments and suggestions throughout this research. K.B. was supported by an Australian Government Research Training Program (RTP) Scholarship.

P1-9 - Transformation of meaning-making in Chan meditation: perspectives from semiotics

Elli Marie Tragel¹

¹ University of Tartu

Summary

Against the background of semiotics and cultural psychology, lived experiences of Buddhist Chan retreat participants (in Estonia) are analyzed. The aim is to investigate what could meditation as a method of contemplative research reveal about human meaning-making in general. It is found that the attention to the demolishing rather than the fixating functions of signs presents semiotic selves with a flexibility of meaning-making, which is crucial for reducing "semiotic pollution" in the mind.

Details

BACKGROUND AND AIMS: Chan Buddhist methods are dedicated to taking a break from signifying. Western semiotics tends to overlook the theoretical relevance of signless states, perhaps because meditation is mostly studied as a private commodity, ignoring its communal aspects. Formal Chan

practice creates “laboratory” conditions for observing psyche, yet making sense of experiences is not isolated from modeling systems of the sociocultural world: ordinary and non-ordinary states arise in connection to each other. Based in semiotics and cultural psychology, the aim here is twofold: To emphasize the theoretical value of exemption from meaning as a psychotechnique that humans deploy to transform attachment into progressive detachment; and to propose a semiotic framework for analyzing Chan practice. What can meditation as a method of contemplative research reveal about human meaning-making (semiosis) in general?

METHODS: The conceptual kaleidoscope lends support from Chan retreat participants’ first-person experiences (Estonia, 2022–2023). Excerpts from notes and interviews are analyzed with a focus on transformations of semiosis; meditators are fellow researchers rather than subjects.

CONCLUSIONS: Examples highlight practitioners’ subtle meta-awareness of meaning-making. Analysis confirms that in addition to getting to know semiosis in oneself, observing phenomena arising-passing in the mind can evoke awareness of how such processes occur in others. It is also found that the attention to the demolishing rather than fixating functions of signs presents one with constructive doubt and, consequently, a flexibility of meaning-making, which is needed for reducing semiotic pollution in the mind.

P1-10 - Empathy Bodyssence: Temporal Dynamics of Sensorimotor and Physiological Responses and the Subjective Experience in Synchrony with the Other's Suffering

David Martínez-Pernía¹, Alejandro Troncoso², Kevin Blanco², Antonia Zepeda², Anaís Aluicio², Álvaro Rivera-Rei²

¹ Center for Social and Cognitive Neuroscience (CSCN), School of Psychology, Universidad,
² Center for Social and Cognitive Neuroscience (CSCN), School of Psychology, Universidad Adolfo Ibáñez

Summary

Our study explores the concept of "bodyssence," through an enactive approach. Our goal is to analyze the temporal dynamics, physiological, and phenomenological elements of the empathy for pain’s experience, using both third-person measurements and first-person descriptions. Bodyssence is composed by phases: Forefeel, Fullfeel, and Reliefeel, highlighting a complex interplay between the embodied agent and the other. This mixed-method study offers new insights into the embodied nature of empathy

Details

David Martínez-Pernía, Alejandro Troncoso, David Martínez-Pernía, Kevin Blanco, Alvaro Rivera

BACKGROUND: Previous evidence suggests that observing individuals in painful situations elicits whole bodily responses. Nevertheless, the temporal structure of bodily responses and its association with the comprehension of subjective experiences remain unclear.

OBJECTIVE: Building upon the enactive approach, our study introduces and examines "bodysence," a neologism formed from "body" and "essence". Our goal is to analyze the temporal dynamics, physiological, and phenomenological elements of the empathy for pain's experience.

METHODS: Using the empirical 5E approach. Thirty-five participants watched videos of sportspersons experiencing physical accidents during extreme sports practice, as well as neutral videos, while standing on a force platform and wearing electrodermal and heart electrodes. Subsequently, micro-phenomenological interviews were conducted.

RESULTS: Bodysence is composed of three distinct temporal dynamics. Forefeel, where participants intuitively sense imminent accidents in sports, associated with minimal postural adjustments; Fullfeel, the peak of empathy marked by intense emotions and enhanced postural movement, yet with a slowing heart rate; and Reliefeel, a phase of emotional and physical calming, with reduced heart rate and stabilized posture, all while electrodermal activity stays elevated across the stages.

CONCLUSION: The integration of both first and third-person perspectives through an empirical 5E approach reveals the intricate nature of bodysence, offering an innovative approach to understanding the dynamic nature of empathy.

FUNDING: DMP is partially supported by ANID/FONDECYT 11190507 and 1241087.

P1-11 - "Contemplative Practices: A Pathway to Spiritual Identity and Transformation"

Rebecca Tavangar ¹

¹ None

Summary

This presentation examines the transformative role of contemplative practices in developing spiritual identity and fostering holistic wellness. Highlighting Bahai principles of unity and human nobility, the study reveals how contemplative practices serve as a powerful tool for existential understanding and positive life meaning.

Details

BACKGROUND AND AIMS: This study investigates the integration of Bahá'í contemplative practices with spiritual identity to enhance wellness. It aims to explore how these practices facilitate existential understanding and positive life meaning, grounded in the Bahá'í principles of unity, service, and human nobility.

METHODS: A qualitative analysis synthesizes Bahá'í writings, psychology, and spirituality research. It examines spiritual identity from a Bahá'í perspective, focusing on contemplative practices like prayer and meditation, and their impact on well-being.

RESULTS: Findings demonstrate that Bahá'í contemplative practices contribute to spiritual identity development, improving psychological resilience and physiological health. The emphasis on service and unity in the Bahá'í Faith enriches this identity, fostering interconnectedness and purpose.

CONCLUSIONS: Bahá'í-inspired spiritual orientation offers a unique pathway to holistic health, suggesting that integrating spiritual identity with wellness practices can lead to transformative personal growth and well-being.

ACKNOWLEDGEMENTS AND FUNDING: Acknowledges the guidance of Bahá'í writings and scholars. No specific funding was received for this research.

P1-12 - Introducing Contemplative Practices into Leadership Studies: An Assessment

Catherine Gidney¹

¹ St. Thomas University

Summary

Leadership studies is quickly becoming integrated into liberal arts undergraduate programs in North America. This paper interrogates both the key concepts within two bestselling leadership studies texts and the ways in which contemplative practices are employed. It concludes that educators should be wary as even those texts informed by contemplative practices seem to promote individualized approaches that minimize the political and social justice element of leadership work.

Details

BACKGROUND AND AIMS

Leadership studies is quickly becoming integrated into, or grafted onto, liberal arts undergraduate programs in North America as a means to broaden the liberal arts curriculum, attract students, and highlight the relevance of the liberal arts. At the same time, contemplative practices have been finding their way into executive leadership programs as a means of creating more humane, ethical, and efficient, leaders. This paper interrogates both the primary emphases within key leadership studies texts and the ways in which contemplative practices are employed.

METHODS

For this project I selected two best-selling textbooks used in North America (J. Kouzes and B. Posner, *The Student Leadership Challenge*, and, P. Northouse, *Introduction to Leadership*) and used discourse analysis to identify the key leadership concepts conveyed and the contemplative practices suggested.

RESULTS

First, while these core texts are informed by contemplative studies, their focus on students' own character traits, skills, and values, is an *individualistic* approach that overlooks models of leadership that are consensual, community-based, or cooperative. Second, the contemplative practices highlighted, such as inner reflection, deep listening, and social connection, generally focus on the utilitarian goal of creating more effective leaders. Third, leadership texts provide little guidance on how to teach contemplative practices in the classroom.

CONCLUSIONS: Educators need to be cautious as mainstream leadership texts, even if they use contemplative approaches, may promote narrow (i.e. individualized) approaches to leadership that minimize the political and social justice element of leadership work.

FUNDING: Financial support is provided through SSHRC, Canada.

P1-13 - From Suffering to Flourishing: Toward a Synthesis of Mindfulness Practice and Positive Psychology in Tertiary Education

Jochen Reb¹, Hiro Saito², Eva Peters¹, William Tov¹

¹ Singapore Management University, ² University of Tokyo

Summary

This research explores the effects of a semester-long mindfulness-based holistic education course on undergraduate students' psychological functioning, including socio-emotional skills and flourishing in a Singaporean business school. The course was adapted from the Mindfulness-Based Strategic Awareness Training (Young, 2016), integrating mindfulness with positive psychology to promote positive adult development.

Details

BACKGROUND & AIMS: Higher education globally must address the significant increase in student stress and mental health concerns and, in response to recent technological advancements, needs to shift from knowledge-based, reproduction-focused to generative, holistic learning. This research explores how integrating mindfulness and positive psychology approaches in tertiary education can address these challenges by advancing socio-emotional education and providing students with skills to cultivate sustainable well-being. Specifically, we assess the effects of a semester-long mindfulness-based holistic education (MBHE) course for undergraduate students in a Singaporean business school.

METHODS: We translated the "Mindfulness-based Strategic Awareness Training" for working professionals into a 12-week undergraduate course and conducted a quasi-experimental field intervention with an active control group. A sample of 103 business school (64%), social science (23%),

IT (4%), economics (4%), and exchange (6%) students (mean age: 23, SD= 1.73) self-selected into the MBHE course (N= 31), or a decision-making class (N=71) taught by the same instructor. Data was collected in 3 online surveys before, immediately after, and about 5 months after course completion.

RESULTS: MBHE course participants reported significant increases in self-awareness, self-regulation, flourishing, resilience, and sleep quality, and significant decreases in stress and worry compared to before the program, and importantly, compared to the active control group.

CONCLUSIONS: This research provides quantitative evidence for the effectiveness of an MBHE program in tertiary education in fostering students' personal growth and well-being. It further contributes to understanding factors linking MBHE to well-being and functioning. Methodologically, the project adds to mindfulness research in education settings by introducing a comprehensive intervention approach that merges mindfulness with positive psychology to promote positive adult development.

ACKNOWLEDGEMENTS & FUNDING: MOE Tertiary Education Research Fund, Fund Code: MSS22B007; Approval No.:22-LKCSB-SMU-028

P1-14 - Pocket Gurus: What meditation app engagement can (and cannot) tell us about building a meditation habit

Julia Adams ¹, Nicholas Van Dam ¹, Jonathan Davies ², Julieta Galante ¹

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Summary

Meditation apps are an extremely accessible form of meditation resource and are downloaded by millions of people annually. However, these apps see large, early drop-offs in engagement estimated at 80% of users in the first 7 days. Limited research has focused on factors that drive continued engagement or discontinuation of use. We surveyed meditation app users to investigate what factors were associated with higher engagement in these apps.

Details

- **BACKGROUND AND AIMS:** Meditation apps are an extremely accessible form of meditation resource and are downloaded by millions of people annually. However, these apps see large, early drop-offs in engagement estimated at 80% of users in the first 7 days. Limited research has focused on factors that drive continued engagement and factors that may contribute to discontinuation of use. In studies that do report on reasons for drop out, findings rely on a single item.
- **METHODS:** We surveyed meditation app users and gathered information regarding the association between engagement and factors including demographics, app features, user

characteristics and motivations to practice. Engagement was quantified as total minutes of use over during on having the app.

- **RESULTS:** Headspace use, being male, conscientiousness, and expectations of general improvement were associated with higher engagement. Calm use, quality of Life, neuroticism, expectations for sleep and perceptions of app engagement were associated with lower engagement. In a preliminary regression model, only sex was significantly related to level of engagement.
- **CONCLUSIONS:** Some demographics, mental health factors, app features and attitudes may explain app engagement levels, but these relationships may be non-linear and further explored in longitudinal work.
- **ACKNOWLEDGEMENTS AND FUNDING:** Study conducted by Julia Adams, Nicholas Van Dam, Julieta Galante and Jonathan Davies. Contemplative Studies Centre, funded privately operating under the University of Melbourne.

P1-15 - Experimental Phenomenological Study of Pain Empathy in Patients with Parkinson's Disease.

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Summary

This research seeks to understand empathy toward pain in Parkinson's patients by exploring the bodily, affective, cognitive, and temporal dimensions of the experience. Using experimental phenomenology, a pain empathy paradigm was applied to 46 Parkinson's patients. We identified four experiential structures that provide a holistic understanding of how individuals with Parkinson's empathize with the pain of others, contributing significantly to practical theoretical knowledge of empathy.

Details

BACKGROUND: Studies on Parkinson's disease reveal a loss of empathic capacities through behavioral and neurological measures. Despite advancements in understanding neurobiological correlates, there exists a knowledge gap regarding the role of subjective, bodily, and affective experiences in empathy towards others' suffering.

OBJETIVES: To comprehensively understand empathy for pain in Parkinson's patients, exploring bodily, affective, cognitive, and temporal dimensions through experimental phenomenological methodology.

METHODOLOGY: Utilizing experimental phenomenological methodology, forty-six Parkinson's patients watched videos of athletes experiencing falls during extreme sports. After exposure to emotional stimuli, phenomenological interviews were conducted and analyzed by three trained analysts.

RESULTS: Five central phenomenological dimensions were identified: bodily resonance, motivation, ownership, internal dialogue, and temporality. These dimensions formed four experiential structures in empathy towards others: other-centered empathy, self-centered empathy, empathy with bodily transparency, and empathy absence.

CONCLUSIONS: These structures detail how individuals with Parkinson's experience empathy for pain, significantly contributing to theoretical and practical understanding in this clinical population.

FUNDING: Center for Social and Cognitive Neuroscience, Adolfo Ibáñez University.

P1-16 - Mindfulness with 5 to 12 years old living in a context of vulnerability. A seven-year experience and research

Annie Devault¹, Michèle Corbeil²

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Summary

This presentation discusses the result of 7 years of experiment of a mindfulness-based program offered to a total of 42 children. The aims were to report on children's and parent's experiences of the program and measure the impact of mindfulness on anxiety. The interviews conducted with children and parents show that most children report that they benefited from the program, especially regarding emotional regulation, they also report continuing to practice at home with parents.

Details

Background. The Millenium Cohort Study (2023) found that socioemotional difficulties were attributable to both poverty and poor mental health of the parents. This confirms how poverty plays an important role on the mental health of children (Pollak & Wolfe, 2020). Anxiety affects up to 33% of the population of children and teenagers (Semple et al, 2010). For these reasons it is important to support children dealing with anxious thoughts and emotions. Coholic and Eys (2016) showed that poor children living in chronic stress can benefit from mindfulness by learning self-regulation. The purpose of the presentation is to discuss the result of seven years of experiment of a mindfulness-based program offered to 42 children.

Methods. Nine children and nine parents participated in the qualitative study and the *Beck Youth Inventories* was filled before and after the program to measure anxiety in children. The aims of this study were to report on children's experiences of the program; See if the mindfulness exercises were

integrated at home; Describe the participation of the parents and measure the impact of mindfulness on anxiety.

Results. There was no significant difference between the anxiety level before and after the program. However, the qualitative interviews (n=18) show that most children report benefits from the program, especially with emotional regulation, they report practicing at home. This was corroborated by parents.

Conclusions. The poor cognitive capacity of the participants may explain the absence of significant quantitative results. The global experiment reveals that the relationship between the mindfulness teacher and the children is very important.

Funding. This research was funded by the Social sciences and humanities research council of Canada.

P1-17 - Unveiling the pathways: The effects of mindfulness and recreational psychedelic experiences on meaning in life, pro-sociality, well-being, and non-dual awareness.

Sebastian Ehmann ¹, Michael Gawrysiak ¹

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Summary

Contemplative practices and psychedelics share similar phenomenology and mechanisms in enhancing well-being. This cross-sectional study explores the combined effects of psychedelic-induced ego-dissolution and mindfulness on well-being, testing the mediating roles of compassion, meaning in life, and non-dual awareness (NDA). Results suggest that ego-dissolution enhances well-being via NDA and meaning, while mindfulness directly boosts well-being, with compassion and meaning as partial mediators.

Details

BACKGROUND: Contemplative practices and psychedelics evidence significant benefits for human flourishing. Both practices share neuroscientific (i.e., cognitive flexibility), psychological (i.e., insight), and phenomenological (i.e., self-loss) overlap, but the combined effects remain underexplored. This study aimed to address this gap by examining the influence of ego-dissolution and mindfulness on subjective well-being while testing the potential mediating role of compassion, meaning in life, and non-dual awareness (NDA; awareness without the typical subject-object dichotomy). The initial hypothesis posited that selfless experiences and mindfulness cultivate non-dual embodied cognition, leading to increased compassion and meaning and, in turn, individual well-being.

METHODS: A cross-sectional online survey was conducted to collect assessment data from 303 subjects, predominantly undergraduate psychology students. Assessments included well-validated measures of

ego-dissolution, mindfulness, NDA, compassion, meaning in life, and subjective well-being. Path analysis assessed the initial model's fit, then a revised model was developed and mediation analysis with bootstrapping was conducted to investigate indirect effects.

RESULTS: A revised model demonstrated satisfactory fit, indicating that 1) ego-dissolution predicts well-being through NDA and meaning, 2) mindfulness directly improves well-being, and 3) compassion and meaning partially mediate mindfulness's effects on well-being.

CONCLUSIONS: Results suggest that psychedelics and contemplative practices may foster a change in embodied cognition by increasing compassion, meaning, and NDA.

ACKNOWLEDGEMENTS AND FUNDING: Research was supported by a WCUPA CSM Graduate Student Research Award.

P1-18 - Online Mindfulness in the Military: A Korean Pilot Study

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Summary

This study evaluates an online Mindfulness-Based Intervention (MBI) for Korean military students, addressing the gap in online MBIs research. In 16 weeks, it offered bi-weekly videos and meditation journaling, covering mindfulness practices. Results from 16 participants showed enhanced emotional awareness, resilience, and sleep quality, indicating the effectiveness of MBIs in military stress management and the need for further research.

Details

BACKGROUND AND AIMS:

Online mindfulness-based interventions (MBIs) have expanded into military settings, especially during the pandemic, offering a new approach to stress management. This study evaluates the first online MBI course for Korean military university students, addressing the gap in research on online MBIs within Korea's military context.

METHODS:

Over a 16-week semester, students engaged with weekly 20-minute mindfulness videos and kept meditation journals. The curriculum covered practices like body scans and breath awareness, enhanced with student stories, professor feedback, and animated meditations.

RESULTS:

Analysis from 16 students' journals revealed themes of improved emotional awareness, resilience, and sleep quality, suggesting online MBIs significantly benefit well-being in high-stress military environments.

CONCLUSIONS:

This study shows online MBIs' potential to enhance stress management and health in the military, highlighting the need for further exploration in military education.

ACKNOWLEDGEMENTS AND FUNDING:

Thanks to the participants and the KAIST Education Strategic Planning Team for their support and funding, enabling this research.

P1-20 - Fostering Mental Health, Embodied Cognition, and Intersubjectivity in LGBTQIA+ Youth Amid Current Anti-LGBTQIA+ Political Attacks: A Pilot Study of Tuned In! - an Affirmative Mindfulness-Based Intervention

Gio Iacono¹, Leah Holle², Emily Loveland², Spencer Evans², Cindy Pan³, Tyler Haggerty²

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Summary

In the current anti-LGBTQIA+ political climate, sexual and gender minority youth (SGMY) experience significant mental health disparities. This interdisciplinary study presents Tuned In!, an LGBTQIA+ affirmative mindfulness intervention co-created with SGMY. Tuned In! significantly improved mental health outcomes, mindfulness, and self-compassion among SGMY (n=56), and fostered intersubjective spaces of community amidst socio-political upheaval, contributing valuable insights for SGMY supports during uncertain times.

Details

BACKGROUND AND AIMS: Amidst the current anti-LGBTQIA+ political climate, sexual and gender minority youth (SGMY) face significant mental health disparities and are underserved in clinical practice and research. While political action is imperative, there is a pressing need for culturally-responsive supports for SGMY. This innovative interdisciplinary community-based participatory action research study developed/evaluated Tuned In!, an LGBTQIA+ affirmative mindfulness-based intervention (MBI)

collaboratively with SGMY as co-researchers. Tuned In! utilizes elements of *MBSR-T* (for youth) and *Mindful Self-Compassion for Teens*, and teaches SGMY contemplative practices within a diverse LGBTQIA+ affirming context, promoting mental health, embodied cognition, and intersubjectivity.

METHODS: A pre/post-test design evaluated mental health outcomes among 56 diverse SGMY in the U.S. Tuned In! consists of eight weekly sessions facilitated by trained clinicians (e.g., psychologists, clinical social workers). Self-report measures (e.g., mindfulness, depression, self-compassion, etc.) were completed (baseline/post-intervention/6-months). Focus groups supported understanding feasibility and acceptability.

RESULTS: High engagement/retention, and significant improvements in mindfulness, self-compassion, depression, anxiety, sexual self-efficacy, and psychological distress were found at post-testing, and maintained at 6-month follow-up. Thematic analysis indicated high satisfaction/acceptability, and themes of interconnectedness, self-advocacy, joy, diversity, and kind connection to one's body.

CONCLUSIONS: This study explored contemplative approaches to enhance mental health and intersubjective community spaces for SGMY. SGMY developed strategies to navigate the current anti-LGBTQIA+ socio-political context, develop compassionate awareness, improve anxiety, depression, distress, and enhance self-advocacy, joy, and community. Insights from SGMY will contribute to understanding how adapted affirmative MBIs can support SGMY during these uncertain times of political upheaval.

P1-21 - Easing the Transition to College with Mindfulness Training & Technology Assisted Skill Transfer - An Impact Analysis

Marisa Decollibus¹, Jennifer Frank¹, Robert Roeser²

¹ The Pennsylvania State University, ² Pennsylvania State University

Summary

The current study provided a developmentally relevant mindfulness-based intervention embedded in summer bridge programming, and focused on helping students maintain practice during their transition to college. Wearables allowed students to visualize their stress over time and provided biofeedback. The integration of the wearable acted as an intervention-plus condition. The current impact analysis discusses the feasibility and acceptability of the wearable component as rated by participants.

Details

BACKGROUND AND AIMS: Summer bridge programs that support students during their transition to college often focus on academics over wellness. The current study provided a developmentally relevant mindfulness-based intervention embedded in summer bridge programming, with a focus on helping students *maintain* practice during their transition to college. Wearables were used to allow students to

visualize their stress over time and to provide biofeedback. The integration of the wearable acted as an intervention-plus condition. The current impact analysis discusses the feasibility and acceptability of the wearable component as rated by participants.

METHODS & RESULTS: Feasibility and Acceptability data were collected using a survey created by the investigator. Questions in the survey were based on the Behavior Intervention Rating Scale (BIRS; Elliott & Treuting, 1991). Participants rated items using a 5-point Likert-type scale (1 = *Strongly Disagree* to 5= *Agree*). This data was collected post-intervention, after six-weeks of access to the wearable and mindfulness intervention, from the intervention plus condition only ($n = 16$). Survey results were examined using descriptive statistics. Most participants agreed ($n = 9$) that graphs produced by the device helped them better understand their personal stress patterns. Eight participants agreed that it was easier to use their stress management tools when wearing the device, with an additional three participants slightly agreeing. Overall, the sample additionally found the device feasible to use ($M = 3.9$, $SD = 0.58$).

CONCLUSIONS: This exploratory study found that providing wearables as a tool for skill generalization holds potential as both a feasible and acceptable method to young adults.

ACKNOWLEDGEMENTS AND FUNDING: This research was made possible by the Mind and Life Institute's Mind & Life Francisco J. Varela Research Grant. Any views, findings, conclusions, or recommendations expressed in this publication do not necessarily reflect those of the Mind & Life Institute.

P1-22 - The Mechanisms Underlying the Relationship Between Self-Compassion and Psychological Outcomes: A Systematic Review

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Summary

The systematic review investigates the underlying mechanisms between self-compassion and psychological outcomes, analyzing 65 studies. Emotion regulation and coping, especially repetitive negative thinking, experiential avoidance, mindfulness, and acceptance, are identified as key factors mediating this relationship. The study underscores the need for standardized definitions and scales, and more robust research designs for a clearer understanding of self-compassion underlying mechanisms.

Details

BACKGROUND AND AIMS: Self-compassion has been found to be protective factor of psychological health and well-being. In the past decade, there is an increased research interest in the underlying mechanisms that may explain how or why self-compassion is related to better psychological outcomes.

This systematic review aimed to summarize and evaluate existing evidence on the mediators of the association of self-compassion with psychological outcomes.

METHODS: We searched for relevant articles in Embase, APA PsycINFO, PubMed and Web of Science. Study quality of all 65 included studies was critically evaluated.

RESULTS: Most mediation studies focused on psychological symptoms rather than well-being as outcome. Emotion regulation and coping have been considered as an essential underlying mechanism of self-compassion. Especially repetitive negative thinking was the most frequently studied mediator and consistently found to be a significant mediator between self-compassion and psychological symptoms. Other significant mediators were experiential avoidance and mindfulness- and acceptance related factors. For other mediators, given the limited number of available studies, no firm conclusions could be drawn.

CONCLUSIONS: Existing evidence proves that emotion regulation and coping are key factors that mediate the link between self-compassion and psychological outcomes. To draw more firm conclusions, more uniformity between studies in the definition and assessment of self-compassion and using more rigorous study designs are needed.

CKNOWLEDGEMENTS AND FUNDING: We extend our gratitude to Truus van ttersum for her valuable support in crafting search terms and strategies. The ongoing project is funded by the University Medical Center Groningen (UMCG).

P1-23 - Designing and Testing a Mindfulness-Based Program for Clinician Burnout

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Summary

Clinicians struggle with burnout, anxiety and depression. Mindfulness training had greater effects on burnout than the average trainings. However, shorter and practical formats are needed to not inadvertently contribute to overload. We developed a 7-day clinician mindfulness-based course and tested its efficacy in physicians, residents and nurses. We found lower anxiety, burnout and higher tolerance of uncertainty and self-compassion after the training compared to baseline.

Details

Clinicians struggle with burnout, anxiety and depression. The pandemic was a burnout accelerant and had a negative impact on suicidal thoughts and resignation. Mindfulness training had greater effects on burnout than the average trainings. However, shorter and more practical formats are needed to not inadvertently contribute to overload. The goal of this research project was to develop and test a brief mindfulness-based training to decrease burnout and to gather effect sizes for future randomized controlled trials. We developed a 7-day clinician burnout audio-course with user centered design to

iteratively refine and we tested it under the format of podcast in physicians. Then, we ran three single arm studies to test the efficacy of the app-based course in three independent cohorts of physicians, residents and nurses. We measured anxiety, burnout, intolerance of uncertainty, and self-compassion before and after the training and one month after that for follow-up. We replicated the results obtained in the podcast study and found lower anxiety, burnout and higher tolerance of uncertainty and self-compassion after the training compared to baseline. Outcomes from these studies are used to calculate effect sizes of future randomized controlled trials. This research project provides promising results and suggest the efficacy of the short mindfulness-based intervention in improving mental health in clinicians and the potential underlying mechanisms of self-compassion and tolerance of uncertainty.

P1-24 - Breathing Practices for Stress and Anxiety Reduction: Conceptual Framework of Implementation Guidelines Based on a Systematic Review of the Published Literature

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¹ Health and Human Performance Foundation, ² University of California, San Diego, ³ Emory University, ⁴ Saybrook University

Summary

We conducted a systematic review of the literature to identify simple yet important criteria for implementing breathing practices for stress reduction. Our evidence-based framework highlights the importance of slow breathing, adequate training, and continued practice for optimizing outcomes associated with this accessible, whole health strategy.

Details

BACKGROUND AND AIMS: Stress and anxiety plague populations worldwide, placing a substantial burden on population health and healthcare systems. Voluntary regulated breathing practices, an emerging tool in integrative medicine, may help ameliorate this epidemic. We examined peer-reviewed published literature to understand how these effects vary across populations, practices, and implementation approaches and to identify criteria for optimizing outcomes.

METHODS: PubMed and ScienceDirect were searched to identify clinical trials evaluating isolated breathing-based interventions with psychometric stress/anxiety outcomes. Two independent reviewers conducted all screening and data extraction. Components of effective and ineffective interventions were evaluated to develop a conceptual framework of factors associated with stress/anxiety reduction effectiveness.

RESULTS: Of 2904 unique articles, 731 abstracts, and 181 full texts screened, 58 met the inclusion criteria. Fifty-four of the studies' 72 interventions were effective. Effective breath practices avoided fast-

only breathing and sessions <5 min, and included human-guided training, multiple sessions, and long-term practice. Not associated with effectiveness were variations in population, other breath paces, session duration >5 min, and group versus individual or at-home practices. Analysis of interventions that did not fit this framework revealed that extensive standing, interruptions, involuntary diaphragmatic obstruction, and inadequate training for highly technical practices may render otherwise promising interventions ineffective.

CONCLUSIONS: We identified simple yet important criteria to guide breath practice implementation for effective stress and anxiety reduction across broad populations. Our evidence-based framework highlights the importance of slow breathing, adequate training, and continued practice for optimizing outcomes associated with this accessible, whole health strategy.

FUNDING: This was an unfunded study.

P1-25 - Relationships between trait mindfulness and subjective emotion regulation processes in older adulthood

Megan Fisher¹, Ruchika Prakash^{1,2}

¹ The Ohio State University, ² The Ohio State University Center for Cognitive and Behavioral Brain Imaging

Summary

This study examines relationships between trait mindfulness and subjective emotion regulation processes among a diverse, community-dwelling sample of older adults from the U.S. Data were collected as part of a clinical trial evaluating the impacts of mindfulness training for healthy aging. Megan Fisher conceptualized the study, conducted data analysis, and wrote the submission. Ruchika Prakash secured grant funding for the parent clinical trial and provided feedback on the submission.

Details

BACKGROUND AND AIMS: Trait mindfulness is often linked to better emotional functioning, including fewer internalizing symptoms and reduced reliance on maladaptive emotion regulation strategies, and may even increase with age. Interestingly, growing older is associated with enhanced emotional well-being, yet our understanding of the nature between trait mindfulness and emotion regulatory processes in older adulthood is currently limited.

METHOD: This study examined relationships between trait mindfulness and subjective emotion regulation outcomes during an aversive picture viewing task in 150 healthy older adults. Data were collected as part of a clinical trial on mindfulness training for healthy aging.

RESULTS: Results revealed a significant trait mindfulness by strategy type interaction on subjective valence ratings after controlling for image intensity. Individuals with higher trait mindfulness rated acceptance trials as less negative compared to suppression trials. Additionally, a marginally significant trait mindfulness by image intensity interaction was observed after controlling for strategy type. Individuals with lower levels of trait mindfulness reported greater subjective arousal on high intensity images relative to low intensity images. Trait mindfulness was not significantly related to strategy preferences or success of strategy implementation after controlling for image intensity or strategy selection.

CONCLUSIONS: Trait mindfulness may be important for promoting emotional health in older adulthood. Future studies should test if older adults' subjective states of arousal and negative affect are amenable to mindfulness training.

ACKNOWLEDGMENTS AND FUNDING: This research was supported by the National Institute on Aging and the National Science Foundation.

P1-26 - The Mindful-Gut Feasibility Trial Protocol: Investigating Effects of Mindfulness-Based Cancer Recovery (MBCR) on the Gut Microbiome, Mindfulness, Gastrointestinal and Psychosocial Symptoms in People with Cancer

Jamie Petersson¹, Julie Deleemans², Athina Spiropoulous¹, Raylene Reimer¹, Linda Carlson¹

¹ University of Calgary, ² The University of Calgary Cumming School of Medicine

Summary

Addressing psychosocial symptoms through contemplative practices holds promise in positively influencing the gut microbiota. People with cancer will attend a mindfulness-based cancer reduction program and their gut microbiota, gastrointestinal and psychosocial symptoms will be assessed pre- and post-. Enrollment rates will advise study feasibility. This research serves as a cornerstone for assessing the benefits of an accessible, cost-effective intervention on the gut and psychosocial symptoms.

Details

BACKGROUND AND AIMS: Chemotherapy has enduring effects on cancer survivors' gut microbiota, which are associated with psychosocial symptomatology. Considering the chronic gastrointestinal (GI) and psychosocial symptoms observed in cancer survivors, investigating interventions to improve gut health and psychosocial well-being is critical. This remains unstudied; hence, this study aims to determine if a contemplative program, mindfulness-based cancer recovery (MBCR), impacts the gut microbiota and alleviates GI symptoms.

METHODS: The study design is a pilot proof-of-concept single group pre-post cohort study. The intervention is a 9-week MBCR program. Target sample size is 15 participants. Stool samples along with GI, mindfulness, and psychosocial measures will be collected pre- and post-intervention. Gut microbiota composition will be analyzed through 16S rRNA gene sequencing on stool samples. The primary outcome is feasibility of recruitment/retention and data collection. The secondary outcomes are gut microbiota composition, mindfulness, GI and psychosocial symptoms.

RESULTS: Recruitment and retention rates, completeness of data collection, and effect sizes of the MBCR intervention on outcome measures will be assessed. We hypothesize that MBCR will result in: (1) significant alterations in gut microbiota composition; (2) a decline in the prevalence and severity of GI and psychosocial symptoms and improved mindfulness, and: (3) significant correlations between specific bacteria and GI-, mindfulness-, and psychosocial-related outcomes.

CONCLUSIONS: This novel study will investigate the potential impact of a readily accessible, cost-effective contemplative practice program on gut microbiota and GI symptoms, extending our knowledge of MBCR effects beyond measures of psychosocial health to include the gut microbiome for the first time. This research explores embodied cognition through generating an understanding of the mind-body connection by including both subjective and objective measures of well-being within the mind and body simultaneously.

ACKNOWLEDGEMENTS AND FUNDING: The Enbridge Chair in Psychosocial Oncology funds this research.

P1-27 - Intense Meditation-Related Experience Impacts on the Sense of Self: A Phenomenological Study

Tim Wood¹, Merle Kock², Nicholas Van Dam¹, Julieta Galante¹, Jasmine Childs-Fegredo³

¹ University of Melbourne, ² KU Leuven, ³ York St John University

Summary

Intense meditation-related experiences involve changes in the sense of self. In this qualitative study, meditation-related experiences caused participants to change their worldviews, relationships, and self-narratives as a result of phenomenology that included: no-self, changes in self-other boundaries, insights into impermanence, as well as affective, cognitive, sensory and perceptual changes. Changes in the sense of self were reported by all participants.

Details

BACKGROUND AND AIMS: Intense meditation-related experiences are thought to involve or result in changes in the sense of self. This qualitative study of meditation-related profound experiences sought to understand the phenomenology (or first-person experience) of changes in the sense of self, how

meditators made sense of them, and the impact of that sense-making. **METHODS:** Participants were screened beforehand, by survey, to ensure they had an intense experience that they causally attributed to meditation and that the experience became central to their self narrative and identity. After providing informed consent, participants were interviewed in a semi-structured manner. The interviews took 30-90 minutes and were conducted online via Zoom, then analysed using Interpretive Phenomenological Analysis (IPA). IPA method is idiographic and based on in-depth case-by-case analysis, for the purpose of understanding first-person phenomenological reports. **RESULTS:** In total, 13 interview participants were recruited. Every participant disclosed changes, to varying degrees, in their sense of self, including the attenuation of some self-related phenomena such as embodiment, agency, or self-world boundaries. This presentation summarizes the findings about how these profound meditation experiences were characterized, made sense of, and impacted lives.

P1-28 - Mindfulness-based Strategic Awareness Training (MBSAT): Validation of a Training Intervention to Increase Flourishing in Non-Clinical Populations

Jochen Reb¹, Eva Peters¹, Monika Elser¹, Juan Humberto Young¹

¹ Singapore Management University

Summary

This research assesses the effects of the 8-week Mindfulness-Based Strategic Awareness Training. Training participation increased participant well-being, wisdom, work engagement, compassion, and improved decision-making. By validating MBSAT, we provide sought-after experimental evidence for the effects of mindfulness-based training on human functioning beyond stress reduction and well-being to include benefits for decision-making, wisdom, and work engagement in healthy populations.

Details

BACKGROUND AND AIMS: This research assesses the effects of the 8-session mindfulness-based strategic awareness training (MBSAT; Young, 2016) on human functioning and flourishing. MBSAT follows the 8-week structure of established mindfulness courses such as MBSR and MBCT. However, it is a personal and professional development training geared toward healthy individuals with the aim of improving human flourishing and decision-making.

METHODS: We conducted an experimental intervention study with a waitlist control group with working adults in Switzerland. The large majority of the 47 participants were randomly assigned to participate either in the MBSAT (n = 26) or a waitlist (n = 21) for subsequent participation in the MBSAT after completion of the data collection. Participants in both conditions provided ratings of several measures of well-being and human functioning before and after the intervention group's course participation.

RESULTS: Compared to the control condition, the MBSAT training group participants scored higher on well-being measures including sleep quality, flourishing, wisdom, and psychological need satisfaction.

They further experienced increased work engagement, improved decision-making, and more compassion. Mediation analyses found that these outcomes were mediated sequentially by increased body, emotion, and meta-awareness (first stage) and lower stress and worry (second stage).

CONCLUSIONS: The study provides quantitative evidence for MBSAT as an effective intervention for increasing well-being and human functioning in a non-clinical setting with active working adult participants. Qualitative evidence suggests that participants were actively engaged in the course, enjoyed it, and found it beneficial, consistent with the quantitative results.

This research validates MBSAT, a mindfulness-based training (MBT) geared toward healthy individuals aimed at increasing flourishing rather than reducing distress. As such, we provide sought-after experimental evidence for the effects of MBTs on human well-being and functioning that go beyond stress reduction and well-being to include decision-making, wisdom, and work engagement.

P1-29 - Interpersonal Dynamics in the Online Classroom: Phenomenological Insights from Students and Teachers

Jaša Černe¹, Urban Kordeš¹

¹ University of Ljubljana

Summary

The pandemic moved education online, prompting a study of remote interpersonal dynamics. This presentation explores the interpersonal experiences of students and teachers in online master's program lectures. Experience sampling and phenomenological interviews revealed diverse awareness and interactions with others, as well as occasional emotional challenges. The results offer insights for future education, stressing the importance of ecological, participatory, and phenomenological methods.

Details

BACKGROUND AND AIMS: The COVID-19 pandemic has driven education to widespread adoption of online learning. This physical separation of students and teachers raises questions about changes in their interpersonal dynamics. Using qualitative data gathered through an ecological and participatory neurophenomenological study, this presentation explores interpersonal experiences within online lectures of a cognitive science master's program.

METHODS: In four lectures, 15 students and one teacher, trained in first-person research, monitored their electrodermal activity, and sampled experiences randomly. Post-lecture phenomenological interviews were conducted for selected samples. Grounded theory and micro-phenomenological analysis method guided qualitative data collection and analysis, with student participants actively involved.

RESULTS: Analysis revealed diverse experiences of awareness and interaction with others present in the online classroom, immediate surroundings, or imagination. Participants displayed explicit and implicit awareness of others, at times feeling connected through shared experiences but also experiencing detachment. Interactions with others involved mental preparations for socializing, along with either inward or outward-focused interpersonal experiential gestures. Some experiences presented occasional emotional challenges.

CONCLUSIONS: These findings enrich our understanding of interpersonal dynamics in online classrooms, highlighting the challenges and opportunities of future educational practices. The observed diversity in experiences underscores the importance of using ecological, participatory, and phenomenological methods to fully grasp the evolving educational landscape.

ACKNOWLEDGEMENTS AND FUNDING: Thanks to Maša Rebernik for analysis support and all students for active participation. This study received no external funding.

P1-30 - Contemplative Pedagogies: Fostering 'Being' and 'Belonging' in Engineering Education

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Summary

We employ grounded theory to analyze students' final reflections from three contemplatively situated courses for engineering undergraduates. Our analyses show that contemplative learning environments in engineering create a sense of individual and collective belonging and support personal growth and flourishing. Thus, they can help train engineers who bring their full selfhoods to their work and contribute to a future that values interpersonal relationships and collective well-being, which is critical in today's global climate.

Details

BACKGROUND AND AIMS: Belonging is a fundamental human need that impacts confidence, motivation, and well-being. Contemplative learning environments in engineering can foster belonging to oneself, one's immediate setting, and the greater whole by promoting the underprivileged sense of 'being,' supporting the more habitual aspect of 'doing,' honoring each individual's journey, and disrupting the dehumanizing emphasis on external evaluation of self. We examine how three contemplatively situated courses for engineering undergraduates contribute to students' holistic development, including their

sense of self (embedded in the construct of 'being') and sense of 'belonging,' which considers social connectivity and the 'self' in relation to 'others.'

METHODS: While the courses' content ranged from physics to education, all used contemplative pedagogies as a central ethos and praxis for mindful 'being' and 'doing' that supported individual and collective learning journeys. We employ grounded theory to analyze students' final course reflections.

RESULTS: Our analyses show that contemplative learning environments in engineering create a sense of individual and collective belonging and support personal growth and flourishing. In this, contemplative pedagogies support the interplay between 'being' and 'belonging' and align with Wilcock's occupational science framework that defines the four interdependent dimensions of occupation as 'doing,' 'being,' 'belonging,' and 'becoming.'

CONCLUSIONS: Integrating contemplative pedagogies in engineering education allows students to transcend the engineering paradigm of 'doing' toward that of 'being' and 'belonging' in ways that positively impact their relationships with themselves, their environments, and the world, thereby making engineering education more accessible. This is essential in engineering education where inclusion of diverse students' senses of self is critical for the future they attempt to build.

ACKNOWLEDGEMENTS AND FUNDING: This project was funded by a Mellon Foundation-supported program and institutional funds. We thank our collaborators and students whose creativity, compassion, and empathy made this work possible.

P1-31 - Buddhist Summer Retreat as Literary Creation in 18th-Century Japan

Robert Goree¹

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Summary

A Reappraisal of how Buddhist summer retreats in 18th century Japan were intertwined with literary creation, death memorials, and expansive social networks.

Details

BACKGROUND AND AIMS: In 1777, the sixty-three year old Japanese poet and painter Yosa Buson engaged in a ninety-day Buddhist summer retreat known as *ango* 安居. Long before the practice had originated in India for monks to pause begging alms during the rainy season and avoid stepping on insects. Alone or in groups, they spent the three-month period in temples, small huts or caves engaged in contemplative practices. In Japan, the first recorded instance was 684 CE, and by the 1600s it had morphed into an occasion for Zen-influenced literati to compose poetry in honor of deceased loved ones. With Buson's retreat, the plan was to compose 1,000 haiku to commemorate the fiftieth anniversary of his mother's death. However, he stopped well short at 137 verses then switched to

writing prose pieces on an apparently odd range of subjects, including supernatural animals, antiquarian connoisseurship, and poetry by the mentor of his mentor. What happened?

METHODS: I analyze *New Flower Gathering (Shin hanatsumi)*, the posthumously published record of what Buson wrote during the retreat. Approaching the text as a meaningfully integrated whole, I challenge scholarly consensus about its incoherence, which hangs on the assumption that the prose pieces were haphazardly appended to the unfinished poetic results of an aborted devotional practice.

CONCLUSIONS: Rather than standing as a record of a devotional literary retreat gone awry, the book is better understood as an open-ended expression of gratitude for a large and eclectic group of people. Buson's mother is honored, but so are his father, daughter, mentors, and many poets, in subtle and not so subtle ways. As such, the retreat was not a failure, but was a mischievously creative and socially expansive contemplative endeavor.

P1-32 - Participants Experiences Following a Mindfulness Based Intervention for University Students; A Qualitative Study

**Colette Kealy ¹, Eoin Reade ¹, Esther Ibilola ¹, Cathan Bonner ¹, Donal Higgins ¹,
Varsha Manojthampi ¹, Catherine Doody ¹**

¹ University College Dublin

Summary

This qualitative study explored students' experiences following a 10 week MBI adapted from Mindfulness-based Cognitive Therapy for Life (MBCT-L). Six main themes emerged from a thematic qualitative analysis, including students enhanced sense of gratitude and appreciation, enhanced emotional regulation skills and ability to manage stress and an enhanced sense of Compassion towards self and others. The MBI which appeared to have significant life-enhancing effects on students everyday lives.

Details

BACKGROUND AND AIMS: Mindfulness-based interventions (MBI) have been shown to decrease stress and increase resilience and compassion in University students. However there have been very limited qualitative studies investigating students experiences of MBIs. The purpose of this study was to explore students' perspectives in terms of key learning experiences following completion of a 10 week MBI adapted from Mindfulness-based Cognitive Therapy for Life (MBCT-L).

METHODS: Following ethical approval, participants (n=12) who had completed a 10 week MBCT-L programme, wrote 1500 word reflective essays on their key learning experiences including any impact on their daily lives. A thematic qualitative analysis was carried out by researchers not involved in the delivery of the programme, within the overall conceptual framework of phenomenology.

RESULTS: Participants were undergraduate students from a range of different disciplines across the University. Six main themes and associated sub-themes emerged from the data analysis including : (i) Gratitude, encompassing enhanced feelings of happiness and contentment, (ii) Appreciation, and a sense of savouring the small things in life, (iii) the value of Anchor Practices to stabilise the attention (iv) enhanced Emotional Regulation skills including enhanced ability to manage stressful situations (v) the challenges and opportunities for learning with the Body Scan and (vi) an enhanced sense of Compassion towards self and others.

CONCLUSIONS: This qualitative study provides unique insights into University students experiences of a 10 week MBI which appeared to have significant life-enhancing effects on students everyday lives. The results of the study support the inclusion of MBIs for a University student population.

P1-33 - Creating A Socially Engaged Mindfulness-Based Intervention: Enhancing Social Work Students' Capacity for Wellbeing and Social Action

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Summary

This presentation explores the potential of Socially Engaged Mindfulness (SEM) in addressing the college-age student mental health crisis, particularly among Bachelor of Social Work (BSW) students. Through a participatory action research pilot study, we develop a Socially Engaged Mindfulness-Based Intervention (SE-MBI). Preliminary findings suggest SE-MBI may enhance well-being, critical consciousness, and social action, offering a novel approach to enhancing mental health and social action among students.

Details

BACKGROUND AND AIMS: College-age students face an unprecedented mental health crisis, navigating emerging adulthood amid ecosystem collapse, racial violence, and threats to democracy. Bachelor of Social Work (BSW) students often find themselves drawn to social work due to their lived experiences of oppression and contend with poor mental health and burnout. Global crises stem from disconnection, which makes enhancing interconnectedness crucial for mental health improvement and positive social action. Mindfulness-based interventions (MBIs) enhance well-being and have the potential to impact critical consciousness - a key mechanism for social action. Relatedly, socially engaged mindfulness (SEM), emphasizes interconnectedness and aims to address injustices. Although SEM has a long lineage in communities of practice, scant research explores its impact on well-being, interconnection, critical consciousness, and social action.

METHODS: This presentation explores the transformative potential of SEM. We detail an ongoing participatory action research pilot study aimed at developing and testing a socially engaged Mindfulness-Based Intervention (SE-MBI) specifically for BSW students. We engage in participatory action research with BSW students, the SEM practice community engaged in activism, and academics to co-create the SE-MBI.

RESULTS: Utilizing thematic analysis approaches, preliminary findings reflect overwhelmingly positive responses (“my classmates were talking about their positive experiences throughout the evening”; “I would 100% attend another session”, suggesting that SEM has the potential to enhance well-being, critical consciousness, and social action among BSW students. SE-MBI offers a novel approach to addressing mental health challenges, developing critical consciousness and capacity for social action, and may be scalable to other human services majors (e.g., psychology).

CONCLUSIONS: This initiative aligns mindfulness with motivations of socially conscious students, contributing to contemplative research through innovative approaches to mental health interventions and social change. Implications for contemplative research and curriculum will be explored.

P1-34 - Neural Signatures of Mindful Parenting In-The-Moment

Vani Gupta ¹, Heidemarie Laurent ¹, Katherine Haigler ¹

¹ Pennsylvania State University

Summary

We investigated the relationship between state mindfulness and mothers' neural responses to infant's negative emotions. Mothers (n=25) watched clips of their infants in positive and negative contexts before completing the Toronto Mindfulness Scale. Decentering predicted left-sided brain activity to negative vs positive emotion videos in both ventromedial and dorsolateral prefrontal areas. Findings provide insights into the role of decentering as a state mindfulness strategy for emotion processing during stressful parent-infant interactions.

Details

BACKGROUND AND AIMS: Mindful parenting emphasizes the significance of cultivating intentional, moment-to-moment awareness within the parent-child relationship, particularly in emotionally challenging interactions. To better understand what neural processes are involved in a mindful parental response, we investigated relations between mothers' state mindfulness and neural responses to their own infant's negative affect.

METHODS: Twenty-five mothers viewed brief videos of their 3-month-old infants engaging in tasks designed to elicit either positive (peekaboo) or negative (arm-restraint) emotions during fMRI scanning. Decentering and Curiosity subscales of the Toronto Mindfulness Scale, completed immediately after the

scan, were used to predict whole-brain activation in response to their own infants' negative versus positive emotion videos.

RESULTS: Decentering correlated with left-lateralized activity clusters covering both ventromedial and dorsolateral prefrontal regions. Curiosity correlated with a more limited activation cluster in the left frontal pole.

CONCLUSION: These findings indicate that Decentering may be particularly critical for enabling both bottom-up and top-down emotion regulation processes in mindful parenting, offering insights into the role of state mindfulness in emotion processing during stressful parent-infant interactions.

FUNDING: This work received support from the Society for Research in Child Development and the University of Oregon.

P1-35 - Dignity, Mindfulness and Well-Being in South Korean Graduate Schools

Jieun Chang¹, Ramaswami Mahalingam¹

¹ University of Michigan

Summary

This cross-sectional survey study explores the links between perceived dignity, locus of control, mindfulness, and depressive symptoms among South Korean graduate students. Using structural equation modeling, we found (1) a positive link between perceived dignity and mindfulness via locus of control and (2) a strong negative association between mindfulness and depressive symptoms ($\beta = -.83^{***}$). Results imply that lower perceived dignity may reduce mindfulness, adversely affecting well-being.

Details

BACKGROUND AND AIMS:

Graduate students' mental health is currently at significant risk. According to Evans et al. (2018), the rate of moderate to severe depression among graduate students is 39%. This study aims to explore the associations between perceived dignity within academic institutions, locus of control (LOC), mindfulness, and depressive symptoms among graduate students in South Korea.

METHODS:

In this cross-sectional study, 434 graduate students from a minimum of 96 distinct academic institutions in South Korea were surveyed. Structural equation modeling was used to analyze the data.

RESULTS:

There was a significant negative association between students' perceived dignity and depressive symptoms, mediated serially by LOC and mindfulness. Specifically, perceived dignity was positively associated with mindfulness through internal LOC and powerful others LOC. Mindfulness, in turn, had a strong negative association with depressive symptoms ($\beta = -.83, p < .001$).

CONCLUSIONS:

The study suggests that creating a learning environment where students are treated with dignity may be an important factor in enhancing their sense of control and mindfulness, which, in turn, may reduce their depressive symptoms. In addition, the strong association between mindfulness and depressive symptoms suggests that being in the present moment may be a critical factor for depressive symptoms when students perceive low dignity or a diminished sense of control over their lives.

ACKNOWLEDGEMENTS AND FUNDING:

We deeply appreciate Dr. Kai Cortina for his advice on statistical analysis and Min Joo Lee for creating the survey. This research was funded by the Rackham Graduate School and the Nam Center for Korean Studies at the University of Michigan.

P1-36 - Embracing Apophatic Philosophy: A Non-Dualist Path Towards Enlightened Personal and Societal Transformation

Rodger Ricketts¹

¹ Centro sociale anziani l'età d'oro

Summary

In this book, Ricketts argues convincingly that Buddhism is an apophatic path. He also provides evidence from modern psychology and neuroscience supporting apophatic views of the universe. Finally, Ricketts points out that it is through apophaticism and Buddhist economics that we can create a sustainable life for all.

Details

Embracing Apophatic Philosophy: A Non-Dualist Path Towards Enlightened Personal and Societal Transformation

Contemporary society increasingly has a fragmented view of the world, it sees its diversity but not the unity that underlies it. This fragmentation is at the root of tribal mentality, environmental degradation, polarization, and other problems. Apophatic philosophy provides a much-needed alternative to

traditional cultural and religious materialistic viewpoints. Contrary to religions that assign known anthropomorphic characteristics to a power often referred to as “God “ , apophaticism teaches that we cannot positively know or assert anything about the nature of “God”. At the heart of the discussion are the key characteristics and enormous benefits of ancient spiritual wisdom; an apophatic, non-dualist approach to life, as well as its links with Buddhist philosophy and economics. It is a wisdom that converges the findings of modern science, with the observations of eminent mystics and religious personages from across time and different backgrounds, as well as my own extensive experience in modern psychology and Buddhist practice. In this book, I establish how a non-dualist approach to life can preciously revolutionize our well-being as well as that of society and our relationship with the Earth.

P1-37 - Embracing Apophatic Philosophy: A Path Towards Personal and Societal Transformation

Rodger Ricketts ¹

¹ Centro sociale anziani l'età d'oro

Summary

Through the framework of non-dualism, biocentrism, and Buddhist economics, we discover why and how we must shift from the present predominant dogma to an alternative social and economic strategy to promote subjective well-being and societal happiness, create comprehensive pathways to achieve harmony, eliminate economic deprivation, enable human dignity, and respect Earth's ecosystems.

Details

In a contemporary society increasingly dominated by radicalized viewpoints, self-interest, tribal mentality, and alienation, apophatic philosophy provides a much-needed alternative to traditional cultural and religious viewpoints. Contrary to religions that assign known and defined characteristics to a power often referred to as “God”, thus presupposing that they can comprehend this entity, apophaticism teaches that we cannot positively know or assert anything about the nature of “God”. At the heart of the discussion are the key characteristics and enormous benefits of an apophatic approach to life, as well as its links with Buddhist philosophy and economics. Backed by scientific research, the observations of eminent mystics and religious personages from across time and different backgrounds, as well as my own extensive experience in traditional psychology and Buddhist practice, I demonstrate how an apophatic approach to life can revolutionize our well-being as well as that of society and Earth as a whole.

P1-38 - Mindful Movers: An investigation of Laban/Bartenieff Movement Studies for Embodied Education

Dario Cottica¹

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Summary

This study employs ethnographical and phenomenological methods to investigate the embodied expertise of practitioners of a contemplative somatic practice called Laban/Bartenieff Movement Studies. The embodied knowledge and the sense-making apparatus of the practice are interpreted within phenomenological and enactive accounts of cognition. This investigation paves the way for further scientific inquiry into how this expertise can be put to use for critical pedagogy and Embodied Education.

Details

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Abstract

The Laban/Bartenieff Movement Studies (LBMS) are a system of somatic inquiry that provides a rich framework to experience and understand human movement. As a somatic practice, they are part of a family of embodied contemplative disciplines that cultivate the experience of bringing awareness to the living body in movement, in order to address physical problems that impact health or hinder artistic performance. Despite a history of successes, somatic practices still stand on the fringes of educational and healthcare systems. These disciplines are in fact highly under-researched, and a scientific description of the cognitive processes underlying their expertise is lacking. However, recent developments in the pragmatics of phenomenological investigation offer an effective way to bridge the gap between the world of somatic practices and cognitive science. This study aims at exploring the experience of somatic practitioners by conducting semi-structured, ethnographically-inspired phenomenological interviews with a purposeful sample of certified LBMS experts. The interviews are informed by participant observation performed within LBMS training sessions, transcribed, and coded. Concurrently, phenomenological concepts and enactive accounts of cognition are used to interpret the experts' first-person reports. This study translates the knowledge of this somatic practice into the more comprehensive terms of contemporary philosophy of mind, providing the basis for further research on the potential of these disciplines for critical pedagogy and Embodied Education. Somatic approaches can indeed shine awareness on how sociocultural customs are reproduced in bodily habits and provide methods to intentionally develop contextually desirable behavioral responses. They also provide the expertise to attune kinesthetically to other movers and the sense-making apparatus to analyze movement as an intersubjectively constituted expressive and intentional phenomenon.

P1-39 - Consciousness Unveiled: The Essence of Humanity

Nabaghan Ojha ¹

¹ UNDP

Summary

Consciousness, a focal point of global scientific inquiry, holds promise in unraveling existential mysteries. Despite belief in its potential breakthrough, complexities persist. Contemporary research echoes ancient philosophical discussions, notably in Vedanta. While Vedanta posits consciousness as fundamental, modern science's objective approach struggles to grasp its essence. Recognizing consciousness as transcendent could address societal issues and enhance understanding of human existence and the universe.

Details

Today, **Consciousness** is one of the most debated and an important area of research among the scientists across all disciplines in the globe. The study of consciousness holds the promise of demystifying the profound mysteries about the nature of existence and the universe. There is a belief that establishing a concrete understanding of how the brain generates consciousness could potentially lead to a significant breakthrough, but it is getting more complicated day by day. The contemporary inquiry among scientific communities into the origin of life within physical entities echoes age-old philosophical discussions, particularly evident in ancient Indian philosophical systems like Vedanta. In the "Kena Upanishad," consciousness is expounded when a disciple queries the teacher about the force guiding the mind towards various objects, the teacher asserts that it is consciousness illuminating the mind, thereby enabling its functions. Here, consciousness is posited as the illuminating force behind the mind and sense organs, rendering the body sentient —a perspective that stands as the most established response to the enigma of consciousness today.

Yet, this explanation fails to satisfy both the scientific community and those less advanced in spiritual path. Our modern worldview, shaped by objective research, tends to prioritize tangible evidence and observable phenomena. However, consciousness defies easy objectification. Our current scientific methods struggle to encapsulate the subjective experience, leading to skepticism regarding its nature as distinct from brain function.

Acknowledging consciousness as fundamental, transcending mere biological processes, holds profound implications. Embracing this paradigm shift could potentially resolve myriad societal issues. It calls for a broader perspective from the scientific community—one that recognizes consciousness as a cornerstone of existence, beyond the confines of time, space, and matter. Such a shift has the potential to catalyze transformative progress in our understanding of the human condition and the cosmos at large.

P1-40 - MBRP Online for Mental Health Promotion among Brazilian College Students: A mixed methods feasibility study

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Summary

A mixed methods study was carried out to evaluate the feasibility of a synchronous online version of the MBRP (Mindfulness Based Relapse Prevention) protocol adapted for Brazilian College students. The results confirm the feasibility of the MBRP online, with decrease in symptoms of anxiety, depression, perceived stress, insomnia and increase in self-care, compared to a Control Group. Participants also reported improvements in sleep quality, mental health and the management of reactive responses.

Details

BACKGROUND AND AIMS: In-person Mindfulness-Based Interventions (IBMs) indicate benefits for promoting mental health among College Students. Online versions of IBMs gained relevance following the COVID-19 pandemic, with greater dissemination potential and lower cost. **Aims:** To study the feasibility of a synchronous online version of the MBRP (Mindfulness Based Relapse Prevention) protocol adapted for Brazilian College students.

METHODS: A mixed methods randomized controlled trial was implemented, with an MBRP Experimental Group (GE=47) and a waiting list Control Group (CG=65). The MBRP protocol was offered in weekly 90-minute sessions for 8 weeks, synchronously via the Zoom platform. Pre- and post-intervention data collection was carried out, as well as observations in field diaries and collective interviews at the end of the intervention.

RESULTS: A decrease in symptoms of anxiety (-6.21 95% CI = -9.98; -2.44; p = < 0.001), depression (-3.52 95% CI = -5.24; -1.79; p = < 0.001), perceived stress (-4.76 95% CI = 4.04; 8.92; p = < 0.001), insomnia (-4.13 95% CI = -6.22; -2.03; p = < 0.001) and increase in self-care (7.65 95% CI = 4.03; 11.17; p = < 0.001) were observed compared to the CG. Participants, during and after the MBRP reported improvements in sleep quality, management of reactive responses and interpersonal relationships. No differences in relation to alcohol consumption were observed.

CONCLUSIONS: The results confirm the feasibility and benefits of the synchronous online version of the MBRP for the Mental Health of Brazilian College students.

ACKNOWLEDGEMENTS AND FUNDING: FAPESP Proc 2021/13546-8, 2021/06487-5 e 2015/19472-5; CNPq 307942/2021-0.

P1-41 - Control over conscious perception through meditation?

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Tess Roder¹, Johannes Fahrenfort¹, Heleen Slagter¹**

¹ Vrije Universiteit Amsterdam, ² Southern Cross University

Summary

Buddhism posits that perception is substantially colored by deeply-entrenched habits of the mind and proposes a range of techniques to liberate one from habitual seeing. In this ongoing study, we examine the extent of meditation-induced volitional control over visual perception in expert meditators using behavioral, neural and phenomenological measures.

Details

BACKGROUND AND AIMS:

Buddhism posits that perception is substantially colored by entrenched habits of the mind and proposes techniques to liberate one from habitual seeing. In this ongoing study, we examine the extent of meditation-induced volitional control over visual perception during Binocular Rivalry (BR), a phenomenon triggered when distinct stimuli appear to overlap spatio-temporally, resulting in rapid perceptual alternation rather than veridical continuous mixed percept.

METHODS:

Expert meditators were tested in 3 conditions: no-meditation, Focused Attention (FA), and Open Monitoring (OM) meditation, in both self-report and no-report blocks. Switch rates (SwR) were measured using behavioral self-reports and two complementary EEG analysis methods: Rhythmically entrained source separation (RESS) and decoding of RESS-filtered data. BR phenomenology was measured using questionnaires.

RESULTS:

Preliminary behavioral results from 14 meditators suggest lower SwR during both meditation conditions. RESS-estimated SwR are lower in self-report and higher in no-report blocks for the meditation conditions compared to no-meditation. Phenomenology suggests prolonged individual percepts in the FA condition but no difference between conditions for mixed percept duration. Initial decoding results show high accuracy and high correlation between estimated and self-reported SwR in the no-meditation condition. Results from a larger sample will be presented.

CONCLUSIONS:

These preliminary results show the potential for rivalry-tracking by combining RESS and decoding that could provide a no-report perceptual measure during deep-meditative states, and reveal the extent of control over perception possible through meditation.

ACKNOWLEDGEMENTS AND FUNDING:

This project is funded by the ERC.

P1-42 - Latent Ecologies of the Mind: Exploring Harmonic Synchrony and Complexity in Human Brain Signals And Beyond.

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Summary

This project uses the ecotone metaphor to explore human-environment interactions, analysing synchronised brain signals of two individuals listening to music. By harmonically coupling and quantifying their complexity via Lempel-Ziv, visualised in a 3D state space, it informs a diffusion model to create speculative lifeforms images. Aiming to develop real-time platforms for participatory growth of shared cognitive ecologies, the project seeks to deepen empathy and highlight our bond with nature.

Details

BACKGROUND AND AIMS: Building on the concept of ecotones as zones of rich biodiversity where distinct ecosystems intersect, this interdisciplinary project extends the metaphor by exploring the dynamics of human-environment interactions, using brain signals combined with generative AI. We aim to challenge the conventional narratives of separation and advocate for a deeper recognition of our integral role within the ecological systems.

METHODS: Our research-creation combines analysis from neuroscience, music, and physics. We first employed electroencephalography (EEG) to record brain signals from two individuals listening to "L'Âžle Neu". Through Empirical Mode Decomposition (EMD), we extracted Intrinsic Mode Functions (IMFs) and identified moments of maximal synchrony between individuals. A convolution was then applied to these harmonic signals, symbolising an ecotone of minds. Applying Lempel-Ziv Complexity (LZC) to the harmonically coupled signals, we quantified the complexity emerging at this confluence. Finally, the 2D state space representation of LZC was visualised using a Gaussian Kernel Density Estimate (KDE). This landscape of shared complexity was then used as a guide image to feed a diffusion model, generating insights into the fertile boundary where minds converge and new cognitive ecologies emerge.

RESULTS: The resulting images, beautiful and intricate speculative lifeforms, encourages us to rethink the human-nature boundary. By leveraging artificial intelligence, we demonstrate the potential of technology to enhance the interconnectedness between humans and the natural world, emphasizing harmony in spaces where differences converge. Future work will aim to create real-time platforms where individuals can actively contribute to and witness the growth of shared cognitive ecologies.

CONCLUSIONS: By incorporating the user's own biological processes into the creation of new life forms, this interactive design aims to foster a deeper sense of empathy and belonging, highlighting the intrinsic connection and reciprocal relationships between human well-being and the health of our ecological systems.

P1-43 - Using converging operations to synthesize mindfulness: preliminary evidence from a novel research strategy

Jeff (Yanli) Lin¹

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Summary

Inconsistency in operationalizing and measuring mindfulness has been an enduring problem within mindfulness research. In an attempt to address this challenge, I present a conceptual framework and accompanying research design strategy for how to synthesize different facets of the mindfulness construct, resulting in a more unified and structured investigative approach. Specific examples involving recently completed and ongoing studies of cognitive control and emotion regulation are provided.

Details

BACKGROUND: Scientific and public interest in mindfulness has risen meteorically over the past few decades. Despite the rapid growth of the research literature around mindfulness, inconsistent methods in defining and measuring mindfulness have yielded mixed findings and challenge thorough mechanistic investigation.

METHODS: The focus of the presentation is to present a conceptual framework and accompanying research design strategy for how to systematize different operationalizations of mindfulness, resulting in a more unified and structured investigative approach.

RESULTS: I illustrate the core rationale and utility of the framework through a selective review of recently completed and ongoing studies that differentiate mindfulness effects on neurobehavioral indices of cognitive control and emotion regulation.

CONCLUSIONS: I conclude by demonstrating the flexibility of the approach in accommodating different research questions that span basic, clinical, and translational domains. Specific examples pertaining to future directions are provided.

ACKNOWLEDGEMENTS AND FUNDING: The research covered in the talk received funding support from the WUSTL Department of Psychological & Brain Science, the WUSTL McDonnell Center for Systems Neuroscience, and the National Institutes of Health and National Institute on Aging (NIA F32-AG069499)

**P1-44 - Biological effects of mindfulness-based interventions for cancer populations:
a systematic review**

Alessio Matiz¹, Bruna Scaggiante², Ciro Conversano³, Angelo Gemignani³, Cristiano Crescentini⁴

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Summary

This is a comprehensive state-of-the-art for the impact of mindfulness-based interventions on biomarkers in oncology. The review includes 25 studies and 35 biomarkers. The need for further studies is underlined, as the generally low number of studies per single biomarker limits the possibility to draw reliable conclusions. However, the review highlights the promising results observed in particular for cortisol, blood pressure, telomerase activity and pro-inflammatory gene expression.

Details

BACKGROUND AND AIMS: Research has given considerable support for the use of mindfulness-based interventions (MBIs) in reducing psychological distress of cancer patients and survivors. The biological effects of MBIs in these populations have been investigated by a smaller number of studies. This systematic review was conducted to comprehensively collect the results of these studies.

METHODS: The databases of Pubmed, Scopus, Web of Science were searched in May 2022 and articles were examined with the following inclusion criteria: were published in a peer-reviewed journal and written in English, included adult cancer patients or survivors, included MBI(s) of 4-8 weeks delivered in group settings, and employed physical health markers as study outcome measured before and after the intervention.

RESULTS: Twenty-five studies were included in the current review. These studies globally employed 35 biomarkers, which were categorized in 8 groups: cortisol; blood pressure, heart rate, and respiratory rate; C-reactive protein; telomere length and telomerase activity; genetic signature; cytokines and hormones; leukocyte activation; leukocyte count and cell subpopulation analysis. Beneficial effects of MBIs were present in the examined studies on 7 of these categories of biomarkers, with the most

promising results observed for cortisol, blood pressure, telomerase activity and pro-inflammatory gene expression.

CONCLUSIONS: The present review confirms MBIs' potential for improving physiological health in cancer patients and survivors. The limited number of studies per biomarker hinders the present possibility to draw definitive conclusions on the specific biological effects of MBIs and calls for further research.

ACKNOWLEDGEMENTS AND FUNDING: -

P1-45 - MINDFULNESS AS A SAFE SPACE PROGRAM (MSSP) TO EXPAND CONSCIOUSNESS THROUGH INCLUSIVE ALTRUISM

Olga Restrepo ¹

¹ Independent

Summary

Contemplation programs offer vital sanctuaries amidst pervasive PTSD. This study at Medellin Health Battalion, Colombia, showcased their efficacy. Participants, mainly wounded soldiers, engaged in diverse mindfulness programs, reporting reduced anger, improved relationships, and decreased reliance on medication. Leveraging mindfulness, the "Mindfulness as a Safe Space Program" fosters emotional sanctuaries, promoting resilience and serenity.

Details

Name: Olga Restrepo Botero

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BACKGROUND AND AIMS: To show the importance of Contemplation Programs as Therapeutic Pathways in Conflict-Affected Regions, delves into the transformative role of contemplative practices in mitigating the psychological impact of war and violence.

METHOD: There are an informal and spontaneous interviews in which participants send their testimonials.

RESULTS: Reduced anger, increased connection with suffering soldiers worldwide, improved relationships with family and friends, decreased internal conflict, motivation for education and life restarts.

P1-46 - The MATCH Study: Mindfulness and Tai Chi for Cancer Health. Primary Results of a Comparative Effectiveness Trial

Linda Carlson¹, Jennifer Jones², Peter Wayne³, Devesh Oberoi¹, Katherine-Anne Piedalue⁴, Oluwaseyi Lawal¹

¹ University of Calgary, ² University Health Network Toronto, ³ Harvard University, ⁴ Memorial University Newfoundland

Summary

Many contemplative mind-body practices are used by people with cancer, but programs have not been directly compared. This study is the first to incorporate patient choice when comparing two such programs for distressed cancer survivors (Mindfulness-Based Cancer Recovery and Taichi/Qigong). Both programs improved mood (anxiety, depression, anger, vigor, concentration and fatigue), stress and QL in this large, multi-site, preference based comparative effectiveness trial of 490 cancer survivors.

Details

Background: Mind-body therapies for symptom management in people with cancer have not been tested head-to-head. This study is the first to incorporate innovative design features including patient choice while evaluating two interventions to treat distressed cancer survivors (Mindfulness-Based Cancer Recovery [MBCR] and Taichi/Qigong [TCQ]).

Methods: A preference-based multi-site randomized comparative effectiveness trial was conducted. Participants with a preference for either MBCR or TCQ received their preferred intervention, while those without a preference were randomized into either intervention. Further, within preference groups, participants were randomized into immediate or wait-list control. Group interventions were delivered in-person in cohorts up to 20 participants, over 9-11 weeks. Total mood disturbance (TMD) on the Profile of Mood States was the primary outcome. Secondary outcomes of stress and quality of life (QL) are also reported.

Results: 490 distressed cancer survivors provided baseline data; 383 had a preference for MBCR (n=140) or TCQ (n=180) while 170 had no preference and were randomized into MBCR (n=83) or TCQ (n=87). Average age was 61 Years (SD=11.0), 75% were female, and the most common type of cancer was breast (41%) followed by prostate (11%). Both MBCR and TCQ preference and randomized intervention groups showed improvements on TMD, stress and QL compared to waitlist, but effects were stronger for MBCR and in randomized groups.

Conclusions: Both active interventions improved mood (consisting of anxiety, depression, anger, vigor, concentration and fatigue subscales), stress and QL to differing degrees in this large, multi-site, preference based comparative effectiveness trial.

Funding: The Lotte and John Hecht Memorial Foundation.

P1-47 - Rethinking Common Humanity. Application and effects on social connection

Claudio Araya¹

¹ Adolfo Ibañez University

Summary

This presentation explores the effect of a brief common humanity intervention on connection perception towards unknown individuals, diverging from traditional compassion-focused studies. Employing a mixed-methods design with university students, assessing implicit and explicit responses. Anticipated results suggest improved perception of others and documented firsthand experiences, offering insights into the potential of common humanity practices in enhancing interpersonal connections.

Details

In the context of contemplative practices, common humanity has typically been explored as a component of compassion and self-compassion, with limited focus on the concept itself and even fewer empirical studies addressing it directly. This presentation aims to offer an independent perspective, distinct from compassion, and to introduce a pilot study from this standpoint. Research in social and clinical psychology underscores its significance; however, the potential of brief training in this skill to significantly enhance the perception of connection towards unfamiliar individuals remains underexplored. Objectives: The goal of this presentation is to assess the impact of a brief common humanity intervention on the perception of connection towards an unknown individual, and to describe the experience following the common humanity intervention. Methodology: A mixed-methods randomized experimental design (qualitative and quantitative) will be implemented, including an active control group. A brief intervention (approximately 20 minutes) will be developed to be conducted in the neuroscience laboratory. Participants will be randomized into two groups: an intervention group (brief relational practice of shared humanity) and an active control group (brief relational practice of mindfulness). Implicit and explicit evaluative responses towards an unfamiliar individual will be measured. Following the intervention, a phenomenological interview will be conducted to explore the participants' subjective experiences. University students will serve as participants. Inferential statistics, specifically mixed analysis of variance (ANOVA), will be applied to examine differences in dependent variables. Results: It is anticipated that the practice of common humanity will positively alter the perception of others, in both implicit and explicit assessments. The study aims to document the firsthand experiences of individuals engaging in a practice of shared humanity and their feelings of closeness towards an unknown person.

P1-48 - Exploring the transformation of embodied co-presence in Buddhist practices online

Anastasiia Shabalina ¹

¹ Adam Mickiewicz University in Poznan, Poland

Summary

The study examines the impact of digital technologies on Buddhist practices, focusing on the idea of co-presence. Using the concept of participatory sense-making, the author analyzes the transformation of embodied interaction in the new environment. The results indicate a change in the meaning of co-presence in favor of synchronization over time. Overall, the study illustrates how changes in the medium of interaction reshape meaning-making processes.

Details

BACKGROUND AND AIMS: The COVID-19 pandemic accelerated the spread of digital technology among spiritual groups, particularly affecting the Buddhist community. Many Buddhist practices, rituals, and meditations that depended on the physical presence of participants have been adapted to online format. This shift raises questions about the role of embodied co-presence, which has been of great significance to Buddhism. The study aims to uncover the meaning of embodied co-presence in Buddhist practice by reflecting on this transformation.

METHODS: The study utilizes enactivist approach, particularly the concept of participatory sense-making (De Jaegher & Di Paolo, 2007), relying on the hypothesis that changes in the environment of interaction affects the meaning-making processes. The research involved observing 20 Buddhist collective practices online and conducting a qualitative content analysis of statements from Buddhist teachers and followers regarding this shift.

RESULTS: The study reveals that the key metaphor of co-presence in online practices centers on concepts of simultaneity and time synchronization. It also finds that attitudes towards online practices vary with individuals' pre-existing views on cooperation. Participants who associate cooperation with physical coordination find the shift to online more challenging than those who view cooperation as effort synchronization.

CONCLUSIONS: The study's findings show how changes in the environment of interaction—such as the shift to online—alter meaning-making processes. This shift has redefined the notion of co-presence from shared space to shared time. Additionally, the study demonstrates that the way individuals construct narratives about their practices is influenced by the specific conceptual metaphors they hold.

P1-49 - Leadership in Contemplative Programming Across Disciplines: Reflections from Graduate Students

Joseph Diehl¹, Nona Kiknadze², Andrea Haidar³, Malena Price², Jenna Faith McClear⁴

¹ Duke University, ² University of Miami, ³ Northwestern University Feinberg School of Medicine, ⁴ Duke Divinity School

Summary

This panel aims to highlight the work of an interdisciplinary and diverse body of graduate student leaders in implementing and studying contemplative experiences. These projects aim to further develop contemplative pedagogy and study the science behind contemplative interventions. This panel is designed to inspire and equip students to develop their own independent contemplative research, pedagogy, and program development, as well as highlight ways in which faculty and community leaders can support student-led work.

Details

Since the early 2000s, momentum for an interdisciplinary field to study contemplative experiences has continued to grow. This field, Contemplative Studies, uses first- and third-person methods, as well as disciplines such as religious studies, philosophy, art, and the sciences to study the phenomenology and effects of contemplative practices. This panel aims to highlight the work of several graduate students in clinical psychology, counseling psychology, and theology that have taken leadership roles in implementing and studying contemplative experiences. These projects aim to further develop contemplative pedagogy and study the science behind contemplative interventions. The aims of the panel are to 1) clarify how student leaders can leverage university and external resources to conduct contemplative projects; 2) describe how the projects advance Contemplative Studies from pedagogical and scientific lenses; and 3) discuss the processes and ethics behind integrating one's personal identity, practice, and beliefs with their professional work. This panel is designed to inspire and equip students to develop their own independent contemplative research, pedagogy, and program development, as well as illustrate for faculty and community leaders how they can support student-led contemplative projects.

From a diverse range of identities and disciplines, the panelists (in order of authorship) will provide methodological commentary on and describe results for 1) integrating self-report, electrophysiological brain networks, and heart rate variability to study the effects of mindfulness-based interventions; 2) teaching college students how to flourish through didactic and experiential methods; 3) developing and implementing a mindfulness-based intervention for Arab Americans; 4) the integration of mindfulness pedagogy and practices into a dance movement therapy (DT-M) curriculum and the effects of DT-M on college students' psychological health; and 5) creating student-led contemplative programming on college campuses beyond Buddhism.

P1-50 - Inhibitory Control Mechanisms of Mindfulness-Based Pain Management for Chronic Pain

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Summary

We investigated the inhibitory mechanism of mindfulness-based interventions for chronic pain, using a Go/NoGo paradigm. Behavioral measures indicated that, in addition to fewer errors to NoGo (i.e. better inhibitory control), clinical pain outcome measures also showed improvement. Neurophysiological findings (ERPs) showed that the N2 and P3 amplitudes were modulated following the mindfulness intervention, supporting that enhanced inhibitory function as a mechanistic arm of Mindfulness-Based Pain Management for chronic pain.

Details

Standard care of chronic pain relies on medical opioids, that has led to a significant public health concern. Non-pharmacological alternatives, such as mindfulness interventions, have been examined as promising tools for chronic pain management. Some of the mechanisms by which acute pain is mitigated by mindfulness (i.e. top-down neural control), may also translate to the experience of chronic pain. The present proposal aims to investigate the inhibitory mechanism of mindfulness-based interventions for chronic pain. Inhibitory control ERPs can be elicited using cognitive and emotional variants of the Go/NoGo paradigm. We preliminarily tested our hypothesis that Mindfulness-Based Pain Management has a modulatory effect on inhibitory control markers in the chronic pain clinical population via the examination of the N2-P3 ERP components in a cohort of n=16 chronic pain patients. Behavioral measures indicated that, in addition to the self-regulation index correlating with fewer errors to Nogo (i.e. better inhibitory control), clinical pain outcome measures also showed improvement. Neurophysiological findings showed that the N2 and P3 amplitudes were modulated following the mindfulness intervention, supporting enhanced inhibitory control during a general cognitive task requiring self-regulation. Collectively, these data support our hypothesis of enhanced inhibitory function as a mechanistic arm of Mindfulness-Based Pain Management for chronic pain.

P2-1 - Learning to Attenuate Myself: A Predictive Processing Account of Body Awareness in Meditation

Valeria Becattini¹

¹ Humboldt-Universität zu Berlin

Summary

A meditation technique focused on bodily sensations, the Vipassana practice, often leads to feeling one's body boundaries as almost imperceptible. In this talk, I propose how this kind of subjective experience can be explained through a predictive processing account of the Vipassana practice. I suggest that Vipassana enhances one's sensory attenuation of the body, leading to a decreased perception of the body boundaries. Finally, I outline how the body-scan enables one to understand better and respond to one's emotional patterns.

Details

Valeria Becattini, valebecattini@gmail.com, Berlin School of Mind and Brain, Humboldt-Universität zu Berlin.

BACKGROUND AND AIMS: Meditators of Vipassana tradition often report to feel the boundaries of their body as almost imperceptible. The body-scan is a meditation technique consisting in allocating attention to bodily sensations. This paper has two aims: a) to bridge the phenomenology of the body-scan to a computational mechanism; b) to use the computational mechanism outlined in a) to explain the increased emotion regulation, empathy, and self-compassion of meditation practitioners.

METHODS: I examine computational, phenomenological, and embodied approaches to contemplative practices. I make use of Predictive Processing and Active Inference framework.

RESULTS: I propose that allocating attention to bodily cues enhances the accuracy of low-level prediction errors. Over time, the system is trained to generate precise predictions, and to increasingly match prediction errors. According to evidence on sensory attenuation, predictions matching prediction errors perceptually attenuate related cortical and phenomenal responses. In line with evidence on sensory attenuation, I argue that the body-scan attenuate the perception of the body boundaries. Moreover, I outline how the body-scan increases one's empathy and self-compassion by enabling one to better understand and respond to emotional patterns.

CONCLUSIONS: I conclude the paper by addressing the relevance and benefits of contemplative practices for well-being and psychopathology.

ACKNOWLEDGEMENTS AND FUNDING: Thanks to my supervisors Dr. Prof. Micheal Pauen, and Dr. Anna Ciaunica, to Dr. Mark Miller for his informal supervision, and to Berlin School of Mind and Brain, Humboldt-Universität zu Berlin.

P2-2 - Making peace inwardly and outwardly: Leveraging mindfulness- and compassion-based practices in family courts for divorcing families in the United States

Na Zhang¹, Karey O'hara², Sharlene Wolchik², Irwin Sandler², Michele Porter²

¹ University of Connecticut, ² Arizona State University

Summary

Parental divorce affects over 8.1 million children in the United States. The current qualitative study suggests that mindfulness- and compassion-based practices may be incorporated into the family court system a promising approach to reforming family court, including a shift of focus from adversarial divorce to healing and wellbeing.

Details

BACKGROUND AND AIMS: Over 8.1 million U.S. children are affected by parental divorce in 2020. Divorce is stressful and confers risks of mental health problems to parents and their children. The adversarial legal process of divorce in U.S. family courts is an added source of stress, as the court is a harsh environment that can intensify fight-or-flight stress reactions. The involvement of court professionals can increase rather than mitigate the conflicts. Humanity, compassion, and healing of all family members are rarely emphasized. The current qualitative study aims to understand ways in which mindfulness- and compassion-based practices can be leveraged and embedded into family court procedures and programs to support divorcing families.

METHODS: We completed individual interviews with divorcing or divorced mothers (n = 12) and fathers (n = 11), court professionals (n = 17), and parenting class providers (n = 16). Thematic analyses were used to extract themes to understand court-related stress and potential benefits of mindfulness-based programs.

RESULTS: Court professionals described that only some divorcing couples approach the family court with an established agreement, while the remaining majority are unprepared, contested, or in a high-conflict relationship such that their “fight” continues for years. Parents described that some existing interventions -custody evaluations, home visitation, and court trials -are overwhelming or even traumatizing, especially when they had mental health problems, prior adverse childhood trauma, or social isolation. Mindfulness- and compassion-based interventions appear to be a promising approach to supporting parents’ healing and protect child wellbeing. There is an enthusiasm across parents and stakeholders for its incorporation into the divorce process.

CONCLUSIONS: Multi-level programs for families and court professionals can be designed and integrated to help restore inner peace within parents, foster relational peace between parents, and prevent compassion fatigue among professionals.

P2-3 - Compassion-based interventions to improve wellbeing: a one-stage meta-analytic structural equation model

**Ausias Cebolla Marti¹, Pedro Sarrión¹, Joana Vidal², Belen Fernández-Castilla³,
Daniel Medina², Jessica Navarro-Siurana¹**

¹ University of València, ² University of Valencia, ³ Universidad Nacional a Distancia (UNED)

Summary

This study attempts to analyze the effect of a compassion-based intervention (CBI) and its ultimately impact on wellbeing. A systematic literature search following PRISMA guidelines. A total of 5980 articles was found from which 35 ($n = 6,077$) passed the inclusion criteria. A one-stage meta-analytic structural equation model was conducted to test the mediator effect of compassion on the relationship between MBI and well-being. Results show that there is a full mediation: the relationship between CBI and well-being.

Details

BACKGROUND AND AIMS: Previous literature show the efficacy of psychological interventions in improving well-being. Virtue-based interventions are designed to increase well-being through the training in specific virtue like compassion among others (forgiveness, hope, etc.). Previous systematic reviews have found how several virtuous traits such as compassion correlate positively with wellbeing. However, they have not studied how by modifying explicitly the virtue of compassion, levels of wellbeing are affected. This study attempts to overcome this limitation by analyzing the effect of a compassion-based intervention (CBI) and its ultimately impact on wellbeing. **METHODS:** A systematic literature search following PRISMA guidelines was performed in PubMed, Web of Science, PsycInfo and Scopus. A total of 5980 articles was found from which 35 ($n = 6,077$) passed the inclusion criteria. We were interested only in RCTs that intervene explicitly in compassion and measure compassion and wellbeing pre and post-intervention. Correlation coefficients between the variables of interest were extracted/calculated, and a one-stage meta-analytic structural equation model was conducted to test the mediator effect of compassion on the relationship between MBI and well-being. **RESULTS:** Results show that there is a full mediation: the relationship between CBI and well-being, which was statistically significant, became non-significant ($b = 0.057, p = .083$) when compassion was introduced as a mediator in the model. Furthermore, the indirect effect of MBI on well-being through compassion was big and statistically significant ($c' = 0.622, 95\% [0.090, 0.122]$). The effect of potential moderator variables was also explored. **CONCLUSIONS:** This study demonstrates that compassion-based interventions may increase well-being levels by cultivating the virtue itself.

P2-4 - Cultivating Kindness and Compassion with Mindfulness Apps: Can algorithms teach us to be kind and compassionate?

Ana Dragojlovic¹, Julieta Galante¹

¹ University of Melbourne

Summary

Drawing on interviews conducted in Melbourne, Australia, we explore whether the acquisition of K&C through meditation apps can pose psychological and cultural challenges. Utilising a feminist intersectional framework, we investigate the extent to which practicing meditation via apps without human support could potentially cause harm.

Details

Millions of people across the world practice loving-kindness meditation through mindfulness apps. Regarded as a quintessential meditation in the contemporary secular mindfulness movement, loving-kindness meditation has been described as ‘a Radical Act of Love [to] maintain our individual and collective sanity’, by Jon Kabat-Zinn, who popularized stress-reduction mindfulness meditation in the West. Initially conducted in-person, group-based, and teacher-led formats, many mindfulness courses transitioned to automated delivery through highly scalable mindfulness apps, which now boast tens of millions of downloads.

The cultivation of kindness and compassion (K&C) is often encouraged in mindfulness courses due to its potential to reduce stress and help communities. In teacher-led courses, K&C are perceived as ‘embodied’ qualities that teachers implicitly transmit via interactions with students, rather than solely through meditation exercises. However, apps lack these interpersonal interactions and typically aim to cultivate K&C solely through meditation practices. But is this approach effective? Drawing on interviews conducted in Melbourne, Australia, we explore whether the acquisition of K&C through meditation apps can pose psychological and cultural challenges. Utilising a feminist intersectional framework, we investigate the extent to which practicing meditation via apps without human support could potentially cause harm.

P2-5 - Inducing Self-Transcendent Emotions through Virtual Reality: A pilot study

Joana Vidal¹, Catherine Andreu¹, Maja Wrzesien², Desirée Colombo^{3,4}, Rosa Baños^{1,5}, Justin Wall⁶, Dave Glowacki⁶

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Summary

This pilot study aims to test the efficacy of a Virtual Reality (VR) experience to induce Self-Transcendent Emotions (STEs), specifically awe and Kama Muta. A repeated measures experimental study was carried out. Results show that the Ripple-VR experience is effective in inducing STEs, such as awe and Kama Muta. This controlled environment provides a valuable opportunity for studying these complex emotional responses.

Details

BACKGROUND AND AIMS: Recent studies in emotion research have identified a novel category known as Self-Transcendent Emotions (STEs), that share the common features of shifting attention beyond the self and promoting prosocial motivations and behaviours. One of these emotions is awe, which is characterized by an appraisal of vastness or novelty, often involving feelings of being in the presence of something greater than oneself. Recently, a new STE called Kama Muta has emerged, described as an affective state wherein individuals feel being moved or touched. Moreover, with the rise of Virtual Reality (VR) as a powerful tool to generate immersive experiences, a VR environment named Ripple has been developed. Ripple is designed to emulate the dissolution of conventional self-boundaries and to induce states of selflessness, which are hypothesized to give rise to STEs. Other investigations have demonstrated Ripple's efficacy in inducing states of selflessness, while this study focuses specifically on its effectiveness in generating STEs, particularly awe and Kama Muta.

METHODS: A repeated measures experimental study was carried out. Participants (N=47) were recruited from the general population and completed questionnaires of awe (AWE-S) and Kama Muta (KAMMUS) after the VR experience.

RESULTS: After experiencing Ripple-VR, participants reported a mean score of $M=58.21$ ($SD=23.83$) for the awe scale. According to Pizarro et al. (2018), this score indicates a medium intensity induction of awe. Additionally, evidence of the elicitation of Kama Muta was observed, with a total scale score of $M=75.00$ ($SD=26.74$). These findings align with prior research investigating Kama Muta in various contexts, such as video stimuli or nature experiences.

CONCLUSIONS: The Ripple-VR experience has proven effective in inducing STEs, such as awe and Kama Muta.

ACKNOWLEDGEMENTS AND FUNDING: This work was supported by a predoctoral grant FPU21/03164, funded by the Ministry of Universities of the Spanish Government.

P2-6 - Experimental Evidence for the Benefits of Contemplative Training With Educators: Multiple Tests of Novel Developmental Model of Teaching

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¹ University of Wisconsin Madison, ² University of Wisconsin-Madison, ³ University of Wisconsin – Madison

Summary

SUMMARY: Contemplative skills and dispositions may be core components of effective teaching, and high-quality contemplative interventions, both in-person and digital, can be feasibly implemented with educators to strengthen these qualities.

Details

BACKGROUND AND AIMS: Educators are a key leverage point for improving educational system outcomes. I present a novel developmental model of teaching that situates contemplative skills and dispositions as core building blocks of teacher effectiveness. Using results from three randomized controlled trials (RCTs) testing elements of this model, I argue that contemplative training should play an integral role in teacher education.

METHODS: Study 1 was a RCT involving 21 teachers and 292 students with teacher and student-level interventions. Study 2 was a preregistered RCT of a digital wellbeing training in 662 educators early in the COVID-19 pandemic. Study 3 was a preregistered conceptual replication RCT of the same digital training in 826 educators at the end of the COVID-19 pandemic.

RESULTS: In-person and digital contemplative trainings are feasible and acceptable to educators, improve educator mental health, wellbeing, and the skills and dispositions that underlie mental health and wellbeing, and positively impact teaching quality and work appraisals. High quality digital contemplative trainings deliver persistent benefits with minimal daily engagement, suggesting they can be easily scaled up. Synergistic benefits of teacher and student-level intervention on student executive functioning and social-emotional learning were observed.

CONCLUSIONS: High quality contemplative interventions can support educators. At a time of elevated educator distress, contemplative interventions may be an effective approach to improving educator and educational system outcomes.

ACKNOWLEDGEMENTS AND FUNDING: CZI (DAF 2020-218037, 2021-240812); NIMH K01MH130752-01; MLI (2014-Varela-Hirshberg); Trust for the Meditation Process (15-08), NAEd/Spencer Foundation Postdoctoral Fellowship

P2-7 - Ingredients for Enlightenment: Food and the Path of Liberation

Anne Ryan Gareis ¹

¹ William & Mary

Summary

This poster presentation exemplifies undergraduate contemplative research taking place at William & Mary. The project explores gastronomical practices as a critical aid in the pursuit of spiritual liberation. In South Asian traditions, the way one eats is directly related to the path to liberation. Researching monastics' approach to food, we will better understand how environmental, cultural, and philosophical perspectives of food influence one's day-to-day experience while pursuing their contemplative goals.

Details

This poster presentation is an example of undergraduate contemplative research taking place at William & Mary. The project explores gastronomical practices as a critical aid in the pursuit of spiritual liberation. In South Asian traditions, the way one eats is directly related to the path to liberation. By researching monastics' approach to food, we will better understand how environmental, cultural, and philosophical perspectives of food influence one's day-to-day experience while pursuing their contemplative goals. This project is based in ethnographic fieldwork and literary analysis. The poster presentation will provide an overview of my project and a report on my fieldwork thus far.

At the conference, I will have just completed the first of four monastery visits, where I will implement experiential observation to understand how practitioners engage with gastronomy as a contemplative practice informed by and in alignment with philosophy. This first site is Plum Village in Bordeaux, France. I will participate in the daily contemplative schedule and offer service by farming and cooking. I will gain understanding of how the work on the farm, in the kitchens, and dining halls directly relates to contemplative practices. First-person participation and observation are critical for this project as it provides a direct experience with the tradition and its practitioners. Such insight cannot be gained through textual study or viewing the monastery through an outsider's lens. The first-person experience must be accounted for to understand these practices to the fullest extent possible. In addition to experiential observation, I will interview monastics and lay practitioners to understand their personal interpretation of their tradition's teachings on food. The poster presentation will culminate by pointing to the three remaining site visits and my analysis later in the summer of select South Asian religious texts to account for scriptural teachings on gastronomy.

P2-8 - Who benefits from, and who deteriorates with, preventative mindfulness-based programs? Insights from an individual participant data meta-analysis of RCTs

Julieta Galante¹, Claire Friedrich², Nana Kosugiyama¹, Abigail Chapman³, Ian White³, Peter B Jones², Tim Dalgleish², Napaporn Aeamla-Or⁴, Marieke Arts-De Jong⁵, Bruce Barrett⁶, Susan M Bögels⁷, Jan K Buitelaar⁵, Mary M Checovich⁶, Michael S Christopher⁸, Richard J Davidson⁶, Antonia A Errazuriz⁹, Simon B Goldberg⁶, Corina U Greven⁵, Matthew J Hirschberg⁶, Shu-Ling Huang¹⁰, Matthew Hunsinger⁸, Yoon-Suk Hwang¹¹, Oleg Medvedev¹², Melissa A Rosenkranz⁶, Melanie P Schellekens⁵, Anne Speckens⁵, Nienke Siebelink⁵, Nirbhay N Singh¹³, Feng-Cheng Tang¹⁴, Lianne Tomfohr-Madsen¹⁵

¹ University of Melbourne, ² University of Cambridge, ³ University College London, ⁴ University of Phayao, ⁵ Radboud University Medical Centre, ⁶ University of Wisconsin-Madison, ⁷ University of Amsterdam, ⁸ Pacific University, ⁹ Pontificia Universidad Católica de Chile, ¹⁰ Chung Shan Medical University Hospital, ¹¹ Australian Catholic University, ¹² University of Waikato, ¹³ Augusta University, ¹⁴ Chaoyang University of Technology, ¹⁵ University of British Columbia

Summary

We present preliminary secondary data analyses from a recent large systematic review and individual participant data (IPD) meta-analysis of randomised controlled trials to understand whether key sociodemographic and health-related factors can account for variability, linearly and non-linearly, in the effects of preventive mindfulness-based programmes towards both improvement and deterioration of psychological distress symptoms.

Details

BACKGROUND AND AIMS: Mindfulness-based programmes (MBPs) are popular interventions to prevent mental ill-health. Evidence suggests beneficial average effects but wide variability. Our aim was to understand whether key sociodemographic and health-related factors can account for this variability towards both improvement and deterioration, compared with not doing an MBP.

METHODS: We conducted a pre-registered systematic review and individual participant data (IPD) meta-analysis. Thirteen databases were searched in December 2020 for good-quality randomised controlled trials comparing in-person, expert-defined MBPs in non-clinical settings with passive controls. Two researchers independently selected, extracted, and appraised trials using the revised Cochrane RoB2. IPD of eligible trials were sought from collaborating authors. The primary outcome was psychological distress at 1-6 months after MBP completion. Random-effects, two-stage IPD meta-analyses were conducted. Moderator analyses followed a within-studies approach investigating linear and non-linear effects. Deterioration in participants was defined as a significant primary outcome symptom increase according to the reliable change index.

RESULTS: Fifteen trials were eligible, 13 trialists shared IPD (2,371 participants from 8 countries, median age 34 years-old, 71% women, moderately distressed on average, 20% missing outcome data). In comparison with passive controls, MBPs reduced average distress between one- and six-months post-intervention (standardised mean difference -0.32; 95% confidence interval -0.41 to -0.24; p-value < 0.001; 95% prediction interval -0.41 to -0.24). Results were robust to sensitivity analyses. Confidence in these results is high. Linear moderation effects were not significant. Non-linear moderation and reliable deterioration preliminary results will be presented at the conference.

CONCLUSIONS: In-person MBPs generally reduce distress among community adults who actively choose this type of intervention. Efforts are being made in order to identify sources of variability.

FUNDING: UK National Institute for Health Research (NIHR).

P2-9 - Experiences of People with Musculoskeletal Conditions Participating in a Mindfulness-Based Stress Reduction Program

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Summary

This study explores the experiences of people with musculoskeletal (MSK) conditions participating in a Mindfulness-Based Stress Reduction (MBSR) course. Through interviews and photo-elicitation, three themes emerged: enhanced self and social connection, altered pain perception, and diverse motivators for joining beyond pain and mental health. Despite varied impacts on pain, most reported broader life benefits, suggesting mindfulness as a valuable tool for overall well-being improvement.

Details

BACKGROUND

Musculoskeletal (MSK) conditions are the leading cause of disability globally. Mindfulness-Based Stress Reduction (MBSR) has gained popularity as a treatment for MSK pain. However, the experiences of people with MSK pain attending MBSR remain underexplored. This research investigates the experiences of people with MSK pain in an MBSR program.

METHODS

Qualitative data were gathered through semi-structured interviews and photo-elicitation. Individuals with chronic MSK pain were recruited from the Openground MBSR program in Australia. Participants were instructed to take pictures of things that reminded them of mindfulness while doing the course,

and semi-structured interviews were conducted after they completed it. Interviews were audio-recorded and transcribed verbatim. Qualitative data were analysed using thematic analysis.

RESULTS

Ten individuals were interviewed. Three main themes were identified: 1) Mindfulness enhances the connection with oneself and others - All participants discussed the impact mindfulness had on their sense of presence and connection with themselves (eg, emotional awareness, sense of calmness) and others (eg, work colleagues, loved ones); 2) Mindfulness does not always reduce pain, but it changes how pain is perceived - Most participants discussed that mindfulness enhanced their ability to accept or re-signify pain. While some did not think mindfulness impacted their pain, others discussed that mindfulness reduced it; 3) Motivators went beyond pain and mental health - Most participants joined the MBSR course because of their mental health and/or pain. However, these factors were never the only reasons for initiating the practice - other factors included recommendations from clinicians, evidence supporting the practice, life changes, peers, and failure of other pain management approaches.

CONCLUSIONS

While not all participants experienced an improvement in pain, most reported benefits in broader aspects of their lives. These findings suggest that mindfulness can be a valuable tool for improving overall well-being beyond just pain and mental health management.

P2-10 - Mindful music listening decreases pain among chronic musculoskeletal pain patients: Results from two pilot randomized controlled clinical trials

Adam Hanley¹, Sean Young²

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Summary

In two separate RCTs involving chronic musculoskeletal pain patients ($n=60$, $n=120$), a single-session, 20-minute, mindful music listening intervention resulted in significantly less pain intensity and pain unpleasantness immediately after the intervention. Follow-up data from the first RCT is currently available and indicates the observed pain relief endured across the subsequent month. As such, mindful music listening may be a viable alternative to more traditional mindfulness practice styles.

Details

BACKGROUND AND AIMS: Both mindfulness and music can decrease pain. However, the combination of mindfulness with music listening has never been examined as a treatment for chronic musculoskeletal pain (CMP).

METHODS: Two, single-site, parallel group randomized controlled trials (RCTs) examined a novel, brief (i.e., 20-minute), single session mindful music listening intervention among CMP patients. The first

($n=60$) was a two-arm RCT (mindful jazz listening vs. jazz appreciation). The second ($n=120$) was a four-arm RCT (mindful jazz listening vs. mindful music listening vs. jazz appreciation vs. music appreciation). Changes in acute pain from immediately before to immediately after the interventions were assessed with a 0 to 10 numeric rating scale (NRS) in both studies. Daily pain over a 1-month follow-up period was also assessed using a NRS in the first RCT. Follow-up data collection is ongoing in the second RCT.

RESULTS: In both RCTs, generalized linear mixed modeling revealed that mindful jazz/music listening resulted in significantly less pain intensity and pain unpleasantness than jazz/music appreciation alone immediately after the intervention. Pain intensity decreased by >1.5 points (e.g., 26%) in the mindful jazz/music listening condition; pain unpleasantness by >2 points (e.g., 36%). In The first RCT, mindful jazz listening also decreased daily pain during the 1-month follow-up period. Mindful Jazz listening participants reported pain intensity scores nearly 1 point lower than those in the jazz appreciation condition and pain unpleasantness scores over 1.25 points lower.

CONCLUSIONS: Early results indicate a brief, single session mindful music listening intervention may have immediate and lasting benefits for CMP patients. Given music's ubiquity in the modern environment, teaching CMP patients to use music to guide their mindfulness practice could fill their days with reminders and opportunities to practice mindful pain management.

P2-12 - Impact of a brief mindfulness training on the quality of social support.

Viktoriya Manova¹, Bassam Khoury¹

¹ McGill University

Summary

The poster presentation presents research examining the impact of a brief mindfulness training on supportive interactions, including the state mindfulness of support providers, subjective and objective ratings of the quality of supportive interactions, and the affect of support receivers.

Details

BACKGROUND AND AIMS: Emerging research on interpersonal mindfulness has highlighted its potential to improve social interactions, with some arguing that mindfulness can enhance the quality of social support. This study investigated the impact of a brief mindfulness training on supportive interactions among unacquainted dyads. It examined if a mindfulness training had an impact on support providers' (SP's) state mindfulness, the quality of dyadic interactions, and the affective state of support receivers (SR's).

METHODS: Participants ($n = 260$, 130 dyads) were randomly assigned roles as either SP's or SR's. Providers were further randomized to receive a brief mindfulness induction ($n=66$) or a mind wandering induction ($n=64$). SR's performed an autobiographical mood induction prompting them to recall a

negative past event. Each dyad participated in a structured interaction where SP's supported SR's sharing a negative event. The interactions were video recorded by trained researcher assistants for indicators of SP's supportive presence and empathy. The quality of dyadic interactions was subjectively evaluated by receivers through assessments of SP's therapeutic presence, conversational skills, and supportiveness. Participants' state mindfulness, positive and negative affect, were measured at pre-induction, post-induction, and post-interaction.

RESULTS: We expect that compared to the mind wandering group, SP's receiving mindfulness training will show increased state mindfulness, and will be rated more positively in both objective and subjective measures of interaction quality. SR's interacting with mindfulness-trained providers will report a decrease in negative affect and increase in positive affect post-interaction. Final results will be presented at the conference.

CONCLUSIONS: The present study provides insight on the ways a mindfulness training can impact the quality of supportive interactions and those involved in them. Findings have implications for the implementation of mindfulness-based trainings to improve the quality of supportive interactions between unacquainted dyads, such as healthcare professionals and their clients.

S7.4.2, P2-13 - Longitudinal dose-response effects for meditation on mental health and well-being

Nicholas Bowles¹

¹ University of Melbourne

Summary

This study explores the longitudinal dose-response effects in 614 meditators engaging in self-directed practice over a period approximating two years. Significant dose response effects were found for one of two measured well-being outcomes (satisfaction with life but not positive affect) and both mental health outcomes (psychological distress and negative affect). These findings underscore the importance of consistent meditation practice and potential benefits for those who practice more.

Details

Background and Aims: Studies investigating dose-response effects for meditation, including meta regression models in the domain of mindfulness-based programs, have thus far shown mixed results. However, because this evidence-base is predominantly from brief standardized interventions, it is unclear whether and to what extent dose-response effects are applicable to longer periods of practice outside the context of such interventions. This study sought to examine dose-response effects relating to cumulative practice time over a period of approximately two years on measures of mental health and wellbeing.

Methods: Six hundred and fourteen meditators responded to a follow-up questionnaire approximately two years after their participation in an earlier study. We explored longer term associations between meditation practice dose and outcomes relating to mental health (psychological distress and negative affect) and wellbeing (positive affect and life satisfaction).

Results: Meditation practice dose was significantly predictive of favorable changes for satisfaction with life ($\hat{\eta}^2 = .15, p < .001$), negative affect ($\hat{\eta}^2 = -.13, p < .001$), and psychological distress ($\hat{\eta}^2 = -.14, p < .001$), but not positive affect ($\hat{\eta}^2 = .07, p = .06$), indicating a dose-response relationship for mental health outcomes, and for one of the two measured wellbeing outcomes. For all outcomes, practice frequency was a stronger predictor of favorable outcomes than session duration.

Conclusions: Benefits of meditation appear to continue accruing in the longer term in line with practice dose, with more practice being associated with favorable outcomes in three of four measured domains. The finding that practice frequency was a stronger predictor of favorable outcomes than session duration highlights the importance of daily or near-daily practice. These results highlight the importance of understanding how the benefits of meditation accrue outside the context of formalized programs, for self-directed practice over a broad range of practice doses, in the short and long term.

P2-14 - Contemplative Behavioral Economics: Nudging Toward Prosociality

Joshua Wright¹

¹ City University of New York

Summary

Study of the effects of a single-session mindfulness intervention on moral judgment and moral behavior, in comparison to the influence of social norms and of widely-taught economic theories, using a 2x3 experimental design. Prior research has demonstrated that studying economics makes people more selfish, yet discussion of how to mitigate this antisocial effect is rare and has yet to incorporate the findings of contemplative science.

Details

BACKGROUND AND AIMS: For 20 years, evidence has accumulated that studying economics makes people more selfish, yet discussion of how to mitigate or reverse this antisocial effect is rare. More recently, contemplative science has grown increasingly interested in the relationship between mindfulness and prosociality. Several meta-analyses have been published, and while the results have been mixed, there is evidence to suggest that mindfulness alone -without explicit ethical instruction or even prosocial meditative themes like loving-kindness -can sharpen individuals' ethical discernment. At the same time, interest has also grown in contemplative pedagogy and models for integrating experiential contemplative practices with traditional academic studies. This is a poster/presentation about a work in progress: a prospective survey-based study of how a single-session mindfulness intervention affects prosociality -both moral judgments and actual moral

behavior. Given how widely taught and respected economics is among leaders of business and government, significant findings could have implications for civic discourse, as well as contemplative pedagogy and the pedagogy of social sciences, leadership, and management, all of which are crucial for social connectivity and societal flourishing.

METHODS: 2x3 experimental design, in which participants will be separated by whether or not they receive a short single-session mindfulness intervention and whether they receive either a lesson on basic economic theory, information on relevant social norms, or no relevant information. Their responses to classic ethical questions and their behavior in a standard economic game will then be assessed.

RESULTS: TBD (work in progress)

CONCLUSIONS: TBD

ACKNOWLEDGEMENTS AND FUNDING: N/A

P2-15 - Questioning as a contemplative practice -from the questions of the Buddha to the applications of contemporary education

Bok Hui Lee ¹

¹ Dongguk University

Summary

Questions are born out of curiosity and doubt about existing ideas and systems, and they shake and change those. The Buddha is the most obvious model of this, The path he followed his questions led to enlightenment, and his teachings have been a great asset to our wisdom. If we can provide the opportunity within the education system to question the notion of separateness, to ask, "Is that so? How am I made of?" It will open our eyes to the true nature of existence and contribute to our flourishing.

Details

Name: Bok Hui Lee, email: bokhuilee@dgu.ac.kr, affiliation: Dongguk University.

Title: Questioning as a Contemplative Practice - from the Questions of the Buddha to the Applications of Contemporary Education

BACKGROUND AND AIMS: The Buddha's enlightenment can be said to have arisen as an answer to the questions of his youth such as "Why, being myself subject to birth, do I seek what is also subject to birth?" Through this questioning process, Siddhatta saw familiarity as unfamiliar; he stopped and searched for a new direction, and eventually became a self-awakened Buddha.

METHODS: Analyzing the functioning of questions in the decisive moments of the Buddha's life based on *The Noble Search* and *The Longer Discourse to Saccaka*.

RESULTS: The questioning became the driving force that transformed his life, it was the path to awaken him from the bondage of being, and it brought him to a state of satisfaction through awareness.

CONCLUSIONS: Questions are born out of curiosity and doubt about existing ideas and systems, and they shake and change those ideas and systems. The Buddha is the most obvious model of this, and he had deep questions about life and death, and his own desire for impermanent things. The path he followed and unraveled his questions led to enlightenment, and his teachings have been a great asset to our wisdom ever since. The teachings have been presented in various names and forms throughout the long history of Buddhism and contemplative practice in time and space, and I believe that they can enhance intersubjective values such as empathy and compassion in the wisdom that all things are interconnected, so that if we can provide the opportunity within the education system to question the notion of separateness, to ask, "Is that so? How am I made of?" It will open our eyes to the true nature of existence and contribute to personal and social flourishing. With this perspective, I plan to organize the theoretical background and outline an educational program based on contemplative practice, and draw results through interdisciplinary research with science.

ACKNOWLEDGEMENTS AND FUNDING: To my Supervisor Park, Cheong-Hwan & own funding

P2-16 - Understanding the psychological aspects of the yoga tradition

Jyotsna Agrawal¹

¹ National Institute of Mental Health and Neuro Sciences (NIMHANS)

Summary

Summary: Yoga is a contemplative approach to positive mental health. However, in research the physical aspect of yoga has overshadowed its psycho-spiritual aspect. Therefore, the current study was conducted to qualitatively analyse three core yoga texts to gain insights for development of a psychological model and subsequently, a mental health promotion program. Similar narrative and themes were found across these texts, and insights for mental health promotion will be presented along with deliberation on their implications.

Details

BACKGROUND AND AIMS: Yoga is an applied psycho-spiritual pathway to finding the highest good in life, and thus a contemplative approach to positive mental health. However, in research the physical aspect of yoga has overshadowed its psycho-spiritual aspect, which includes beliefs, thoughts, life choices etc. Therefore, the current study was conducted to qualitatively analyse three core yoga

texts to gain insights for development of a psychological model and subsequently, a mental health promotion program.

METHODS: The texts selected were Bhagavad Gita, Patanjali Yoga Sutra and Yoga Vasistha, which are considered to be the most influential yogic texts for generations of spiritual seekers. These texts integrate ideas from multiple philosophical schools (e.g. Sankhya/ Vedanta) to propose a practical approach for overcoming suffering and finding oneness with the supreme reality.

RESULTS: In the analysis it was found that two out of these three texts are based on dialogue between a 'hero' and a mentor (guru) figure. The narrative begins with the 'hero' having a psychological crisis, whereby the description matches modern criteria for anxiety/ depression. He is then helped by the mentor in terms of finding a meaningful spiritual framework for the existence and one's place in it. He is further taught a variety of applied techniques, in terms of breath control (pranayama), meditation as well as cultivation of specific virtues and skills. The third text is briefer, without a narrative; however, has similar themes for spiritual growth.

CONCLUSIONS: A few consistent themes were noted across texts, from deeper Self, to certain attitude towards action, or cultivation of harmony promoting relational qualities etc. These ideas are relevant for mental health promotion programs, and the details of these themes will be presented along with deliberation on their implications.

ACKNOWLEDGEMENTS AND FUNDING: This was non-funded research. The researcher acknowledges NIMHANS, Bengaluru for support.

P2-18 - Revisiting contemplative education for meaning in life in the light of the intersubjectivity turn

Renata Cueto De Souza ¹

¹ Simon Fraser University

Summary

This presentation aims to advance contemplative pedagogies for meaning in life grounded in theories of subjectivity based on (a) the tenets of contemporary mindfulness' first wave; (b) the phenomenology of intersubjectivity and meaning. The former characterizes contemplation as a pull toward meaning within subjectivity while the latter sees it as a condition for seizing meaning and a source of meaning outside the subject. Implications for teaching and learning are considered in this light.

Details

BACKGROUND AND AIMS:

A concern of contemplative education is the attainment of meaningful lives oriented towards ethical ways of being. So far there have been few philosophically framed studies on the subject—the work of educational scholar Oren Ergas being a notable exception. He proposed a theory of subjectivity as a state of mind within which two opposite pulls—towards action as day-to-day living and towards contemplation as meaningful living—struggle and reconcile. My presentation indicates the limitations of this proposal and suggests advances taken from contributions of phenomenology of intersubjectivity and philosophy of meaning.

METHODS:

The study is divided into four sections: (1) the task of centering the subject in the curriculum through contemplative practices; (2) the need for a theory of subjectivity to ground pedagogical approaches; (3) theories of subjectivity in existential phenomenology on meaning in life; (4) active and contemplative lives in the philosophy of meaning.

RESULTS:

Findings suggest that early contemplative pedagogies for meaning in life, such as Ergas's, focus on contemporary education's neglect of the subject in teaching and learning, but have not engaged with recent educational theory's criticism of subjectivism nor its turn to intersubjectivity. Phenomenology and philosophy of meaning characterize intersubjectivity as an existential tension where the pole of meaning resides in the world, outside the subject. Moreover, rather than opposing orientations, both active and contemplative living can be sources of meaning.

CONCLUSIONS:

Contemplative pedagogies for meaning in life should engage more closely with existing philosophical traditions to further significant contributions to the field.

ACKNOWLEDGEMENTS AND FUNDING: N/A

P2-19 - Open-focus Attention: A Path Towards Embodiment and Well-being

Jayprakash Show ¹

¹ Indian Institute of Technology Jodhpur

Summary

Attention gives rise to the kind of world that a person experiences. So the attention model can positively impact Well-being. Narrow-focus attention is one-directional and goal-oriented; giving rise to a sharp distinction between subject and object. That causes stress and anxiety. The open-focus attention is an optimal blend of attention that is the receptive and gradual way to realize the world. Such a form of

attention appreciates a more genuine description of oneself. It makes our lives effortless, contributing to our well-being.

Details

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Open-focus Attention: A Path Towards Embodiment and Well-being

Background and Aims:

The way an agent pays attention gives rise to the kind of world that a person experiences and affects our well-being. This implies that our well-being is the result of one sort of attention model. Of the two major types of attention, narrow-focus attention and open-focused attention. The narrow-focus attention is one-directional, goal-oriented, and remains focused on a single target, giving rise to a sharp distinction between subject and object. Such a practice clearly demarcates an agent's inner and outer world. As an emergency mode, it is considered a 'fight or flight' response that requires a lot of energy, one which may give an instant result but gives rise to negative emotions, stress, anxiety and also impacts our well-being negatively. It thereby hinders the complete representation of the self. The right hemisphere's attention is diffuse-immersed; such an optimal blend of our attention is called open-focus attention. Open-focus attention is the receptive and gradual way to realize the world. This suggests that the association of open diffused attention.

The complete realization of ourselves requires attention that has a broad range. This research aims to understand the effect of the open-focus attention in a healthy life that can be thought of as an instant of well-being.

Method:

This study attempts a textual analysis to understand the phenomenological aspects of narrow-focus attention and open-focus attention in our well-being

Result:

The narrow-focus attention causes distress in our everyday experiences. Whereas the practices associated with the open-focus attention make room for the realization of the association between the environment and oneself. As a result, it improves our life that is causing our well-being.

Conclusion:

Open-focus attention is the receptive and gradual way to realize the world. Such a powerful practice positively impacts our mind and body and makes our life effortless, contributing to our well-being.

P2-20 - Cardiophenomenology of stress anticipation experience in MBSR and meditation-naive participants

Liudmila Gamaionova¹

¹ University of Lausanne

Summary

This study adopts cardiophenomenology, a modification of the neurophenomenological paradigm, by using peripheral physiological and cardiac measures for synchronization with subjective lived experience. The poster presents preliminary results of analyzing the experience of stress in meditators and non-meditators during a stress-inducing test. The analysis combines the first person (short micro-phenomenological interviews) and third person (continuous measurement of cardiovascular changes).

Details

BACKGROUND AND AIMS: Contemplative practices have been extensively studied in their relationship to the experience of stress, with the results demonstrating that meditative training is associated with more adaptive psychological and physiological stress response. However, stress is a complex phenomenon: while it has a distinctive physiological signature, its phenomenological features may vary significantly among individuals. Does meditative training affect how stress experiences are constructed? How are phenomenological features of the stress experience related to the objective measures of stress?

METHODS: To investigate these questions, this study adopts cardiophenomenology, a modification of the neurophenomenological paradigm, by using peripheral physiological and cardiac measures for synchronization with subjective lived experience. The poster presents preliminary results of analyzing the experience of anticipatory stress during a stress-inducing laboratory test. The analysis combines the first person (short micro-phenomenological interviews) and third person (continuous measurement of changes in the sympathetic and parasympathetic activity of the autonomic nervous system) in participants (n = 44) who were randomized to an eight-week Mindfulness-Based Stress Reduction program or wait-list control.

RESULTS: Preliminary results suggest that the effects of mindfulness training can be detected not only on a physiological level but also on the phenomenological level. Cardiophenomenology is a useful paradigm for approaching the study of stress experiences, and meditative training allows the

development of the ability for a more fine-grained description of phenomenological features associated with the peripheral response to stress.

CONCLUSIONS: A combined analysis of fluctuations in the pre-ejection period and vagal control on one side and subjective affective-corporal experience on the other provide a deeper understanding of the dynamic of stress anticipation.

ACKNOWLEDGEMENTS AND FUNDING: Cogito Foundation (Switzerland), Centre interdisciplinaire en histoire et sciences des religions (Université de Lausanne, Switzerland)

P2-21 - From Disconnection to Compassion: Exploring the Embodied Experience of Empathy in Natural Interactions through Phenomenological approach

Alejandro Troncoso^{1,2}, Antonia Zepeda¹, Vicente Soto², Ellen Riquelme², Sissi Fuentealba³, Catherine Andreu⁴, Ausias Cebolla Marti⁵, David Martínez-Pernía⁶

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Summary

This study aimed to explore the embodied experiences of empathy in an interactive context. Twenty-nine participants interacted face-to-face with a simulated Alzheimer's patient, probing the question: "What do you fear forgetting?". Micro-phenomenological interviews and mixed methods analyses were employed. Findings identified four graded experiences: relational disengagement, persistent angst, anguish anchoring with other-oriented support, and compassionate support, challenging the traditional binary view of empathy.

Details

BACKGROUND AND AIMS:

Research has advanced in revealing psychological and brain mechanisms in empathy-compassion experience. Yet, persistent limitations include a lack of real interactive contexts and in-depth subjective analysis. This study aimed to address these gaps by examining experiences within an interactive setting.

METHODS:

Twenty-nine participants engaged face-to-face with a simulated Alzheimer's patient, exploring the question: "What do you fear forgetting?" Through micro-phenomenological interviews, participants' experiences were explored. Mixed methods analyses were conducted.

RESULTS:

Results revealed four distinct graded experiences: relational disengagement, persistent angst, anguish anchoring with other-oriented support, and compassionate support. Some felt detached from the other's suffering, experiencing reduced anguish intensity and a cold ambiance. Conversely, others experienced a warm interaffective ambiance, feeling profoundly present and motivated to offer compassionate support.

CONCLUSIONS:

Shifting from the commonly reported binary view of empathy as distress or compassion, this study shows a more graded perspective of empathy-compassion structures of experiences, considering its interactive phenomenological dimensions and its temporal dynamics. These graded structures result in distinct approaches in interactive engagement acts, presence, and emotion co-regulation to address and resonate with the other's suffering

ACKNOWLEDGEMENTS AND FUNDING: AT is supported by ANID grant # 21220194

P2-23 - Exploring Healthcare Professionals' Perspectives on Mindfulness-Based Interventions for Chronic Musculoskeletal Pain: A Qualitative Study

Anita Barros Carlos De Amorim¹, Talia Barnet-Happles¹, Trudy Rebbeck¹, Nicholas Van Dam², Charlotte Johnstone³, Claire Ashton-James¹, Nathalia Costa⁴, Matthew Jennings⁵, Kathryn Refshauge¹, Evangelos Pappas⁶

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Summary

This qualitative study explores healthcare professionals' perspectives on mindfulness-based interventions (MBIs) for chronic musculoskeletal (MSK) pain in the Australian healthcare system. Thirteen clinicians were interviewed. The identified themes emphasize the importance of considering costs, accessibility, resources, training, policies, administrative support, and patient engagement, suggesting that comprehensive support from both clinicians and healthcare systems is needed for successfully integrating MBI in chronic MSK pain management.

Details

BACKGROUND AND AIMS

The implementation of mindfulness-based interventions (MBIs) for chronic musculoskeletal (MSK) pain into routine clinical practice remains challenging. This study aims to explore healthcare professionals' perspectives on MBIs for chronic MSK pain and to identify any perceived barriers and facilitators to the implementation of this intervention in the Australian healthcare system.

METHODS

This is a qualitative study using semi-structured, in-depth interviews. Healthcare professionals who have experience treating patients with chronic MSK pain were recruited from the Sydney Local Health District in New South Wales, Australia. All interviews were audio-recorded and transcribed verbatim. Qualitative interview data was analyzed using a reflexive thematic analysis of transcribed data from the interviews. Themes were identified in the data and supported by quotes.

RESULTS

Thirteen participants pain specialists and allied health professionals were interviewed. Our analysis identified three overarching themes: *1) Clinicians support MBIs for chronic pain:* Most clinicians expressed support for using MBIs for chronic MSK pain. However, they acknowledged the cost and accessibility as barriers for patients. Offering online MBIs was seen as a possible solution to enhance accessibility, but challenges with technology, especially for older patients, were mentioned. *2) Implementation requires healthcare system support:* Clinicians highlighted the need for healthcare system support to integrate MBIs successfully. This includes resources, training, policies, and administrative backing. Without these elements, implementation may be challenging. *3) Patient Engagement:* Clinicians highlighted the importance of patient awareness, preferences, and readiness in adopting MBIs for pain management. These factors were recognized as both barriers and facilitators to effective implementation.

CONCLUSION

The findings underscore the need for comprehensive support from both clinicians and healthcare systems to facilitate the successful integration of MBIs for the management of chronic MSK pain in the Australian healthcare system.

FUNDING

Sydney Health Partners.

P2-24 - An Integrative Mechanistic Framework for Mindfulness-Induced Cognitive Change

Luis Cásedas¹, Jonathan Schooler², Juan Lupiáñez³

¹ Universidad Autónoma de Madrid, ² University of California Santa Barbara, ³ Universidad de Granada

Summary

Meta-analytic evidence consistently suggests that mindfulness training is effective in improving executive cognitive performance. Here we outline a novel theoretical framework for this phenomenon: the Capacity-Efficiency Mindfulness (CEM) framework. The CEM framework integrates the mindfulness and cognitive training literatures, highlights the critical role of mind-wandering and affect in explaining mindfulness-induced cognitive gains, and generates falsifiable predictions for future research.

Details

[Note: The poster will outline a novel theoretical framework and, therefore, the suggested sections for the abstract seem not applicable; we provide a narrative abstract instead]

In recent years, there has been a marked increase in the number of intervention studies investigating the potential of mindfulness meditation and mindfulness-based programs to produce positive cognitive change. Several meta-analyses of these studies are now available, which collectively suggest that mindfulness training holds promise for improving performance across executive cognitive domains. However, the specifics of this relationship, including the underlying mechanisms, have yet to be fully characterized. Here, we examine empirical and theoretical advances in this area and integrate them with established insights into the mechanisms and limitations of classical cognitive training. Based on this synthesis, we propose the Capacity-Efficiency Mindfulness (CEM) framework as a mechanistic account of mindfulness-induced cognitive change. According to CEM, mindfulness training modulates cognitive function not by increasing the gross amount of an individual's cognitive resources, but by enabling their more efficient use through a reduction in cognitive-affective interference during task performance. The framework highlights the critical mediating role of mind-wandering and affect in determining the efficiency of resource allocation in situations that require controlled cognitive processing, thereby generating specific theoretical predictions for future research. Research avenues available to begin testing CEM predictions are discussed to conclude.

P2-25 - Racial Discrimination and Mental Health among Underrepresented Minorities (URM) in Residential Addiction Treatment: Interpreting Environmental Reward and Drug Craving from an Embodied Cognition Perspective

Stevie Grasseti¹, Ebony White², Sebastian Ehmann¹, Michelle Yoong¹, Michael Gawrysiak¹

¹ West Chester University of Pennsylvania, ² Drexel University

Summary

Despite the ubiquity of racial discrimination in America, relatively little empirical research has studied the consequences on mental health. This presentation will reference data collected from underrepresented minorities receiving treatment for substance use disorders to highlight putative consequences on mental health (i.e., traumatic stress, drug craving, environmental suppression) and factors that bolster resilience. Results will be interpreted from an embodied cognition perspective.

Details

BACKGROUND: Exposure to racial discrimination is common in America and is linked to deleterious outcomes for underrepresented minorities (URMs). However, there is relatively little empirical research examining how discrimination adversely affects mental health for URMs. Through an interdisciplinary collaborative effort from a racially diverse team of investigators, this presentation highlights findings testing hypotheses about the risk-resilience factors related to discrimination in the context of an ongoing clinical trial.

METHODS: Data presented here reflects eligibility assessments of participants seeking enrollment into a clinical trial to treat opioid use disorder (OUD). All participants carried a substance use disorder (SUD), identified as URM, and were assessed following admission to a residential addiction treatment facility. All measures used were standardized, well-validated, and assessed perceived exposure to discrimination, racial trauma, posttraumatic stress, mindfulness, and reward probability. Analyses assessed the interrelationships between discrimination and variables of interest to test predictions about the ways that discrimination is harmful.

RESULTS: Exposure to discrimination significantly and inversely associated with mindfulness ($p < .05$), and reward probability ($p < .001$) and positively associated with drug-craving, and race-based traumatic stress ($p < .001$).

CONCLUSIONS: Results suggest that exposure to racial discrimination is linked to drug-craving and reductions in mindfulness and perceived availability of, and meaningful engagement in, environmentally rewarding activities. Findings will be discussed from an embodied cognition framework.

ACKNOWLEDGEMENTS AND FUNDING: Research reported here was supported by NIH-NIDA (Award R15DA050102).

P2-26 - The Monitoring of Momentary Experiences Task: A multi-study exploring a new measure of open monitoring awareness

Ivan Nyklíček¹

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Summary

Open monitoring is an important skill in various meditation traditions. A new behavioural measure of open monitoring awareness based on stimulus-free verbal expression of momentary experience was examined in three studies. Results showed associations with meditation status and experience, but not with self-reported mindfulness skills or a brief training.

Details

Background and aims: Open monitoring is an important skill in various meditation traditions. Besides self-report and neurophysiological assessments, a behavioural task assessing open monitoring skill is a welcome complementary approach. Therefore, the aim was to examine a new behavioural measure of open monitoring awareness based on stimulus-free verbal expression of momentary experience.

Methods: In Study 1, 35 experienced meditators and 47 matched control participants performed the task and completed self-report instruments; in Study 2, 10 experienced vipassana meditators completed this measure before and after an intensive 7-day retreat; in Study 3, 62 participants of an 8-week MBSR intervention performed the task before and after the intervention. Indices of Interoceptive, Exteroceptive, and Affective Awareness were obtained.

Results: Scores on the task did not correlate with self-reported mindfulness skills and did not change from pre-to post retreat or MBSR training. However, compared to controls, experienced meditators scored higher on all awareness variables with large effect sizes. In addition, scores correlated with experience in vipassana meditators.

Conclusions: The MoMEnt task seems to assess open monitoring skill, which is not captured by self-report questionnaires, does not change with brief training, but is associated with meditation status and amount of practice. These outcomes provide directions for future applications of the task.

Acknowledgements and funding: The project is internally funded by Tilburg University, Netherlands

P2-27 - The Harmony Study To Improve Biopsychosocial Mechanisms Influencing Cardiometabolic Health among African American Women: A Report of Protocol, Recruitment, Baseline Data, and Research Training Opportunities in the Context of the COVID Pandemic

Cheryl Giscombe¹, Susan Gaylord², Keturah Faurot², Andrew Bradford³, Sierra Vines³, Kelly Eason², Charity Lackey³, Raven Smith³, Dorothy Addo-Mensah³, Karen Sheffield-Abdullah³, Latonia Chalmers³, Quinshetta Alston³, Silvia Marques-Davis³, Tomeka Day³, Kerri Green-Scott³, Aisha Chilcoat⁴, Giselle Corbie³, Kelly Evenson³, Carmen Samuel-Hodge³, Tene Lewis⁵, Lily Chen³, Taleah Frazier⁶, Jamie Crandell³, Millicent Robinson³

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Summary

The HARMONY study is a RCT investigating effects of a culturally-tailored mindfulness self-management intervention on sustained improvements in healthy eating and exercise through improved mindful stress management, self-regulation, and self-efficacy in overweight African American women at risk for chronic cardiometabolic illness. This presentation provides preliminary results, including COVID modifications, recruitment data, and research training outcomes.

Details

Background and Aims: African American Women (AAW) are at high risk for stress-related cardiometabolic (CM) conditions. The Harmony Study is an NIH-funded RCT testing a culturally tailored mindfulness-based stress management intervention to address psychological stress as a potential barrier to adherence to healthy exercise and eating goals. The aim is to help AAW build on their strengths to promote cardiometabolic health by enhancing positive reappraisal, self-regulation, and self-efficacy as protective factors against chronic stress-inducing biobehavioral morbidity and mortality risk.

Methods: This 48-week, longitudinal, two-arm, mixed-method RCT includes two group-based, online interventions and laboratory-based, biobehavioral outcome data collection.

Results: A variety of recruitment processes have yielded 162 enrolled participants of the targeted 200 participants AAW ≥ 18 years old with CM risk. Data to determine primary outcomes (actigraphy and carotenoid levels) and secondary outcomes (body composition, inflammatory markers, glucose metabolism, and stress) are being collected at 0- and 4-, 8-, and 12-months post-intervention. Intent-to-treat, data analytic approaches will be used to test group differences. COVID-related modifications have been made, including web-based intervention implementation. Robust training opportunities for students/emerging scholars from diverse backgrounds have been facilitated by this study, including an NIH diversity supplement award for an early-career faculty member.

Discussion: This study is the first to use culturally-tailored stress management, exercise, and nutrition educational approaches to reduce biobehavioral CM risk in AAW. Results will inform the development of scalable and sustainable CM risk-reduction programming.

Funding: This work was supported by NIH: The National Institute on Minority Health and Health Disparities (R01MD015388-04 and R01MD015388-04S1), the National Institute of Complementary and Integrative Health (T32AT003378-17), and the National Center for Advancing Translational Sciences (UM1TR004406). 1TR004406).

P2-28 - The impact of personal values on well-being: A structural equation model

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Summary

This study aims to explore which values are associated with hedonic and eudaimonic well-being. A cross-sectional study was performed with 269 participants. Well-being and personal values were measured. Structural equation modelling using Mplus was conducted. The model adjusted satisfactorily the data [$\chi^2(118) = 185.770, p < .001$]. Openness to change was positively related and Self-enhancement was negatively related to well-being

Details

Background and aims: From the Theory of Basic Human Values (Schwartz et al. 2012), different studies have analyzed the link between personal values and well-being, yielding mixed results. Openness to change values have been associated with increases in hedonic well-being (HWB) (positive affect, satisfaction with life), however the relationship between conservation, self-transcendence, and self-enhancement values and HWB is inconsistent. Additionally, the relationship between personal values and eudaimonic aspects of well-being (psychological and social positive functioning) remains unexplored. This study aims to explore which values are associated with HWB and eudaimonic well-being (EUWB).

Methods: A cross-sectional study was performed with 269 non-clinical individuals (71.4% women; Age: $M=31.23, SD=14.41$). Emotional (EWB), psychological (PWB) and social well-being (SWB) (MHC-SF, Keyes et al., 2008), and personal values (PVQ-RR, Schwartz et al., 2017) were measured. Structural equation modeling using Mplus was conducted.

Results: The model adjusted satisfactorily the data [$\chi^2(118) = 185.770, p < .001, CFI = .950, RMSEA = .046, 90\%CI[.033-.059], SRMR = .043$]. Openness to change was positively related to EWB and PWB ($b =$

.21, $p < .05$; $b = .34$, $p < .001$). Self-enhancement was negatively related to EWB and PWB ($b = -.24$, $p < .01$; $b = -.22$, $p < .01$).

Conclusions: Openness to change (e.g., stimulation and self-direction) was associated with greater HWB and PWB, while self-enhancement (e.g., achievement and power) was associated with lower HWB and PWB. Hence, growth orientation values (vs. self-protective values) are more related to well-being. Future research could also explore the relationship between the degree of self-centeredness and values, such as self-transcendence. Understanding how individual values relate to one's degree of self-centeredness could provide valuable insights into human behavior and well-being.

Acknowledgements and funding: This work has been funded by “PROMETEO” program (CIPROM/2021/041, Conselleria de Innovación, Universidades, Ciencia y Sociedad Digital)

P2-29 - Development of the Youth Compassion Measure to Identify Developmentally Appropriate Domains of Embodied Compassion in Youth

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Summary

Development and validation of the Youth Compassion Measure are presented. This novel tool is a developmentally appropriate assessment of compassion combining scenario-based and self-report response to capture contextual and perceived aspects of compassion development. Through a three-phase development process with students, this measure aims to act as a valuable tool for understanding and fostering compassion in young people. This measure supports interventions enhancing compassion in youth.

Details

BACKGROUND AND AIMS: This work presents the development of a developmentally appropriate compassion measure -the Youth Compassion Measure. This measure combines scenario-based questions and self-report to combine personal perception with real life contextualization to assesses compassion in adolescents, emphasizing the need for age-appropriate compassion cultivation and understanding.

METHODS: The development occurred in three phases. Phase 1- We conducted youth focus groups (26 students, grades 4-8) to develop the measure. Using a structured protocol, they generated scenarios mirroring their challenging experiences, aligning with the five stages of compassion. This phase offered insights into scenarios that resonate with younger adolescents regarding tough or difficult situations they may face. Phase 2- One-on-one interviews and the administration of the initial version of the questionnaire with 15 students (grades 6-8). This step allowed for a deeper understanding of the

individual perspectives on compassion and the preliminary assessment of the questionnaire's content. Phase 3- The measure was administered in two urban public schools across 200 students to assess the measure's psychometric properties, including internal consistency and construct validity.

RESULTS: The questionnaire exhibits strong reliability, with a Cronbach's alpha of 0.943. "Deciding to help others" and "Noticing" indicate lower reliability, while "Psychological safety in my school" and "Citizenship behaviors" demonstrate higher reliability, within the acceptable range. Structural validity, including confirmatory factor analysis, suggests reasonable model fit indices - RMSEA at 0.0494 and CFI at 0.936- confirming the questionnaire's target in measuring intended constructs.

CONCLUSIONS: This measure has relevance for understanding compassion cultivation in youth. By providing insights into how compassion can be effectively nurtured across development, this has the potential to lay a foundation for supporting effective interventions aimed at promoting compassion and prosocial behavior in young people.

ACKNOWLEDGEMENTS AND FUNDING: This was funding through a Mind and Life PEACE grant.

P2-30 - Taking Rewards Seriously: Developing a Scale for Pleasant Effects of Meditation

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Summary

Study of the validity of and initial results from a new scale of meditation-related pleasant effects, modeled off Britton's Meditation-Related Adverse Effects Scale (MRAES-MBP). Topics to be explored include: the relationship between pleasant effects, adverse effects, motivation, program adherence, consistency of practice, and total practice time; as well as expectations among novice meditators compared to wellness-industry marketing.

Details

BACKGROUND AND AIMS: There are dozens of wellness scales that have been used to assess mindful qualities and various health and wellness outcomes, but there is no concise scale for meditation-related pleasant effects comparable to Britton's Meditation-Related Adverse Effects Scale (MRAES-MBP). Pleasant effects may be important for adherence to mindfulness intervention protocols, and inability to measure them is a gap with serious implications for public health, social connectivity, and societal flourishing.

METHODS: A "positive effects" scale corresponding to the MRAES-MBP was developed. An initial pilot was carried out by asking participants in MBSR programs to fill out both the MRAES-MBP and a

“mirror image” pleasant effects survey in each of the 8 weeks of the program. Students’ weekly practice logs and reflections are being reviewed to correlate results from these two scales with a battery of wellness assessments, practice logs, and outcomes coded from written reflections. Empirical methods are mixed with scholarship on meditation pedagogy.

RESULTS: Preliminary results indicate both differentiation and overlap between the results of the MRAES-MBP and the new pleasant effects survey. Further analysis will explore the relationship between pleasant experiences, motivation, consistency of practice, and total practice time over a semester-long period.

CONCLUSIONS: Still pending, but the intention is to unpack implications for adherence to mindfulness intervention protocols, public health, and how to manage novice meditators’ expectations in the face of wellness-industry marketing.

ACKNOWLEDGEMENTS AND FUNDING: N/A

P2-31 - Meditation, Education, and Transformation: An Empirical Test of Students’ Experiences in a Meditation and Wellness Course

Kevin Aviles¹, Adrian Bravo¹, Mark McLaughlin²

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Summary

This study examined the impact of a 15-week contemplative studies college course has on students’ trait mindfulness and proposed mechanisms of change (i.e., attentional regulation, emotional regulation, equanimity, cognitive flexibility, and decentering-related constructs) associated with transformational outcomes. Based on prior literature we hypothesized that all these constructs will improve (i.e., improved self-report scores on each outcome) from pre-to-post completing the course.

Details

BACKGROUND AND AIMS:

Prior research has shown support for mindfulness-based interventions being efficacious in improving well-being among college students. However, mindfulness (and other contemplative practice) is introduced to college students in a myriad of other ways, including through specific lecture courses. The present study aimed to contribute to existing literature by examining cognitive and behavioral changes associated with participation in a contemplative studies class in tandem with a long-term meditation practice in college students.

METHODS:

To test study aims, we recruited students ($N = 31$; 67% female, 67% White, Mean age = 21) to fill out surveys assessing several factors associated with contemplative practice (e.g., decentering, mindfulness skills, emotion regulation, self-compassion, and well-being) once before, three times during, and once after taking the class. Overall, 55% of participants filled out all 5 surveys and 65% completed the pre- and post-class surveys.

RESULTS:

Data analysis is ongoing (analyses will be completed by the time of the conference), but , we hypothesize that as a result of taking this course we will see: 1) an increase in participant's ability to de-identify and distance themselves from internal experiences (decentering), 2) an increase in responding more non-judgmentally and non-reactively to their experience, 3) an increase in compassion for self and other, and 4) an increase in positive psychological well-being. Results from this project could inform future research on the efficacy of incorporating contemplative pedagogy and practices in the classroom.

ACKNOWLEDGEMENTS AND FUNDING:

Support for this research was provided by the William & Mary Center for Mindfulness and Authentic Excellence.

P2-32 - Experiences of Fatigue Improvement in Female Cancer Survivors Undergoing Exercise/Nutrition Training vs. Qigong: A Qualitative Analysis of A Randomized Controlled Trial

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Summary

This qualitative study examines the interviews of 24 women with cancer related fatigue who were in a 2017 randomized controlled trial comparing the effects of an exercise/nutrition program to qigong. We found that qigong reduced fatigue by reducing stress and increasing tranquility, while exercise/nutrition reduced fatigue through physical strengthening. The exercise group developed increased bodily awareness, while the qigong group conveyed an increased psychosomatic awareness.

Details

BACKGROUND AND AIMS:

Cancer related fatigue (CRF) is a common, debilitating effect of cancer and its therapies, lacking a standard of treatment. We previously conducted a randomized, controlled trial in 24 women with CRF comparing the effects of a 10-week exercise/nutrition program to qigong. We found similar levels of fatigue improvement in both groups, but qigong had greater mood, emotion regulation, and stress improvement, while exercise/nutrition had improved sleep/fatigue. This qualitative study examines the follow-up interviews of these women to identify factors they attributed to their fatigue improvement and to determine whether these factors correspond to the quantitative data.

METHODS:

We used a team-based grounded theory methodology to identify themes related to fatigue improvement that arise within each group, how they compare to each other, and how they compare to the quantitative data.

RESULTS:

Generally, we found that the qigong group experienced a “calming, stress-relieving effect”, as one patient noted. The qigong group had improved physical symptoms, such as migraines, night sweats, lymphedema, posture, and alcohol intake. The dominant theme in the exercise/nutrition group was that individuals felt physically “stronger and more energetic”. The exercise group also noted an improved understanding of their “body’s limits”.

CONCLUSIONS:

The calming, stress-relieving effects of qigong correspond to the quantitative measures of improved mood, and stress improvement measures. The exercise group developed bodily awareness and physical strengthening, while the qigong group conveyed an increased psychosomatic awareness—because of their improved physical symptoms—and tranquility. These themes can direct future research into therapies and mechanisms of CRF.

ACKNOWLEDGEMENTS AND FUNDING:

We wish to thank Camilla Moore, Greg Salguiero and Katie Lester for designing and delivering the interventions. We especially thank all the participants in this trial who made this study possible.

P2-33 - The Mindful Researchers - A multi-layered co-creation process for the cultivation of contemplative practices in science, academia and beyond

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Summary

The Mindful Researchers initiative (<https://mindfulresearchers.org>) responds to a shared need for a community to support each other and to sustain one's contemplative practice within the academic realm in which ambition and competition are prominent ideals. An ongoing participatory co-creation process supports the emergence of bottom-up, community-driven, grassroots projects that may help researchers to flourish, sustain their contemplative practice, and foster interdisciplinary collaborations.

Details

BACKGROUND AND AIMS:

In a fiercely competitive academia, it seems hard to sustain one's contemplative practices. How can we combine a steady mindfulness practice with the mindset of a researcher in this realm? What is required on individual and institutional levels for researchers to succeed in the scientific world without losing their mindful, ethical attitude?

The Mindful Researchers initiative emerged after Mind & Life Europe's ESRI 2020 from the shared need to cultivate a space for contemplating, sharing, learning and supporting each other, while fostering new collaborations, in order to enhance the flourishing of researchers.

METHODS:

From 2020-2022, we organized 30+ online community sessions and issued newsletters with resources and updates. Since 2023 we have been engaging in a participatory 'visioning' process to collect and map current needs and ideas from the community of contemplative researchers, through open community meetings as well as five small-group workshops with 26 participants. We aim to prioritize these insights through a poll, which will provide the framework for designing a strategy to stimulate new collaborations and projects for the benefit of the wider community. This structured process, inspired by collaborative design practices, emphasizes bottom-up, grassroots, community-driven initiatives, complementing efforts from larger organizations.

RESULTS:

Collected data have been analyzed, and a poll to prioritize items is in preparation. We present a synthesis of collected data, learnings and preliminary outcomes, outlining possible next steps.

CONCLUSIONS:

Our project, alongside community-building, explores the adaptability of collaborative design to a community focused on contemplative practices. It seeks to experiment with innovative venues of knowledge production and to introduce participatory methods to the field of contemplative research. We invite anyone to join and enrich this exploration with new ideas and contributions.

ACKNOWLEDGEMENTS AND FUNDING:

We acknowledge the Yoga Science Foundation, Mind & Life Europe, and Mind & Life Institute for funding and support.

P2-34 - Mindfulness, Social Connectedness, Dignity, and Coworker Relationships

Jieun Chang¹, Ramaswami Mahalingam¹

¹ University of Michigan

Summary

This longitudinal survey explores the links between mindfulness, social connectedness, dignity, and coworker relationships among South Korean graduate students and recent alumni. Structural equation modeling showed that mindfulness predicted (1) satisfactory coworker relationships and (2) the treatment of others with dignity, both mediated by enhanced social connectedness. Results imply mindfulness's potential for respectful and fulfilling social interactions by promoting social connectedness.

Details

BACKGROUND AND AIMS:

Good coworker relationships are crucial for workers' well-being and job performance (AbuAIRub, 2004). Additionally, mindfulness has been suggested as a factor in promoting social connectedness and dignified interactions with others (Mahalingam, 2019), which may potentially lead to more satisfactory coworker relationships. This study aims to explore whether mindfulness predicts improved coworker relationships by fostering social connectedness and encouraging the treatment of others with dignity.

METHODS:

A two-wave longitudinal survey with a six-month gap was conducted among 241 South Korean graduate students and recent alumni from diverse majors and institutions. Structural equation modeling was utilized to analyze the data.

RESULTS:

A positive relationship was observed between mindfulness measured at the first survey (T1) and coworker relationships at the second survey (T2), with social connectedness (T2) serving as a mediator. Additionally, a positive link was found between mindfulness (T1) and the act of treating others with dignity (T2), mediated through social connectedness (T2). However, when controlling for social connectedness (T2), treating others with dignity (T2) did not show a direct relationship with coworker relationships (T2).

CONCLUSIONS:

The findings suggest that mindfulness may play a crucial role in improving coworker relationships by fostering social connectedness. Furthermore, mindfulness may also promote dignified interactions among individuals through enhanced social connectedness.

ACKNOWLEDGEMENTS AND FUNDING:

We deeply appreciate Min Joo Lee for her assistance in creating the survey. This research was funded by the Rackham Graduate School and the Nam Center for Korean Studies at the University of Michigan.

P2-35 - Mindfulness, Nature Connectedness, A Caring Attitude towards Nature, and Pro- Environmental Behavior

Jieun Chang¹, Ramaswami Mahalingam¹

¹ University of Michigan

Summary

This study explores how mindfulness is linked to pro-environmental behavior over time. Structural equation modeling of the two-wave survey data among South Korean graduate students and recent alumni showed that mindfulness predicted pro-environmental behavior directly and indirectly: serially via increased nature connectedness and an enhanced caring attitude towards nature. Results imply the potential of mindfulness and a caring attitude towards nature in promoting pro-environmental behavior.

Details

BACKGROUND AND AIMS:

Facing serious environmental challenges, pro-environmental behavior (PEB) is crucial in the current society to sustain lives on Earth. Mindfulness has been identified as a potential enhancer of PEB through increased nature connectedness (NC; Barbaro & Pickett, 2016).

Given the scarcity of longitudinal research on these relationships, this study aims to explore the relationship between mindfulness, PEB, and NC over time. Additionally, it explores the role of a caring attitude towards nature (CATN) in promoting PEB, inspired by the link between compassion and prosocial behavior (Batson & Shaw, 1991).

METHODS:

A two-wave longitudinal survey was conducted with a six-month gap among graduate students and recent alumni across various majors and universities in South Korea (n = 241). Structural equation modeling was used to analyze the data.

RESULTS:

Mindfulness at the first survey (T1) predicted PEB six months later (T2) directly and indirectly: serially via increased NC (T2) and CATN (T2). NC (T2) was associated with CATN (T2) both directly and via environmental concern (T2). Environmental concern (T2) and NC (T2) predicted PEB (T2) only indirectly through CATN (T2), indicating that CATN may be a proximal determinant of PEB.

CONCLUSIONS:

These results suggest mindfulness may promote PEB over time by fostering NC, environmental concern, and a caring attitude towards nature. Our findings underscore the potential of mindfulness and a caring attitude towards nature as key factors in PEB, suggesting interventions that could promote these factors may enhance PEB.

ACKNOWLEDGEMENTS AND FUNDING:

We appreciate Min Joo Lee for creating the survey. This research was funded by the Rackham Graduate School and the Nam Center for Korean Studies at the University of Michigan.

P2-36 - Effects of a Mindfulness-based Cognitive Therapy on autobiographical memory specificity of non-clinical adults

Jade Araujo ¹

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Summary

The objective of the present study were to evaluate the effects of a Mindfulness-based Cognitive Therapy (MBCT) on autobiographical memory specificity (AMS) of non-clinical adults. We assessed the effects of an MBCT program on the AMS of 71 non-clinical adults in a mixed 2 × 2 factorial design with participants randomly assigned to either the MBCT group (n = 35) or the waiting-list control group (n = 36). The findings support prior results suggesting that MBCT interventions increase AMS.

Details

BACKGROUND AND AIMS: A reduced autobiographical memory specificity (AMS) is known not only as a characteristic of the depressed mood state but also as a steady cognitive marker of depression and a potential marker of sensitivity to future depression. Previous research has demonstrated that Mindfulness-based cognitive therapy (MBCT) increases the AMS in depressed participants. However, few studies have investigated the possible effects of MBCT on the AMS of non-clinical participants. The objective of the present study were to evaluate the effects of an MBCT intervention on the AMS of non-clinical adults with no history of depression.

METHODS: We assessed the effects of an MBCT program on the AMS of 71 non-clinical adults in a mixed 2 × 2 factorial design with participants randomly assigned to either the MBCT group (n = 35) or the waiting-list control group (n = 36).

RESULTS: Despite similar levels of AMS across groups at baseline, participants who received MBCT scored significantly more specific memories at post-treatment than the control group.

CONCLUSIONS: These findings support prior results suggesting that MBCT interventions increase AMS. Further, it extends these findings to a never-depressed sample, supporting that AMS can be trained by MBCT.

P2-37 - An Embodied and Relational Contemplation: Retrieval of a Fourteenth-Century Practice of Contemplation Through the Lens of Mimetic Theory

Susan Mcelcheran ¹

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Summary

This paper proposes that an exploration of the practice of contemplation in *The Cloud of Unknowing* through the lens of mimetic theory as developed by René Girard can retrieve a positive model of embodied and relational contemplation. A historical and literary reading of *The Cloud* through the lens of mimetic theory will discover how contemplation can contribute to the overcoming of polarities and division through pacific mimesis.

Details

BACKGROUND AND AIMS:

In this paper I question the assumption that medieval contemplation was isolating, disembodied, and non-relational. Such a view ignores the holistic conception of the human person in some medieval texts, the pervasive physicality of the late medieval period, and its freedom from the Cartesian dualism of

body and soul. This paper proposes that an investigation of one medieval practice of contemplation through the lens of mimetic theory as developed by René Girard can retrieve an embodied and relational model of contemplation.

METHODS:

I propose to explore *The Cloud of Unknowing*, a fourteenth-century anonymous treatise on contemplative prayer. I first establish elements of embodiment in its historical and literary aspects. From a historical perspective, I present evidence that the prevalent view of physicality in the late medieval period was not only positive but was a central element of religious writing. From a literary viewpoint, I give evidence from the *Cloud* illustrating the author's high regard for the integrity of the physical body and its role in contemplation.

Next, I use mimetic theory to explore the *Cloud's* view of relationality in its approach to imitation and desire. Girard's mimetic theory of social dynamics analyzes the tendency of human imitation and desire to lead to rivalry, polarities, and violence. I use this analysis to show how imitation and desire are transformed from rivalrous to pacific in the *Cloud*.

RESULTS:

A reading of the *Cloud* through the lens of mimetic theory retrieves a positive model of embodied and relational contemplation, showing how contemplation can overcome polarities and division through pacific mimesis.

FUNDING:

This research is funded by a grant from the Social Sciences and Humanities Research Council of Canada.

P2-38 - Decolonizing College Science Courses through Contemplative Practices

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Summary

Contemplative practices provide tools to decrease stress while potentially contributing to the process of decolonizing (freeing of the minds from colonial ideology). I propose the utilization of contemplative practices in educational spaces for decolonizing with emphasis on Science, Technology, Engineering, and Mathematics courses. These practices also provide faculty with a structured way to reflect on their course material and interactions with students and colleagues while reducing stress.

Details

B: College students experience an increasing number of stressors that may affect their ability to obtain their academic goals. There is also a need to reevaluate how to support students in Science, Technology, Engineering, and Mathematics (STEM) courses as current research has also shown an overall decrease in students of non-dominant cultures who complete degrees in STEM. Contemplative practices provide tools to decrease stress while potentially contributing to the process of decolonizing (freeing of the minds from colonial ideology). However, many case studies have not considered the application of these practices in STEM fields.

I present a process of decolonizing STEM courses exists as three strands of a braided circle: The first step includes examining more equitable practices inclusive of anti-oppressive perspectives and collaborative pedagogies. Second, exploring methods for expanding the way we teach science to include discussions of uncertainty, ways of knowing, and collaborative curriculum design. Third, investigate the impact of introducing contemplative practices (including those that students already utilize) for ensuring the well-being of students while providing students with skills for their future academic and professional careers. These practices also provide faculty with a structured way to reflect on their course material and interactions with students and colleagues while reducing stress, allowing faculty more mental space to evolve new methods for more equitable practices, bringing us back to the first strand.

M: Student survey covering student experiences, the impact of difficult topics on their ability to learn and share their knowledge in class, role of religious and/or spiritual practices on stress-reduction and community building. Interviews of select students including my former students

R/C: in process

A&F: This work is done as part of my dissertation at the California Institute of Integral Studies in San Francisco, California.

P2-50 - The Design, Delivery, and Evaluation of the Contemplative Studies Centre's Undergraduate Subject: The Art and Science of Meditation.

Haisu Sun ¹, Cullan Joyce ¹, Chris Mccaw ¹, Nicholas Van Dam ¹

¹ University of Melbourne

Summary

We will detail the structure and motivations behind 1st year subject, *The Art and Science of Meditation*. We will highlight the challenges in teaching contemplative traditions and evaluates the subject's impact on student learning and well-being. Findings suggest that prioritizing practice before conceptualization enhances learning, with positive outcomes linked to student participation in meditation practices. The evaluation shows a correlation between subject engagement and improved learning and well-being.

Details

BACKGROUND AND AIMS: This presentation will discuss the educational offerings at the Centre. We will set out the context and discuss the subject *The Art and Science of Meditation*, describing some critical decisions. We'll also discuss a mixed-methods evaluation of the subject and reflect on some emerging findings from the data analysis.

METHODS: The Centre's first educational offering was a university-wide undergraduate subject that ran for the first time in 2023. The subject design and delivery posed several challenges: 1) to fully participate, students needed foundational learning to engage with contemplative practices and traditions. 2) Contemplative traditions use multiple (sometimes conflicting) frameworks to describe their purpose and effects. 3) evaluative frameworks applied to assess practices function differently in science and faith traditions. The course delivery occurred in two parts. The first provided an overview of contemplative research and practice historically and contemporarily. The second presented case studies where contemplative practices were applied in educational, social justice, and other settings. Evaluation focused on whether participation led to positive changes in students' engagement, sense of belonging, and personal well-being. We also sought to understand whether these changes were linked to students' engagement in meditation practices. The study used a comparison group enrolled in a Psychology undergraduate course.

RESULTS: Regarding design and delivery, we found that focusing on the practices first, via setting and experience, and describing conceptualisations later provided a consistent base for student learning. Second, the formal evaluation found improvements in student learning and well-being associated with their participation in the practices set out in the subject.

CONCLUSIONS: Focusing on contemplative practice as a base of student learning was well-received. The formal evaluation identified a strong relationship between student engagement in the subject and improved learning and well-being outcomes.

P2-51 - The influence of mind-body practices on the understanding and representation of the emotions of others, in children aged between 8 and 11 years old

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Summary

The development of emotional skills constitutes an important aspect in mental, physical and psychological health as well as in social relationships. Previous studies show that mind-body practices can have beneficial effects on attention and emotion regulation of children. The objective of this study

was to explore whether a mind-body practice (Change Program) can have benefits on Theory of Mind of school children, aged 8 and 11, compared to a control group.

Details

Emotional skills are defined as the ability to identify, understand, express, regulate and use one's emotions and those of others. The development of emotional skills constitutes an important aspect of the child's cognitive development and plays an essential role in mental, physical and psychological health as well as in social relationships.

It has been shown that mind-body practices have beneficial effects on attention, emotion regulation, and well-being of children. The objective of this study was to explore whether mind-body practices can have benefits on the abilities to distinguish real emotions from apparent emotions to better understand the mental states of others (Theory of Mind) of children aged 8 and 10. We have applied a mind-body practice (Change Program) for 4 sessions, 45 minutes each at three public schools in France. We have measured the ability to distinguish emotion of others using a standardised test in experimental group as well as a control group that did not participate the program.

P2-39 - Who practices what and why? A pilot study for a Global Exploration of Meditators

Karin Matko^{1,2}

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Summary

This pilot study prepares the first global survey of meditators and aims to understand the relationship between meditation practice, motivation, and individual characteristics. The study includes data from 210 experienced German meditators and found differences in motivation, values and personality among meditators of different traditions. The findings suggest the need for further research to develop better theories of meditation and personalized treatments based on individuals' needs.

Details

BACKGROUND AND AIMS: This pilot study prepares the first global survey of meditators. It will focus on understanding how meditation practice, motivation and individual characteristics are related in a large sample of meditators of different traditions and cultural backgrounds. Moreover, it will investigate why certain individuals prefer specific meditation traditions and techniques and examine long-term trajectories in meditation practice and personality development.

METHOD: To date, 210 experienced German meditators completed the pilot study. It measured meditation practice (e.g. duration, frequency, experiences), motivation, and individual characteristics

(e.g. HEXACO, values, altruism, narcissism), and will be readministered after 6 and 12 months to observe potential changes.

RESULTS: The most prevalent traditions in the sample were Yoga, Christian meditation, Mindfulness, Anthroposophy, Transcendental Meditation and Zen. Preliminary analyses found marked differences between meditators of different traditions. Buddhist, Christian and Anthroposophic meditators were considerably less motivated to improve their resilience, joyfulness, health, confidence, or creativity than Hindu meditators or meditators who mix different traditions. Christian meditators were the most inclined to value tradition and the least to value stimulation. Meditators with mixed backgrounds valued self-direction and hedonism more than meditators with a “pure” background. Hindu-mix meditators were the most lively and Christian ones the most religious.

CONCLUSIONS: The findings from this study indicate interesting differences between meditators that need to be substantiated and extended in the global survey. They will contribute to the development of better theories of meditation, improve predictions in future research, and inform the development of personalized treatments tailored to individuals' needs and preferences.

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P2-40 - Prevalence of Meditation Use In Australia and New Zealand: Results from the first nationally-representative survey

Jonathan Davies¹, Cate Bailey², Julieta Galante², Nicholas Van Dam²

¹ Contemplative Studies Centre, University of Melbourne, ² University of Melbourne

Summary

This poster presents exciting new results from the first ever nationally representative survey data on contemplative practice use in Australia and New Zealand, providing initial insights into how many people practice, what they do, how they do it, and why.

Details

BACKGROUND AND AIMS: Interest in contemplative practices worldwide has grown significantly in past decades, however little is known about how many and what kind of people use contemplative practices, nor what, how or why they practice, especially outside of the USA. The objective of this study was to collect initial prevalence estimates in two nationally representative surveys of Australia and New Zealand.

METHODS: We surveyed n=2072 Australian and n=571 New Zealand adults, representative of the population on age, gender, ethnicity, region and income. Questions included sociodemographics, health and wellbeing, health behaviours and healthcare utilisation, faith and spirituality, contemplative practices used, usage patterns, and practice motivations, beliefs and attitudes.

RESULTS: Nearly 1 in 3 Australian and 1 in 4 New Zealand adults meditated in the past 12 months. Other contemplative practices were less prevalent. Meditators were more likely to be female, younger, queer, educated, employed, wealthy and have higher psychological distress and lower health and wellbeing-related quality of life when compared to the whole population. Practices used, usage patterns and motivations varied across different subpopulation groups.

CONCLUSIONS: This is the first data to explore prevalence and predictors of contemplative practice use in Australia and New Zealand and reveals higher engagement in meditative practices than the USA, UK and European. Further research is warranted, given the high prevalence of contemplative practices in this region.

ACKNOWLEDGEMENTS AND FUNDING: This research was funded by the Three Springs Foundation and EuroQoL Foundation.

P2-42 - Prevalence and 20-year Trends in Meditation, Yoga, Guided Imagery and Progressive Relaxation Use Among US Adults From 2002 to 2022

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Summary

This poster presents new results from the first ever 20 year analysis of nationally representative National Health Interview Survey (NHIS) survey data on contemplative practice use in the USA between 2002 to 2022, providing the first detailed data on how the use of meditation, yoga, and guided imagery/progressive relaxation have changed in different sociodemographic and health subpopulations over time.

Details

BACKGROUND AND AIMS: Meditation, yoga, guided imagery, and progressive relaxation have been widely promoted as complementary approaches for health and wellbeing. However, the extent of growth over the past 20 years and their use by sociodemographic and health subgroups remains unclear. This knowledge gap could lead to misestimations regarding the applicability and safety of these practices, impacting public health planning and clinical healthcare decisions. The objective of this study

was to assess the prevalence and 20-year trends of complementary approaches in US adults between 2002-2022.

METHODS: We conducted a population-weighted analysis across 5 cycles of the National Health Interview Survey (NHIS) Complementary and Alternative Medicine (CAM) supplement. Participants were probabilistically sampled to represent the US adult population per census data. We estimated use, prevalence and trends along with associated sociodemographic and health characteristics.

RESULTS: The study included 134,959 participants (M=49.39 years, SD=18.4, 55.4% female). The overall use of meditation, yoga and guided imagery/progressive relaxation increased significantly from 2002 to 2022. Growth has been consistent across most sociodemographic and health strata, however traditionally privileged groups, 'other' race or with mental health concerns were overrepresented in 2022. Meditation use accelerated over time for 65+ year olds and less educated subgroups.

CONCLUSIONS: Meditation and yoga have grown in popularity 2-3-fold over the past 20 years. Growth has been significantly faster among some underrepresented sociodemographic subgroups, but privileged groups remain overrepresented. There are indications of CAM practices being used to address unmet mental health needs some subgroups. Public health officials and health professionals should be mindful of the extensive use in service and treatment and consider their risks and benefits. Further research is needed to understand for whom these practices are most helpful and when other interventions are needed.

ACKNOWLEDGEMENTS AND FUNDING: This research was funded by the Three Springs Foundation and EuroQoL Foundation.

P2-43 - Shedding light on changes in subjective experience during an intensive contemplative retreat: the Lyon Assessment of Meditation Phenomenology (LAMP) questionnaire

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Summary

This study introduces a novel instrument aimed at capturing the dynamic unfolding of meditation experience across a wide range of psychological domains. 53 meditators completed the assessment during a 10-day retreat. Most variables exhibited significant changes, showcasing diverse trajectories indicative of practice-specific effects. Intensive sampling enabled a rich description of individual variability, while the multidimensional approach holds promise in elucidating mechanisms of meditation.

Details

Background: A significant share of meditation research relies on trait psychometric measures of mindfulness, which neglect the intricate and dynamic unfolding of experiential processes entailed by meditation over time. There have been, however, a few attempts to capture ongoing changes in experience during meditation. In this study, we integrate and expand upon three of these previous approaches to create a novel instrument, which we called the Lyon Assessment of Meditation Phenomenology (LAMP). This questionnaire encompasses contextual, conative, affective, somatic, attentional, cognitive, and meta-cognitive domains.

Methods: Fifty-three experienced meditators completed it after each meditation session during an intensive 10-day retreat. We modeled the time courses of the individual answers to each question using generalized additive modeling, and automatically clustered participants using group-based trajectory modeling.

Results: Over 60% of the assessed measures exhibited significant change during the retreat across the group, following distinct temporal trajectories. These trajectories reflected differences between meditation types (chiefly, focused attention and open monitoring) and individual expertise, supporting a previously proposed multi-dimensional phenomenological model of mindfulness. We also identified three clusters of individual temporal trajectories associated with prior meditative experience and difficulties experienced during the retreat. Finally, we replicated and extended core findings from mindfulness research on pain regulation.

Conclusions: The proposed multidimensional experience-sampling approach provides a rich characterization of the dynamical aspects of meditative experience and may be usefully employed to deepen our knowledge of the phenomenology and mechanisms of meditation and meditation-based interventions.

P2-44 - Improved quality of life and psychological symptoms following mindfulness and cognitive rehabilitation in multiple sclerosis and their mediating role for cognition: a randomized controlled trial

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Summary

This randomised controlled trial in 99 patients with Multiple Sclerosis with cognitive complaints showed that both Mindfulness Based Cognitive Therapy (MBCT) and Cognitive Rehabilitation Therapy reduced a wide array of psychological symptoms and improved mental Quality of Life. These improvements

seemed to impact self-reported cognitive problems after both treatments, whereas objective cognitive improvements after MBCT seemed independent of improvement in psychological symptoms.

Details

BACKGROUND AND AIMS:

Multiple sclerosis (MS) frequently gives rise to depressive and anxiety symptoms, but these are often undertreated. This study investigated the effect of mindfulness-based cognitive therapy (MBCT) and cognitive rehabilitation therapy (CRT) on psychological outcomes and quality of life (QoL), and whether they mediate treatment effects on MS-related cognitive problems.

METHODS:

This randomized controlled trial included MS patients with cognitive complaints ($n=99$), and compared MBCT ($n=32$) and CRT ($n=32$) to enhanced treatment as usual ($n=35$). Baseline, post-treatment and 6-months follow-up assessments included psychological symptoms, well-being, QoL and daily life function, in addition to self-reported cognitive outcomes and neuropsychological assessment. Linear mixed models were used to investigate intervention and mediation effects.

RESULTS:

MBCT positively affected depressive symptoms (Cohen's d (d)=-0.46), fatigue ($d=-0.39$), brooding ($d=-0.34$), mindfulness skills ($d=0.49$) and mental QoL ($d=-0.73$) at post-treatment. Effects on mindfulness skills remained significant six months later ($d=0.42$). CRT positively affected depressive symptoms ($d=-0.46$), mindfulness skills ($d=0.37$) and mental QoL ($d=-0.45$) at post-treatment, but not at 6-month follow-up. No effects on anxiety, well-being, self-compassion, physical QoL and daily life function were found. Treatment-effects on self-reported, but not objective, cognition were mediated by psychological symptoms and mindfulness skills.

CONCLUSIONS:

MBCT and CRT reduced a wide array of psychological symptoms and improved mental QoL. These improvements seemed to impact self-reported cognitive problems after both treatments, whereas objective cognitive improvements after MBCT seemed independent of improvement in psychological symptoms. Future studies should investigate long-term sustainability of these beneficial effects.

ACKNOWLEDGEMENTS AND FUNDING:

The project was funded by the Dutch MS Research Foundation (project number 15â€“911) and National MS Foundation.

P2-45 - Positive health outcomes of mindfulness-based interventions for cancer patients and survivors: A systematic review and meta-analysis

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Summary

Mindfulness-based interventions (MBIs) are commonly used for cancer patients and survivors to reduce symptoms, but little is known about effects on positive health outcomes. We investigated the effects of MBIs on multiple positive health outcomes and found significant effects. MBIs may play a key role in improving well-being in this population.

Details

BACKGROUND; Mindfulness-based interventions (MBIs) are commonly used for cancer patients and survivors to reduce symptoms, but little is known about effects on positive health outcomes. We conducted a systematic review and meta-analysis to determine the effects of MBIs on positive health outcomes in cancer patients and survivors.

METHODS; PubMed, PsycINFO, Web of Science, and CINAHL databases were searched. Eligible studies were randomized controlled trials (RCTs) evaluating the effect of MBIs compared to any type of control on positive health outcomes in cancer patients or survivors. Positive health outcomes were grouped into eight domains: mindfulness skills, self-compassion, positive affect, coping, social support, well-being, personal growth, and spirituality.

RESULTS; Based on 45 RCTs eligible for meta-analysis, statistical significant effects were observed for all positive health outcomes at post-treatment. Effect sizes ranged from small (positive affect; Hedges's $g=0.26$) to medium (coping, $g=0.61$). At follow-up, mindfulness skills, self-compassion, personal growth, and spirituality reached statistical significance, with effect sizes ranging from small (positive affect; $g=0.07$) to medium (spirituality; $g=0.61$) and large (post-traumatic growth; $g=1.40$).

CONCLUSIONS; Taken together, significant effects of MBIs were found for several positive outcomes in cancer patients and survivors, with the strongest evidence found for mindfulness skills. MBIs may play a key role in improving well-being in this population.

P2-46 - Neurofeedback and single-trial prediction of meditation states

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¹ University of Groningen, ² University of Freiburg, Medical Center, Section Systemic Health Research, Freiburg, Germany

Summary

Neurofeedback is a promising paradigm for neurophenomenological research, as it creates a closed loop between neural activity and first-person experience. We showed that expert meditators could find a connection between a real-time EEG feedback signal and their meditation experience. Moreover, we found that the meditative state of self-boundary dissolution can be predicted with machine learning from MEG data, which might improve signal quality in future neurofeedback studies.

Details

BACKGROUND AND AIMS:

Neurophenomenology is a research program which aims to find relations between mental and brain states without reducing one to the other. Neurofeedback is a promising paradigm for neurophenomenological research, as it creates a closed loop between neural activity and first-person experience. We employed real-time neurofeedback with expert meditators to test whether they could find a connection between the feedback signal and their meditative experience. Moreover, we explored how machine-learning based single-trial prediction of meditative states could be used to improve signal quality.

METHODS:

We provided real-time EEG neurofeedback to participants on activity in selected brain regions and frequency bands which have been found to correlate to meditative states (open monitoring, focused attention, self-boundary dissolution, relaxation). Moreover, we used MEG recordings of expert meditators which were recorded during the meditative state of self-boundary dissolution or a control state to predict the subjective state based on source activity features. To this end, we compared different classification methods.

RESULTS:

Participants could find a connection between the feedback signal and their experience for at least some of the meditative states. Furthermore, the state of self-boundary dissolution could be predicted with significantly above-chance level accuracy for within-participant classification.

CONCLUSIONS:

Neurofeedback is a feasible paradigm to create a closed loop between subjective experience and neural activity, at least for some meditative states. Moreover, machine learning-based prediction could be used for future neurofeedback studies to improve signal quality.

P2-47 - Exploring the Induction of Deep Non-Dual States through Floatation-REST: A Phenomenological Pilot Study

Cyril Costines¹, Marc Wittmann², Fynn-Mathis Trautwein¹, Stefan Schmidt¹

¹ University of Freiburg, ² Institute for Frontier Areas of Psychology and Mental Health

Summary

This pilot study examines the induction of minimal phenomenal experience (MPE), a content-reduced, non-dual state of consciousness, using two conditions: 1) Floatation-Restricted Environmental Stimulation Therapy (floatation-REST) and 2) nondual meditation (ND meditation) during floatation-REST. Phenomenological data indicate that both conditions are effective in inducing MPE, suggesting a new experimental paradigm for the empirical study of consciousness.

Details

BACKGROUND AND AIMS: Recent developments in consciousness research have identified the significance of minimal phenomenal experience (MPE), a content-reduced, non-dual state, for understanding the nature of consciousness. However, empirical MPE research is limited by the small number of meditators able to induce the target state on demand. To further research into such meditative states, a new experimental approach is needed to help novice or intermediate meditators induce MPE. The aim of this pilot study is to investigate the inducibility of MPE in meditators using two conditions: 1) Floatation-Restricted Environmental Stimulation Therapy (floatation-REST) alone and 2) nondual meditation (ND meditation) during floatation-REST.

METHODS: A comparative phenomenological analysis was used to investigate the effects of condition 1 and condition 2 on eight healthy participants with varying levels of meditation experience. Phenomenological data was collected post-session using a semi-structured interview following the microphenomenological technique.

RESULTS: Initial findings indicate that participants in condition 1 experienced a reduction or elimination of self-awareness, self-location, first-person perspective, and body boundaries. Participants also reported a reduction in object-related properties and mind-wandering, as well as altered time consciousness. Although meditating in a supine position on the water surface in condition 2 was unfamiliar, the sensory-reduced environment significantly facilitated the induction of MPE.

CONCLUSIONS: The findings suggest that floatation-REST alone can effectively induce MPE-like states. Additionally, ND meditation during floatation-REST can facilitate MPE induction, providing a method to study MPE without relying on advanced meditators.

ACKNOWLEDGEMENTS AND FUNDING: This work was carried out without financial support.

P2-48 - The Apostle's Creed as a Guide for Understanding Christian Contemplation

Jenna Faith Mcclear ¹

¹ Duke University

Summary

Christianity has a rich tradition of contemplative practices. However, in contemplative education, we may be tempted to study these practices in isolation, neglecting a contextual understanding of the ancient faith they were formed in. In this poster, I present the Apostle's Creed as a guide to understanding the foundations of Christian contemplation. This poster will instill my target audience with the contextual knowledge necessary for a comprehensive and holistic understanding of the Christian contemplative tradition.

Details

Christianity has a rich tradition of contemplative practices. However, in contemplative education, we may be tempted to study these practices in isolation, neglecting a contextual understanding of the ancient faith they were formed in. In this poster, I will present one of the oldest confessional statements of the Christian faith, the Apostle's Creed, as a guide to understanding the foundations of Christian contemplation. To do this, I will present four foundational distinctives of Christian contemplation, using textual evidence from the Apostle's Creed, in conversation with Christian scripture and theological writings, as supporting evidence for each distinctive. For the first distinctive, I reveal the primary purpose of Christian contemplation, which is union with God. Second, I show how Christian contemplation is not escapism. Third, I reveal the intrinsically embodied nature of Christian contemplation. Finally, I explore how Christian contemplation is an inherently communal practice. This poster will instill my target audience with the contextual knowledge necessary for a comprehensive and holistic understanding of the Christian contemplative tradition.

P2-49 - Ancient Wisdom for Modern Minds: Integrating Sŏn Buddhist Traditions and Modern Therapy in Heart-Smile Training

Hee Jung (Hyeju) Min ¹, Misan Wandoo Kim ²

¹ Dongguk University, ² KAIST

Summary

Heart-Smile Training (HST) merges traditional Sŏn Buddhism's ancient practices with contemporary psychotherapy, aiming to enhance mental well-being. It centers on sound meditation, utilizing utilizing Hunminjŏngŭm vowel sounds and principles from the Śūraṅgama Sūtra to promote mindfulness, compassion, and emotional resilience, deeply influenced by Pojo Jinul's teachings and incorporates Zhiyi's Four Immeasurables.

Details

Heart-Smile Training (HST) merges traditional Sŏn Buddhism's ancient practices with contemporary psychotherapy, aiming to enhance mental well-being. It centers on sound meditation, utilizing Hunminjŏngŭm vowel sounds and principles from the Śūraṅgama Sūtra to promote mindfulness, compassion, and emotional resilience. This approach is deeply influenced by Pojo Jinul's teachings and incorporates Zhiyi's Four Immeasurables—loving-kindness, compassion, empathetic joy, and equanimity—creating a comprehensive framework for personal and emotional growth. Research between KAIST and CHA highlights HST's potential in addressing early-stage depression, showcasing its significance in modern mental health care. By blending traditional Sŏn Buddhist methods with psychotherapy, HST offers a novel solution to contemporary challenges, underlining the timeless value of ancient wisdom in fostering well-being.



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