Book of Abstracts

Dear colleagues,

Welcome to the 27th IAPS Conference!
This year's edition has the motto "Global challenges, local impacts" and it retakes climate change, its challenges, and impacts as a major issue in current societies. The increasingly visible and unavoidable impacts of a changing climate are reshaping various dimensions of our way of life. Consequently, there is a need to broaden the current understanding of the transitions underway, as well as to foster innovative arrangements to address the challenges that the immediate future holds. The worldwide emerging environmental conflicts and debates stress the need for greater reflection, discussion, and solutions in three interrelated areas: governance, sustainability, and consumption.

Along four days, IAPS 2022 Conference will address the challenges related to these three themes, with more than 300 communications being presented. We are pleased to welcome colleagues from different scientific domains and hope to have transdisciplinary debates and fruitful discussions around the topics to be presented! We are also pleased to welcome colleagues from different latitudes as climate change and people-environment relations are indeed global issues with specific local expressions. No region can be a part of the debate and transition processes. We need all to be on board to successfully face the challenges imposed and strive for a more sustainable future!

The organization of this Conference was, of course, not possible without the contribution of other colleagues and institutions. We take this opportunity to thank the members of the Scientific Committee and of the Review Committee for their time and dedication during the referee process of the hundreds of proposals received. We acknowledge that it was a time-consuming process, and it would not be possible without your hard work! A special thank you to Luísa Lima and Paula Castro for their kind and attentive support through all this journey!

We are also grateful to the mentors of the IAPS Early Career Researchers Workshop. This workshop gives postgraduate students of all IAPS-relevant disciplines an opportunity to discuss their research proposals and ongoing work with leading scholars and academics, and to build international networks with other students in the field of people-environment studies. Thank you for allowing young researchers such an amazing opportunity!
To all our keynote speakers, Anabela Carvalho, Anke Fisher, Gordon Walker and Phoebe Koundouri, we are very grateful and honoured by your participation on this Conference. We are sure that your interventions will be inspiring and true "food for thought" for all of us!

A word of appreciation also to Iscte and all its entities that supported this initiative and thus contributed to its success, including our research centres CIS_Iscte, ISTAR_Iscte and BRU_Iscte, as well as the Iscte Sustainability Office. We are also very grateful to Mundiconvenius for all the (long) days of work to make this event possible. A special thank you also for all support received from the IAPS Board, who patiently helped us deal with some difficult decisions.

Finally, we extend this thanks to all IAPS members and others who will be participating in this conference. We would like to thank you all for staying on board with us despite the transition to a fully online conference. As much as we had planned to host you in our beautiful and vibrant Lisbon, we believe that having the Conference fully online allowed us to have a safer and more sustainable Conference in these uncertain times, while still having the opportunity of sharing our work and networking.

We hope you enjoy the Conference!
The IAPS 2022 Organising Committee

Dear IAPS members,

We are extremely pleased to welcome you to the 27th Conference of IAPS. Since its first years IAPS has contributed to a better environment and to promote more sustainable environmental actions. This conference is committed to continue this critical path to shape the future.

As Presidents of the Scientific Board of this conference, we are thrilled to recognize that the Lisbon Organizing Committee has put together a broad and exciting program, starting with the early career researchers' workshop, and including a line-up of symposia, panels, posters and keynote conferences crucial for furthering our thoughts around the 2022 theme - "Global challenges, local impacts: rethinking governance, sustainability and consumption in light of climate change". The keynotes reflect well these broad themes that are so important for our future: climate change communication, co-creation and participatory governance, sustainability and environmental justice, greener lifestyles. We know that they will open up your mind to new and exciting ideas and research.

The Organizing Committee has also gone very far for assuring that this online conference becomes as interactive and participative an experience as possible. After two years of pandemic, making the 27th IAPS conference an online one was a painful, but in the end realistic, decision. It assured a much broader access to scholars who are not able to attend the in-person conference for many reasons, including lack of funds for travelling; but it also contributes to taking seriously the idea that intensive air travel is not sustainable and academia has to find new, less carbon-intensive, forms of meeting, working, collaborating, networking and career development. So please join us in thanking the Organizing Committee for all their work and resilience. Besides the usual difficulties of organizing such a big event, they bravely faced all the difficult challenges brought by a pandemic, an economic crisis and a war.

This event would not be possible without the help of many others. We are grateful for the support received from many institutions and organizations such as Iscte and IAPS. We would also like to thank all the colleagues that generously gave their time for helping reviewing the abstracts, those that will chair the sessions, and to the volunteers that enthusiastically joined us in this adventure.

We wish this conference can bring you fruitful discussions, interesting contacts and lots of plans to work together in the future. We hope you will enjoy the 27th IAPS conference.

Paula Castro and Luisa Lima
Coordinators of the Scientific Committee

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KEYNOTE SPEAKERS

Anabela Carvalho (University of Minho, Portugal)
Climate policies and practices: critical discourse studies perspectives

Taking an anti-essentialist view of reality, in which meaning-making is key, this presentation will discuss the discursive processes that have allowed, in the last few decades, for the continuation of policies and practices that continuously increased environmental degradation. Despite advance knowledge of what would lie ahead, as offered, for instance, by the Limits to Growth report 50 years ago or by multiple IPCC reports more recently, affluent societies have largely proceeded in the same path while talking abundantly of 'sustainable development', 'energy transition' and 'climate action'. Examining media, corporate and political discourses, and their connections to social and material contexts, can contribute to understand the means and conditions for the reinforcement of certain pathways. By widening the lenses of analysis, the research programme of critical discourse studies can help develop systemic readings of climate policies and practices, as well as contribute to understanding the course of possible alternatives.

Anke Fisher (Swedish University of Agricultural Sciences, Sweden)
Co-constructing meaning in environmental governance – from micro to macro and back

In this talk, I explore what happens if we bring together micro- and macro-perspectives on environmental and sustainability challenges: What can we learn from letting research on people's lived experiences, perceptions and values speak to structural perspectives on environmental governance? How might such an approach help us to understand conflicts and resistance to change, and to identify ways to address these in a constructive way? I illustrate my explorations with examples from research on biodiversity and wildlife management, rewilding and transitions to a low-carbon society, and invite a discussion on an agenda for future research.

Gordon Walker (Lancaster University, UK)
The beats of life: why rhythms matter to people-environment-planet relations

Rhythms are patterns of repetition - beats, pulses and cycles that structure the dynamism of both everyday life and environments and ecologies. In this paper, I discuss why and how rhythms matter to work on people-environment relations at a time of planetary crisis. I outline three overlapping areas of problematisation. First, focused on people's experience of and disconnection from nature, including from its seasonal rhythms and cycles. Second, concerned with the embedding of circadian and other rhythms in human chronobiology, and the consequences for health of misalignments or desynchronizations between biological and social times. Third, recognition of how rhythmic structures are both at the core of climate change, and part of responding to the climate emergency within transition processes. In opening up the latter, I explore how energies and rhythms of diverse forms are fundamentally related, and how questions about how we live better with energy and manage low carbon energy systems, have rhythmicity and relations between rhythms at their core.

Phoebe Koundouri (Athens University of Economics and Business, Greece)

Transformations for the Sustainability Transition: Policy and Methodological Consideration

My keynote speech will have a policy-focused part and a methodology-focused part. In the policy focused part, I will present the main results of the 2021 and 2022 reports of the UN SDSN (Sustainable Development Solution Network) Senior Working Group on "Financing the Joint Implementation of the Sustainable Development Goals and European Green Deal". This report attempts to connect the dots between the four major policy initiatives – the Sustainable Development Goals (SDGs), the European Green Deal (EGD), the European Semester, and the Next Generation EU recovery plan – to support policymakers with actionable strategies that can guide EU-wide and national economic recovery in line with the continent's overarching sustainability agenda. We map EGD Policies to the 17 SDGs and the 6 Transformations of Agenda 2030 to **help decision-makers understand how the different policies affect the transformations that countries need to undertake** to achieve sustainability. This is done via a novel deep learning approach.

The central question of the second part of my keynote speech derives from our recent ERC Synergy Grant, titled "Smart Water Futures: Designing the next generation of urban drinking water systems" and introduces our work on the central question of how sustainability-related decisions, like the ones we focus on the first part of this keynote speech, are affected by our understanding of the underpinnings of human decision making under ambiguity. Specifically, the central question of this paper is whether a rational agent under uncertainty can exhibit ambiguity aversion (AA). The answer to this question depends on the way the agent forms her probabilistic beliefs: classical Bayesianism (CB) vs modern Bayesianism (MB). We revisit Schmeidler's coin-based example and show that a rational MB agent operating in the context of a "small world", cannot exhibit AA. Hence we argue that the motivation of AA based on Schmeidler's coin-based and Ellsberg's classic urn-based examples, is poor, since they correspond to cases of "small worlds". We also argue that MB, not only avoids AA, but also proves to be normatively superior to CB because an MB agent (i) avoids logical inconsistencies akin to the relation between her subjective probability and objective chance, (ii) resolves the problem of "old evidence" and (iii) allows psychological detachment from actual evidence, hence avoiding the problem of "cognitive dissonance". As far as AA is concerned, we claim that it may be thought of as a (potential) property of large worlds, because in such worlds MB is likely to be infeasible.

Program

IAPS 2022 July 5-8 **GTM+1 Lisbon Time Zone**

Time slots	Tuesday July 5	Time slots	Wednesday July 6					Time slots	Thursday July 7					Time slots	Friday July 8				
9:00 – 10:45	Early Career Researchers Workshop	9:00 – 10:30	C1 Community & Behaviour Change	G1 Place Meanings & Justice	**S1 Symp Restorative Environments**	S2 Adressing Sustainability I	S3 Urban Spaces	9:00 – 10:30	**C4 Symp Sustainable Lifestyles**	G6 Houses & Public Spaces	S12 Global-Local Interplay	**S13 Symp Social Context of Restoration**	***Fishbowl Idiographic approach***	9:00 – 10:30	C6 Environm. Education & Lifestyles	**G13 Symp Collective Climate Action**	S24 Risk Perception & Environ. Attitudes	S25 Natural and Built Settings	***Early Career IAPS Ntw***
10:45 - 11:00	Break	10:30-10:45	Break					10:30-10:45	Break					10:30-10:45	Break				
11:00 - 11:45	Early Career Researchers Workshop	10:45-12:15	**G7 Symp Perspectives in P-E relationship**	**G8 Symp Constructing Citizenship**	S14 Gentrification & Sustainability	S15 Aging and Disabilities	S16 Restorative Experiences I	10:45 - 11:45	**Keynote Phoebe Koundouri (plenary session)**					10:45 - 11:45	**Keynote Gordon Walker (plenary session)**				
11:45-12:45	Early Career Researchers Workshop	12:15-13:00	**Posters Flash Presentations - Session 3 & 4**					11:45-12:45	***IAPS NT***	***IAPS NT***	***ERC session***	G9 Institutional Spaces	G10 School Settings	11:45-12:30	**Posters Flash Presentations - Session 5 & 6**				
12:45-13:30	Break	13:00-13:45	Break					12:45-13:30	Break					12:30-13:30	Break				
13:30 - 15:00	**Opening session (30m)** **Keynote Anabela Carvalho (plenary session)**	13:45-15:15	C2 Eco-beh Values/Norms	**G2 Symp Bottom up citizenship**	G3 Citizenship	S4 Adressing Sustainability II	S5 Restorative Experiences II	13:30-15:00	C5 Nature and Well-being	G11 Responses to Envir. (in)Justice	S17 Risk and Climate Change	S18 Uses of spaces I	S19 Contact with Nature	13:30-15:00	C7 Food Production-Consumption	G14 Risk Governance	S26 Representations of Rural Spaces	S27 Education & Nature Interventions	S28 Mobility in Chidren
15:00-15:45	**Posters Flash Presentations - Session 1 & 2**	15:15-16:45	C3 Saving Resources	**G4 Symp Social housing contexts**	S6 Communication & Social media	S7 Mobility	S8 Education & Citizenship	15:00-16:00	**Keynote Anke Fischer (plenary session)**					15:00-16:30	***IAPS NT***	**G15 Symp People and Forest Fires**	C8 Policies & Lifestyles	S29 Social Innovation	S30 Public/ Green Spaces
15:45-16:00	Break	16:45-17:00	Break					16:00-16:15	Break					16:30-16:45	Break				
16:00-17:00	***IAPS networks - up to 5 sessions***	17:00-18:30	***Workshop Community building in agriculture***	G5 Senses of Place	**S9 Symp Public Spaces**	S10 Children Spaces	S11 Animals & Outdoor Spaces	16:15-17:45	S20 Healthcare Settings	S21 Energy & Low-carbon Transitions	S22 Health and the Pandemic	S23 Uses of Spaces II	G12 Environmental Activism	16:45 - 17:30	**Closing session (plenary session)** **ECRW Award**				
17:00-17:30	**Welcome reception (Musical moment - Iscte's Choir)**							17:45-19:15	**IAPS General Assembly Meeting**										

Legend: C Consumption G Governance S Sustainability **Symp** Symposia

EARLY CAREER RESEARCHER'S WORKSHOP

Tuesday, 5th of July 2022				
Schedule (Lisbon time)	**Group 1 – Mentors: Rui Gaspar (Universidade Católica Portuguesa, Lisboa, Portugal) & Raquel Bertoldo (Aix-Marseille Université, France)**	**Group 2 – Mentors: Silvia Collado (Universidad de Zaragoza, Spain) & Raquel Diniz (Universidade Federal Rio Grande do Norte, Brazil)**	**Group 3 – Mentors: Adriana Portella (Universidade Federal de Pelotas, Brazil) & Angela Castrechini (Universitat de Barcelona, Spain)**	**Group 4 – Mentors: Sabine Caillaud (Université Luimere Lyon 2, France) & David Rudolph (Technical University of Denmark, Denmark)**
09:00 – 09:15	**Welcoming and introduction to the sessions**			
09:15 – 10:00	21376: Does our relationship to "home" mediate strategic adaptations and wellbeing outcomes during Covid-19? [Pablo Paredes; Laval University, Canada]	21325: Exploring the impact of individual differences on the mental wellbeing benefits gained from exposure to urban green environments [Rebecca Reese; University of the West of England, UK]	21379: Campus planning for the distributed university: Lessons from New York City campuses [Manju Adikesavan, City University of New York, USA]	20984: How Residential Environment Moderates the Experience of Migration for Rural Urban Migrants in Mongolia [Tuvshinzaya Amarzaya; Cornell University, USA]
10:00 – 10:45	21324: Supporting Children in a Changing Climate: Positive Youth Development and Participatory Action Research in Learning Environments [Abigail Brown; Cornell University USA]	21319: A Novel, Participatory Approach to Assessing Youth Leisure Environments Through an Affordance-Capability Approach Framework [Julia Jaffe; Cornell University, USA]	21320: Trauma-informed design for therapeutic residential care facilities: Applying trauma-informed care principles to the built environment to prevent retraumatization and promote resilience for youth in care [Rebecca Ames, Cornell University, USA]	21396: Residential choices in times of pandemic: Towards an ecological transition? [Andréane Moreau; Laval University, Canada]
10:45 – 11:00	**Coffee Break**			
11:00 – 11:45	21178: Social connectivity of students in hybrid learning environments. [Theresa Wheele; NTNU Norway]	21331: Local identity based motivation to engage in collective action supporting the redistribution of street space [Viktoria Allert; Technical University of Dortmund, Germany]	21327: Exploring How Digital Design Tools Change the Consumption of Architectural Design Courses Resources [Ting.ting Cheng; National Cheng Kung University, Taiwan]	21323: Social Representations of Climate Change and Pro-environmental Actions in Portugal: Understanding the role of political-ideological orientations, cultural values, and associated identities [Seray Çoruk; University Institute of Lisbon, Portugal]
11:45 – 12:30	21330: Public Life in the intertwined digital and physical public space: a study of young Strava users [Xue Xia; University of Sidney, Australia]	21321: Multisensory restorative experience in semi-outdoor environment at workplace – a sociocultural perspective [Kun Lyu, University of Sidney, Australia]	21328: New lens to study people behaviours in public spaces: Structured data collection and analyses of two public spaces in Rio de Janeiro [Diego Crescêncio, Universidade Federal do Rio de Janeiro, Brazil]	Final conjoint discussion
12:30 – 12:45	Final conjoint discussion	Final conjoint discussion	Final conjoint discussion	

Full Program

Date: 05/07/2022
Hour: 09:00:00

ECRW - (21376) - A COMPARATIVE META-ANALYSIS OF "HOME", BEFORE AND DURING THE GLOBAL PANDEMIC

Garcia De Paredes Pablo[1]
1 - Université Laval

Background and objectives

According to the traditional literature on the concept of home, it is presumed that there is a connection between an individual's functional representations of home and his or her residential behavior and aspirations. During the pandemic, the concept of home and the dwelling as a material entity took center stage thanks to multiple sanitary confinements. The pandemic has tested the concept of home as a tool for describing individual representations and behavior. Did the pandemic broaden, change, or transform the definition of "home" used by People Environment studies researchers analyzing residential experiences? And if so, in what direction?

Process and methods (for empirical research)

To answer this question, we conducted a meta-analysis of 150 scientific articles linked to "home". Of these, 100 were from pre-pandemic literature and 50 from pandemic times. In a first step, we classified the complexity of their definition of "home", their type of residential experience, the type of adaptations solicited from households, and the origin of disruptions endured. In a second step, we scored each article's correspondence between its definition of home and its findings.

Main results (or main arguments in the case of critical reviews)

A survey of the 150 articles reveals that the pandemic literature describes the household in a dynamic and often contradictory way, with "home" dimensions counterbalancing each other in a discontinuous experience of home. On the other hand, except for migration studies and some studies on aging, the traditional literature treats the concept as dimensionally stable.

Implications for research and practice/policy

Potential changes to the concept of home would trace the path towards the transformation of the concept accounting for the socio-spatial dynamics between dimensions (their salience depending on the socio-environmental circumstances), facilitating the analysis of residential surveys and the creation of public housing policy.

Importance and originality of the contribution

Our research shows how home dimensions are being used by researchers to understand residential behavior with an increasingly complex analysis.

Palavras-chave : concept of home, meta-analysis, literature review, Covid-19

ECRW - (21324) - SUPPORTING CHILDREN IN A CHANGING CLIMATE: POSITIVE YOUTH DEVELOPMENT AND PARTICIPATORY ACTION RESEARCH IN LEARNING ENVIRONMENTS

Abigail Brown[1]
1 - Department of Human Centered Design, Cornell University

Background and objectives

Youth are aware of climate change and often feel the psychological impacts of the global threat but are frequently treated as passive victims of climate change. This literature review aims to connect Positive Youth Development (PYD), Youth Participatory Action Research (YPAR), and Place-Based Education (PBE) to demonstrate the potential for strengths-based, youth-led approaches to promote improved coping, higher environmental efficacy, and greater resilience among youth. The physical environment role is specifically considered.

Main results (or main arguments in the case of critical reviews)

Conventional education settings have begun recognizing and integrating PYD approaches, but may not effectively provide climate education that supports PYD outcomes. PYD has only recently been linked to climate change. Typical climate change learning occurs in science classes as a transfer of knowledge without transforming youth into agents of change. YPAR is widely acknowledged to improve agentic action and hope, and a large body of work discusses PBE as providing opportunities for meaningful youth engagement with climate change, particularly through place attachment. However, the extent to which physical environment features are described in complex learning and development processes related to PBE, PYD, YPAR, and climate change is limited.

Implications for research and practice/policy

This is the first step towards dissertation research that aims to empirically study how PYD and YPAR applied to educational contexts through PBE can support improved outcomes for youth in a changing climate. This future study will benefit from mixed qualitative and quantitative methods, and a longitudinal design to observe long term impacts.

Importance and originality of the contribution

The introduction of PYD and physical environment considerations to YPAR and PBE are key to transforming learning environments to improve youth's coping, efficacy, agency, and resilience. Providing tools for control, stewardship, and well-being may provide a pathway to children and their communities thriving.

Palavras-chave : Positive Youth Development, Youth Participatory Action Research, Place-Based Education, Place Attachment, Resilience, Climate Change

Global Challenges, Local Impacts
Rethinking governance, sustainability and consumption in light of climate change
05 - 08 JULY '22
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ECRW - (21178) - EXPLORING THE EFFECTS OF TECHNOLOGY ON STUDENT SOCIAL CONNECTIVITY IN THE HYBRID UNIVERSITY CAMPUS.

Theresa Wheele[1]
1 - ZHAW

Background and objectives

Student social connectivity in the university environment is changing as learning spaces become more digital, further propelled by restrictions of the COVID-19 pandemic, and have created new learning spaces such as the emergence of hybrid, blended, or new-generation spaces. These spaces have been suggested to impact more negatively on social connectivity (found typically during industry level research) than in more traditional university spaces, but there is a massive shortage of peer-reviewed research to help understand how social connectivity could be improved in these more digitally orientated new university spaces. There is a strong and rising interest from educational researchers, practitioners, and other stakeholders to increase understanding of student experience in the new university environment. Addressing this pressing concern has led to the research project 'innovative campus solutions' at NTNU (Norwegian University of Science and Technology), where the ZHAW (Zurich University of Applied Sciences) are collaborating with research in Switzerland to further understand how technology is effecting student social connectivity in the newly emerging hybrid university space. New technologies are being continually developed and tested (for instance, 'the meeting Owl'), yet there is no real understanding on how they might help improve student social connectivity, which is a key part in the overall university experience and has been indicated to increase student success.

Therefore, the aims of the proposed research are:

1) To test new hybrid meeting technologies and how they affect student social connectivity

2) To test how environmental controls might shift the experience of social connectivity for students using new hybrid meeting technologies, both virtually and physically

3) To test how digital control strategies might shift the experience of social connectivity for students using new hybrid meeting technologies, both virtually and physically

A preliminary study is proposed with two longitudinal studies to follow. Study 1 addresses aim 1 with a preliminary study of new hybrid meeting room technologies used during class discussions of up to 20 students, collecting data using observational analysis and recording self-reported analysis of social connectivity. A short online survey will be distributed after the discussion to assess how students experience the new technologies. Study 2 addresses aim 2 by introducing environmental controls to the setup in Study 1, including lighting controls, sound controls, or movement controls. Students will again complete a short online survey after the discussion to report on their experiences. Study 3 addresses aim 3 by introducing digital control strategies to the setup in Study 1, including dubbed subtitles, facial recognition with name tags, or screen color controls. This study will also be concluded with a short survey where students will report on their experiences. The data will be analyzed statistically alongside qualitative data collection that will be collected during the experiments through observation. This knowledge intends to develop research in the field of pedagogy, architecture, facility management, and aims to inform future university design and management.

ECRW - (21330) - THE IMPACT OF SMART TECHNOLOGIES ON PEOPLE-PLACE RELATIONSHIPS AND LONELINESS IN URBAN OPEN SPACE: A STUDY OF YOUNG ADULTS

Xue Xia[1]
1 - University of Sydney, Australia

Background and objectives

Since the start of the Smart City movement, more and more digital technology has been placed and used in our city space and is intertwined into our social life. Digital technology is often designed to enable our cities smarter, more efficient and more productive; it is nevertheless a double-edged sword that may alter people-place relationships and reinforce urban dwellers' loneliness. My research explores the relationship between loneliness, technology and public open space with a focus on the young adult population who are found to be one of the most vulnerable groups to loneliness.

Process and methods (for empirical research)

This study uses a case study methodology and qualitative methods. This research uses smart furniture and smart device as two case studies. It conducts individual interviews with young adult users, designers and experts. These two case studies represent two forms of technologies that are mediated in the public realm and are likely to lead to various scales of social interactions.

Main results (or main arguments in the case of critical reviews)

As the interviews suggest so far, the loneliness of young adult users often is not directly related to their technology use in public open spaces. However, the perception of that place, the sociability of that place and young adults' self-identity development can be altered. They may consequently influence young adults' loneliness.

Implications for research and practice/policy

Urban loneliness is an emerging health issue. It is crucial for city makers to acknowledge and understand the relationship between our public realm and social well-being. By understanding digital technology in the public realm, this study intends to contribute to a major theoretical discussion on smart city development, with special attention given to the issue of loneliness among young city dwellers.

Importance and originality of the contribution

Results will assist city-makers with evidence on how to use technology to make better public space planning and design decisions that support personal development and social wellbeing in contemporary public spaces.

Palavras-chave : digital technology, young adults, loneliness, people-place relationship

ECRW - (21325) - MULTI-SENSORY COMPONENTS OF URBAN GREEN ENVIRONMENTS FOR INTERGENERATIONAL WELLBEING

Rebecca Reece[1]; Chris Alford[1]; Issy Bray[1]; Lewis Elliott[2]
1 - The University of the West of England; 2 - University of Exeter

Background and objectives

Urban green environments can be beneficial for mental wellbeing however, studies mainly focus on what components of these spaces are beneficial for one age group. This research aims to understand how components of urban green spaces impact intergenerational wellbeing. Two research questions are proposed; 'How do visual and other sensory components of urban green spaces impact individual wellbeing amongst urban green space users of different age groups?', and, 'How do urban green space users perceive different urban green space components to support or negate intergenerational interactions in urban green spaces?'. The study is part of PhD research that is examining the impact of individual differences on the wellbeing benefits gained from exposure to urban green environments.

Process and methods (for empirical research)

Qualitative semi-structured interviews will be conducted in Spring 2022 with participants representing multiple age groups. Participants will be regular users of urban green spaces in Bristol, UK, and be asked about their use of these spaces, including what multi-sensory components they enjoy and whether they contribute towards their wellbeing.

Main results (or main arguments in the case of critical reviews)

Reflexive thematic analysis will be used to analyse themes and patterns in the data. This will allow for commonalities to be identified and understand what components of urban green spaces are important and beneficial for wellbeing across multiple ages. Analyses will be conducted in June with results being presented at the ECR workshop.

Implications for research and practice/policy

By understanding what components of urban green environments are beneficial for intergenerational wellbeing, this can inform urban planning and the design of urban green environments. The commonalities identified can inform future experimental research looking at wellbeing benefits of urban green environments.

Importance and originality of the contribution

An in-depth understanding of the components of urban green environments for benefiting wellbeing in an intergenerational sample will be provided. Limited studies have adopted an intergenerational approach therefore this project will provide a unique perspective.

Palavras-chave : Urban green environments, Wellbeing, Intergenerational

ECRW - (21319) - A NOVEL, PARTICIPATORY APPROACH TO ASSESSING YOUTH LEISURE ENVIRONMENTS THROUGH AN AFFORDANCE-CAPABILITY APPROACH FRAMEWORK

Julia Jaffe Julia Jaffe[1]
1 - Cornell University

Background and objectives

Currently, audits of youth-focused or outdoor spaces are developed and conducted by adults, resulting in inventory-style, direct-observations that provide utility-based data from the perspective of a non-user. Audits are generally created for a specific purpose (measuring features that contribute to physical activity) and thus often omit or diminish the importance of contextual factors that influence the utilization of environments, such as individuals' motivations, sociocultural norms, environmental quality, opportunities for challenge and risk, or degree to which the environment is experienced as welcoming. These social and psychological factors are crucial for adolescent wellbeing and should be considered integral to creating assessments to evaluate, and guide the design of, youth-enabling environments.

Process and methods (for empirical research)

This project integrates affordance theory, the capability approach, and positive youth development within a youth participatory action research framework. Youth will complete park audits and design charrettes during which they will engage in qualitative, participatory methodologies and focus groups to articulate their understanding of their environments and experiences, and how those environments can be evaluated according to their needs and desires. This will be an iterative, reflexive process.

Main results (or main arguments in the case of critical reviews)

Results in a process that encourages capability formation, fosters positive youth development, and improves our understanding of what constitutes a 'youth-enabling environment'. We will also pilot a youth-developed audit tool meant for public outdoor leisure/recreation spaces.

Implications for research and practice/policy

An assessment that is user-developed and user-led has the potential to produce a context-sensitive evaluation process that reflects young peoples' desires, needs, and positive development.

Importance and originality of the contribution

The audit constructs and items will be generated from a novel affordance-capability approach to move assessments beyond what one can physically accomplish, to focusing on the implications for social and identity development. Linking the environment, youth development, and democracy, the capability approach will guide both the research process and product (audit), resulting in a new way to operationalize wellbeing in environmental research.

Palavras-chave : Youth, Environmental Assessments, Adolescent Development, Affordances, Participatory Action Research, Capability Approach, Youth Environments

ECRW - (21331) - SOCIAL IDENTITY BASED MOTIVATION TO ENGAGE IN COLLECTIVE ACTION SUPPORTING THE REDISTRIBUTION OF STREET SPACE

Viktoria Allert[1]
1 - Technical University of Dortmund

Background and objectives

Reallocation of street space to active travel modes remains a contested policy tool, even though it is considered inevitable for a sustainable mobility transition. Citizen engagement can play a crucial role in pushing city councils to provide safe infrastructure for cyclists and pedestrians. Using the Social Identity Model of Collective Action, we investigate how social identification with mode-of-transport user groups predicts intention to become actively involved in supporting transport policies favouring active travel modes.

Process and methods (for empirical research)

In a cross-sectional study, we collected data of 642 panellists, representative of age and gender in the German population. Participants rated their willingness to engage in collective action to promote transport policies reallocating street space. We assessed social identification with different mode-of-transport-related user groups, their group-based emotions regarding the status quo of street design as well as regarding the transport policies, social norms and collective efficacy beliefs. We then used regression analyses to predict willingness to actively engage in collective action to support transport policies redistributing street space.

Main results (or main arguments in the case of critical reviews)

Social identification with cyclists, social norms, collective efficacy beliefs as well as positive emotions regarding the policy measures and negative emotions regarding the status quo of street design predicted collective action intention to support the policies (R^2=.301; $F(5,582)=51.481$, $p < .001$). Further data analysis is still ongoing.

Implications for research and practice/policy

As the overall willingness to engage in collective action supporting the proposed policy measures was low, we conclude that policymakers have to engage with the public and work on creating alliances for a sustainable mobility transition in order to gain societal support for contested policy measures.

Importance and originality of the contribution

By investigating willingness to actively support policies as well as including a behavioural measure for active engagement (donating to a mobility initiative), we wanted to shed light on the political role of individuals as active citizens in co-creating a sustainable mobility system beyond passive policy acceptance.

Palavras-chave : social identity, citizen engagement, transport policies, street space

ECRW - (21321) - MULTISENSORY RESTORATIVE EXPERIENCE IN SEMI-OUTDOOR ENVIRONMENT AT WORKPLACE – A SOCIOCULTURAL PERSPECTIVE

Kun Lyu[1]
1 - University of Sydney

Background and objectives

The importance of semi-outdoor environment in workplace settings has increasingly been recognised for its potential to deliver multisensory experience of nature in an urban environment, which can potentially lead to better restorative outcomes. However, large individual difference exists in how people react to the multimodal components (visual, thermal and auditory) of the semi-outdoor environment. This study aims to investigate how two culturally different groups, Australians and Chinese, perceived and behave differently within a semi-outdoor environment and the associated restorative benefits.

Process and methods (for empirical research)

A pre-and-post-test experiment was conducted to compare the restorative effects of a workplace semi-outdoor space presenting two distinct thermal scenarios, one devoid of thermally adaptive opportunities, just direct sunlight exposure, and the other condition including the adaptive opportunity for subjects to select between direct sunlight or shade. The experiment used a multisensory virtual reality method to simulate the dynamic environmental conditions of an actual semi-outdoor space. 40 subjects (20 Australians and 20 Chinese) were recruited. Participants' cognitive performance, subjective experience, behavioural responses within the virtual environment and skin conductance level were measured.

Main results (or main arguments in the case of critical reviews)

The results suggested two culturally different groups had distinctive responses (sensory pleasantness) to the thermal environment and overall sensory environment, leading to different behavioural patterns inside the virtual environment and restorative outcomes (cognitive performance, psychophysiological stress level and subjective mood).

Implications for research and practice/policy

The difference between subject's thermal perception of the semi-outdoor environment can potentially be explained by their environmental attitudes towards sunlight. Australians and Chinese have different ideology about the concept of skin beauty(wheat colour vs pale colour) which results in different environment attitudes. The findings advocate culture-specific design for the urban outdoor and semi-outdoor environment. Adaptive opportunities (environmental diversity) should be implemented to provide better restorative experience.

Importance and originality of the contribution

To date, this has been the first attempt to incorporate thermal sense and cultural factors into the restorative environmental research.

Palavras-chave : restorative environment, multisensory, cultural difference, virtual reality, workplace, thermal pleasure

ECRW - (21379) - THE ARCHITECTURAL STUDIO IN THE ERA OF DISTRIBUTED LEARNING AND TEACHING: LESSONS FROM NEW YORK CITY SCHOOLS OF ARCHITECTURE

Manju Adikesavan[1]
1 - The Graduate Center, City University of New York

Background and objectives

Remote (fully off-campus) and hybrid (combination of on- and off-campus) learning and teaching (LT) practices, facilitated by mobile internet services and portable devices since the 1990s, were intensified by the social distancing measures implemented to contain the COVID-19 pandemic in early 2020. Students and faculty and staff members experienced unprecedented levels of spatial and temporal flexibility in conducting LT during the pandemic. As campuses reopen, New York City (NYC) architecture schools are instituting distributed LT arrangements such as 'hyflex' (courses that can be simultaneously attended in-person or online) and 'bichronous' (courses with a blend of asynchronous and synchronous sessions) that support LT in both on- and off-campus settings due to a widespread preference for continued flexibility in LT practices. This project examines: What types of distributed architectural LT arrangements have been intensified or are emerging in the aftermath of the pandemic? How are the purpose, function, and usage of architectural LT spaces, especially the studio, evolving vis-à-vis distributed LT practices? How are the changing purpose and function impacting the design, planning, and policymaking of studio and related spaces?

Process and methods (for empirical research)

(1) historical analysis of the changes in the function and design of the architectural studio and allied spaces from the late 1990s to 2020, (2) thematic analysis of interviews with campus planners, architects, and NYC architecture school administrators to examine how the architectural studio and allied spaces are changing vis-à-vis distributed LT practices, and (3) behavior mapping and observation of distributed LT practices.in NYC architectural school studio and allied spaces.

Main results (or main arguments in the case of critical reviews)

Comparative case-studies of distributed LT practices implemented in NYC architecture schools; resultant changes in the purpose, function, and usage of studio and allied spaces; and studio designs, plans, and policies associated with distributed LT practices.

Implications for research and practice/policy

The case-studies will support evidence-based planning and implementation of distributed LT in architecture schools.

Palavras-chave : architectural studio, studio-based learning and teaching

ECRW - (21320) - TRAUMA-INFORMED DESIGN FOR THERAPEUTIC RESIDENTIAL CARE FACILITIES: APPLYING TRAUMA-INFORMED CARE PRINCIPLES TO THE BUILT ENVIRONMENT TO PREVENT RETRAUMATIZATION AND PROMOTE RESILIENCE FOR YOUTH IN CARE

Rebecca Ames[1]
1 - Cornell University

Background and objectives

Almost by definition, children in therapeutic residential care (TRC) often have long and complex trauma histories, such as chronic neglect, physical, emotional, or sexual abuse, or exposure to community violence (Holden & Sellers, 2019). Many TRC programs engage trauma-informed care (TIC) approaches to promote 'healing, consistent and supportive environments' (McLoughlin & Gonzalez, 2014) for YIC, a notable shift away from the previous focus on safety and containment of negative behaviors (Holden et al., 2019). However, the focus remains on the psychosocial environment of care, and has yet to be systematically applied to the design of the built environment. This dissertation aims to fill this gap by developing novel trauma-informed design (TID) guidelines for TRC settings.

Process and methods (for empirical research)

A mixed-methods approach will utilize semi-structured interviews and surveys of both staff and YIC at a TRC facility in upstate New York, as well as participatory design charrettes with youth.

Main results (or main arguments in the case of critical reviews)

This research will explore the characteristics of complex trauma in youth that may be influenced by the physical environment and identify opportunities for retroactive environmental modifications and future facility design initiatives to support trauma-informed program goals as well as promote positive youth development.

Implications for research and practice/policy

Early research in the emerging field of TID points to the potential for the built environment to support the goals of TIC approaches (Bollo & Donofrio, 2021), but little research or theory exists on the implementation of TID for youth in TRC. This research will have a strong translational focus, with the goal of identifying and applying TID guidelines to settings that house youth who have experienced complex trauma.

Importance and originality of the contribution

Ultimately, this foundational research will be used to develop a blueprint for TID for traumatized youth that can be applied in a number of other settings, including residential treatment programs for children and adolescents, domestic violence shelters, schools, group homes, and acute inpatient care.

Palavras-chave : built environment, therapeutic residential care, complex trauma, trauma informed care, trauma informed design, resiliency

ECRW - (21327) - EXPLORING HOW DIGITAL DESIGN TOOLS CHANGE THE CONSUMPTION OF ARCHITECTURAL DESIGN COURSES RESOURCES

Ting-Ting Cheng[1]; Li-Wen Sung[1]
1 - National Cheng Kung University

Background and objectives

This study explored how the incorporation of digital design tools in architectural design courses led to the adjustment of learning behaviors and thus develop design thinking that cherishes resources. In 2020, under the influence of the COVID-19 pandemic, digital design tools have become the primary means of creation. Although the learning content of the courses remain the same, the conventional and new learning methods differ considerably in resource consumption, revealing a new possibility in learning.

Process and methods (for empirical research)

Through mixed research methods and participant observation, this study recorded the physical and virtual architectural models created by freshmen from 2018 to 2022, along with the use of consumables such as materials and tools. The following presents the research process.

(1) Investigate the learning tools employed by students before and after the COVID-19 outbreak. (2020)

(2) Record the influence of digital design tools application on the students' learning outcomes.

(3) Compare the resource consumption caused by the creation of physical and virtual models.

Main results (or main arguments in the case of critical reviews)

(1) Learners' learning outcomes were not affected by the tools they used; in short, they could grasp their learning goals and even produce more creative learning outcomes.

(2) In the digital age, learners could create their works using computers for long time because of a change in learning habits.

(3) Using digital design tools for creation reduced the use of materials considerably, lowering resource consumption.

Implications for research and practice/policy

(1) Learners born into the digital age can learn digital knowledge independently and are open to the requirements for digital creation.

(2) Learners can develop design thinking that cherishes resources.

Importance and originality of the contribution

According to the study results, digital design tools effectively support architectural design courses and eliminate the conventional requirement of physical modeling. Digital design tools reduce the waste of physical resources and cultivate the thinking of architectural professionals to cherish resources.

Palavras-chave : Digital Design Tools, Consumption, Architectural Design Courses, Cherish Resources

ECRW - (21328) - NEW LENS TO STUDY PEOPLE BEHAVIOURS IN PUBLIC SPACES: STRUCTURED DATA COLLECTION AND ANALYSES OF TWO PUBLIC SPACES IN RIO DE JANEIRO

Diego Crescêncio[1]; Patricia Drach[1,2]

1 - Urbanism Program (PROURB), Federal University of Rio de Janeiro, Brazil; 2 - Departament of Architecture and Urbanism (DAU), University of Rio de Janeiro State, Brazil

Background and objectives

UNESCO states the importance of public space as crucial for sustainable cities and communities: providing ecosystem services, improving health and well-being, ensuring social inclusion and economic exchange, offering an opportunity to enrich the quality of life of all urban dwellers, leaving no one behind. This paper is part of a research project and aims to measure and model the personal and social uses of public spaces. The study was conducted in two squares of Rio de Janeiro and aims to address the question: Can we use a common language to observe people-environment relations, generate urban data and analyze trends and actions in public spaces?

Process and methods (for empirical research)

Trought Public Life Data Protocol data specification developed by Jan Gehl and applied in several cities , two open-source protocols were used to field surveys and collect data.

Main results (or main arguments in the case of critical reviews)

Preliminary results indicate that quantitative and qualitative data gathered thought standardized methods in mobile devices and processed in Geographic Information Systems (GIS) can be used to model essential characterizations of public spaces at social and physical levels.

Implications for research and practice/policy

The methodological approach was shown to be replicable in systematic investigation of different public spaces. Depending on future results and analyses, this research can contribute to develop metrics and indicator about human behaviour and public spaces for local community empowerment, city management and also to provide urban open data for scientific community, government and society.

Importance and originality of the contribution

Since 2016, International Science Council (ISC) managed task forces to evaluate Citizen Science Data (CSD) potentials and challenges for science and for monitoring and driving progress toward Sustainable Develop Goals (SDG). This research aims to propose a holistic framework to generate hyperlocal structured citizen science urban data about human behaviour and public spaces, considering data lifecycle like: data collection, validation, curation and management practices. This data later will be available to re-use in public urban data repositories.

Palavras-chave : Urban context, Public spaces characterisation, Geographic Information Systems, People-environment Relationship, Urban data

ECRW - (20984) - HOW RESIDENTIAL ENVIRONMENT MODERATES THE EXPERIENCE OF MIGRATION FOR RURAL URBAN MIGRANTS IN MONGOLIA

Tuvshinzaya Amarzaya[1]
1 - Cornell University

Background and objectives

In Mongolia, the population of Ulaanbaatar (UB) had tripled in the last 25 years from rapid rural to urban migrations, reaching 1.5 million today (NSO, 2021). However, the city of UB was built for 200,000 residents, leading to critical lack of affordable housing. As such, the majority (60%) of rural migrants are forced to settle in the informal settlement known as "ger-areas", which is identified as the #1 developmental challenge of Mongolia due to its toxic level of air, water, and soil pollution. There are 750.000+ migrants living in gers with neither central heating, sewage systems nor access to essential or social amenities on the outskirts of the city (World Bank, 2010).

Process and methods (for empirical research)

Due to the paucity of existing research, I first carried out a qualitative study to identify environmental factors (neighborhood and housing) in ger-areas that help or detract from migrants' wellbeing. Secondly, I will develop quantitative scales to measure salient topics identified in the qualitative phase. I interviewed migrants (N=77) in 4 different housing types in 3 representative zones in the ger-areas till saturation in each subsample (N=12-15). I also interviewed relevant stakeholders such as urban planners, social workers, and regional government officials (N=11).

Main results (or main arguments in the case of critical reviews)

From initial coding by deductive framework analysis techniques, supporting migrant's social capital through increasing social amenities emerged as an important theme. Land-laws which encouraged residential-only development left little or no community spaces in ger-areas. For migrants, whose social capital is already reduced from losing kin and family network, lack of support in receiving neighborhoods is specially damaging.

Implications for research and practice/policy

The relationship between residential environment and migrants' well-being is underexplored even though such research has great practical implications in both design and policy. As informal settlements are dynamic and fast-changing environments, interventions can have a swifter and broader reach that would be possible in formally built city centers.

Importance and originality of the contribution

In the young researchers workshop, I would greatly appreciate help from my fellow researchers in the upcoming quantitative study, particularly in developing instruments and measurements.

Palavras-chave : qualitative, rural urban migration, developing countries, Mongolia, migrant settlements

ECRW - (21396) - RESIDENTIAL CHOICES IN TIMES OF PANDEMIC: TOWARDS AN ECOLOGICAL TRANSITION?

Andréane Moreau[1]

1 - Master Student, M. Arch. and M. Sc. in Architecture, Laval University

Background and objectives

The COVID-19 pandemic has transformed many households' relationship to space and time, redefining their experience of housing and neighborhoods as well. In some cases, the health crisis became a reason to move to a larger dwelling and/or to a less dense area with better connection to nature. As the climate crisis worsens and urban sprawl continues to grow, this research aims to understand how residential choices were made during the pandemic, to provide insights on their territorial impacts and assess their potential contribution to an ecological transition.

Process and methods (for empirical research)

The case of Quebec City will be studied using the longitudinal dataset provided by the web survey MAVIPAN (Living with the pandemic in Quebec, Leblanc et al, 2020) of the Vitam Research Center in Sustainable Health affiliated with Laval University. The survey explores the impacts of the pandemic on lifestyles since Spring 2020. With this data, mixed methods will be used to assess if, where and why participants moved during the pandemic.

Main results (or main arguments in the case of critical reviews)

So far, the literature review has shown that there is an increase in real estate transactions in peripheral areas, a desire for comfort to better respond to new needs, and an aversion to dense and/or busy areas, generally perceived as places of high virus transmission. The identified trends confirm the interest of households for less dense areas, but also the appeal of second homes as a compromise between urban dynamism and idyllic isolation in the countryside or suburbs.

Implications for research and practice/policy

This project will provide some thoughts on how architecture and planning need to adapt to ongoing crises.

Importance and originality of the contribution

This research will provide a better understanding of issues that are still poorly documented, particularly those related to household behaviors in Quebec City during the pandemic.

Palavras-chave : Residential choices, residential aspirations, residential mobility, moving, COVID-19, lockdown

ECRW - (21323) - SOCIAL REPRESENTATIONS OF CLIMATE CHANGE AND PRO-ENVIRONMENTAL ACTIONS IN PORTUGAL: UNDERSTANDING THE ROLE OF POLITICAL-IDEOLOGICAL ORIENTATIONS, CULTURAL VALUES, AND ASSOCIATED IDENTITIES

Seray Coruk[1]
1 - PhD Student

Background and objectives

The detrimental consequences of climate change have become increasingly visible worldwide, including in Portugal with heatwaves, droughts, and sea-level rise (Carvalho et al., 2014). The role of human behavior in addressing this global problem has already been recognized in both academia (Swim et al., 2011) and societally (e.g., COP26). However, so far climate change studies in Social and Environmental Psychology mostly focused on individual-level environmental attitudes and behaviors, leaving the political and cultural dimensions of those understudied. This study aims to address climate change not only as a problem of individual attitudes and behaviors but also as a political and cultural phenomenon. This project will contribute to that by using Theory of Social Representations to examine representations of climate change in Portugal and how these are shaped by cultural, political-ideological orientations, and related identities.

Process and methods (for empirical research)

Three empirical studies will be conducted for that: (1) media analysis to understand how climate change and its solutions and the associated political-ideological and cultural factors and related identities are represented and communicated in Portuguese media since the media holds an important role in shaping and mirroring citizens' representations (Caillaud et al., 2012); (2) focus groups and interviews to explore participants' daily understandings of climate change and related issues, such as how those relate with social and place identities; lastly (3) a representative survey to provide a national-level picture of Portuguese citizens' representations of climate change and related socio-psychological processes, namely, how those shape different types of pro-environmental actions and are shaped by political-ideological orientations, cultural values and associated identities.

Implications for research and practice/policy

This work will help to build systematically more integrative policies not only at individual level but also contextual, institutional level.

Importance and originality of the contribution

Main contribution will be conceptualizing social representations of political and cultural dimensions of climate change since it has been mostly addressed at individual-level attitudes, and behaviors.

Palavras-chave : social representations, climate change, cultural values, political-ideological representations

Hour: 15:00:00
Session: Posters Flash Presentations Session 1
Room: Room 1

Tema(s): Sustainability (6)

PP - (20854) - ANXIETY MEETS NATURE: TWO MODERATED MEDIATION MODELS OF THE RELATIONSHIP BETWEEN PERCEIVED SOCIOECONOMIC STATUS AND SUBJECTIVE WELL-BEING

Rita Moura[1]; Maria Luísa Lima[1]; Cristina Camilo[1]; Sílvia Luís[2]
1 - Iscte - Instituto Universitário de Lisboa; 2 - Universidade Lusófona de Humanidades e Tecnologias

Research or practical problem and objectives

People with low socioeconomic status can strongly benefit from spending more time in natural spaces. However, it is not yet clear how nature can act as a buffer against the negative effects of low socioeconomic status. Hence, the present study aims to explore the moderating effect of time spent outdoors in green (Green Model) and blue spaces (Blue Model) on the relationship between perceived socioeconomic status and subjective well-being via the potential mediator anxiety.

Methods and process (for empirical research)

This study was conducted in collaboration with the Blue Health project. Only the measures of perceived socioeconomic status, subjective well-being, anxiety, and time spent in green and blue spaces were considered. Data was collected through an online questionnaire, resulting in a community sample of 946 Portuguese respondents, of which 52.9% were male and 39.7% were under 40 years old.

Main results preview and importance (or main arguments in the case of critical reviews)

The moderated mediation models were tested using the PROCESS macro, model 14 (version 4.0) in SPSS (version 28). Data corroborated both hypothesized moderated mediation models. In the Green Model, anxiety was found to fully mediate the relationship between perceived socioeconomic status and subjective well-being. In addition, time spent in green spaces was found to moderate the effect of anxiety on subjective well-being. The same pattern was observed in the Blue Model, using blue spaces as the moderator. These results show that a stronger relationship between higher anxiety level and lower subjective well-being was found for those who spent less time in natural spaces. These results held while controlling for age and sex. The present findings show that when Portuguese people that belong to economically disadvantaged groups spend more time outdoors in green and blue spaces, anxiety has a lesser impact on their subjective well-being. Thus, nature acted as a buffer against the negative effects of anxiety that can result from low perceived socioeconomic status.

PP - (21405) - THE INFLUENCE OF THE SOCIAL STATUS OF OLDER PEOPLE PERCEIVED BY SOCIETY ON THE RELATIONSHIP BETWEEN SENIOR VOLUNTEERING AND HEALTH.

Julia Sánchez-García[1]; María Luísa Lima[2]; Sibila Marques[2]; Ana I. Gil-Lacruz[1]; Marta Gil-Lacruz[1]
1 - University of Zaragoza; 2 - Iscte - Instituto Universitário de Lisboa

Research or practical problem and objectives

This study examines how formal volunteering by people over 70 years of age in organizations impacts their health. In addition, it is analyzed whether the perceived social status of older people in society moderates the above relationship. As a hypothesis, it was expected that volunteering by the elderly would positively influence their health. Also, it was expected that high (vs. low) perceptions of older people's social status would moderate the relationship between volunteering and health.

Methods and process (for empirical research)

The data came from the fourth round of the European Social Survey. The sample analyzed included 8,331 individuals aged over 70 years residing in 29 countries in Europe. A multilevel model was used to test the hypotheses.

Main results preview and importance (or main arguments in the case of critical reviews)

The results show that volunteering has a positive influence on the health of the elderly. The positive association between volunteering and health was stronger in countries where the elderly (aged 70 years or older) is perceived to have higher social status. The proportion of older people who do not engage in volunteer activities despite their positive effects may be related to perceptions of the social status of older people in societies. Individual and national implications for active aging are discussed.

PP - (21142) - THE SPATIAL EXPERIENCE OF THE VISITORS OF THE PAVILION OF KNOWLEDGE IN LISBON - AN EXPLORATORY STUDY

Anna Losonczi[1]; Barbara Keszei[2]; Bálint Halász[1]; Andrea Dúll[3]; Teresa Valsassina Heitor[4]

1 - Ginkgo Architects Design & Research, Budapest; 2 - Budapest Business School, Faculty of Commerce, Hospitality and Tourism, Department of Pedagogy; 3 - Eötvös Loránd University, Faculty of Education and Psychology, Institute of People–Environment Transaction; 4 - Instituto Superior Técnico, Civil Engineering, Architecture and Georesources Department, Lisbon, Portugal

Research or practical problem and objectives

One potential goal of the architectural design process is to predict and control or influence spatial experience, often to enable creating restorative environments. Visiting a building induces a complex set of mental activities, involving specific restorative effects and spatial preferences. The study focuses on the level of engagement with space, as well as on the affective content and the presence of ambivalence when reflecting on spatial experience. The exploratory research was conducted among the visitors of the Pavilion of Knowledge in Lisbon.

Methods and process (for empirical research)

Based on an architectural analysis, we identified the key conceptual features of the building considered to be crucial in shaping spatial experience. These characteristics were incorporated in three pairs of statements. Each pair consisted of antithetical and complementary experiences. The first pair contrasts the importance of moving through a series of spaces with one central space being prominent in the architectural experience of the building. The second pair contrasts familiarity and repetition with novelty and variety. The third pair relates to the relationship of the inside of the building with the surroundings, and whether there is continuity or separation. The respondents (n=27) described their experiences in an open-ended form and selected one or both statements of each of the three pairs. The intensity of the affective content and the level of engagement was measured by a coding system developed by an interdisciplinary team (architects and a psychologist) based on the qualitative data analysis.

Main results preview and importance (or main arguments in the case of critical reviews)

Participants expressed both implicitly and explicitly their engagement level in relation to each spatial experience statement. Many answers showed parallelism and ambivalence between pairs of statements, meaning that respondents experienced conflicting spatial experiences simultaneously. Our results can be interpreted in the framework of Kaplan's Attention Restoration Theory, showing that restoration can be also related to successfully designed built environments.

PP - (21148) - FROM MY WINDOW: VIEWS OF NATURE AS A RESOURCE FOR PSYCHOLOGICAL RESTORATION DURING COVID-19 LOCKDOWN

Esther Lorenzo Montero[1]; Jose Antonio Corraliza[1]
1 - UNIVERSIDAD AUTÓNOMA DE MADRID

Research or practical problem and objectives

The situation experienced during the confinement forced by COVID-19 has psychological consequences. These consequences have effects on people's emotions and psychological well-being, due to the drastic reduction in social interaction and contact with nature. The main objective of this study is to find differences in the emotional experience in relation to the views through the window.

This study aims to understand how restoratives experiences can be and what elements are needed to elicit restoration during a lockdown (between March and May 2020 in Madrid).

Methods and process (for empirical research)

We designed an online self-reported questionnaire, which was distributed to 137 participants, with the following variables: contact with nature maintained through the window, the scale of psychological restoration observed and the emotions experienced during the period of forced confinement, in addition to sociodemographic variables.

Main results preview and importance (or main arguments in the case of critical reviews)

In a first step, the exploratory qualitative analysis shows the relevant elements (nature and social presence) in the experience of looking out the window or going out to the terrace, forming restorative experiences when people have not been able to leave their homes. The quantitative analysis shows that access to views of nature from the window of our houses is significantly related to higher levels of psychological restoration and positive emotions (tranquility). Also, participants were asked about the most desirable features of the view from the window. The preliminary analysis shows that the most frequent features are concerning the presence of nature. These results indicate that contact with nature through the views through the window from our homes is a psychological restoration resource during confinement situations. These results are in line with the previous body of research that points to the psychological benefits of access to nature in times of stress such as that produced by confinement due to COVID-19.

PP - (21125) - MICROPLASTICS: MENTAL MODELS AND PERCEIVED RISK

Marcos Felipe Rodriguez[1]; Gisela Bohm[1,2]; Rouven Doran[1]

1 - University of Bergen; 2 - Inland University of Applied Sciences

Research or practical problem and objectives

Microplastics are a potential planet boundary threat. Previous literature points towards the need for an interdisciplinary approach combining natural and social sciences to address the problem effectively. This includes an understanding of the role of the public in aggravating and /or mitigating the problem, particularly regarding risk perceptions and mental models, which have both been shown to predict environmental behavior.

Methods and process (for empirical research)

A survey questionnaire was developed and distributed through the Norwegian Citizen Panel, which is a web-based survey where the participants represent a cross-section of the Norwegian population. The survey included: 1) Open ended questions about the perceived main source of microplastics and the perceived best way to tackle the problem of microplastics. 2) An question to indicate, among a list of different agents (e.g., national governments, individual consumers, etc.), the ascribed responsibility for causing the problem, responsibility for solving the problem, competence and motivation to tackle the problem. 3) A psychometric scale to assess risk perception about microplastics. 4) A rating scale to indicate the degree in which different emotions are felt when thinking about microplastics. 5) A rating scale with a list of different possible sources, consequences and ways to help solve the problem of microplastics. The (ongoing) factor analysis will reduce the number of items to fewer dimensions and regression analysis will reveal how the different measures associate.

Main results preview and importance (or main arguments in the case of critical reviews)

The results will shed light on the perceived risk and mental models of microplastics. Moreover, they will show how emotions, ascribed responsibility, competence and motivation associate with mental models and risk perceptions of microplastics. This addresses some existing knowledge gaps in the social science literature on microplastics, has implications for risk communication, and may assist in finding a societal response to an eminent environmental problem.

PP - (20871) - EMOTIONAL AND BEHAVIORAL REACTIONS TO A NATURAL DISASTER: SIMULATION OF A TSUNAMI BY VIRTUAL REALITY

Aude Naud[1]; Oscar Navarro[2]; Ghozlane Fleury-Bahi[1]; Abdel Halim Boudoukha[1]; Philippe Allain[3]; Jeremy Besnard[3]; Damienne Provitolo[4]

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Research or practical problem and objectives

Risk perception and reaction in natural disaster situations is difficult to grasp, given their sudden and particularly dangerous nature. But the new technologies allow us today to overcome this lack, by exposing individuals to these risks without putting them in any danger. What are the emotional and behavioral reactions during a natural disaster situation? This study aims to highlight individuals' reactions facing a tsunami simulated in virtual reality as danger approaches, also considering the presence of others and their behavior.

Methods and process (for empirical research)

Eighty-eight participants took part in the study. First, each participant completed self-report measures of anxiety and impulsivity. In a second time, they were exposed to a virtual reality tsunami, according to two experimental conditions : one in which virtual people were quietly fleeing danger, another in which they fled danger by panicking. A third control condition did not include any virtual agent. Physiological stress (heart rate and skin conductance) and movement velocity were measured during the virtual exposure. The « disaster » virtual reality scenario is divided into different events according to a pre-established chronology, in order to determine the impact of each on participant's stress and behavior.

Main results preview and importance (or main arguments in the case of critical reviews)

Tsunami exposure had no effect on participants' anxiety. However, they still had physiological stress reactions during the experiment, but their trigger did not occur at the same time as their escape reaction: the participants fled the danger (increased velocity) before they experience physiological stress, whether they were in the presence of others or not.

These results question the relationship between risk, stress and escape behavioral reaction. Escape reaction is not induced by stress reaction, at least in the context of direct exposure to an imminent danger. It would therefore be interesting to highlight other determinants of escape reactions to environmental danger in order to understand the role of each and their interactions.

Hour: 15:00:00
Session: Posters Flash Presentations Session 2
Room: Room 2

Theme: Governance (4); Sustainability (1); Consumption (1)

PP - (21000) - IMPLEMENTATION OF PROFESSIONAL RESIDENCY AND THE CHALLENGE OF TRAINING PROFESSIONALS COMMITTED TO ACCESS TO HOUSING AND THE CITY IN BRAZIL

Nirce Medvedovski[1]; André Carrasco[1]; Angela Gordilho Souza[2]; Flávia Galbiatti[1]; Rodolfo Ribeiro[1]; Luiza Fagundes[1]
1 - Universidade Federal de Pelotas; 2 - Universidade Federal da Bahia

Background and objectives

In a situation of great inequality in the rights of access to housing and the city, it is urgent that Brazilian universities invest in responses to these realities. The training of professionals in architecture, urbanism and urban planning has been, mostly, distanced from conceptual tools and professional practice to face the housing and urban precariousness that characterizes much of the territory. The proposal for a specialization in university education, inspired by the Medical Residency, with the implementation of Professional Residencies in Architecture, Urbanism and Engineering aimed at the production and management of more inclusive territories, which are based on practical experience and the exchange of knowledge, on participatory and multidisciplinary technical assistance, seeks to fill this gap. This work critically reports the ongoing experience since 2011, based on the Federal Law No.11.888/2008 on Technical Assistance, of the pioneering implementation of the Professional Residency at the Federal University of Bahia and at 4 associated universities.

Main results (or main arguments in the case of critical reviews)

It identifies the need for training for participatory projects, for the mastery of knowledge tools and territorial design, and for the development of Social Technologies that help in the construction of projects that meet the demands of the communities. It focuses on training newly graduated professionals and also on offering internships for undergraduate students. It presents an immediate return potential for the communities with which it interacts, by delivering, as a final product of its formation, a project of a new reality and the possibility of advising for its implementation.

Implications for research and practice/policy | Importance and originality of the contribution

As an ongoing experience of a potential public policy of technical assistance, the text identifies the positive points and the bottlenecks for the continuity of this new professional training, committed to reducing social inequalities, with the principles of environmental sustainability, cultural diversity, and with the return of the public university to the demands of its population.

PP - (21389) - BUILDING PARTICIPATIVE AGENDAS: AFFECTIVE MAPS AS A WAY OF MAPPING SOCIO-ENVIRONMENTAL RISKS AND VULNERABILITIES IN THE BRAZILIAN NATIONAL SOCIAL ASSISTANCE POLICY

Andie Lima[1]; Zulmira Bomfim[1]
1 - Federal University of Ceará

Research or practical problem and objectives

The Brazilian National Social Assistance Policy is a public policy that aims to minimize social injustices, guaranteeing access to social rights and acting in the prevention of risks (violations of rights, such as situations of domestic violence, property violence against the elderly, exploitation of child labor and sexual exploitation of children and adolescents) and vulnerabilities (lack of access to income, risk of food and nutrition insecurity), promoting acquisitions and potential through services and benefits. One of its principles is "territoriality", which means being concerned with the variety of local issues across the country, and its actions must take place according to local specificities, which is quite important in a country of continental dimensions and extensive ethno-cultural diversity as Brazil. The production of data on territories then becomes quite important. However, the diagnoses already designed do not address the psychosocial and environmental aspects, which promotes an obstacle in facing the risks and vulnerabilities experienced by the assisted communities.

Methods and process (for empirical research)

To solve this problem, this work aims to propose the analysis of the affective dimension of communities in relation to their place of residence based on the construction of Affective Maps and the evaluation of Esteem by the Place, taking as a reference the territories covered by the Referencial Centers in Social Assistance, basic equipments of social protection of the Brazilian Unified Social Assistance System. For that, theoretical-methodological references of Social Psychology with a Socio-Historical basis (represented mainly by the Affectivity category) and of Environmental Psychology with a transactional approach were used.

Main results preview and importance (or main arguments in the case of critical reviews)

Thus, this process intends to raise insights on the construction and evaluation of territorialization practices that address territorial complexities and that stimulate governance based on social participation for designing agendas contemplating the affective factors for facing vulnerabilities and psychosocial potential.

PP - (20983) - UNDERSTANDING LIVABLE CITIES OF OUR TIME: LIVABILITY INDICATORS IN SOCIO-ECOLOGICAL FRAMEWORK

Tuvshinzaya Amarzaya[1]
1 - Cornell University

Research or practical problem and objectives

Today, when more than half of the global population lives in cities, Livable City indicators are vital in understanding and measuring quality of life in cities in order to improve it. Accordingly, scholars from fields spanning urban planning, geography, historical preservation, sociology, and political science generated volumes of research and numerous Livability indicators in the last five decades. However, due to its widespread interest among disparate fields at differing time periods and world regions, the definition and organization of those indicators remain highly variable and scattered. This lack of overarching definition and systematic organization severely limits Livability Indicators' usefulness to policy-makers in measuring progress and impacts of policy interventions, setting measurable goals and informing future urban policies.

Main results preview and importance (or main arguments in the case of critical reviews)

As such, this research chronicles a comprehensive and user-friendly index of Livability indicators for decision-makers to catalogue existing resources, locate its gaps, and to identify pathways to enhance livability in their cities. This was accomplished by critically reviewing 39 selected and eligible peer-reviewed articles on Livability (published between 1970 and 2017) to compile 105 validated indicators. Those 105 indicators are then re-organized by applying socio-ecological model of capital and sorted into following seven categories of capitals: financial, natural, human-made environmental, technological, social, human, and moral. Within each category, indicators were further divided into objective and subjective indicators. The current count shows that there are far more objective indicators than there are subjective ones (78:27). While objective measures (e.g. # of recorded crimes) are essential, research suggests that subjective perceptions of people (e.g. feeling of safety) may be even more influential in shaping quality of life for residents. As such, careful measures of subjective indicators would bring great value to Livability domain in enabling urban policy-makers and practitioners to serve their residents more effectively.

PP - (21167) - SENSORY LAND-BASED FIELDWORK: DISRUPTING COLONIAL AMNESIA AND FEELING ENVIRONMENT

Alison Grittner[1]

1 - Faculty of Social Work, University of Calgary

Background and objectives

We offer a sensory land-based fieldwork as a pedagogical strategy for embodied learning in relationship to the land. This fieldwork education seeks to both destabilize colonial futurity regarding the land within settler-colonial contexts, as well as develop person-land relationships amongst learners.

Process and methods (for empirical research)

We share a short five minute film containing spoken word instructions for the fieldwork as well as five sensory land-based stories. These sensory stories reflect and respond relationally to the land in mediums the students chose for themselves; combining spoken word poetry, photography, soundscapes, narration, watercolour painting, and beading (a traditional Indigenous art form).

Main results (or main arguments in the case of critical reviews)

This fieldwork education process provoked students to sensorily experience, recognize, and reflect on "settler emplacement" within their bodies, senses, and histories; pursuing calls for settlers to "un-settle their senses of self and relationship to place" (Morgensen, 2009, p. 158) and environment. Centering the settlement of land and Indigenous history within this fieldwork, recognizes that decolonization and sustainability is a process that troubles settler private ownership and extractive land development, and accordingly, seeks to redresses Indigenous land sovereignty and heal relationships with the land. We locate this fieldwork within land-based education that provokes recognition of the land as Indigenous, as well as situating settler colonialism as an ongoing process of land territorialization and exploitation. Sensory fieldwork within the context of land-based pedagogy induces colonization and environmental degradation to be deeply felt, embodied, and experienced through the senses.

Implications for research and practice/policy | Importance and originality of the contribution

This fieldwork education process provides possible avenues for fellow settlers, educators, allies, advocates, and accomplices to engage in reflexive pedagogical inquiry that destabilize assumptions and futurity regarding the land and environment, and as importantly, to question and trouble: the roles we inhabit in relationship to the earth and settler-colonialism.

PP - (21165) - DIFFICULT WINDOWS: UNPACKING HIDDEN BARRIERS TO OCCUPANT-WINDOW INTERACTIONS

W. Victoria Lee[1]

1 - University of Edinburgh

Research or practical problem and objectives

Our relationship with the window, as an architectural feature or building element, is manifold. During the pandemic lockdowns, windows were both the metaphorical and literal connection to the outside world for many. From a technical perspective, windows also provide one of the most fundamental ways of ventilating the indoor environment, now a key parameter to ensure safe return to our workplaces. Yet little is known of exactly how people interact with windows, how window designs and associated elements (such as windowsills) aid or hinder those interactions in different context and for different purposes.

Methods and process (for empirical research)

An online questionnaire survey of occupant-window interactions was conducted across Scotland at the end of the first lockdown in the UK. Participants were asked about the physical characteristics and usability of the windows in the room in their home where they spent the most waking hours during the lockdown. Importantly, participants were asked to describe how they interact with the windows and windowsills, and what (if anything) they find particularly enjoyable or frustrating in the interactions. A total of 977 valid responses were collected. Likert-style items were analyzed quantitatively using statistical techniques whereas free-text questions were coded and analyzed qualitatively.

Main results preview and importance (or main arguments in the case of critical reviews)

Whilst most people indicated that their windows satisfy their needs, when prompted to reflect on their daily experiences many respondents described difficulties that undermine the various uses of their windows, including view, daylight, ventilation, and outside connection. These barriers can be mapped to specific elements of the window; from higher-level design decisions such as orientation and opening mechanism, to details such as handle placement and weight of moving parts. At best, these difficulties pose minor nuisance to the occupants' experience when interacting with windows; at worst the barriers can compromise the accessibility to important functions of windows such as ventilation, and in turn negatively impact occupants' wellbeing.

PP - (20872) - CRITICAL REALIST GOVERNANCE ANALYSIS OF GHANA'S COCOA SECTOR

Miles Ahlemann[1]
1 - University of Osnabrück

Background and objectives

My "Critical Realist Governance Analysis of Ghana's cocoa sector" is part of the University of Osnabrück's CoVaCoa research project. Supported by the German "Gesellschaft für International Zusammenarbeit (GIZ) and funded by the "Deutsche Bundesstiftung Umwelt" (DBU) and Weinrich Schokolade, our inter-disciplinary research project studies the relation between Ghana's cocoa sector and European consumer markets as to the effect of shifts in consumer preference.

The objective of our research is to explore how European cocoa processors and the confectionary industry can contribute to the reduction of negative externalities along the domestic and trans-national cocoa value chain.

Within this inter-disciplinary research project my governance analysis examines the effect of recent public initiatives on the regulatory and economic situation of private sector stakeholders and the governance structure itself. Each of these are studied in regards to the trade-off between different policy objectives such as yield maximization, climate risk mitigation, crop diversification, anti-deforestation and child labor prevention. Herein, I focus on the identification and investigation of cultural, regulatory and material circumstance which may have contributed to the occurrence of morphogenesis or morphostasis within the sector and along the value chain.

Process and methods (for empirical research)

After extensive desk research, I have identified several issue areas and governance objectives for further investigation via semi-structure interviews during field research in Ghana in early 2022.

Main results (or main arguments in the case of critical reviews)

Research in progress. No preliminary results, so far.

Implications for research and practice/policy | Importance and originality of the contribution

As my research seeks to apply and evolve Critical Realism as a theoretical framework for governance analysis, the interview guides I developed are paradigmatically rooted in Margaret Archer's *Morphogenetic Approach* (1995) while my methodology is based on Andrew Sayer's (2001) *Cultural Political Economy* approach. Finally, the formulation of the interview questions followed the recommendations of Andreas Brönnimann (2021), in that they are intend to identify real causal relations by moving from the empirical to the actual level of phenomena.

Date: 06/07/2022

Hour: 09:00:00
Session: C1 - Community & Behaviour Change
Room: Room 1

Theme: Consumption (5)

IC - (20967) - CLIMATE CHANGE MITIGATION AND ADAPTATION BEHAVIOR AS INDIVIDUALS AND FAMILIES: VALIDATION AND BEYOND OF THE DRAGONS OF INACTION PSYCHOLOGICAL BARRIERS (DIPB) SCALE IN JAPAN AND CHINA

Xun Liu[1]; Naoko Kaida[2]; Tongyu Wang[1]
1 - Graduate School of Systems and Information Engineering, University of Tsukuba, Tennodai 1-1-1, Tsukuba, Ibaraki 3058573 Japan; 2 - Faculty of Engineering, Information and Systems, University of Tsukuba, Tennodai 1-1-1, Tsukuba, Ibaraki 3058573 Japan

Background and objectives

Besides technology innovation, adopting pro-environmental lifestyles could be the most reasonable way to mitigate climate change. While parental influence on children in pro-environmental behaviors (PEB) is known to some extent, children's influence and parent-child interactions in climate change mitigation behavior (CCMB) have been little studied, especially in the Asian contexts. We explored these issues employing the DIPB scale (Lacroix et al., 2019), including the scale validation to Asian consumers. In this study, we aimed to: (1) validate the DIPB scale in Japan and China; (2) examine the difference of environmental attitudes, CCMB, and psychological barriers between the parent and children groups; and (3) examine the difference between the two studied countries.

Process and methods (for empirical research)

Parents and children (age 10-18) in Japan (450 pairs in 2020) and China (455 pairs in 2021), i.e., total n=1810, were recruited to participate in the questionnaire surveys that measured their perceptions about environmental issues, psychological barriers for CCMB, engagement and parent-child interrelationships in CCMB.

Main results (or main arguments in the case of critical reviews)

The results of factor analyses, correlation analyses and multiple regression analyses indicate (1) similar results of the psychological barriers in both countries with the original DIPB validation study; (2) positive associations between parents and children in environmental attitudes, CCMB and psychological barriers in both countries; (3) children's influence in family negatively related to children's and parent's psychological barriers in both countries; (4) children's Influence as a significant predicter of the Chinese parents' CCMB but not in Japan

Implications for research and practice/policy | Importance and originality of the contribution

The DIPB scale could be applicable to not only the Western societies but also the Asian societies. This study suggests that environmental education designed for children could have spillovers in both countries, and it would serve better in the Chinese context.

This study validated the DIPB scale in the Asian countries. It provides evidence of parent-child interrelationships and possible influence of children in family environmental decision making.

IC - (21092) - YOU ARE NOT ALONE: NEIGHBOURHOOD SENSE OF COMMUNITY AND COLLECTIVE EFFICACY AS POTENTIAL BOOSTERS FOR HIGH-EFFORT BEHAVIOUR CHANGE AND GHG REDUCTION.

Stephan Schwarzinger[1]; Michael Brenner-Fliesser[1]; Sebastian Seebauer[1]; Claudia Winkler[1]
1 - JOANNEUM Research Forschungsgesellschaft mbH

Background and objectives

Recent research on climate and energy-relevant behaviour shows that housing and mobility are among the dominant factors for individual climate impact. Empirically, housing and mobility are strongly interrelated, influenced by spatial and infrastructural parameters, publicly visible and an important part of people's personal lifestyle and identity. Hence, impact-relevant behavioural changes in housing and mobility are not only associated with high financial costs, but also with high personal and social effort. This imposes particular challenges for changes of behaviour, since earlier findings indicate that climate-friendly engagement often remains limited to low-cost/low-effort situations such as switching off lights or avoiding plastic bags.

Therefore, more research is needed on how to facilitate high-cost/high-effort climate-friendly behaviour. A promising entry point is on the level of neighbourhoods, where essential infrastructural and social factors converge. Similar spatial conditions and standard of living, low anonymity, as well as clear visibility and attribution of building features and mobility behaviour to individuals (including symbolic representation such as cars) make neighbourhood dynamics a potential lever for encouraging behaviour change. To realise these impact reduction potentials, critical dynamics need to be identified and translated into practicable and effective approaches for interventions.

Process and methods (for empirical research)

Drawing on recent work on social identity, collective efficacy, and measurement of climate-relevant behaviours, the project CLEANcultures presents an approach for (I) designing unconventional and specific interventions at the neighbourhood level (focused on joint processes of sense-making, learning and participation), and for (II) validating their effectiveness in terms of greenhouse-gas emission reduction.

Main results (or main arguments in the case of critical reviews)

Preliminary results from urban and rural Austrian neighbourhoods show a strong focus on locally observable phenomena (e.g. urban heat islands or overtourism) and their links to global climate change.

Implications for research and practice/policy | Importance and originality of the contribution

The approach translates recent research literature into real-world interventions and monitors their actual impact, providing a science-based guideline for practitioners, and a valuable feedback loop for the scientific community.

IC - (21093) - COVID-19 RESHAPING PRO-ENVIRONMENTAL BEHAVIOURS? THE INFLUENCE OF SOCIO-ECONOMIC VARIABLES

Andrea Fontes[1,2]; Sílvia Luís[3]; Maria Fernandes-Jesus[4]; Miriam Rosa[5]

1 - Instituto Universitário de Lisboa (Iscte-IUL), BRU-IUL; 2 - Universidade Europeia; 3 - Lusófona University, Hei-Lab; 4 - York St John University, UK; 5 - Instituto Universitário de Lisboa (Iscte-IUL), CIS-IUL

Background and objectives

Factors leading to pro-environmental behaviours during global crises are still relatively unknown. Some individuals are oriented for pro-environmental behaviours due to having pro-environmental values (Steg & Vlek, 2009). Also, both lay people and research imply that only after basic needs are fulfilled, people get environmentally concerned, which is at odds with recent research showing that members of socio-economic minorities are just as concerned as majorities (Pearson et al., 2018).Regardless, structural/contextual transformations can facilitate changes in habits enabling pro-environmental concerns and practices (e.g., Verplanken et al. 2008).Taking the Covid-19 pandemic as such transformation, the present work aims at understanding if environmental concerns, behaviours, and changes during the pandemic 1) are more associated to high socioeconomic status and if 2) happened in the scope of the pandemic, and how.

Process and methods (for empirical research)

Two studies were conducted during confinements. Study 1 (N=173) was a qualitative questionnaire on concerns raised by the pandemic, while Study 2's questionnaire (N=273) included quantitative questions regarding behaviors and sociodemographics, and qualitative questions regarding motives underlying concerns and changes. Data were analyzed through content analysis and multiple correspondence analysis.

Main results (or main arguments in the case of critical reviews)

Study 1 showed that 28% of the participants presented an increased concern about environmental causes during the pandemic. Moreover, Study 2 showed that socio-economic variables discriminate on job situation and needs met, but not on the pro-environmental behaviours' dimension. Also, changes were driven by motives such as: more time available to implement desired behavioural changes (e.g., recycling; walking regularly); increased awareness of the interdependence between overconsumption and environmental problems (e.g., pollution).

Implications for research and practice/policy | Importance and originality of the contribution

Taken together, our findings suggest that pro-environmental concerns and behaviours are not a privilege of the wealthy and/or educated. Despite their socioeconomic status, people will not necessarily privilege the economic argument over the environmental one, as it is often implied by economic theories and translated to public policies (Dimitri, 2021).

IC - (21149) - LIFE IN COMMUNITY: THE SENSE OF COMMUNITY'S ROLE IN THE HOUSEHOLDS' CARBON FOOTPRINT.

Angela Castrechini[1]; Marcel Mesado[1]
1 - University of Barcelona

Background and objectives

Current consumption patterns and habits begin to have a great impact on the planet's environmental degradation. Material possessions have always played an important role in satisfying the psychological needs of individuals. However, with the decline of cohesive communities and the rise of individualism, many people have found a substitute of social participation in material things. Therefore, as some authors affirm, the solution to the environmental problem may be more related to recovering cohesive communities than to appealing to individual conscience or technological improvement. In this sense, the present study focuses on investigating, through the analysis of intentional communities (cohousing and ecovillages), whether a high sense of community can produce consumption patterns that are less harmful to the environment.

Process and methods (for empirical research)

To do this, the consumption of households in intentional communities (cohousing and ecovillages) has been analyzed and compared with that of households that a priori have the same values, attitudes and similar socioeconomic statuses, but live in a traditional dwelling. A survey has been designed and applied collecting both the level of household consumption and their sense of community.

Main results (or main arguments in the case of critical reviews)

The results show an inverse correlation (R2 = 0.54) between the sense of community (measured through "Brief Sense of Community Scale" -BSCS by Peterson et al., 2008) and the level of consumption (measured through carbon footprint). That is, the greater sense of community the surveyed individuals had, the lower their consumption.

Implications for research and practice/policy | Importance and originality of the contribution

This study shows the advantages of promoting, from public administrations, intentional communities to face the problem of high resource consumption and its impact on the planet, while addressing the housing problem in large cities, and depopulation in rural areas.

IC - (21362) - THE EFFECT OF AGING-FRIENDLY PARK ATTRIBUTES ON LEISURE PATTERNS BEFORE AND DURING THE COVID-19 PANDEMIC

Po-Ju Chang[1]
1 - National Taiwan University

Background and objectives

The COVID-19 pandemic has devastated the world, causing unprecedented lifestyle changes, especially in outdoor leisure patterns. Participating in leisure activities releases stress, adds a sense of meaning to life, helps individuals cope with limitations caused by chronic illness, and contributes to overcoming negative life events among older adults. In addition, urban neighborhood parks are critical because they enable older people to maintain active lifestyles. These parks provide not only physical environments that support outdoor activities but also neighborhood social support that encourages older adults to participate in outdoor activities. This study explored the associations among leisure patterns and aging-friendly neighborhood park attributes before and during the COVID-19 pandemic.

Process and methods (for empirical research)

This study included two data collection rounds involving groups of 602 (before the COVID-19 pandemic) and 498 (during the COVID-19 pandemic) participants aged above 55 years in the same selected neighborhood parks in Taiwan in 2020 and 2021. Twenty parks were selected based on size and location in central Taiwan's largest city, Taichung, and the researchers evaluated their aging-friendly attributes. We used a series of analyses to examine the effects of aging-friendly park attributes on home-based and on-site leisure behaviors before and during the pandemic.

Main results (or main arguments in the case of critical reviews)

The results indicate that leisure patterns among the aging population shifted from primarily involving on-site leisure before the pandemic to primarily involving home-based leisure during the pandemic. However, viewing nature in parks increased during the pandemic. The parks' levels of nature and aesthetic attributes were positively associated with on-site leisure behavior.

Implications for research and practice/policy | Importance and originality of the contribution

An improved understanding of the effect of aging-friendly neighborhood park attributes on leisure patterns among older adults during the COVID-19 pandemic is important for effective development of urban outdoor leisure spaces to help older adults overcome life's difficulties during and after the pandemic.

Hour: 09:00:00
Session: G1 - Place Meanings & Justice
Room: Room 2

Theme: Governance (5)

IC - (20939) - HOW DOES MIGRATION LEAD TO A REDEFINITION OF THE IDENTITY OF PLACES: NEW IDENTITY OR MULTIPLE IDENTITIES?

Tiago Dionísio[5]; Jef Van Den Driessche[4]; Fátima Bernardo[1]; Isabel Loupa-Ramos[2]; Veerle Van Eetvelde[3]
1 - Assistant Professor, Universidade de Évora, Évora, Portugal; 2 - Assistant Professor, Instituto Superior Técnico, Lisbon, Portugal; 3 - Tenured Academic Staff, Gent University, Ghent, Belgium; 4 - PhD student, Gent University, Ghent, Belgium; 5 - PhD student, Gent University, Ghent, Belgium

Background and objectives

The identity of a place is a dynamic process resulting from physical and social changes that occur in places. Migration is a disruptive event that challenges processes of distinctiveness and continuity in a new place for emigrants while acting as a threat to the sense of identity connection former residents have with their place. Therefore, the characteristics that underlie place identity among old and new residents can contribute to the understanding of the dynamics of local identity, namely whether we are building a new identity that integrates different perceptions, practices and appropriations or multiple identities that overlap or rival.

Process and methods (for empirical research)

Therefore to address this topic, 2 case studies with a strong presence of emigrants were studied: one in an urban context and the other in a peri-urban context. To capture neighborhood identity a qualitative based on stakeholder focus groups methodological approach has been developed (Loupa-Ramos et al. 2019).

Main results (or main arguments in the case of critical reviews)

For each case study, focus groups were performed with native and different types of migrant habitants. This approach allows us to explore the contents associated with the identity of a place for different groups. The contents of identity include tangible and intangible features of the relation between people and their environments, as well as features that can and cant be spatially identified. Furthermore, migrants seem to present different and similar elements of identity content depending on how well they adjust their identity with the previous living place and d their new environment.

Implications for research and practice/policy | Importance and originality of the contribution

In sum, acknowledging the relevance of the contents of identity provides knowledge that can be crucial for supporting future planning and development options to improve territorial cohesion, whilst comprehending how each group creates and redefines their place identity, both in terms of structure, processes and implications in terms of intergrupal relationships.

IC - (20941) - REPRESENTATION OF COLLECTIVE IDENTITY IN THE PUBLIC REALM: A TOPONYMIC STUDY IN TORONTO

Homa Hedayat[1]; Roger Keil[2]; L. Anders Sandberg[2]
1 - PhD Student, Researcher; 2 - Professor York University

Background and objectives

Place naming affects identity and shapes cultural aspects of public places. Also, commemorations and anniversary of historical events, as representatives of public collective memory, have been influenced by renaming. In June 2020, Toronto City Council received 14000 petitions signed by citizens who asked for renaming monuments and civic assets whose names were associated with people who had authority in delaying the abolition of the trans-Atlantic slave trade. This paper presents results from "Recognition Review" and seeks to understand who or what is represented in the public realm in Toronto; uncover how systemic racism may be embedded in monuments and the naming of civic properties; and inform strategies to create public spaces that are more welcoming, inclusive, and reflective of Toronto's rich diversity, culture and heritage.

Process and methods (for empirical research)

The data includes monuments (statues or monoliths) located in a public space such as street, park and monument names. We will compile a list that showcases the prevailing trends in the civic landscape. A toponymic and thematic analysis is conducted by classifying the data into several categories based on culture, religion, ethnicity, language, race, historical periods, and political influence. The selected samples are representative of City's Community Council boundaries.

Main results (or main arguments in the case of critical reviews)

The main result led to an understanding of how civic commemorations shape conceptions or misconceptions of public history in Toronto. Also, the research indicated how historical dynamics have led to the underrepresentation of certain communities in the public realm.

Implications for research and practice/policy | Importance and originality of the contribution

This project will yield indirect economic benefits to the City of Toronto by contributing to social cohesion. Its purpose is to help correct historic wrongs in defining the nature of civic identity in Toronto. Its long-term positive effects are improvement of diversity and equality through creating municipal policy.

IC - (21002) - DOMESTIC DIGITAL COMMUNICATIONS, HOUSEHOLD CHARACTERISTICS AND WELL-BEING DURING THE GLOBAL PANDEMIC

Pablo Garcia De Paredes[1]
1 - Université Laval

Background and objectives

Households have adapted through almost two years of disruptions to their daily activities (Andrew et al., 2020; Barone Gibbs et al., 2021; Gurney, 2020). We hypothesize (h1) that those with higher digital literacy scores, more resources in available time, living space characteristics, income, and environmental diversity, have fared better than others. Little attention has been given to the role of technology on the literature about the meaning of home (Mallett, 2004). We contend (h2) that domestic digital communications play a role in amplifying or reducing the negative impacts on well-being.

Process and methods (for empirical research)

Departing from a longitudinal sample of 3281 participants (The MAVIPAN project, in Quebec Province), we'll study through statistical analysis the possible correlations between two groups of variables. First, our independent variables; digital communication habits (professional type and screen time before the pandemic) and household characteristics (household size per person, architectural typology, proximity to parks, etc.), and our dependent variables, well-being, and household adaptation. We aim at exploring how our independent variables influenced the participant's representations of home and their adaptation capabilities, resulting in changes to their reported wellbeing.

Main results (or main arguments in the case of critical reviews)

Results from other studies have pointed out to the fragmentation of daily activities and the new permeability of public and private activities (Bailly et al., 2021). While changes due to new proxemic codes have emerged, other questions remain: what are the positive and negative aspects of digital communications in the house and how do they mediate adaptation strategies?

Implications for research and practice/policy | Importance and originality of the contribution

Our project sheds light on the environmental-psychological impact of digital communications technologies in the ways we read, comprehend, and act upon our domestic environment. The implications are twofold; (1) policy guidelines to enhance the public's knowledge about the possible hazards/benefits of domestic digital communications and (2) create new knowledge about the way virtual and natural environments are translated into behavior within the house.

IC - (21087) - MEANING AND VALUE OF JAPANESE LIVING-ENVIRONMENT FOR FOREIGN RESIDENTS IN JAPAN

Yurika Yokoyama[2]; Jinqi Li[1]
1 - Harbin Institute of Technology, Shenzhen; 2 - The University of Tokyo

Background and objectives

In Japan, research on the history of housing began about 100 years ago, and Hirotaro Ota's "*Zusetu-Nihon-Jutakushi*"(1948) is the oldest book on complete history of Japanese housing. In 1970s, number of classes on housing history was increasing in the department of architecture in universities and in the department of home economics in women's colleges in Japan (Michio Fujioka ed., 1970). Since then, there have been a lot of research on history of housing and on classification, and preservation activities, as well as education in and out of museums and universities.

In this study, we discuss how foreign residents in Japan perceive and value these houses and their surrounding environments, i.e. living-environment, that Japanese people cherish so much by now.

Process and methods (for empirical research)

First, 11 representative photographs of ordinary people's living-environment, which are considered to be important in Japanese housing history, were selected. Then a web questionnaire was conducted with these photographs, where Chinese residents in Japan were asked 1) preference, 2) impressions, 3) willingness to live, 4) conservation consciousness, and 5) motivation to visit.

Main results (or main arguments in the case of critical reviews)

Based on 53 valid responses, overall evaluation of Japan's living-environment tends to be positive. Especially, preference and atmospheric evaluation. And an interesting point, we find that some of the Japanese living-environments bring foreigners feel nostalgic impression. Strong positive correlations between conservation consciousness and preference (correlation coefficient 0.95), motivation to visit and preference (correlation coefficient 0.92) are found.

Implications for research and practice/policy | Importance and originality of the contribution

Through this research, we clarified foreign residents' evaluation to the Japanese living-environment, which is a favorite landscape for them. Despite cultural differences and gaps with the familiar living-environment, foreigners feel nostalgic to some of the living-environment.

It is suggested that the Japanese living-environment can also be valued by foreigners. Preservation and introduction including real experience of it are also very meaningful for the world.

IC - (20811) - THE MECHANISM OF RELATIONAL EMPOWERMENT THROUGH COMMUNITY ENGAGEMENT: AN APPLICATION OF EXPONENTIAL RANDOM GRAPH MODELS

Yohei Kato[1]; Keng Hua Chong[1]
1 - Singapore University of Technology and Design

Background and objectives

Community design is a long-standing participatory approach to designing inclusive built environments. The design process offers rich opportunities for participants to interact, collaborate, and learn from various stakeholders engaged in a project. In other words, it seeks to empower individuals and community by enhancing interpersonal relations. Despite the significance of relational components in any community-based intervention, conventional empowerment frameworks often emphasize on mastery and control, instead of collaboration and cooperation. Further, relational data being inherently interdependent pose challenges to common statistical approaches, such as regressions, that assume independence of observations. To address these gaps, this study demonstrates how to examine relational empowerment from a network perspective. The study focuses on one component of relational empowerment, referred to as "facilitating other's empowerment". This can be thought as a form of guidance and mentorship provided by senior members for newer members.

Process and methods (for empirical research)

With a sequential mixed-methods approach, the mechanism of relational empowerment was explored in a case study of a long-term community design project in Japan. The study began with interviews with key stakeholders that informed the survey questionnaire: it integrates multidimensional measures of engagement (i.e. breadth, duration, frequency, and intensity) and "name generators" that collect information about ties that facilitate discussions and opinion sharing between participants. To examine factors associated with relational empowerment, this study applied the Exponential Random Graph Model (ERGM), a statistical approach to modelling social networks.

Main results (or main arguments in the case of critical reviews)

The result indicated that some of the long-term participants are catalyst to facilitate others' empowerment and that higher levels of engagement can increase the likelihood of tie formation between participants.

Implications for research and practice/policy | Importance and originality of the contribution

The study contributes to the research and practice of community design by highlighting the advantages of ERGM in examining interpersonal relations: it helps to reveal different levels of influence and capacity among participants, so that community designers can provide appropriate capacity-building support.

Hour: 09:00:00
Session: S1 - Symposia - Research from the restorative environments network (IAPSren)
Room: Room 3

Theme: Sustainability (6); Sustainability (1)

(20906) - RESEARCH FROM THE RESTORATIVE ENVIRONMENTS NETWORK (IAPSREN)

Stephanie Wilkie[1]; Eleanor Ratcliffe[2]; Robert Van Dongen[3]; Kate Lee[4]; Anna Bornioli[5]; Valeria Chiozza[6]; Filomena Russo[7]; Alexander Hooyberg[8]; Marilisa Herchet[9]; Everly Jazi[10]
1 - University of Sunderland; 2 - University of Surrey; 3 - Eindhoven University of Technology; 4 - The University of Melbourne; 5 - Erasmus Centre for Urban, Port, and Transport Economics; 6 - Sapienza Università di Roma; 7 - University of Cambridge; 8 - Flanders Marine Institute; 9 - Technische Universität Dresden; 10 - University of British Columbia

Background and objectives

Since 2008, the aim of the IAPS Restorative Environments Network has been to connect restoration researchers across countries and disciplines. This symposium continues this aim through presentations of interest to both restorative environment network members and the broader IAPS community. Six presentations explore the restorative potential of varied natural and built environments and through different research methodologies. Presentations focus on the impact of culture and religious identities on environmental appraisals (A.Bornioli, A. Biremboim, & P. Ben-Nun Bloom) and how experiences in youth shapes person-place relationships and environmental commitment using life-history interviews (V. Chiozza & M. Bonaiuto). Others investigated the psychological and physiological responses to urban 'in-between' spaces via mixture of questionnaire, interview and biosensor measures (F. Russo) and the inter/intra-environment variation in psychological restoration between heterogenous urban coastal settings (A. Hooyberg). The symposium culminates with two future-focused presentations. The first is a discussion of the lessons learned across studies linking urban greenery and mental health using meta-analytic techniques (M. Herchet). The final presentation of the symposium will be a research synthesis building on earlier published comprehensive reviews to introduce strategies to progress the continued empirical investigation of restorative environments (E. Jazi).

Significance for the advancement of People-Environment relations

The topics will be of interest to restoration researchers, as well as IAPS attendees across the three conference themes. The symposium involves both early-career and established network members. This 'cross-generational' approach supports discussion through the varied lens and experiences of researchers; this will facilitate reflection on our current understanding of restorative environments and discussion of future directions for the field.

IC - (20821) - ENVIRONMENTAL APPRAISALS IN OUTGROUP CULTURAL LANDSCAPE: THE CASE OF MUSLIM ELEMENTS IN EUROPEAN CITIES

Anna Bornioli[1]; Amit Biremboim[2]; Pazit Ben-Nun Bloom[2]
1 - Erasmus University Rotterdam; 2 - Hebrew University of Jerusalem

Background and objectives

Cultural landscapes can contribute to positive environmental experiences, including perceived restorativeness. However, previous works focused on ingroup environmental experiences in cultural landscapes. We suggest that group identities, including religious identities, might impact cultural landscape environmental experiences in outgroup settings. This study compared outgroup environmental experiences during a simulated walk in a cultural landscape (a Muslim setting) and a neutral environment, and examined the influence of perceived threat and intolerance on environmental appraisals.

Process and methods (for empirical research)

We explored between-subject differences in environmental appraisals during a simulated walk in a cultural landscape—an urban environment with Muslim elements - and in a control environment, with neutral elements that were embedded instead of the Muslim ones. We examined environmental appraisals and the moderating effect of perceived threat and intolerance. Participants were adults from three European countries (France, Germany, Netherlands). We included measures of place attachment, Perceived Restorativeness Scale, Interestingness, perceived greenery and the perceived length of walk.

Main results (or main arguments in the case of critical reviews)

Results show that overall the Muslim environment was associated with better environmental appraisals. Multiple linear regressions showed that participants experiencing threat or intolerance reported less favourable environmental perceptions in the Muslim environment, in terms of place attachment, perceived restorativeness, and perceived interestingness. There were not systematic differences between countries.

Implications for research and practice/policy | Importance and originality of the contribution

These findings contribute to research on the top-down psychological constructs (e.g. personal characteristics) that likely play a role in environmental and restorative experiences. Feelings of perceived threat and intolerance can generate opposite environmental appraisals. While previous work showed that place attachment and identification predict positive environmental perceptions and restoration, we showed the potentially negative effects of exposure to cultural cues, as these might worsen environmental experiences of those who feel threatened or intolerant towards a specific culture. Findings point at the importance of policies for cultural integration and tolerance. Reducing intolerance and/or perceived threat, experiences of the urban landscape can be improved.

IC - (20961) - RESTORATIVE CHARACTERISTICS OF INTERMEDIATE ARCHITECTURAL ENVIRONMENTS

Filomena Russo[1]; Koen Steemers[1,2]
1 - University of Cambridge; 2 - The Martin Centre

Background and objectives

The restorativeness potential of Intermediate Architectural Environments (IAE) is the focus of this research. IAE range from courtyards, arcades, balconies to window-seats, offering retreat to the interior and contact with the exterior. IAE promote prospect and refuge, with shelter, safety, diverse controllable environmental conditions, adaptable sociability and relaxation opportunities. Literature indicates that the restorative benefits of exposure to nature dominate Restorative Environments (RE) research, with fewer studies on built settings. With people spending a significant proportion of time indoors, and predominantly in cities, RE within buildings give opportunity to relieve stress, attention fatigue, and warrants investigation.

Process and methods (for empirical research)

An initial pilot study conducted at a cultural building in Sao Paulo, which includes IAE of different spatial characteristics and environmental qualities, that are freely accessible to the public. Mixed research methods were used, including semi-structured qualitative participant interviews and building environmental surveys. This methodology was expanded in two recent studies in Sao Paulo as follows: Perceived Stress Scale, cognitive task, participants heart-rate variability, galvanic skin response, eye tracking, Restoration Outcome Scale, Prospect and Refuge questions, semi-structured qualitative questions, and daylight-thermal measurements.

Main results (or main arguments in the case of critical reviews)

Pilot study findings indicate that views, daylight and sociability were the main IAE characteristics contributing towards restorativeness. These were investigated in more detail in these recent studies. Data analysis will be completed by the time of the conference. Pilot study findings are compared with recent studies' findings, that include participant physiological data collection.

Implications for research and practice/policy | Importance and originality of the contribution

Although similar methodology has been employed in RE research, these are novel methods in the context of intermediate environments; results can demonstrate the value of such methods to inform subsequent IAE research. Some of the scales/questionnaires applied in this study have been translated to Brazilian Portuguese for the first time; an online survey is proposed to review the validity of translations within a larger population sample.

IC - (20908) - 'BLUE' COASTS: PSYCHOLOGICAL RESTORATION CHANGES WITH LANDSCAPE TYPE AND CONTENT

Alexander Hooyberg[1]; Nathalie Michels[2,3]; Jens Allaert[4,5]; Michiel Vandegehuchte[1]; Henk Roose[6]; Stefaan De Henauw[2]; Gert Everaert[1]

1 - Flanders Marine Institute, Ostend, Belgium; 2 - Department of Public Health and Primary Care, Ghent University, Ghent, Belgium; 3 - Department of Developmental, Personality and Social Psychology, Ghent University, Ghent, Belgium; 4 - Department of Head and Skin, Ghent University, University Hospital Ghent; 5 - Department of Psychiatry and Medical Psychology, Ghent University, Ghent, Belgium; 6 - Department of Sociology, Ghent University, Ghent, Belgium

Background and objectives

Living in a coastal area and spending time at the coast has been shown to benefit psychological health and well-being. However, the amount of psychological restoration may be highly location-specific, and depend on the physical constituents of the environment. Therefore, this study aimed to quantify the inter- and intra-environment variation in the experienced psychological restoration along the Belgian coast, and to determine the influence of the physical constituents of the environment hereon.

Process and methods (for empirical research)

Ten coastal environments were identified represented by 52 pictures, in which beach environments were subdivided into five types. The pictures were rated by 102 students on a five-item perceived restorativeness scale (PRS). The type and relative proportion of the physical constituents of the environment were quantified by manually drawing polygons on the pictures, calculating their surface area, and classifying them hierarchically under natural/urban/people and lower-level constituents. The analyses included general linear mixed modelling, standardized for individual and study-design-related covariates.

Main results (or main arguments in the case of critical reviews)

The PRS-scores varied gradually across the ten coastal environments: salt marshes > dunes > beaches > green parks > piers > historical sites > dikes > docks > recreational harbors > towns. Average PRS-scores differed up to 30% between very high and neutral, and no detrimental effects were detected. Additional intra-environment variation occurred at the beach with lower PRS for 'in a beach bar' and 'between beach cabins' compared to 'on a breakwater'. Lastly, the PRS associated positively with the relative proportion of natural components (i.e. vegetation, sky, and natural underground) and negatively with the relative proportion of urban components (i.e. buildings, vehicles and hardened underground).

Implications for research and practice/policy | Importance and originality of the contribution

The results of this study allow to refine the current perspectives about the restorative potential of coastal environments, and to propose recommendations for future research, therapeutic applications, and spatial planning.

PP - (21003) - RETHINKING THE AGENDA: A CASE FOR SYNTHESIZING ACROSS METHODOLOGIES AND BUILDING ON PAST RESEARCH

Everly Jazi[1]
1 - University of British Columbia

Research or practical problem and objectives

For the past four decades, interdisciplinary researchers have studied the psychological and physical health benefits of time spent in nature. Almost 40 years since the key texts of Kaplan and Kaplan (1989) and Ulrich (1983), nature and health research is now prolific, building on the key theoretical and experimental texts to examine ideas with observational analysis, randomized control trials, intervention studies, as well as qualitative interviews looking at place attachments and specific attitudinal variables around nature and wellbeing (Frumkin et al., 2017). The scope of research has also expanded and includes different assessments of exposure (e.g., types of and features in green, blue, brown, and open spaces, frequency of exposure or dosage, type of activity) as well as different benefits or outcomes such as economics and urban space or architectural structures, psychophysiological or neural outcomes, pro-environmental relevance, and more (Frumkin et al., 2017). Despite the productive and diverse output, a lack of standardization in methods, variables, and other components of studies and reviews makes it difficult to synthesize results across papers to draw conclusions about mechanisms and causal pathways in the nature and health sphere.

Main results preview and importance (or main arguments in the case of critical reviews)

Since many authors have introduced synthesis as a goal and agenda of the field, the current research introduces a conceptual framework and plan building off previous agendas to clarify links in diverse methodological approaches. In doing so, the authors introduce two strategies that may allow for conclusions to be drawn between studies, and introduces other possibilities for strategies that future research may consider. Without addressing the difficulty of making claims across a diversity of methods and topics, policymakers, public health officials, and the people-environment field may act on non-empirical or spurious findings, unable to hone in on values for groups that would benefit otherwise, with recognized mechanism and interventions that work.

IC - (21046) - EVERYDAY GREEN AND THE MENTAL HEALTH OF URBAN RESIDENTS – A META-ANALYTIC APPROACH

Marilisa Herchet[1]; Marek Venený[1]; Timon Krause[2]; Mathias Hofmann[1]

1 - Center for Open Digital Innovation and Participation (CODIP), Technische Universität Dresden; 2 -

Background and objectives

The aim of this meta-analysis is to provide a quantitative overview of the mental health effects of urban green elements that play a role in residents' daily life. This includes a variety of mental health measures (e.g., positive and negative mood, anxiety, stress and attention) and covers various forms of nature contact (e.g., in-situ, images and VR).

Process and methods (for empirical research)

A literature search was conducted across scientific databases (i.e., Scopus, MEDLINE, Web of Science, APA PsycInfo and PSYNDEX). Additionally, multiple mailing lists were used in search for grey literature. The screening process of the identified studies was performed by two independent reviewers, supported by the synthesis software Colandr. We included (quasi-)experimental laboratory or field studies with a pre-post-control design. Studies with a primary focus on blue space or rural settings were excluded. Study quality was assessed by two independent reviewers using a tailored version of the Quality Appraisal Checklist for Quantitative Intervention Studies by the UK National Institute for Health and Care Excellence (NICE).

Main results (or main arguments in the case of critical reviews)

Significant, positive effects ranging from small to medium differences in the pre-post-changes of "nature" vs. "control" conditions were found across the measures of mental health. Overall, the study quality was acceptable, however the descriptions of the sample and the represented population were often insufficient – e.g., it was not reflected to which degree valid conclusions for the general population can be drawn from student samples.

Implications for research and practice/policy | Importance and originality of the contribution

Our results once more stress the importance of accessible and attractive urban green. As fostering healthy urban living conditions is a socially, financially and politically most desirable goal, our results encourage the strategic investment of public resources towards greener cities. From a methodological perspective, primary studies should provide a sound rationale of their sampling process.

IC - (21207) - RESTORATIVENESS ONTOGENESIS: HOW EARLY NATURE EXPERIENCES START RESTORATION PROCESSES IN HUMAN BEINGS

Valeria Chiozza[1]; Marino Bonaiuto[1]

1 - Dipartimento di Psicologia dei Processi di Sviluppo e Socializzazione Sapienza Università di Roma

Background and objectives

In the last decades, an increasing volume of research has emphasised the positive effects of exposure to natural settings, such as recovery from stress and mental fatigue. This sense of peacefulness and rehabilitation, known as "Restoration", also makes people emotionally attached to parks and natural areas, as they may rely on them to fulfil their needs. Especially during childhood, ordinary and extraordinary experiences in nature seem to play an essential role in setting up such a wellbeing process. Evidence showed that being surrounded by natural elements can promote children's concentration, attentional capacity, self-discipline, and impulse control.

However, despite extensive research investigating the restoration processes, their ontogenesis remains unclear. Therefore, the present contribution aims to understand what kind of early experiences and activities first led to restoration (e.g., ordinary/extraordinary; structured/unstructured), when the individual became aware of this experiential feeling and what this awareness meant at that time and in later stages of life.

Process and methods (for empirical research)

We used a retrospective approach based on qualitative analyses on life-history interviews: they were collected for a different research purpose (namely, how individuals originate their nature and biodiversity commitment), from 2011 to 2015 within the BIOMOT EC-FP7 on a sample of biodiversity stakeholders from different EU countries. Variables are mapped along three main life periods (i.e., 0-15 years of age; 15-25 years of age; 25 years of age until the time of interviews), considered within each semi-structured interview. Thus, we aim to discuss the chronological trajectory that leads to restoration experiences, considering different levels of analysis (i.e., contextual, social, pragmatic, psychological).

Upon completion of the analyses, based on the literature, results are expected to highlight that direct and frequent early experiences in nature correlate with a deep feeling and awareness of natural restorative effects, especially when experiences are conducted during unstructured activities and bucolic contexts. Furthermore, we predict that undergoing and recognising these people-environment properties would enhance both natural places attachment and environmental commitment in adulthood.

Main results (or main arguments in the case of critical reviews)

The restorative benefits deriving from experiences in nature seem to promote meaningful bonds with the natural world and positive environmental attitudes. However, given the increased urbanisation and the change of lifestyles, there is an increasing loss of contact with nature. Implications include detrimental effects on psychophysical development and a progressive loss of sensitivity to biodiversity and nature in general. Thus, it is essential to raise questions about the role of early experiences and whether they may influence the capacity to facilitate specific restorative feelings and broader environmental awareness.

The qualitative method will allow us to embrace a life course perspective and rebuild the individuals' entire experience of life and interwoven trajectories. By highlighting the most life-changing episodes, this work intends to contribute to this research field with a deep knowledge of the critical factors that activate restorative processes in humans.

Implications for research and practice/policy | Importance and originality of the contribution

Understanding the roots of these psychological functions could enhance further research investigating the same issue with quantitative approaches; as well as deepening how to foster connectedness to nature and recovery of adaptive resources consumed due to the demands of day-to-day life.

Hour: 09:00:00
Session: S2 - Adressing Sustainability I
Room: Room 4

Theme: Sustainability (4)

IC - (20979) - EXPLORING THE IMPACT OF DIGITAL DATA ANALYSIS AND FIELD NOTE RESULTS ON PUBLIC SPACE RESEARCH IN RURAL AREAS

Ting-Ting Cheng[1]; Li-Wen Sung[1]
1 - National Cheng Kung University

Background and objectives

The previous results obtained by the research team from building digital sensor systems in a rural community for the past 3 years verified that these systems can digitally record community behavior trajectories 24 hours a day, demonstrating feasibility to preliminary application.

According to the aforesaid results, this study aimed to explore whether system sensitivity to environmental observation can be enhanced by adopting conventional environmental behavior maps and field notes.

Process and methods (for empirical research)

The researchers engaged in participant observation and conducted mixed method research by targeting 11 early career researchers. Data were collected from detailed field notes, field research reports, and open-ended questionnaires.

The research process are as follows:

(1) Learn how to use the sensor system to understand the presentation of behavior record findings and research results.

(2) Explore the methods for observation and data recording through field notes and environmental behavior maps, which can be applied in conventional environmental behavior research.

(3) Enter the research site to conduct environmental behavior research.

(4) Publish the research results and complete a questionnaire survey.

(5) Conduct research analysis.

Main results (or main arguments in the case of critical reviews)

The study results are as follows:

(1) The present researchers' understanding of the data sensing results affects their cognition of environmental research. This leads to differences in field investigation targets and results.

(2) Long-term data collection can complement the research limitations of field surveys. However, sole reliance on data observation can oversee the emotional resonance at the research site.

Implications for research and practice/policy | Importance and originality of the contribution

The research results can contribute to the accurate allocation of public resources to essential public spaces, thereby reducing resource waste. Data analysis allows for real-time observation of environmental behavior changes and rolling review of strategies for public space arrangement, thereby enhancing the sustainable value of senior-friendly communities.

IC - (21113) - FARMERS' DRAGONS – PSYCHOLOGICAL BARRIERS TO CLIMATE CHANGE MITIGATION IN AGRICULTURE

Jaana Sorvali[3]; Swen Kühne[1]; Robert Gifford[2]

1 - Zurich University of Applied Sciences; 2 - University of Victoria; 3 - Natural Resources Institute Finland

Background and objectives

Agriculture contributes to 20% of total greenhouse gas emissions in the EU if land use, land use change and forestry (LULUCF) sector emissions are included. While mitigation targets for reducing emissions have been set for many sectors long time ago, agricultural sector has been lagging behind. Now, binding emission reduction targets for agriculture have been set in many European countries. Reducing emissions in agriculture is possible, but still the emission levels have stagnated. To understand what hinders farmers to engage in climate smart behavior the concept of "dragons of inaction" could be insightful. The concept describes psychological barriers (e.g., lack of knowledge, conflicting goals) and has been applied in other domains, but not on specific groups (i.e., farmers) or qualitatively. So, which psychological barriers do farmers spontaneously mention when asked about climate change and agriculture?

Process and methods (for empirical research)

4401 Finnish farmers responded to "comments on the impact of climate change on agriculture" in an open-ended question. The answers were coded based on the dragons of inaction psychological barriers. The coded data was connected to the respondents' background variables and other structured climate change related responses. The connections within the psychological barriers and between other variables was studied.

Main results (or main arguments in the case of critical reviews)

Although farmers believe that climate change is happening and describe changes in agricultural practices, weather etc. farmers also brought forth psychological barriers. Transferring the responsibility of climate action to others and denying the possibilities to influence to climate change were the most stated barriers. Interestingly, some barriers are mentioned regardless of stated willingness to act. Some dragons of inaction seem to be less important in agriculture, but some additional barriers and connections to certain farmer groups could be identified.

Implications for research and practice/policy | Importance and originality of the contribution

The results can help governments to design specific interventions that address psychological barriers in agriculture and help to reach mitigation targets for agriculture.

IC - (21196) - CITIZEN THINK TANKS: CO-DESIGNING POST-PANDEMIC HOUSING FUTURES

Anna Pagani[1]; Valentin Bourdon[1]; Livia Fritz[1]; Claudia R. Binder[1]
1 - École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Suisse

Background and objectives

During the first wave of COVID-19, Swiss residents found themselves spending most of their time in homes unable to accommodate the needs hitherto met by cities. While scholars and practitioners have proposed strategies to mitigate the effects of housing deficiencies on inhabitants' wellbeing, the contribution of all citizens involved in housing production and use cannot be overlooked. Therefore, this research aimed to offer spaces for mutual learning to co-design post-pandemic housing futures.

Process and methods (for empirical research)

Two Citizens Think Tanks (CTTs) were organised in spring 2020 as part of the transdisciplinary project Swiss Corona Citizen Science, involving eight to ten participants in two online sessions. The first CTT aimed to discuss housing conditions before and during the confinement. The analysis of the recordings and whiteboards led to the identification of three variables, namely (i) space for oneself, (ii) physical private space, and (iii) space for social interactions, using which we developed possible scenarios for the future of housing. The latter were presented in the second CTT using short stories and images, shaping a shared imaginary. The most desirable scenario was voted on, followed by a collective reflection on pathways to achieve it.

Main results (or main arguments in the case of critical reviews)

The scenario 'reinvesting the community', resulting from an increase in personal and social space and a reduction in the physical one, was voted as the most desirable. Obstacles and opportunities that this vision entails included sharing and learning to share; ways of recreating a neighbourhood 'spirit'; designing housing that allows for encounters, welcomes different cultures, and addresses desires for appropriation.

Implications for research and practice/policy | Importance and originality of the contribution

The CTTs highlighted how different types of knowledge can contribute to the production of strategies to cope with present and future crises, generating questions that open up new avenues of research. They offered an example of how scientists and practitioners can interact with and benefit from the multiple voices of inhabitants.

IC - (21384) - "IF THEY HAD TO WAIT FOR THE MEN, THEY MIGHT NOT HAVE WATER AT ALL": GENDER, OCCUPATIONS, AND PERCEPTIONS OF THE ENVIRONMENT IN WEST KALIMANTAN, INDONESIA

Anastasia Voronkova[5]; Radisti Praptiwi[1]; Putri Pratiwi[2]; Mathew White[4]; Karyn Morrissey[3]

1 - Esa Unggul University; 2 - Yayasan Planet Indonesia; 3 - Technical University of Denmark; 4 - University of Vienna; 5 - University of Plymouth

Background and objectives

Understanding the differences in environmental perceptions and behaviours of sociodemographic groups with contrasting priorities and decision-making power may be crucial to improve sustainability and equity of environmental policy. However, to date few studies have explored those differences between gender groups, and fewer yet have done so in the Global South, despite conservation efforts being most prominent there.

Process and methods (for empirical research)

This study explored the case of a rural rainforest community in West Kalimantan, Indonesia, to examine perceptions of environmental issues and differences in those between men and women of the community. Through the combination of focus groups and a survey (N = 300), people's perceptions were compared statistically and put into a detailed qualitative context.

Main results (or main arguments in the case of critical reviews)

The findings show how the intense combination of climate change and outside pressures can make people struggle to cope with the occurring changes in a sustainable way. Lack of rain, deforestation, and salinization of freshwater sources affected community members' health, wellbeing, and livelihoods. In turn, their adaptation attempts were limited by the governmental restrictions and a palm-oil company claiming part of the forest.

The environmental changes were noticed by both men and women but perceived differently due to distinct gender roles and occupations. Men were more attentive to the loss of forest and fish, while women more acutely perceived the lack of rain and freshwater. Simultaneously, men and women shared the feelings of extreme uncertainty and lack of control over their livelihoods and children's future.

Implications for research and practice/policy | Importance and originality of the contribution

People-centred research is important for understanding the on-ground constraints communities face, often not recognized in the official policy designs in Indonesia. This case-study gives an insight into people's lived experiences and should be used to better adapt relevant conservation interventions and management practices. Attention to differences in men's and women's experiences would allow to better involve both into potential solutions.

Hour: 09:00:00
Session: S3 - Urban Spaces
Room: Room 5

Theme: Sustainability (5)

IC - (20782) - URBAN BIODIVERSITY – CHALLENGES AND CHANCES FOR PLANNING

Dörte Martens[1]; Öyküm Öztürk[1]; Lara Rindt[1]
1 - Eberswalde University for Sustainable Development

Background and objectives

Urban greenspace provides important functions for the climate such as heat control and air exchange. Besides, it provides increased health and well-being, e.g. shown by attention restoration and stress reduction. However, the role of biodiversity in this relation is not yet clearly analysed. The given study adresses 1. perception, 2. health effects and 3. activities to support urban biodiversity.

Process and methods (for empirical research)

Face-to-face questionnaires were conducted in four districts of Berlin. In order to reach people who might not use greenspace regularly, the interviews took place in parks as well as on markets in the same district. In order to reach a broad audience, questionnaires and staff provided German, Turkish and Russian questionnaires (N = 432).

The perception of urban biodiversity was measured by photos manipulated with low, medium and high biodiversity scenarios. Participants were asked to rate their favourite scenario. Nature relatedness, perceved restorativeness, stress reduction and health were rated on four-stage-scales. Additionally, participants rated their willingness to take part in given activities to support urban biodiversity such as urban gardening or sponsorship for trees.

Main results (or main arguments in the case of critical reviews)

Result show a clear preference for the high biodiversity greenspace presented on the photos (48 % of the participants). This result is consistent for all groups, controlled for the density of their living environment, research setting (park/market), age, gender and migration background.

A factor analysis on the activities to support urban greenspace reveals four different factors, which correlate with nature relatedness, perceived restorativeness and stress reduction differently. This implies that the activities to support urban biodiversity should be looked at closely in addressing and effecting city dwellers.

Implications for research and practice/policy | Importance and originality of the contribution

Results reveal the importance of urban biodiversity for health, restoration and the relatedness to nature for city dwellers. Chances and challenges of given activities to support biodiversity are discussed in an intercultural context and get developed further.

IC - (20907) - IS RESTORATION IN THE 'EYE' OF THE BEHOLDER? DOES LUMINANCE AND PLACE PREFERENCE AFFECT THE PERCEIVED RESTORATIVE POTENTIAL OF URBAN AND NATURE ENVIRONMENTS?

Louise Delicato[1]; Stephanie Wilkie[2]
1 - Heriot Watt University; 2 - University of Sunderland

Background and objectives

Attention restoration theory (ART, Kaplan, 1995) suggests that nature is inherently restorative due to environmental characteristics not present in urban settings. However, nature and urban environments are perceived differently due to identity-related place preference (Author, Year). This study explored whether matching the mean luminance of nature and urban stimuli affects their perceived restoration potential to those with different place preferences.

Process and methods (for empirical research)

Images were places in and around Texas, USA (Geisler & Perry, 2011a, 2011b) and were chosen using restorative characteristics (ART). The mean luminance of each image was adjusted to match the average mean luminance of the urban set of images. While the mean luminance of stimuli was equivalent, the standard deviation of the luminance profile of the nature and urban image sets varied; on average, nature images were higher in contrast. Participants (*N* = 258) took part in an online study in which they indicated their place preference (nature = 66.5%) and rated the perceived restoration potential (PRP) of twenty nature and twenty urban images (the order of image presentation was randomised). British Psychological Society ethics procedures were followed.

Main results (or main arguments in the case of critical reviews)

PRP was higher for nature images across place preference groups. However, a preference / environment interaction showed that PRP is greater for the environment you prefer to be in; nature images were rated higher by the nature preference group and urban images were rated higher by the urban preference group.

Implications for research and practice/policy | Importance and originality of the contribution

This provides further evidence that higher-level, identity-related processing affects perceived restoration and demonstrates that luminance of the images does not affect this. However, as the nature stimuli were higher contrast than the urban stimuli future research should consider the role of contrast in differentiating judgements of PRP.

Global Challenges, Local Impacts
Rethinking governance, sustainability and consumption in light of climate change
05 - 08 JULY '22

IC - (21155) - GREEN URBAN SPACES IN PANDEMIC CONTEXT: RETHINKING GREEN SPACES FOR CONNECTING PEOPLE AND NATURE

Isabel Pellicer[1]; Angela Castrechini[1]; Enric Pol[1]; Christine Hernández[1]
1 - University of Barcelona

Background and objectives

In the context of the pandemic, there has been a greater interest in green public spaces. In this context, the purpose of the study was to analyze what people think about when talking about green spaces, what activities they do in them, what they look for when they frequent them and how they would like them to be.

Process and methods (for empirical research)

Research was carried out based on a digital questionnaire that collected information related to the frequency and reasons for using of green spaces, specifically, the use of them during the Covid-19 pandemic in Barcelona city. 102 people answered the questionnaire.

Main results (or main arguments in the case of critical reviews)

The results show us that the group between 25 and 34 years old is the one that refers to a greater use of spaces. 84% of respondents expressed that they missed these spaces. However, 47% respond to the fact that their use in these spaces has not changed pace after the exit of absolute confinement, with 40% having begun to use them more than in the past and a low proportion (13%) who use it less than in the past.

Among the options for using these spaces, 30% chose them as places to clear their minds and walk, 23% as leisure and being with friends and 21% to connect with nature. As for what they would like to find in these spaces, 28% of respondents indicate that they are looking for routes or itineraries to walk, followed by areas of contemplation with 26% and connectivity with other green spaces with 25%.

Implications for research and practice/policy | Importance and originality of the contribution

The observed trend is related to the benefits linked to the restorative effects of nature, as they offer a way to disconnect from the daily routine. Perhaps it is important to rethink green spaces of cities as an interconnected network, rather than separate spaces of urban green.

IC - (21386) - HOW DO PSYCHOLOGICAL ECOSYSTEM SERVICES AFFECT THE HUMAN-NATURE EXPERIENCE? A WALKING TO BIOPHILIC DESIGN IN URBAN GREEN SPACE

Shih-Han Hung[1]; Chun-Yen Chang[2]

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Background and objectives

Why should we pay attention to human health and wellbeing in the built environment? According to the World Health Organization report, about 280 million people worldwide suffer from depression and mental illness. Coupled with the impact of the covid-19 pandemic in the past two years, people are full of uncertainty about the future, adding more to a sense of psychological panic. Natural interventions such as walking, jogging, and gardening are an alternative for health, alleviating mental illness, and improving human wellbeing. Therefore, does psychological ecosystem service support human health and wellbeing walking in urban green spaces? Does perceive biophilic attributes related to landscape preference?

Process and methods (for empirical research)

This research used a dataset with more than 500 valid data points collected online. In addition, the dataset includes a personal dose of natural perception in the built environment, such as types of green activities, duration, the psychological rating of landscape preference, perceived biophilic design, pleasure, etc.

Main results (or main arguments in the case of critical reviews)

The results found that the longer the participant walked in one of the types of urban green space (i.e., parks), the more perception of positive well-being they could obtain. That is to say, the effect of spending more than 60 minutes was significantly better in pleasure than those who spent 30 minutes in the urban parks in Taiwan. In addition, people prefer the urban parks more as they exposure longer and also feel more arousal. Moreover, there was a significant correlation between perceived biophilic design and landscape preference, and the preference matrix could predict perceived biophilic design in the urban green space.

Implications for research and practice/policy | Importance and originality of the contribution

This research explains the psychological health and well-being of the dose of exposure in the built environment. It could further understand human need for nature and its relationship to biophilic design and the psychological responses, which refer to be a reference for evidence-based healthy landscape design.

IC - (21378) - DESIGNING NATURE-BASED ENGAGEMENT INTERVENTIONS TO PROMOTE PSYCHOLOGICAL WELL BEING IN AN URBAN ENVIRONMENT

Rose Macaulay[1]; Katherine Johnson[1]; Kate Lee[1]; Kathryn Williams[1]
1 - University of Melbourne

Background and objectives

Nature-based engagement interventions such as mindful or sensory engagement exercises can support psychological benefits of nature experiences. However, there is little research that compares the efficacy of these forms of engagement, which is required to inform the selection and design of interventions for targeted nature outcomes. We aimed to compare and evaluate the effects of three nature-based engagement interventions on psychological well being outcomes of nature experiences.

Process and methods (for empirical research)

Participants (*n* = 215) were randomly allocated to one of four groups that received different instructions on how to engage during a 20-minute outdoor experience: mindful engagement, directed engagement, mind wandering, and an unguided control group. Immediately before and after the outdoor experience, participants completed surveys on trait and state mindfulness, connection with nature, affect, and then completed the Sustained Attention to Response Task (SART). Controlling for baseline scores, we analyzed between-group differences on these post-experience outcomes.

Main results (or main arguments in the case of critical reviews)

The groups did not differ on connection with nature or positive affect after the nature experience, however the mind wandering group reported significantly lower negative affect compared to the directed engagement group. SART outcomes indicated that the unguided control group experienced the greatest level of attention restoration overall.

Implications for research and practice/policy | Importance and originality of the contribution

Our findings indicate that different forms of engagement in nature may be suited to specific psychological outcomes. Engagement interventions may tax the attention system but some may be suited to improving mood in nature experiences. These findings have implications for the design and implementation of nature-based engagement interventions as pathways to promote psychological well being.

Hour: 10:45:00
Session: G7 - Symposia - Perspectives in the investigation of person-environment relationship from personality processes to perceptions of global challenges
Room: Room 1
Theme: Governance (5); Governance (1)

(21089) - PERSPECTIVES IN THE INVESTIGATION OF PERSON-ENVIRONMENT RELATIONSHIP FROM PERSONALITY PROCESSES TO PERCEPTIONS OF GLOBAL CHALLENGES

Bálint Balázs[1,2]; Iván Zsolt Berze[1,2]; Andrea Dúll[3,4]; Célia Krisztina Farkas[1,2]; Barbara Fogarasi[1,2]; Edit Lippai[2]
1 - Doctoral School of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary; 2 - Institute of People–Environment Transaction, ELTE Eötvös Loránd University, Budapest, Hungary; 3 - Institute of People-Environment Transaction, ELTE Eötvös Loránd University, Budapest, Hungary; 4 - Budapest University of Technology and Economics, Department of Sociology and Communication, Budapest, Hungary

Background and objectives

The research projects conducted in the Environmental Psychology Lab of the Institute of People-Environment Transaction in Hungary and presented in this symposium encompass the issues of the perceptions and relationship of the person towards their environment representing from the individual to the global, collective level. The understanding of the individual differences in person-environment interrelationship and fit can lead to a more subtle interpretation of people's individual and collective pro-environmental thinking and behavior and to refined intervention methods in influencing them.

Significance for the advancement of People-Environment relations

One of our lab's research projects aimed at a deeper understanding of place identity's aspects and place in the identity structure through interpreting it as identity orientation. Investigating the importance of the person-environment relationship and the associations of place identity on a personal level may also contribute to identifying intervention methods, which can be effective in encouraging pro-environmental behavior by as many people of different personalities as possible.

The investigation of gamers' relationship with their gaming environment can be helpfully applied in the understanding of individual connections to collectively used places. The second research presented in the symposium aimed to apply qualitative methodology, i.e., semi-structured interviews which can explore the personal meanings of and thus the intimate relationships with the two interpretations of a gaming environment. This knowledge can also contribute to elaborating such future initiatives which intend to apply gamification in influencing pro-environmental awareness.

The individual connections to collectively used places are mostly manifested in the people's settlement environment. Besides the characteristics of the population, developing governance in any desired field has another essential side of knowledge: the objective "urban performance". The third research set up a coherent analytical framework of the urban livability's objective, used by urbanists, indicators before combining them with psychological, i.e., perception-based indicators to create a quantified measurement of urban livability. This combination can contribute to understanding and facilitating the urban sustainability processes.

The settlements include elements that possess biographical, historical, or cultural meanings and values. These latent aspects of the individual connection to these built heritage sites differ between experts and laypersons. The aim of the fourth research was to develop a measurement tool in the form of a semantic differential scale, specifically for built heritage, to uncover these aspects and their differences between professionals and laypersons. The findings related to these preservation-related places can contribute to the understanding of sustainable-related thinking and behavior.

The general psychological fundamental of the formation of the people-environment relationship is perception. Since in introducing people to (and involving them in) such common public goals like climate change actions, it is essential to know their attentional patterns related to global changes. The research presented last in this symposium examined individuals' attentional patterns towards visual stimuli displaying environmental damage.

IC - (21033) - MEASURING THE CONNOTATIVE MEANING OF THE BUILT HISTORIC ENVIRONMENT

Barbara Fogarasi[1,2]; Iván Zsolt Berze[1,2]; Andrea Dúll[2]

1 - Doctoral School of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary; 2 - Institute of People–Environment Transaction, ELTE Eötvös Loránd University, Budapest, Hungary

Background and objectives

Built heritage preservation practice is based on the objective values easily identified by professionals, yet everyday people associate values linked to experiencing the place. These values and meanings, however, cannot be directly deduced from the heritage site. To uncover these attitudes, the research aims to provide a measurement tool in the form of a semantic differential scale, developed specifically for built heritage.

Process and methods (for empirical research)

We applied the method of the semantic differential, used to measure connotative meanings. Since there is no such known measurement tool for historic environments, we constructed one based on Osgood's methodology. We adapted the study to the COVID-19 pandemic, conducting it online with 360° panoramic photographs of 5 historic sites along 40 adjective pairs. We determined the underlying factor structure (principal component method with varimax rotation) and computed correlation coefficients between the adjective pairs.

Main results (or main arguments in the case of critical reviews)

The developed Semantic Differential Scale for Built Historic Environments has been tested on both laypeople and heritage professionals with convenience sampling (213 laypeople: age: M = 51.99 years, SD = 13.992; 78 professionals: age: M = 51.15 years, SD = 13.273) A difference was found in the number and partially the content of dimensions: in the laypeople sample we identified four factors: *evaluation (containing 21 items), complexity, intimacy,* and *condition*, while six factors, more balanced in the number of items, emerged among heritage professionals: *arousal-cognition, complexity, intimacy, evaluation*, *condition,* and *authenticity*, suggesting that professionals have subtler and more discerned concepts about built heritage than do laypeople, whose categories of meaning are less refined.

Implications for research and practice/policy | Importance and originality of the contribution

The research is innovative in developing a measurement tool and studying the connotative meaning of historic places, whose sustainability is key in tackling climate change. The results bring us closer to understanding the values that drive people's behavior and action in practicing good governance of the built historic environment.

IC - (21034) - TOWARDS MEASURING PLACE IDENTITY ORIENTATION

Iván Zsolt Berze[1,2]; Andrea Dúll[2]

1 - Doctoral School of Psychology, ELTE Eötvös Loránd University, Budapest, Hungary; 2 - Institute of People–Environment Transaction, ELTE Eötvös Loránd University, Budapest, Hungary

Background and objectives

Our research series examined whether place identity can be measured and interpreted as identity orientation, so measurable individual differences can be found in the extent to which the relationship with meaningful places is important for the individuals to their sense of who they are. Before investigating the aspects and associations of place identity orientation, we aimed to develop a questionnaire measuring it reliably.

Process and methods (for empirical research)

The developing process included more main and substeps and was based on the AIQ-IV questionnaire (Cheek, Smith, & Tropp, 2002) measuring four (personal, social/public, collective, and relational) identity orientations, in which, after its translation to Hungarian, we inserted the items related to place identity. The first versions, aimed to test the appropriateness of our methodological decisions considering the insertion and formulating of the new items, were completed by university students. The later versions, tested in adult samples, focused on generalizability and refining the questionnaire based on professional and methodological considerations followed from the previous results (N ranged between 177 and 432). The analysis included exploratory and confirmatory factor analyses.

Main results (or main arguments in the case of critical reviews)

(1) The place-related items included in one factor, creating a reliable scale, could be interpreted by participants in the definition of themselves, i.e., the adequateness of measuring place identity as identity orientation was confirmed, (2) the factor structure of the developed version in the last step more exactly fit the scale structure of the original questionnaire.

Implications for research and practice/policy | Importance and originality of the contribution

Our research involves a new approach: it examined place identity in a personality psychological framework. The results can contribute to the subtle examination of the components of place identity, its place in the identity structure, the investigation of the phenomena of or the possible difficulties in person-environment fit at the individual level, and, moreover, the understanding of the associations of place identity with ecological, pro-environmental behavior or psychoterratic syndromes (e.g., eco-grief).

IC - (21039) - TOWARDS A TRANSDISCIPLINARY METHODOLOGY OF MEASURING URBAN LIVABILITY

Bálint Balázs[1,2]; György Alföldi[3]; Andrea Dúll[4,5]

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Background and objectives

In this research, we intended to draw an analytic approach to measure and interpret urban livability through quantitative data analysis. We aimed to find the transdisciplinary intersections between urban analysis and methodologies of environmental psychology observations.

Process and methods (for empirical research)

We chose six municipalities in Hungary to analyze in this research. We used available statistical data from the Central Statistical Office on demography, economy, built environment, infrastructure, among others, to make it possible to compare Hungarian small and medium-sized cities' livability measured by socio-economical indices. A coherent analytical framework has been set up. By using cluster analysis, the results had been interpreted after organizing the cities into two groups: 'well performing' (socio-economic increase or stagnation – urban performance, Carrera Portugal, 2019), and 'shrinking' (decline in the socio-economic and urban features) cities.

Main results (or main arguments in the case of critical reviews)

We present the significant differences between the collected data of cities that are 'performing well' and those that are shrinking. The decline in urban features correlated with structural problems of the economy can lead us to the following conclusion: the structural crises of shrinking cities can be identified in the picture which is outlined of various socio-economic indices (e.g., outmigration from the region). These could adversely show the livability of the city (e.g., vacant infrastructure).

Implications for research and practice/policy | Importance and originality of the contribution

The main goal of the research is to show how urban performance is related to the different indices of urban livability. In Hungary, the decision-makers and urban planners still have not recognized how the shrinking phenomenon has effects on cities and still expect continuous socio-economic urban development. In our research, the indicators can also be interpreted as measurements of the socio-physical and psychological livability and sustainability of urban spaces. Comparing these livability factors, specific objective indicators can also be examined at the psychological level, whereas until now they have only been used in analyses about urban performance.

IC - (21044) - GAMERS' EXPERIENCES OF GAMING ENVIRONMENTS – BASED ON INTERVIEWS

Edit Lippai[1]; Iván Zsolt Berze[1,2]; Andrea Dúll[1]

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Background and objectives

The aim of our qualitative study was to explore and describe how the environment of gaming activity is interpreted and experienced by gamers during playing tabletop and video games.

Process and methods (for empirical research)

The idea of an interview study was formulated in consultation with some members of several Central and Southern European gamer subcultures, which could provide a more accurate, life-like, reliable picture of the context of the gaming environment. In our exploratory research, a semi-structured set of questions was developed in three overlapping pilot phases which resulted in 29 segments of questions. 130 interviews were conducted, because of the pandemic, partially in an online form. A part of our questions aimed at a wide context of gaming situation (e.g., gamer identity), whereas other items were specifically intended to reveal environmental settings of gaming activity.

Main results (or main arguments in the case of critical reviews)

According to the results, the game environment could mean both the design, i.e., the visual world of the games and the gaming situation, i.e., the socio-physical context of gaming activity. It was difficult to interpret these at a conscious level, however, experiences about the environment of gaming activity emerged even in the answers to non-environment-specific questions. In the case of both, their intimate characteristics and the unambiguous rules were emphasized by the respondents. The essential excitement of the video gaming activity is largely associated with the duality of the gaming environment which should be at the same time complex and unpredictable providing the opportunity for exploring and personalization.

Implications for research and practice/policy | Importance and originality of the contribution

The investigation of gamers' relationship with their game environment can be helpfully applied in the gamification-based planning processes (e.g., public place planning). The consideration of the need for the complexity and duality of the environment can be crucial in the success of the gamification methods which are also applicable in the influencing of pro-environmental behavior.

IC - (21048) - ATTENTIONAL PATTERNS AND BIASES ASSOCIATED WITH THE VISUAL PROCESSING OF ENVIRONMENTAL DAMAGE

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Background and objectives

Attitudes towards climate change and related environmental problems are worth investigating at all levels of society. The present study examined the individual's visual – unintentional – attentional patterns (and possible attentional biases) related to environmental stimuli, including environmental damage.

Process and methods (for empirical research)

The main experiment of the study was a dot-probe (reaction time) test, using pictures displaying environmental damage (as negative stimuli), undisturbed nature and positive and negative social scenes (as control stimuli). The participants' (N = 42; convenience sampling; men-women: 45-55%; age: M = 26.4 years, SD = 6.012) mood was measured before and after the dot-probe task using the short Hungarian version of PANAS (Gyollai et al., 2011). The self-reported environmental awareness has been also asked and compared to the results of the dot-probe task and the mood (affect) changes during the task.

Main results (or main arguments in the case of critical reviews)

The results reflect the fact that stimuli depicting environmental damage did not cause attentional bias (in any direction), nor had "environmental awareness" any correlation with an attentional orientation towards environmental damage-images. However, in case of negative social stimuli (and no other type of stimuli) significant visual (avoidant) attentional bias was found ($t(41) = 3.766$, $p < .001$, Cohen's $d = .581$). The participants' mood deteriorated significantly ($W(41) = 668$, $p = .002$, $r_{rb} = .552$) during the dot-probe task, but this finding did not correlate with any other findings.

Implications for research and practice/policy | Importance and originality of the contribution

Planning a sustainable governance method, involving every level of society, it is essential to know the people's attentional characteristics towards this field. To know how to "grab" their attention, we should know first, how it basically works (Sollberger et al., 2017).

These results also propound the idea, that there could be an evolutionary background behind this phenomenon, which idea needs also to be considered by further investigations.

Hour: 10:45:00
Session: G8 - Symposia - Constructing citizenship in the local-global interplay – claiming rights and responsibilities and defining relevant actors
Room: Room 2
Theme: Governance (4); Governance (1)

(21026) - CONSTRUCTING CITIZENSHIP IN THE LOCAL-GLOBAL INTERPLAY – CLAIMING RIGHTS AND RESPONSIBILITIES AND DEFINING RELEVANT ACTORS

Paula Castro Paula Castro[1]
1 - ISCTE-IUL

Background and objectives

Constructing citizenship in the local-global interplay – claiming rights and responsibilities and defining relevant actors

Many of the environmentally consequential meaning-struggles – or battles of ideas - of our time ensue in the interaction between two universes: the universe of institutions and that of the everyday. Examples of this are the struggles about what rights and/or responsibilities should be involved in responding to climate change, or to changes in people-place relations through gentrification and turistification, or to impacts of global mobility. Such meaning-struggles call for people-environment analyses to keep in sight how society and state are in constant interaction, and to focus on how these interactions are conceptualized, practiced and also contested in each of these two universes and their communication. This focus is the place proper for the concept of citizenship, as understood in this symposium. The 4 presentations it comprises put this conceptualisation to practice, by looking at discourse and communication (through the analysis of interviews, press articles and speeches) to examine how citizenship is constructed through the desirable rights and responsibilities assigned to or claimed for citizens. They will specifically examine:

(1) how the tensions between the rights and responsibilities of being grounded (in place and community) and universalistic rights (of mobility) are used to legitimize foreign residency under Golden Visa laws in Portugal;

(2) how the resistance to gentrification in two neighbourhoods in Barcelona is constructed on the grounds of 'the right to stay put' and the right to belong;

(3) how and from which perspective (individual, collective) are the place-narratives of residents in 2 gentrified neighbourhoods in Lisbon constructed and how rights to belong and remain in place are advanced or questioned.

(4) how Greta Thunberg speeches construct the good green citizen by valuing young people as competent CC actors, locating the desirable scope of CC action in the public sphere, and highlighting collective responsibilities over individual rights.

Significance for the advancement of People-Environment relations

Integrating the literatures of constructionist socio-environmental psychology and citizenship this symposium highlights the importance of analyzing how the actors, rights and responsibilities of citizenship are conceptualized and

defended in society in interaction with state - namely here in interaction with the laws that regulate mobility and migration, housing and tourism, and sustain climate change action impasses.

More specifically, we contribute to a better understanding of how, in this interaction, the dilemmatic tensions between rights to place and rights to mobility sustain certain views of citizenship that can be more (or less) prone to the creation of multi-place attachments. We also contribute with new knowledge about the variety of environmental-psychological underpinnings sustaining political resistance to gentrification, and the rights claimed to legitimize it. And we also help showcase how GT helps position young people as competent citizens with collective responsibilities. All of which has implications for a more insightful understanding of the multiple realities of migration and place-relations, a more just governance of cities, and of the potential impact of climate youth activism.

IC - (21043) - RESIDENTS' INDIVIDUAL OR COLLECTIVE NARRATIVES OF PLACE CHANGE AND THE PSYCHO-POLITICAL CONSTRUCTION OF THE RIGHT TO STAY PUT

Enrica Boager[1]; Paula Castro[1]
1 - ISCTE-IUL, CIS-IUL

Background and objectives

The transformations of urban neighbourhoods brought about by gentrification and touristification are reshaping the ways people relate with places and are becoming a source of conflicts over place-relevant rights and responsibilities. From a psycho-socio-political perspective, it is thus important to understand how place changes affect the construction, enactment, and legitimisation of place-related citizenship claims at a local level. Drawing from constructionist approaches in environmental social psychology and adopting a narrative approach, this study explores how residents make sense of changes and advance place-related rights claims. Specifically, it investigates 1) how and from which perspective (individual, collective) are residents' place narratives constructed and 2) how Self and others' rights to belong and remain in place are advanced or questioned.

Process and methods (for empirical research)

Interviews with long-term and new residents (n=30) from two Lisbon neighbourhoods - more (Alfama) or less (Ajuda) - affected by changes were conducted. The analysis looked at four aspects of narratives: temporal form (regressive/ progressive/ tragic); sharedness in the community (unified/fragmented); perspective (individual/collective); and roles (hero/victim/villain).

Main results (or main arguments in the case of critical reviews)

Findings show the emergence of three narratives. One is the unified, collective, and regressive narrative of long-term residents presenting the "born and bred" community as the sole victim and the sole hero able to preserve place continuity. New residents present two different and more fragmented narratives: a tragic one presents the Self as a committed and attached hero defending the place; a progressive one presents the Self as capable of coping with changes enjoying divergent places. The three narratives depict the right to stay put respectively as 1) a violated and collective time/place entitlement or an individual right granted by 2) commitment and 3) agency in place.

Implications for research and practice/policy | Importance and originality of the contribution

Providing innovative insights into how this right is psychologically constructed and legitimised, the study contributes to the micro-politics of place and citizenship, with implications for more just city's governances.

IC - (21050) - GENTRIFICATION WHILE STAYING PUT: ON THE PSYCHOSOCIAL VARIETIES OF THE RIGHT TO THE CITY, COMMUNITY RESISTANCES AND MICRO-SEGREGATION.

Andrés Di Masso[1]; Cristina Pradillo[1]; Laia Aleu[1]
1 - GRICS - Interaction and Social Change Research Group, Universitat de Barcelona

Background and objectives

Gentrification tends to alter long-term residents' established bonds with their immediate life-spaces, often triggering feelings of place-dispossession (Elliott-Cooper et al., 2020). This may lead to place nostalgia and increase the pressure to leave the area, but it may also prompt reactions of social resistance on the grounds of 'the right to stay put' (Newman & Wyly, 2006). The latter is premised on taken-for-granted psychosocial benefits derived from the maintenance of stable and meaningful bonds with one's place. However, neighbours' affectation and responses to gentrification may be more diverse and nuanced. In this presentation, we examine the variety of environmental-psychological underpinnings related to the right to stay put.

Process and methods (for empirical research)

We draw on results of an ongoing research on gentrification in two neighbourhoods in Barcelona (Gràcia and Poblenou), between 2018 and 2021. We conducted a visual-semiotic analysis (Nöth, 2011) of photographs of the commercial landscape and a thematic-discursive analysis (Braun & Clarke, 2013) of thirty walking interviews (Evans & Jones, 2011) to old and new residents.

Main results (or main arguments in the case of critical reviews)

1) The right to stay put is *one* dimension of the right to the city that is at stake in gentrification, alongside the right to one's place (the right to recognise and realise one-self through space, against place-alienation) and the right to belong in a place (the right to feel accepted against symbolic exclusion); 2) community forms of resistance linked to the right to stay put can be either 'intimate' (involving community cultural retreat) or 'antagonist' (organised as a social movement against urban inequality); and 3) the right to stay put may be simultaneously infringed and bodily vindicated through micro-segregation inside the neighbourhood.

Implications for research and practice/policy | Importance and originality of the contribution

We contribute new knowledge about the variety of environmental-psychological underpinnings sustaining political resistance to gentrification. Results are useful for the political assessment of the socio-psychological impacts of gentrification processes.

IC - (21054) - THE DILEMMA OF PLACE AND MOBILITY IN THE EVERYDAY: IMPLICATIONS FOR REPRESENTATIONS OF CITIZENSHIP AND MIGRATION

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Background and objectives

The residency-by-investment law offers residency rights to non-nationals that invest in the country (e.g., in real estate), even if they only stay in the country for short periods of time (14 days every 2 years). This legal innovation (Castro, 2012) makes prominent the dilemma between particularistic (requiring place and community building) and universalistic (emphasizing mobility) views of citizenship (Billig, 1995). We will then explore how this dilemma is mobilized in everyday interactions to put forward representations of citizenship and migration in Portugal – where the law was implemented in 2012 - in relation to and by Chinese nationals, the largest group of beneficiaries.

Process and methods (for empirical research)

Performing a rhetorical analysis (Billig, et al., 1988) we explore how the dilemma of place and mobility in their relation with citizenship under the new law are (1) constructed by Chinese investment residents (total n= 11) and (2) presented to the public sphere by press articles (n=17; n=6 in a tabloid and n=11 in a quality newspaper) during the initial stage of law implementation (2012 – 2017).

Main results (or main arguments in the case of critical reviews)

Analysis suggests that investment residents try to solve the dilemma of place and mobility by defending the pursuit of international/cosmopolitan lifestyles. The analysis of the press articles shows how place and mobility are constructed in a dichotomous way - emphasizing how there is no expectation for long-term permanence - thus mitigating the potential threat of mobility/migration that could be associated with a new migration.

Implications for research and practice/policy | Importance and originality of the contribution

The combination of these analyses shows how the articulation of dilemmas of place and mobility sustain certain views of citizenship that can be more/less prone to the creation of multi-place attachments (Di Masso et al., 2019; Gustafson, 2001). This paper also highlights the importance of analyzing how citizenship is conceptualized and defended in relation to laws that regulate it, helping to put forward pro/against understandings of mobility and migration.

IC - (21055) - A REMARKABLE YOUTH VOICE IN THE CLIMATE DEBATE: ANALYSING THUNBERG'S MEANING-MAKING AND CONSTRUCTION OF ENVIRONMENTAL CITIZENSHIP

Alice Fonseca[1]; Paula Castro[1,2]

1 - ISCTE - IUL | University Institute of Lisbon; 2 - CIS-IUL - Centre for Social Research and Intervention

Background and objectives

Aiming to contribute for a better understanding of the climate change (CC) debate, and in particular of how young activists are constructing the "good environmental citizen", this study explores the meaning-making patterns that structure Greta Thunberg's message, as she is a remarkable youth voice in the global CC debate and a pivotal young activist figure.

Process and methods (for empirical research)

For this, a systematic analysis of 25 of Thunberg's speeches was conducted, drawing from an interdisciplinary approach bridging two socio-psychological perspectives – Social Representations theory (SRT) and Stereotype Content Model (SCM) – with the literature on green citizenship. The analysis aimed to identify: (1) the central meaning oppositions (*themata*) Thunberg uses for making sense of CC; (2) how she values/devalues different CC actors with the traits of the two SCM's dimensions (warmth and competence); (3) to identify the kind of environmental citizenship (e.g., action in the public *versus* private sphere; focus on individual rights *versus* collective responsibilities; focus on the national *versus* global scale) she constructs.

Main results (or main arguments in the case of critical reviews)

Findings show how Thunberg's unyieldingly focuses on calling for (transformative) collective action in the public sphere, devaluing today's "leaders" as cold and incompetent and valuing "youth" and "public" as competent climate actors, against usual stereotypes. Moving past a focus on individual rights, Thunberg emphasizes duties (to a global collective), constructing an active green citizenship aligned with a "strong sustainability" approach.

Implications for research and practice/policy | Importance and originality of the contribution

By integrating psychology and the literature on green citizenship, we show how Thunberg's speeches have implications for the affirmation of youth voices: the young good environmental citizens she constructs are competent, agentic and focused on public action for collective transformation. This opens space for a more serious uptake of young people's voices from public authorities and supports young people's self-confidence.

Hour: 10:45:00
Session: S14 - Gentrification & Sustainability
Room: Room 3

Theme: Sustainability (3)

IC - (20873) - SUSTAINABLE URBAN DEVELOPMENT AND THE CHALLENGE OF "GREEN" GENTRIFICATION: ON THE POLITICAL ECOLOGY OF URBAN GREENING AND GREEN DIMENSIONS OF GENTRIFICATION

Anika Schmidt[1]; Annegret Haase[1]
1 - Helmholtz Centre for Environmental Research GmbH - UFZ

Background and objectives

Recently the issue of green gentrification has gained rising attention within research on gentrification and also on urban ecology or urban green infrastructure. The quite "young" debate has evolved in the mid-2000 with research on the displacement of low-income population due to rising rents and land prices as an effect of the creation of new green spaces or the qualification of existing ones. Today, green gentrification is far from being clearly defined and relates to unintended effects of urban development projects and policies in the context of sustainable and resilient urban development, but also includes intended upgrading and market-driven "green" housing projects for the "sustainability class" (author, year). Recently, scholars also speak of resilience or climate gentrification, when referring to the socio-economic effects of urban climate adaptation and mitigation measures.

Process and methods (for empirical research)

With this conceptual contribution, we want to give an overview on the green gentrification debate and refer to the understandings and findings of a series of articles and books without doing an extended literature review.

Main results (or main arguments in the case of critical reviews)

With green gentrification, a new research field located at the intersections of formerly separate research strands has evolved. In the past, the gentrification research has mostly neglected "green" dimensions and otherwise, research on urban greening rarely paid attention to displacement and long-term environmental justice. We want to shed light on these interlinkages, as we think it is crucial to acknowledge goal conflicts and dilemmas within research and policies aiming at sustainable urban development, environmental justice and resilience.

Implications for research and practice/policy | Importance and originality of the contribution

We want to stress the possible dilemmas and conflicts of sustainable urban development, but also want to present approaches, such as "just green enough" (author, year) and the combination of greening and housing policies in other to avoid displacement of the population whose living conditions should initially be improved and trigger further research on the issue.

IC - (21004) - THE ROLE OF FINANCIAL WELL-BEING FOR A MORE SUSTAINABLE SOCIETY: REFLECTIONS FROM STUDIES ON BRAZIL

Rebeca Toyama[1]; Marlise Bassani[1]
1 - PUC-SP - Pontifícia Universidade Católica de São Paulo

Background and objectives

Sustainability is impacted by the interaction of people with their environment. Issues related to the way of life (WOL) can be axes for analyzing the impact of climate changes.

One possibility to approach people's WOL is to focus on how to deal with financial aspects. The goal of this work is to present the role of financial well-being (FWB) and possible contributions to promoting a more sustainable society.

Would financially stressed people be less willing to behave pro-environment? Would people with low levels of FWB have difficulty accessing environmental education? Would better FWB indexes lead to a more conscious consumption?

Consumer Financial Protection Bureau defines FWB as a state of being in which a person can fully meet current and ongoing financial obligations, feeling secure in their financial future, and making choices that enable them to enjoy life. According to the Organization for Economic Co-operation and Development, BEF is the ultimate measure of the success of financial education efforts.

The 2030 Agenda reinforces the importance of taking care of the economic dimension, in addition to the social and environmental ones, in an interconnected, integrated and indivisible way to promote sustainability.

In the Financial citizenship Report, the Central Bank of Brazil establishes a connection between financial citizenship and Sustainable Development Goals.

Process and methods (for empirical research)

Main results (or main arguments in the case of critical reviews)

The bibliographic survey searched for articles about Brazil published since 2015 and pointed out the absence of studies that relate FWB and sustainability.

Implications for research and practice/policy | Importance and originality of the contribution

Researching sustainability and FWB in a multi, inter and transdisciplinary way integrates objectives aspects such as income and indebtedness with subjective aspects, such as behavior and WOL. The gap identified in the production of Brazilian research suggests the urgency of integrating researchers from many different fields. An auspicious theme for environmental psychology involved in human and environmental health.

IC - (21393) - UNDERSTANDING SUB-SAHARAN AFRICAN INDIGENOUS ARCHITECTURE BY SETTLEMENT FORMS AND DESIGN APPROACHES OF KHOISAN AND BANTU PEOPLES

Hasan Basri Kartal1 ; Mehmet Emin Şalgamcıoğlu2
1 - Istanbul Technical University PhD student; 2 - Associate Professor in Istanbul Technical University

Background and objectives

Diversification of architectural products among indigenous cultures shows self-organisation and self-adaptation patterns embedded within each culture. Investigating these patterns and their evolution is essential for promoting local, ecologically adaptive, sustainable and energy-efficient architecture and planning. Conventional approaches and universalist attitudes in architecture, urbanism and urban planning tended to ignore the characteristics of architectural morphology in Sub-Saharan Africa. This study examined the forms of indigenous dwelling and evolution of traditional housing of Khoisan and Bantu peoples, two big ethnic groups of sub-Saharan Africa that live relatively isolated and nonindustrialized rural lifestyles today. The study aimed to fill the lack of literature on indigenous dwelling principles and housing form development of the local tribes in Sub-Saharan Africa.

Process and methods (for empirical research)

The primary method is qualitative research that focuses on settlement morphology investigation, theoretical conceptualizing and discussion based on the studies of researchers Ambe J. Njoh, Susan Denyer, Richard W. Hull and Labelle Prussin.

Main results (or main arguments in the case of critical reviews)

The outcomes showed the materials and techniques used in local architecture vary according to climatic conditions. The indigenous housing design uses light frames, round plans, and natural materials, requiring less labour and energy. The African indigenous and traditional dwellings and settlement patterns sit a particular African architectural thought. The most important finding is that circular-planned houses have been used more than rectangular-planned houses in African local architecture due to the functionality and aesthetic concerns.

Implications for research and practice/policy | Importance and originality of the contribution

The study contributed to overcoming the one-sided perspective within the architectural historiography's tradition, as examining the African indigenous architecture would be highly productive for architectural design, architectural theory, urban planning and sustainable urban studies. The discussion would support the idea that the architectural knowledge of the Sub-Saharan indigenous and traditional architecture would also be invaluable for new interdisciplinary and transdisciplinary fields of study centred on architectural anthropology and ethnography.

Keyword's : African Indigenous Architecture, African Indigenous Planning Attitudes, Sub-Saharan Indigenous Tribes, Housing Forms, Settlement Morphology

IC - (21206) - GENTRIFICATION OF URBAN AND RURAL CHILDREN'S LANDSCAPE FACILITIES AND SUSTAINABLE LANDSCAPE JUSTICE STRATEGIES

Dr. Youmei Zhou[1]
1 - Tongji University

Background and objectives

Children-friendly cities are gradually becoming a hot topic of research on how to allow children to engage in activities in a safe environment full of activities that match children's creativity and behavioural preferences, and also to promote children's multiple intelligences development through the creation of play facilities, while the focus of these studies is almost always on children in the city, while studies on children in the countryside focus mostly on nature-friendliness and play facilities are lacking, especially in contrast to cities for governance concerns of high-quality landscape facilities with early education-type features. The great disparity between urban and rural children's play and landscape facilities is about to become a new generation of landscape gentrification, and it is important to address this phenomenon and propose sustainable working solutions and technical approaches. This study attempts to investigate the preferences of rural children for landscape facilities and play facilities through a parametric new production process for a sustainable and low-consumption approach as a technical tool, and through interviews and questionnaires to explore strategic suggestions for a children-friendly justice.

Hour: 10:45:00
Session: S15 - Aging and Disabilities
Room: Room 4

Theme: Sustainability (5)

IC - (20874) - RESTORATIVE ENVIRONMENTS FOR THE OLDEST OLD: POTENTIAL HEALTH BENEFITS OF RESTORATIVE NEIGHBORHOOD OPEN SPACES CLOSE TO THE HOME

Anne Grave[1]; Louis Neven[2]; Masi Mohammadi[1,2]
1 - Eindhoven University of Technology; 2 - HAN University of Applied Sciences

Background and objectives

Over the next three decades, the global number of people over the age of 65 will more than double. This increase puts pressure on the healthcare systems. The aging process makes seniors more vulnerable to environmental stressors and developing attention fatigue, especially in environments that do not fit their needs and capabilities. Incorporating restorative design principles into the living environments of seniors can reduce stress and attention fatigue, improve their health and wellbeing, and thus mitigate the impact of global aging.

However, not much is known about the design of restorative environments for seniors. Seniors are not often included in restorative research; literature study shows that only 15 out of 234 studies included senior participants. Yet various studies suggest the need for restorative environments that comply with seniors' changing needs and capabilities. We hypothesize that seniors will have more need for well-designed restorative Neighborhood Open Spaces (NOS) close to their homes. Due to reduced mobility, seniors will probably have more difficulties with visiting traditional restorative environments like forests, urban parks, or historical places preventing them to restore resources.

Process and methods (for empirical research)

Exploratory interviews with seniors (N=27) were conducted in Waalre, the Netherlands about their preferred place for restoration.

Main results (or main arguments in the case of critical reviews)

In line with the hypothesis, places named by the oldest old (80+ years) were almost all NOS close to the home, within 200 m. Of the younger seniors (65-80 years) half choose places within 30 km, relatively close to the home. However, from the group of older adults (50-65 years) half choose places outside the region (more than 100 km) like beaches and wild forests.

Implications for research and practice/policy | Importance and originality of the contribution

These results suggest the need for the oldest old for restorative experiences close to the home. Designing high-quality NOS offers the opportunity to improve their health and wellbeing and help mitigate global aging.

IC - (20901) - HOW VISUALLY IMPAIRED PEOPLE WITH INTELLECTUAL DISABILITIES CHOOSE WHERE TO STAY

Momoka Hirai[1]; Miwako Kitamura[1]
1 - Tohoku University

Background and objectives

Visually impaired people's actions are informed by tactile, auditory, and other information. However, visually impaired people with intellectual disabilities have difficulties thinking abstractly; therefore, they struggle to understand the meaning of information in their environments. Few studies discuss how visually impaired people with intellectual disabilities perceive space and choose where to stay.

This study aims to clarify the factors that determine where such individuals choose to stay, focusing on visually impaired people with intellectual disabilities in their homes and in welfare service offices for the disabled. Especially since homes in Japan are smaller than those in other developed countries, how to make them comfortable is an important issue.

Process and methods (for empirical research)

A behavioral observation survey and semi-structured interviews were conducted with three visually impaired individuals with intellectual disabilities at X establishment.

Main results (or main arguments in the case of critical reviews)

1) The participants' homes were not customized according to their needs. Each person had lived in their current home for over 10 years and walked freely around their homes. They mentioned that their favorite places were windowsills, stair landings, and rooms. They showed a preference for small spaces. At their favorite spots, they enjoyed spending time alone, listening to the sounds of cars and music, and playing games.

2) All participants enjoyed communicating with others. In contrast to their favorite place at home, the participants chose their favorite places, such as the entrance to their room or around their seat, where there was considerable traffic and where they could easily communicate with others.

Implications for research and practice/policy | Importance and originality of the contribution

Visually impaired people with intellectual disabilities spend their time alone and with others depending on the space. Therefore, it is crucial to plan small, comfortable spaces at home and stable places at institutions where many people pass by. Further, considering COVID-19-related limitations on meeting people, communication within facilities must be supplemented with various tools, such as online support.

IC - (21035) - BUILT ENVIRONMENT PERCEPTIONS: HOW OLDER PEOPLE DECODE OUTDOOR PUBLIC SPACES

Marcos Figueiredo[1]; Sara Eloy[1]; Sibila Marques[1]; Luis Dias[1]
1 - ISCTE-IUL

Background and objectives

When UN released the "Global Age Friendly Cities: A Guide" in 2007, the concern around ageing people and their needs was evident. As the world ages, the built environment requires special attention in order to assist this growing part of the society. An age-friendly city demands an inclusive design that includes e.g. green spaces, safe pavements and safe pedestrian crossings. Also, mobility in cities and new forms of transport as bicycles and electrical scooters demand the update of urban design guidelines and urban policies.

The goals of this study are to provide an overview of existing literature regarding emotions and perception from older people related to the exterior built environment by mapping these publications according to several criteria.

Process and methods (for empirical research)

For doing so a scoping review was performed using articles in several scientific databases. Searched articles include publications after 2007 (the release of the UN guide) and related to studies involving people at least 60 years old and quantitative analysis methods.

Main results (or main arguments in the case of critical reviews)

This review collected evidences from the perceptions of older people when in contact with the outdoor built environment. Studies reported basic emotions (e.g. fear, wellbeing, joy) and, space perceptions (e.g. walkability, accessibility) regarding the built environment as sidewalks, street, gardens, and outside furniture. Our study reinforces the importance to analyse older people perceptions regarding the built environment in an interdisplinary approach so that architects, urban planners and decision makers have information on what are the design solutions that fit the eldery people needs.

Implications for research and practice/policy | Importance and originality of the contribution

Considering the challenge to build a smart and inclusive city, where older people can accesss attractive and safe spaces and are safe from discrimination practices as ageism, this research also connects within the current contemporary pandemic moment, aiming to public spaces appropriation as a space to build social cohesion and provide wellbeing.

IC - (21301) - HOMES TO AGE IN PLACE: A HUMAN-CENTRED DESIGN APPROACH IN THE NORTH OF SCOTLAND

Carla Resendiz Villasenor[1]
1 - Teesside University

Background and objectives

Housing for later life has been studied in depth in community-dwelling settings and post-crisis home adaptations, specifically when health deterioration affects the execution of Activities of Daily Living. Addressing the gap in research regarding preventive measures on housing for later living, the aim of this research is to understand how people adapt their home environments (design, adaptations and technology adoption) to plan ahead for ageing in place and find insights to improve the long-term experience in the built environment.

Process and methods (for empirical research)

This research presents a qualitative case study analysis of two households in the North of Scotland, using the Human-Activity-Space-Technology Model, describing preventive actions regarding housing decisions and analysis of choice. Each case study explores a different approach regarding housing (home adaptations and newbuild). The participants are homeowners and were recruited by approaching local community groups via snowball sampling.

Main results (or main arguments in the case of critical reviews)

The findings of this research reveal how people design and adapt their homes over time, as well as an analysis of catalysts to plan ahead and take actions that will benefit them in the future. Results also reflect on the status of adoption of technologies and analyse the use of energy and heating systems, detailing interactions and areas of opportunity for designing spaces and implementing interfaces to promote healthy living and support healthy ageing.

Implications for research and practice/policy | Importance and originality of the contribution

This research provides insights to be implemented in the development of new housing stock, integrating smart home technologies to support people living independently at home to prevent and successfully face health changes that allow residents to age in place. These insights provide feedback to Builders, Architects/Designers and policymakers.

This work presents a novel approach using a prevention focus to create-adapt the home environment to reduce disruption in later living. The Human-Centred focus on People- environment studies can potentially impact positively residents' wellbeing, especially in rural settings.

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IC - (21370) - HOME MODIFICATION FOR PEOPLE WITH DISABILITY

Szu-Yu Tzeng[1]; Wan-Ling Jeng[1]
1 - Department of Architecture and Interior Design, National Yunlin University of Science & Technology

Background and objectives

The aging-in-place policy has been applied in many countries. Home modification aims to enable clients to live independently, safety and easy for caring in their own home. Studies focusing on the features of the aged and the actual conditions of home modification using the subsidy system are lacking and needed in Taiwan. Key components for carrying out barrier-free home environment are user's needs, subsidy system and quality of construction. This study aimed to explore the features of the aged and the actual condition of home modification using the subsidy system.

Process and methods (for empirical research)

After literature review, case-study and focused interview was conducted among cases who had applied home modification and received the government subsidy.There are three main purposes in this study：(1) Comparing the similarities and differences of contents among 22 counties on "Subsidy Program of home modification in barrier-free" and analyzing the features of applying cases last year; (2) Carry out case-study to survey the applying cases of "Subsidy system of home modifications in barrier-free", to understanding the improvement places, items, amount on and quality, and checking the effects of home modifications; (3) Analyzing the current situation the dilemma of builders, including the concepts of barrier-free environment or taking part in professional training on subject of "Barrier-free home modification.

Main results (or main arguments in the case of critical reviews)

There are three findings of this study:(1) Mobility limitation due to disease and increasing home safety are the main reasons of home modification.:(2) Subsidy of home modification could courage people with disability to do more adaptation, and more complete; (3) Relevnt courses of barrier-free environment could improve the experience and knowledge of evaluators and manufacturer, and strengthen the effects of home modification.

Hour: 10:45:00
Session: S16 - Restorative Experiences I
Room: Room 5

Theme: Sustainability (5)

IC - (20913) - IMPACT OF AN ONLINE MICRO-RESTORATIVE EXPERIENCE ON MOOD, EMOTION, AND PERCEIVED RESTORATIVENESS: MATTERS OF PLACE PREFERENCE

Stephanie Wilkie[1]; Tracey Platt[1]
1 - University of Sunderland School of Psychology

Background and objectives

Attention restoration theory suggests preferences for nature are based on a need for cognitive restoration. Preference also represents place identity, which interacts with the type of environment to impact mood and perceived restorativeness (PR). In restoration research, mood effects have been mixed, perhaps because it is a state requiring some time to change. Instead, emotion may be a better construct to assess the impact of brief nature experiences. This study investigated whether mood, emotion, and PRP differed after a virtual 'micro-restorative' experience; and if place preference interacted with environment type to produce differential effects.

Process and methods (for empirical research)

An online convenience sample (*N* = 337) self-categorised as having a nature (*N*=140) or urban (*N*=197) place preference. They viewed one environmental stimuli (nature, urban greenspace, urban street) for 30 seconds (random assignment) followed by measures of mood, emotion, PR (counterbalanced), as well as trait cheerfulness/bad mood to control for confounding effects on mood and emotion.

Main results (or main arguments in the case of critical reviews)

Covariate effects were significant for mood and emotion. No significant environment or preference main or interaction effects existed for mood. Emotion and PR differed by environment type; nature/urban greenspace elicited higher positive/lower negative emotion and higher PR than urban streets. Significant interactions indicated larger positive emotion and PR effect sizes for the nature preference group. This suggests nature and urban greenspace can be equally beneficial; but place preference (as place identity) and environment type have an interactive effect, particularly for those with a nature preference. Commonly-reported mood effects did not occur but were evident for emotion.

Implications for research and practice/policy | Importance and originality of the contribution

Brief online micro-restorative experiences may be useful for eliciting specific emotions but not necessarily for improving mood. Place preference and trait dispositions should be included in restoration research, due to the pronounced differences in effect sizes and the significant covariate effects. Future studies should determine exact timeframes to consistently affect mood.

IC - (20935) - IMPACT OF SUMMER HEAT ON URBAN PARK VISITATION, PERCEIVED HEALTH AND ECOSYSTEM SERVICE APPRECIATION

Nadja Kabisch[1]; Roland Krämer[1]
1 - Humboldt-Universität zu Berlin, Department of Geography

Background and objectives

Urbanization, environmental change and ageing are putting human health at risk. In many cities, heat stress is projected to increase. Urban green spaces may be an important resource to strengthen the resilience of city dwellers against environmental stressors. At the same time urban green spaces are also threatened by challenges related to climate change – such as heat and drought. We aim to present research about the capacity of urban parks to provide ecosystem services under extreme heat and drought conditions.

Process and methods (for empirical research)

We show results of a questionnaire survey conducted under summer heat conditions in two inner-city parks in Leipzig, Germany in 2019. We assessed activity patterns, their satisfaction with the existing natural and built infrastructure, how heat does impair their health, how they change their park use during heat and how they evaluate the role of parks for coping with heat stress.

Main results (or main arguments in the case of critical reviews)

We found that the old-grown, tree-rich park was used significantly more frequently for experiencing nature, while the newer, less tree-rich park developed on a former railway-brownfield site was used more often for socializing and having picnics. The heat stress summary score was significantly higher for participants in the newer, less shaded park. Nearly half of the respondents stated that they used the parks during heat waves as frequently as usual in the summer, while some stated that they adapted their park use behaviour, e.g. by coming later in the evening. When asked about the role of parks under heat conditions, respondents mentioned several benefits matching with regulating and cultural ecosystem services, such as cooling and recreation.

Implications for research and practice/policy | Importance and originality of the contribution

In terms of adapting to climate change, urban planning should preserve older parks with large tree coverage to maintain natural processes and regulating ecosystem services such as cooling, while respecting demands for cultural ecosystem services which might require built infrastructure as well.

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IC - (21042) - POTENTIAL CONFOUNDING FACTORS IN REPEATED-MEASURES ONLINE FIELD EXPERIMENTS WHERE PARTICIPANTS LISTEN TO NATURAL SOUNDS FOR RESTORATION AND WELL-BEING

Yasushi Suko[1]; Kaoru Saito[2]; Kalevi Korpela[1]
1 - Tampere University, Finland; 2 - Tokyo University of Agriculture, Japan

Background and objectives

During the COVID-19 pandemic, free-of-charge and easy-to-use ways to tackle everyday stress are needed. Listening to natural sounds (e.g., birdsong) is claimed to be restorative and require no specific training or initial investment cost. It could therefore be worth implementing in the real-life context. However, most research so far has been based on one-off, laboratory-based experiments. To bridge this research gap, we aimed to (1) develop and assess protocols for repeated-measures online field experiments in which people can participate at home and (2) examine if repeated listening to natural sounds is psychologically more restorative than other means of relaxation. In this presentation, we focus on reporting (1).

Process and methods (for empirical research)

In Study 1, approximately 200 university students participated in an online experiment lasting for seven days. Participants were randomly allocated to Group 1 (listening to natural sounds), Group 2 (sitting in silence), Group 3 (surfing the Internet), or Group 4 (no intervention), and completed questionnaires before and after these 10-minute interventions every day. In Study 2, 90 university students participated in an online experiment lasting for 14 days. Participants were randomly allocated to Group1 (listening to natural sounds in the first week and music in the second week) or Group 2 (same but in reverse order), and completed questionnaires before and after these 10-minute interventions every day.

Main results (or main arguments in the case of critical reviews)

Participants' preference for natural sounds changed over time (Study 1). The day of the week (i.e., Monday, Tuesday, etc.) might be a confounding factor on participants' mood states (Studies 1 and 2). Participants' absence and withdrawal increased during weekends (Studies 1 and 2).

Implications for research and practice/policy | Importance and originality of the contribution

These novel results have implications for the design of repeated-measures online field experiments. This will serve as a stepping-stone to further research on the benefits of natural sounds on our mental health and well-being.

IC - (21108) - USING WEARABLE SENSORS FOR HEALTHY ROUTING CHOICES

Anna Maria Becker[1]; Torsten Masson[1]; Carolin Helbig[2]; Abdelrhman Mohamdeen[3]; Uwe Schlink[3]

1 - Universität Leipzig; 2 - Helmholtz Zentrum für Umweltforschung - UFZ; 3 - Helmholtz-Zentrum für Umweltforschung - UFZ

Background and objectives

Environmental stressors such as air pollution, noise pollution, and heat stress affect people in urban traffic and can have detrimental health impacts. This field experiment (N = 206) tested an intervention to promote healthy routing choices for cyclists and pedestrians.

Process and methods (for empirical research)

The experimental group carried wearable devices to measure their exposure to particulate matter, noise, and heat on their everyday routes through the city. Afterwards they received an individualized feedback about their exposure to these environmental stressors. The control group did not carry the devices. Questionnaires, capturing components of Protection Motivation Theory, were used at four time points during the intervention, including a follow-up measurement.

Main results (or main arguments in the case of critical reviews)

Mixed model analysis showed that participants in the experimental condition, who reported low levels of habit of their travel behaviour, had increased intentions to choose less polluted trajectories right after carrying the measurement device. Particularly participants with medium (but not high or low) previous knowledge about environmental stressors showed changes in their self-protecting intentions. Coping appraisals were not affected by the intervention. However, threat appraisal for particulate matter exposure increased over time. Collective action intentions (e.g. demonstrating for less polluting urban traffic) decreased in reaction to carrying the measurement devices. Only highly identified cyclists were not demotivated to show collective action.

Implications for research and practice/policy | Importance and originality of the contribution

This may indicate that interventions focused on individual exposure are more suited to motivate individual health-behaviour rather than collective activism. The use of wearable sensors to monitor individual pollution exposure is on the rise and this study offers initial insights into their psychological effects.

IC - (21198) - GROWING SPACES IN A CORUÑA (SPAIN). A CROSS-SECTIONAL STUDY ON POSITIVE BENEFITS ON HEALTH, WELLBEING AND SOCIAL COHESION

Adina Dumitru[1]; David Tomé Lourido[1]; Eva Peralbo Rubio[1]; Jennifer Senick[2,3]
1 - University of A Coruña; 2 - Rutgers Center for Green Building; 3 - Rutgers University

Background and objectives

Collective garden participation has the potential to enhance mental well-being through its positive relationship with life satisfaction, happiness, and restoration (Tharrey & Darmon, 2021). The objective of the research was to find out if there were differences in terms of health, wellbeing and social cohesion between a sample of users of urban growing spaces and a representative sample of the city of A Coruña.

Process and methods (for empirical research)

The data presented in this cross-sectional study, derives from two surveys conducted during the summer and autumn of 2021 on 870 adult participants (61 from the group of users of urban gardens and 809 from the control group of citizens). The variables included were evaluated through standardized questionnaires or instruments designed by experts within the Connecting Nature project (Grant Agreement No. 730222). The data analyses included the calculation of descriptive statistics and comparisons of means through Student's t test.

Main results (or main arguments in the case of critical reviews)

When comparing users of urban gardens with the control group (sample of citizens of A Coruña who were not users of growing spaces), the results show higher scores for urban gardeners in the following variables: perceived general health, perceived restorativeness, some conditions of pro-environmental behaviour, connectedness to nature, social cohesion and empowerment. All of these differences were statistically significant at the p=.05 level.

Implications for research and practice/policy | Importance and originality of the contribution

If the results are corroborated in future research, these clear differences show policy makers how a sustainable and cost-effective intervention brings clear benefits to local communities. These results must be analysed with caution, since despite having found statistically significant differences, using tests that considered the homogeneity of the comparisons, the groups of individuals were very different in terms of sample size. However, this work is one more step to empirically support the benefits that urban gardening has for the health, wellbeing and social cohesion of citizens.

Hour: 12:15:00
Session: Posters Flash Presentations Session 3
Room: Room 1

Theme: Consumption (6)

PP - (21361) - WHY DO WE THROW AWAY TRASH ON THE STREET?: PERCEPTIONS OF THE REASONS AND IDEAS FOR SOLUTIONS AMONG MALAYSIAN UNIVERSITY STUDENTS

Kazane Itoi[1]; Naoko Kaida[2]; Koji Iwamoto[3]; Azrina Sobian[4]
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Research or practical problem and objectives

Street littering is one of the serious urban waste problems in Malaysia that affects hygiene and landscape of public environments, leads to urban and global water pollution, and could hinder environmental moral in proper waste discharge and reduction among citizens. This study aimed to examine observations by Malaysian people on street littering to extract primary reasons and solutions to this issue.

Methods and process (for empirical research)

A questionnaire survey was conducted in November 2016 to collect data from undergraduate students of Universiti Teknologi Malaysia (n=177) on a five-point scale question (1: Very bad, 5: Not at all bad) on subjective evaluation of street littering situations in the country and free statements about reasons and solutions to littering (1507 statements). Text analysis was conducted using KH Coder software to obtain word frequency and co-occurrence network on the free statement data.

Main results preview and importance (or main arguments in the case of critical reviews)

Most respondents (90.39%) indicated the littering problem in Malaysia is serious (M = 1.81). Word co-occurrence networks with 24 and 21 clusters were generated for reasons and solutions. Insufficient dustbins were a predominant reason for littering, and it was linked with laziness to find dustbins in the same cluster. Also, relatively small clusters were obtained, such as lack of moral and environmental awareness and lack of responsibility for cleanliness. As to the solutions, deploying more dustbins was predominant and linked with education and punishment in the same cluster. Also, smaller clusters were obtained, such as environmental edification, family education, and law enforcement and campaign by the government. The text analysis result suggests that supplying more street dustbins could reduce littering in Malaysia while people seem aware that this issue is closely linked with users' behavior and morals. It implies the necessity of extending environmental awareness-raising. The findings of this study provide practical ideas to address urban waste problems in Malaysia and other countries in similar situations.

Global Challenges, Local Impacts
Rethinking governance, sustainability and consumption in light of climate change
05 - 08 JULY '22

PP - (21381) - SCHOOL DESIGN AND FOOD WASTE AWARENESS - CASE STUDY ANALYSIS OF HOW ENVIRONMENT CAN ENCOURAGE ENVIRONMENTAL ACTIVE LEARNING

Gabriela Yoshitani Da Luz[1]; Kaname Yanagisawa[1]
1 - Chiba University

Research or practical problem and objectives

The issue of food waste is currently a political world priority, being one of the 17 Sustainable Development Goals (SDGs) proposed by the United Nations General Assembly that aim for the world to reach a sustainable consumption and production pattern by 2030.

To reach this goal and generate awareness in the population, previous research and government-led food waste intervention policies have focused on educating households, particularly the parents, to improve health and reduce food waste.

In schools, food education programs tend to occur in the classroom, where teachers lecture them about the negative impacts of food waste. However, researchers currently focusing on studying the ecological awareness of children have been finding that such a theoretical and passive method of passing environmental knowledge is not enough. Promoting more active experiences, especially contact with the natural environment stimulates much more interest and motivation towards a more environmentally conscious behavior.

Methods and process (for empirical research)

In this research, we analyzed the project of elementary schools in Brazil and Japan through technical visits, interviews, and observations, focusing on their connection with the natural environment, the existence of vegetable gardens and kitchens, and how the students and teachers use them.

Main results preview and importance (or main arguments in the case of critical reviews)

The schools that present a strong connection with the outdoors and have a landscape project are intensely used by teachers and children and are an excellent opportunity to be used in active environmental learning.

A good example is a school where the kitchen is connected to the gardens and has a visual connection with the students. Teachers encourage them to engage in different steps of the cooking process (from cultivating and harvesting vegetables to helping write the day's menu) and use these moments to teach about the food waste and conscious behavior.

PP - (21068) - TO BUY OR NOT TO BUY? YOUNG CONSUMER VIEWS ON FASHION PURCHASES AND MICROPLASTICS IN THE UK

Maja Grünzner[1]; Sabine Pahl[1]; Mathew White[2]; Kayleigh J. Wyles[3]; Richard C. Thompson[4]

1 - University of Vienna, Faculty of Psychology, Department of Cognition, Emotion and Methods, Environmental Psychology Vienna, Wächtergasse 1, 1010 Vienna, Austria; 2 - University of Vienna, Faculty of Psychology, Vienna Cognitive Science Hub, Kolingasse 14-16, 1090 Vienna, Austria; 3 - School of Psychology, University of Plymouth, Drake Circus, Plymouth, Devon PL4 8AA, United Kingdom; 4 - International Marine Litter Research Unit, University of Plymouth, Drake Circus, Plymouth, Devon PL4 8AA, United Kingdom

Research or practical problem and objectives

Fashion contributes to pollution worldwide. Synthetic microfibres are one of the major microplastics sources in European rivers and experts working in the field of plastic research rated textile fibres as one of the riskiest microplastics sources for the natural environment and human health. Additionally, fast fashion – which is mainly using synthetic fibres and harmful chemicals – has taken over the clothing market and young fashion consumers (Millennials and Generation Z) are a demographic with great spending power in this market. Hence, exploring their motivations in clothing purchases can be the first step to find behavioural intervention entry-points to mitigate microplastics pollution.

Methods and process (for empirical research)

Therefore, we conducted semi-structured interviews with *N* = 17 participants (aged 19-33) to explore, in-depth, the perceptions and motivations of young fashion consumers concerning their purchases as well as their awareness of the potential environmental impact of their clothing choices. We carried out the interviews in Plymouth, UK between November 5th and December 14th 2021. The interview guide was partly inspired by the stage model of self-regulated behavioural change and the interview transcripts are analysed with thematic analysis.

Main results preview and importance (or main arguments in the case of critical reviews)

Preliminary analysis reveals that contextual constraints such as price as well as emotional motives and their coping strategies communicated as "retail therapy" play a role. The final analysis will be completed by June 2022 in which we are categorising the consumer's perceptions towards their clothing purchases under consideration of sustainable purchase practices (e.g. reducing consumption, buying second-hand or purchasing recycled/ organic materials) and their thoughts on labelling as well as microplastics pollution.

The results can inform about young fashion consumers – psychological and contextual – drivers and barriers of sustainable clothing consumption and foster the development of behavioural interventions to increase sustainable purchase practices within this target group.

PP - (21045) - SUSTAINABLE TOURIST SPOTS EVOKING CURIOSITY -RESEARCH IN HARAJUKU, TOKYO

Katsuki Yokoyama[1]; Yurika Yokoyama[2]
1 - Professor of environmental design at Joshibi University of Art and Design; 2 - Professor at The University of Tokyo

Research or practical problem and objectives

Tourist spots had experienced a significant decrease in visitors due to the pandemic and now they are worrying whether they will be able to regain their former liveliness. With the rise of e-commerce in recent years, the shoppers in urban tourist spots need to give them the benefit of coming to their stores. Therefore, it is necessary to convey to people the pleasure of walking around the town.

Methods and process (for empirical research)

We report the results of a questionnaire to young people about their image of Harajuku, popular among young people as a town with 'kawaii' culture. We asked them (N=216) if they felt curious about Harajuku, and frequency of their visits there and the image they had there using the SD method and open-ended questions.

Main results preview and importance (or main arguments in the case of critical reviews)

The results showed that the degree to which people feel at ease in Harajuku gradually increases in proportion to the frequency of their visits, but as for the unvisited people, the degree is higher for the group with curiosity than those without curiosity. On the other hand, the degree of the variety they feel of Harajuku is high even for those who visit less frequently. And for the non-curious group, the degree of those who visit more frequently is lower, while for the curious group, the degree stays the same. The analysis of the open-ended questions suggests that the frequently visiting and curious group is interested not only in the famous stores on main street, but also in small stores on back streets.
In order to make young people feel curious about the town, it is necessary to make them feel at ease at first, but in order to sustain curiosity, it is necessary to keep giving them a sense of variety, and it is desirable to create an attractive town from the main street to the back streets.

Global Challenges, Local Impacts
Rethinking governance, sustainability and consumption in light of climate change
05 - 08 JULY '22

PP - (20881) - MEASURING THE DIGITAL REWARD FOR THE RECYCLING OF PLASTIC BOTTLES IN THE PERSPECTIVE OF THE PROTECTION MOTIVATION THEORY

Jean-Marc Bouillon[1]
1 - Dauphine-PSL Paris - Université Paris-Dauphine

Research or practical problem and objectives

A plastic bottle lost in nature is a source of serious pollution. As such, it is a major threat to the environment.

At the same time, a plastic bottle can be valued as a high-performing container with its own high potential for the creation of economic value if it is effectively recycled through bottle-to-bottle circular industrial processes.

One option to ensure consistent and effective recycling of plastic bottles by customers is to reward them each time they effectively recycle their empty plastic bottles into selective bins.

By doing so, they can make the most of the value of the plastic bottles they use while better mastering their consumption through conscious decisions.

Thanks to digital technologies, customers can now adopt this new practice of digitalized recycling, a "phygital" recycling pro-environmental behavior combining physical recycling and digital.

It also creates a potential path for new post-consumption marketing practices promoting sustainable products manufactured through new patterns of bottle-to-bottle production, consumption, and recycling in circular economies.

The objective of the on-going research is to measure the impact of digital adaptative reward (hedonicity, praticality, ..) for plastic bottles recycling based on the Protection Motivation Theory which captures the decision-making process of consumers (Oakley, Himmelweit, Leinster, Rivas Casado, 2020).

Methods and process (for empirical research)

Based on a quantitative research design, a research model has been developed. A scale of measurement of the digital reward of plastic bottles recycling is currently being designed and tested.

Main results preview and importance (or main arguments in the case of critical reviews)

From a theory and methodology standpoint, the design and validation of a scale to measure the effect of digital reward on plastic bottle recycling will contribute to research curriculum development at the intersection of Environmental Psychology, Information-Communication Technology and Marketing Science.

From a managerial standpoint, this research will contribute to the exploration of new recycling practices, their consistency, and their effectiveness in a sustainable perspective.

PP - (20858) - BUY SOLAR, GET CASH BACK. DO REBATE DESCRIPTION OF SUBSIDIES INFLUENCE YOUR ELECTRICITY CHOICE?

Swen J. Kühne[1]; Ester Reijnen[1]
1 - Zurich University of Applied Sciences

Research or practical problem and objectives

In countries such as Switzerland, energy companies receive governmental subsidies to promote electricity generation from renewable energy sources (e.g., solar). Companies usually pass these subsidies on to customers who buy electricity from these sources. Now, research in areas other than energy has shown that the way a bonus is paid – as a monetary amount (e.g., cashback), voucher, etc. – affects behavior differently. The question now is whether the way in which the afore mentioned subsidies or rebates are passed on to customers can also influence the decision to buy, for example, solar electricity.

Methods and process (for empirical research)

For this purpose, we conducted an online experiment with 303 participants, in which the participants had to choose between a green electricity product and a solar electricity product. Participants were randomly assigned to one of four conditions: One of 3 rebate conditions (cashback, voucher, or a choice between the two) or the baseline condition. In the baseline condition the price shown was net of subsidies.

Main results preview and importance (or main arguments in the case of critical reviews)

Results showed a significant effect of the conditions on choice, $x^2(1) = 6.31$, $p < .01$. Thereby the cashback condition increased the choice of the solar electricity product (by 22.5%), as did the choice condition, albeit marginally (by 14.5%), but not the voucher condition compared to the baseline condition. The choice effects likely arouse due to an underestimation of the annual incremental price of solar electricity in the cashback and choice condition. Furthermore, we found that regardless of the condition, participants were willing to pay (WTP) an additional 12.3% on average for solar electricity. In summary, the way subsidies are presented seems to affect their evaluation by consumers and, accordingly, influences their choice of electricity products. The description of subsidies as monetary rebates could therefore contribute to increased purchases of solar electricity and thus to the achievement of government climate goals.

Hour: 12:15:00
Session: Posters Flash Presentations Session 4
Room: Room 2

Theme: Sustainability (6)

PP - (20832) - A STUDY ON COMMON SPACES IN NURSING HOMES FOCUSING ON "NAGARA-CARE": RESEARCH ON CONVERSATIONS AND INTERPERSONAL DISTANCES BETWEEN CARE STAFF AND RESIDENTS

Yukako Tanimoto[1]; Masayuki Sato[2]
1 - Tohoku Institute of Technology; 2 - Waseda University

Research or practical problem and objectives

Japan has been a super-aged society, hence the rate of aging has been dramatically increasing. A nursing home will play a base role on the care and final abode for elderly people who cannot continue living by themselves. Oka, a researcher at Niimi University, says that the recent ways in caring for the elderly with dementia have changed due to multi-tasking specifically doing two things at once. In light of this, our study will focus on what I call "NAGARA-Care", a method of caregiving engaging the residents in conversation.

The purpose of this study is to propose the necessary conditions for common spaces in nursing homes in a way where care staff could implement "NAGARA-Care" for more effective and interactive communication between residents and care staff. In order to reach this objective, we clarify the structure of the care work and focus on two points: (1) contents of conversations, and (2) interpersonal physical distances. These points haven't been focused in previous studies.

Methods and process (for empirical research)

Qualitative surveys were carried out by one observer in two nursing homes regarding the following points:

・We measure interpersonal distances between residents and care staff by tape measure.

・Movement and activities of three-people care staff in one unit,

・The contents of their conversations.

Main results preview and importance (or main arguments in the case of critical reviews)

In conclusion, this study revealed the following things: (1) "NAGARA-Care" is effective in opening conversations because it lead to good stories. (2) Residents became more engaged in communicating with care staff especially when they joined in occasional activities such as decorating the place in the New Year holiday. (3) The position of the care staff preparing meals is important. To further increase the frequency of conversations, the chairs of residents are going to be positioned within four meters from the care staff in the kitchen.

PP - (20840) - LIVING CONDITIONS OF THE ELDERLY IN POST-DISASTER TEMPORARY HOUSINGS: TWO CASES OF DISASTER IN JAPAN

Mitoko Nakashima[1]
1 - Kagawa University

Research or practical problem and objectives

While most studies on post-disaster temporary housings focus on the developing stage of reconstruction, few studies on the late stage at which most residents move out and the elderly is faced with a risk of social isolation. Taking up two different cases of the Great East Japan Earthquake (GEJE) and the Western Japan Flood (WJF), this paper attempts to elucidate living conditions of the elderly in post-disaster temporary housings at the late stage of reconstruction.

Methods and process (for empirical research)

Based on the data obtained from questionnaire survey on households and in-depth interviews with the elderly conducted at six temporary housings in Mabi-cho, a devastated area of WJF and four temporary housings in Ofunato City, a devastated area of GEJE, this paper examines 1) conditions of vacancies in temporary housings, 2) support activities for residents of the temporary housings, 3) moving-out activities and 4) social relations of the elderly.

Main results preview and importance (or main arguments in the case of critical reviews)

As a result, we found that 1) the ratio of vacancies is 61.9% in Mabi-cho and 67.0% in Ofunato City, 2) support services for residents of the temporary housings were provided by municipal government and outside groups once or twice a month in Mabi-cho, while those provided by municipal government, outside groups, and resident groups fifth or tenth a month in Ofunato City, 3) moving-out activities of the elderly of Mabi-cho rapidly decreased in a year, while that of Ofunato City gradually decreased within three years, 4) number of the elderly who have friends is around 50% in Mabi-cho, while 70-80% in Ofunato City.

It can be concluded that as community organization and support activities became weakened at the late stage of reconstruction, moving-out activities and social relationships of the elderly also declined. Therefore, much support for the community and the elderly of the temporary housings is more needed at the late stage of reconstruction.

PP - (20970) - FRONTIERS OF INVESTIGATION ON PERCEPTION AND EVALUATION OF URBAN STREETS SPACE

Zhongyi Liu[1]; Lianlian Liu[1]
1 - Dalian University of Technology

Research or practical problem and objectives

Based on the background of global sustainable development, it is of great practical significance to construct friendly urban street space for promoting urban sustainable development. In the past, the subjective perception evaluation methods were mainly used in traditional urban street space perception and evaluation researches, but the authenticity and accuracy of the results are questionable. This research adopts the eye-tracking technology. It can make the research results reflect people's perception more truly and accurately, and provide a new perspective and quantitative basis for urban street space research.

Methods and process (for empirical research)

Firstly, analyzing the existing research results and methods. Secondly, as there are many problems in the use of stimulus materials in eye-tracking experiments, a comparative experiment on the selection of stimulus materials for eye-tracking was carried out in order to select the experimental stimulus materials suitable for this study. Finally, analyzing the eye movement data obtained by eye-tracking experiments and drawing a conclusion.

Main results preview and importance (or main arguments in the case of critical reviews)

The subjective perception evaluation methods commonly used in the past are deficient in meeting the authenticity and accuracy of research results. Human factors engineering technology represented by eye-tracking can effectively remedy this shortcoming. Through comparative analysis of four kinds of commonly used eye-tracking experiments stimulus materials, such as real-environment materials, video-scene materials, silence-scene materials and sound-scene materials. It is concluded that video-scene materials should be used instead of real-environment materials in this study. While ensuring the authenticity and accuracy of research results, it also reduces experimental errors caused by huge amount of experimental data and special adaptability of equipment.

PP - (21020) - EVALUATION OF VIEW THROUGH WINDOWS WITH ROLL SCREENS BY APPLYING AN EARLY VISION ALGORITHM

Akane Okamura[1]; Hikaru Shida[1]; Shigeki Matsunaga[2]; Koichiro Saito[3]; Yoshiro Hori[3]; Nozomu Yoshizawa[1]
1 - Tokyo University of science; 2 - YKK CORPORATION; 3 - YKK AP Inc.

Research or practical problem and objectives

View through windows is one of the important elements for achieving well-being in residential and office spaces. In a previous work, it became clear that the visibility of view outside windows(hereafter referred to as "Clarity")had a great influence on the occupants' evaluation of view out. Since human vision recognizes objects by edge detection, we can evaluate the "Clarity" quantitatively by mathematically predicting the intensity of edges in the view. Authors have developed an edge detection program which reproduces human visual information processing and made it possible to predict the visibility of view out by applying this tool to luminance distribution images of view through windows without window equipment like screens and shoji with fine texture. The aim of this research is to develop a new algorithm for predicting the "Clarity" of view through windows with roll screens by introducing the texture detection mechanism, specifically feedback from V2(secondary visual cortex), to the existing program.

Methods and process (for empirical research)

To verify the validity of the new program, we conducted a subjective experiment using a space model. 18 subjects observed simple figures through roll screen and evaluated the visibility of them. Experimental factors are the shape of the figures (3 levels), the transmittance of figures (4 levels), background luminance (3 levels), and roll screen with different physical properties (5 types).

Main results preview and importance (or main arguments in the case of critical reviews)

As a result of regression analysis using the subject's evaluation as the objective variable and the value calculated by the developed algorithm as the explanatory variable, the explanatory power was 0.82, increased from 0.58 in case of the original algorithm. In conclusion, we were able to confirm the validity of the developed algorithm. By applying this algorithm to luminance distribution images obtained from the simulation, we can quantitatively predict the effect of view through windows with roll screens in the architectural design process.

PP - (21021) - EVALUATION STRUCTURE OF LIGHTING QUALITY AND VIEW THROUGH WINDOWS IN THE RESIDENTIAL SPACES

Kaori Arano[1]; Keita Matsuda[1]; Takanori Kabaki[1]; Yuki Oe[1]; Jun Munakata[2]; Mika Kato[3]; Naoko Sano[4]; Nozomu Yoshizawa[1]

1 - Tokyo University of Science; 2 - Chiba University; 3 - Nihon University; 4 - Tokyo Denki University

Research or practical problem and objectives

Bringing daylight into the room and ensuring view are important roles of windows for the health and well-being of the occupants. Several metrics for ensuring lighting environment and view have been proposed, however, the previous study has shown that the occupants evaluate the amount of daylight more highly than the actual amount when view is good. When people evaluate their indoor environment, lighting environment and view from the window are not completely independent and are likely to influence on each other. The purpose of this study is to clarify the evaluation structure of lighting quality and view through windows in residential spaces in order to obtain basic data for establishing the evaluation method regarding lighting environment and view in the future.

Methods and process (for empirical research)

The questionnaire was administered to 371 residents to assess the impressions of the windows and visual environment of their living rooms. Using the covariance structure analysis, the pass diagrams of evaluation on lighting quality and view through windows were obtained with observed and latent variables, which were extracted through factor analysis.

Main results preview and importance (or main arguments in the case of critical reviews)

As a result of the covariance structure analysis (GFI:0.928, RMSEA:0.071), view had a significant impact on the lighting quality (standardized coefficient:0.66). The satisfaction with the visual environment through windows was most influenced by view (standardized coefficient:0.67), followed by the lighting quality (standardized coefficient:0.09).With this analysis, it was statistically clarified that the lighting quality is greatly affected by view, and that view has the greatest impact on the satisfaction of the visual environment through windows. Therefore, it may be possible to say that it is better to focus on view when designing windows in a living room. In the future, we would like to further clarify the evaluation structure of view and lighting quality through examinations in different target groups.

PP - (21170) - EXAMINING THE WELL-BEING AND NATURE CONNECTEDNESS BENEFITS OF WALKING IN DIFFERENT NOISE-EXPOSED ENVIRONMENTS: STUDY PROTOCOL OF A LONGITUDINAL INTERVENTION STUDY.

Julia Schaupp[1,3]; Silvia Tobias[1]; Javier Dopico[2]; Natalia Kolecka[1]; Maria Garcia Martin[1]; Jean-Marc Wunderli[2]; Beat Schäffer[2]; Karin Hediger[3]; Nicole Bauer[1]

1 - Swiss Federal Institute for Forest, Snow and Landscape Research (WSL); 2 - Swiss Federal Laboratories for Materials Science and Technology (Empa); 3 - University of Basel, Faculty of Psychology, Department of Clinical Psychology and Psychotherapy

Research or practical problem and objectives

An increasing number of scientific studies indicate that contact with nature can improve wellbeing. Thus, nature-based interventions are promising approaches. However, an increasing percentage of people live in urban regions with limited opportunities for spending time in natural environments. In addition, such urban settings typically feature increased levels of noise, representing a major environmental stressor and global challenge. Although various earlier studies have compared the effects of exposure to natural versus urban environments, evidence on the effects of noise in this context is very limited. The study compares the effects of walking in natural versus urban environments, taking the road traffic noise exposure in the respective settings into account. Further, the study investigates approaches to increase the positive effect of nature-based interventions and aims to discern whether a mindfulness intervention increases the positive effects of walking in nature.

Methods and process (for empirical research)

We present the study protocol of a longitudinal intervention study, containing field experiments in ecologically valid settings. Participants will be sent on 30-minute guided group-walks in natural or urban environments with different road traffic noise levels and with or without a mindfulness intervention. Participants will be assessed before and directly after the walk. After this, participants will be instructed to walk individually for three times during the next ten days and will be assessed for a third time. Assessments will consist of self-report measures, physiological data, an attention test and objective noise measurements.

Main results preview and importance (or main arguments in the case of critical reviews)

The results will inform about the restorative effect of different types of environments and of different noise levels in these sites. The project will provide information for the Swiss noise legislation and the implementation of the revised Federal Act on Spatial Planning. Further, the study will provide insights on how altering the way in which individuals engage with nature may increase the beneficial effects of exposure to natural environments.

Hour: 13:45:00
Session: C2 - Eco-beh Values/Norms
Room: Room 1

Theme: Sustainability (1); Consumption (4)

IC - (20826) - NEW PATHS OF UNDERSTANDING ELECTRICITY USE BEHAVIOUR IN ENERGY-EFFICIENT BUILDINGS

Zeynep Ekim[1]; Pimkamol Mattsson[1]
1 - Environmental Psychology, Department of Architecture and Built Environment, Lund University

Background and objectives

Energy use behaviour is a complex issue and multiple perspectives are needed to fully understand it. It is difficult to define the most effective strategies or behaviours that reduce energy use in residential environment (Casado et al., 2015) despite efforts put on energy-efficient design and technologies. This study focuses on cognitive processes on electricity use behaviour in energy-efficient multifamily buildings. The aims are (1) to validate a new instrument using Self-determination theory (SDT; Ryan & Deci, 1985) and (2) to explore the psychological factors for electricity saving behaviour.

Process and methods (for empirical research)

An instrument comprising of 18 items of motivation of electricity saving behaviour along with four questions regarding electricity use behaviour were distributed via post to individuals (N=887) living in energy-efficient buildings in southern Sweden. The buildings were built between the years 2016 – 2020 in accordance with the energy performance building regulations in Sweden.

Main results (or main arguments in the case of critical reviews)

The result will give a deeper understanding of motivational factors related to electricity use behaviour in energy-efficient buildings. The individuals' reasons and rationales in engaging electricity saving behaviour will be examined in relation to their sense of self-determination. It is expected that autonomous motivation will contribute to electricity saving behaviour to a greater extent than controlled motivation.

Implications for research and practice/policy | Importance and originality of the contribution

This study will contribute to the theoretical knowledge of energy use behaviour while exploring the role of autonomous and controlled motivation in electricity saving behaviour. Understanding cognitive processes of electricity saving behaviour will contribute to defining new strategies and designing new technologies to reduce excessive electricity use. This study extends previous research on energy-saving behaviour by employing SDT to explore motivational factors in an energy-efficient multifamily buildings setting.

IC - (20827) - RELATIONAL, INTRINSIC, AND INSTRUMENTAL VALUES: DO THEY INDEPENDENTLY PREDICT PRO-ENVIRONMENTAL AND PRO-NATURE BEHAVIOURS AND CAN THEY ENHANCE THE VALUE-BELIEF-NORM MODEL?

Marc Williams[1]
1 - Cardiff University

Background and objectives

Conservation policy is often framed in terms of nature's instrumental value to humans, but research has also shown that intrinsic and relational values can predict pro-environmental behaviours. What is not well-understood is the extent to which these value types have independent predictive power, and how they might interact/dissociate in their prediction of behaviour.

Process and methods (for empirical research)

Two survey studies were conducted (Ns of 500 and 560), the first collecting data about pro-environmental behaviours, intrinsic value belief, and relational values, and the second collecting data about these variables as well as pro-nature behaviours, instrumental value belief, and constructs included in the value-belief-norm (VBN) model.

Main results (or main arguments in the case of critical reviews)

Data suggested that there is an independent contribution of different value types to pro-environmental behaviours. Results from a structural equation model integrating these constructs with the VBN model will be presented.

Implications for research and practice/policy | Importance and originality of the contribution

The research has implications for how conservation messaging and policy frames the issues of environmental decline and biodiversity loss.

The research provides novel insights into the level of endorsement of different value types by the UK public, as well as novel analyses regarding the unique contributions of different value types to particular pro-environmental behaviours. The VBN is a widely applied model and therefore understanding how it might be extended to include different value types, as well as to pro-nature behaviours, is of relevance to environmental psychology.

IC - (21061) - WASTE PREVENTION IN THE CIRCULAR ECONOMY: EXPLORING PRECYCLING BEHAVIOURS IN THE FINNISH CONTEXT

Angelina Korsunova[1]; Piia Lundberg[1]; Annukka Vainio[1]; Mirka Råberg[1]
1 - University of Helsinki

Background and objectives

While the concept of circular economy (CE) has been gaining increasing momentum, it has also been criticized for excessive focus on recycling. At the same time, according to the European Union Waste Framework Directive, waste prevention and re-use are the most preferred options in the waste hierarchy, compared to recycling or energy recovery. In the context of everyday consumption, waste prevention is also described as "precycling", that is any kind of behavioural strategies to minimize the amount of generated waste, including refusal of single-use items, reduction of overall consumption, reuse and repair of existing products, and invention of new uses for the materials. Our study aims to holistically explore the willingness of citizens in Finland to engage in waste prevention, or precycling in their everyday life. Compared to previous studies that have been looking into re-use and repair behaviours, we intend to adopt a wider perspective, by also including behaviours related to frugality and minimalism.

Process and methods (for empirical research)

Our study is a quantitative survey-based exploration (n=1000) in the Finnish context of the citizen views and motivations to engage in precycling, based on the set of the 4Rs in the CE (refuse, reduce, reuse and repair).

Main results (or main arguments in the case of critical reviews)

We examine what kind of precycling behaviors citizens are currently performing, compare their willingness to engage in different types of precycling, as well as delve into the skills and challenges experienced by citizens when implementing precycling. Precycling is still a relatively little-studied form of pro-environmental behavior, and our research sheds further light on this issue.

Implications for research and practice/policy | Importance and originality of the contribution

The insights produced by our study have practical policy implications for strengthening the waste prevention principle put forward by the EU. Comparing the willingness to engage in different precycling behaviours and the associated skill sets, allows understanding which precycling behaviours call for more education and communication to support citizens in implementing waste prevention.

IC - (21078) - ENVIRONMENTAL ATTITUDES AND BEHAVIOR IN KAZAKHSTAN: UNDERSTANDING THE EFFECT OF PERSONAL AND POLITICAL VALUES

Fatikha Agissova[1]; Elena Sautkina[1]
1 - National Research University Higher School of Economics

Background and objectives

The state of the environment in Kazakhstan, a post-Soviet country located in Central Asia (population – 18.78 million, GDP per capita – US $9,731 (The World Bank, 2019)), is showing alarming tendencies due to a deterioration of land resources, pollution, and an increasing water scarcity caused mainly by oil, gas and metal extraction. These problems, aggravated by climate change-related risks, pose a large threat to numerous aspects of people's lives. There is a scarce amount of literature on predictors of environmental attitudes in Kazakhstan, most of them focusing on sociological aspects. Therefore, the current study is aimed at filling this gap through investigating the socio-psychological predictors of environmental attitudes and pro-environmental behavior in Kazakhstan.

Process and methods (for empirical research)

Data were collected using an online survey (N = 305) in early 2020.

The survey included the scales of personal values, political values, new environmental paradigm (NEP), environmental concern, pro-environmental behaviors (littering, recycling, environmental citizenship, community action), and socio-demographic variables.

Main results (or main arguments in the case of critical reviews)

· The value of Security was the strongest predictor of both Environmental Concern and NEP, overshadowing the effect of traditionally accepted value dimensions of Self-Transcendence and Self-Enhancement.

· Environmental Concern was also positively predicted by personal value of Self-Direction and negatively – by political value of Free Enterprise. NEP was positively predicted by values of Universalism and Benevolence, as well as by political value of Civil Liberties.

· Environmental concern was a strong predictor of all pro-environmental behaviors included in the study.

Implications for research and practice/policy | Importance and originality of the contribution

Results of the current research contradict the previous findings of studies mostly conducted in Western countries, concluding that it is not just altruistic caring or political liberalism that drives people to act, but the simple concern for their security. There is a need for further research in the developing countries that are experiencing environmental impacts.

IC - (21112) - POLITICAL, ENVIRONMENTAL AND SOCIAL DETERMINANTS OF PRO-ENVIRONMENTAL BEHAVIOUR IN RUSSIA

Elena Sautkina[1]; Fatikha Agissova[1]; Alexandra Ivanova[1]; Kingsley Ivande S.[1]; Veronika Kabanova[1]; Natalia Patrakova[1]
1 - HSE University

Background and objectives

In the context of global environmental and climate change caused by human impact, the study of pro-environmental behaviour and its determinants is important. At present, research on determinants of pro-environmental behaviour in Russia is sparse. Our study addresses this evidence gap and looks at the political, environmental and social determinants of pro-environmental behaviour.

Process and methods (for empirical research)

Adult participants (N=462, mean age = 36.73 years, SD = 11.77, 56.7% females) took part in an online survey measuring personal values, environmental motivation, environmental concern, connectedness to nature, institutional trust, political values, populism, patriotism and proenvironmental behaviour.

Main results (or main arguments in the case of critical reviews)

The results show that different types of pro-environmental behaviour are predicted by different variables. Waste management behaviour was positively predicted by Integrated Regulation and Environmental Knowledge. Social pro-environmental behaviour was predicted positively by Integrated Regulation, Connectedness with Nature, Institutional Trust, Introjected Regulation and the value of Equality. Resource Conservation Behaviour was positively predicted by Integrated Regulation, Biospheric Concern and Populism, while the value of Free Enterprise was a negative predictor. Sustainable Purchasing Behaviour was predicted positively by Integrated Regulation, Egoistic Values, Egoistic Environmental Concern, Connectedness with Nature and Populism, while Free Enterprise predicted this behavior type negatively. Climate Relevant Actions were positively predicted by Integrated Regulation and negatively by Egoistic values. In addition, Hedonic values was a negative predictor of all behaviour types, except resource conservation. The strongest predictor of all behaviour types was Integrated Regulation, the most autonomous form of environmental motivation.

Implications for research and practice/policy | Importance and originality of the contribution

Further research is needed to investigate how some new findings could vary cross-culturally. Our findings are based on surveys which used self-reporting and a correlational study design. Future research should overcome these limitations. Future studies could look at how highly politicised attitudes, such as climate change related concern and beliefs, interplay with political variables in Russia.

Hour: 13:45:00
Session: G2 - Symposia - Bottom-up engagement of citizens and stakeholders in sustainability transitions
Room: Room 2

Theme: Governance (6); Governance (1)

IC - (20887) - INCLUSIVE LOW-CARBON TRANSITIONS? POSITIVE ENERGY DISTRICTS AND ENERGY POVERTY

Adam Hearn[1]
1 - University of Basel

Background and objectives

Energy poverty affected at least 34 million Europeans in 2018. The COVID19 pandemic and subsequent energy price rises across Europe have further highlighted this problem for policymakers.

Positive Energy Districts (PEDs) are innovative urban areas that aim to produce more renewable energy than they consume, contain highly energy efficient buildings and actively encourage citizen participation. They are meant to be guided by principles of inclusivity, affordability and sustainability, allowing for a high quality of life. But how is energy poverty perceived by stakeholders in different PEDs across Europe? What steps are being made towards ensuring PEDs are inclusive? What are the perceived barriers to PED creation?

Process and methods (for empirical research)

This research is based on both relevant literature and semi-structured interviews conducted with key stakeholders from diverse PEDs, carbon-neutral and smart city districts. Using energy vulnerability factors and an energy justice framework, this research sheds light on how the topic of energy poverty mitigation is experienced and picked up by PED stakeholders. Stakeholders from PEDs in Belgium, Czechia, Sweden, Germany, Austria, Spain, Finland, the Netherlands and Italy, were interviewed in order to determine how and to what extent they approached the topic of inclusivity, with a focus on energy poverty reduction.

Main results (or main arguments in the case of critical reviews)

Results show that responses vary widely, with some urban areas working to make sure that participatory processes are inclusive, whilst others focus purely on the technical aspects of PED creation. Most stakeholders agree that there is potential for PEDs to reduce energy poverty, but there are concerns regarding funding inclusive PEDs.

Implications for research and practice/policy | Importance and originality of the contribution

The contribution of this talk is towards the framing of energy poverty in European urban areas, also informing policymaking for inclusive PED replication.

(20889) - BOTTOM-UP ENGAGEMENT OF CITIZENS AND STAKEHOLDERS IN SUSTAINABILITY TRANSITIONS

Sohre Annika[1]; Iljana Schubert[1]; Darja Mihailova[1,2]; Adam X. Hearn[1,2]; Antonia Kaiser[1,3]; Simon Sohre[4]
1 - University of Basel, Sustainability Research Group; 2 - EU Horizon2020 SMART-BEEjS project; 3 - Department of Socioeconomics, Agroscope, Tänikon 1, 8356 Ettenhausen, Switzerland; 4 - Protestant University of Applied Sciences

Background and objectives

It is commonly accepted that a sustainability transition to a low-carbon system can only be achieved through efforts at different levels and scales, i.e., policy instruments from public authorities, initiatives from business actors and civic initiatives at local, regional, national and international levels. Thus, transitions, for instance through behaviour change, cannot be levered only through "top-down", i.e. governmental hierarchical governance modes but also calls for non-governmental actors (NGOs, grassroots, civil society, science, smaller businesses etc.) at a micro or meso (e.g. local/regional; individual/small scale societal) level and also for "softer types" of instruments, like information, nudging or feedback. This "bottom-up governance" (BuG) includes arrangements with complimentary and targeted interventions (policy dimension), and also differentiated politics and polity arrangements, i.e. a diversity of governance actors, their interests and constellations, as well as structural frame conditions.

However, despite a big body of literature contributing to a better understanding of participation and engagement of different actors, there is still a gap in understanding how different bottom-up actors, i.e. not only early adopters but also different groups within "the majority" of individuals as well as business actors or initiatives in the different fields of sustainability (energy, climate, food, mobility, social issues/poverty) can be engaged with lasting effects. For this to be achieved, disciplinary boundaries and black boxes have to be overcome and more inter- and transdisciplinary research has to happen to integrate the multiple factors of ECB-related BuG.

In this session we will put the spotlight on different BuG approaches from different interdisciplinary/transdisciplinary perspectives. In particular, it will be discussed how to engage local actors, build knowledge, and support networks among existing bottom-up renewable energy initiatives. Furthermore, we will shed a light on how to set up inclusive, participatory local districts in terms of considering justice requirements. Regarding engagement of citizens, we will also discuss how to deal with societal tensions, particularly between rural and urban populations. In addition, we investigate how to engage individuals in sustainable relevant practices (e.g. carsharing practices) and how to engage societal groups as enablers to set up collective learning processes. Finally, we explore different perceptions of the question of individual versus societal responsibilities within sustainability transitions.

Presenters/preliminary titles

· Darja Mihailova "Mainstreaming energy citizenship through research: Horizon2020 projects as actors in strategic niche management"

· Adam Hearn "Inclusive low-carbon transitions? Positive Energy Districts and Energy Poverty"

· Antonia Kaiser "Sustainable agricultural development through the lens of rural-urban divide»

· Iljana Schubert "User-based redistribution in a free-floating carsharing scheme"

· Simon Sohre "Collective learning processes by engaging students in sustainability cooperation projects"

· Annika Sohre "Type casting of responsibility in sustainability transitions – Lessons learnt from Covid-19 and climate crisis"

Significance for the advancement of People-Environment relations

The session addresses different person-community-institution relations with a focus on bottom-up governance arrangements. Particularly, we investigate how to engage different actors, ranging from individuals in different areas, focusing on different practices, to different societal stakeholder groups. We also include justice, network and community-based considerations. Moreover, we explicitly focus on people-society connections regarding questions of responsibility and collective learning processes.

IC - (20888) - TYPE CASTING OF RESPONSIBILITY IN SUSTAINABILITY TRANSITIONS – LESSONS LEARNT FROM COVID-19 AND CLIMATE CRISIS

Annika Sohre[1]
1 - University of Basel, Sustainability Research Group

Background and objectives

The debates about urgency of climate change and the necessity of energy transformations towards sustainability have been established as mainstream discourse. For instance, the Fridays for Future movement lately mobilized big parts of the public, besides the traditionally involved stakeholders or interested fringe groups in society. However, public opinion is divided when it comes to who should contribute in what way to the required societal transformations. Political claims are counteracted with finger-pointing to individual responsibilities to act and vice versa. Similar patterns can be observed in the Covid-19 crisis and its governance.

Underlying factors contributing to this ambiguity are differences in perceptions of responsibilities, regarding the role of individuals, "the state" or society in the sustainability transition and its governance, in practice and science.

Process and methods (for empirical research)

This is achieved by triangulation of different findings (1-4): (1) A systematic literature review of the scientific discourses with a focus on explicit and implicit perceptions of individual and societal responsibilities and agency is conducted and conceptualized in an integrative framework. In addition, different empirical insights of perceptions relating to current crises are analyzed to challenge the perceptions found in the literature. Empirical insights are taken from (2) a survey on Covid-19 and sustainability in Switzerland, (3) interviews on perceptions of Covid-19 and sustainability in Switzerland and (4) a survey about the climate movement in Switzerland.

Main results (or main arguments in the case of critical reviews)

The paper results in a systematic mapping of perceived individual and societal responsibilities in sustainability transition governance.

Implications for research and practice/policy | Importance and originality of the contribution

It thereby contributes to more informed political decision-making processes, by mapping to what extent individuals or "the society" should contribute in different areas of sustainability transitions. Moreover, it contributes to the state of the art particularly of bottom-up/top-down literature, by systematically reviewing and investigating explicit and implicit perceptions of individual and societal responsibilities in literature and based on empirical data.

IC - (20890) - COLLECTIVE LEARNING PROCESSES BY ENGAGING STUDENTS IN SUSTAINABILITY COOPERATION PROJECTS

Simon Sohre[1]
1 - Protestant University of Applied Sciences

Background and objectives

Sustainability needs to focus not only on environmental or technical innovations but needs to integrate the social dimension. However, while five SDGs are dealing with the social dimension, this field is often neglected, not only in literature but also in practice, for instance regarding the integration of social work and sustainable development perspectives.

An integrative approach to bring together the social dimension is to focus on collective learning processes. Collective learning processes call for engagement for different groups of society. One important group within civil society which can be engaged and engage others, are students.

Process and methods (for empirical research)

Within the transdisciplinary project "TRICOP", possible forms of cooperation are investigated and initiated to connect sustainability initiatives, businesses and social work institutions (e.g., linking urban gardening with day centres for people with mental illnesses or marginalized groups such as refugees), opening up spaces for trinational cooperation and innovation.

TRICOP is realized through various student projects at the EH Freiburg and the University of Basel. The students with different disciplinary backgrounds investigate and initiate forms of cooperation between different iniatives as well as its barriers and enabling factors and thus are educated and engaged as transition enablers. Based on expericences of student projects in six semesters, this paper explores these forms of bottom-up engagement and the implication for setting up and forming collective learning processes in the field of social/environmental sustainability.

Main results (or main arguments in the case of critical reviews)

Through different seminars and workshops students learn different skills to research and identify various cooperation potentials, using literature/internet research, interviews/focus groups. Moreover, through investigating and setting up potential cooperation projects, the student function as enablers and thus initiate collective learning processes.

Implications for research and practice/policy | Importance and originality of the contribution

The paper contributes to theoretical&practical discourses on engagement of students within sustainability transitions and links this to the underresearched field of collective learning processes. Moreover, it integrates social work and other forms of sustainability.

IC - (20925) - USER-BASED REDISTRIBUTION IN A FREE-FLOATING CARSHARING SCHEME

Iljana Schubert Iljana Schubert[1]
1 - Zürich University of Applied Sciences

Background and objectives

Free-floating carsharing schemes, where members can pick-up and return cars anywhere within a certain city zone, are on the rise. Research has shown that CO2 savings could be achieved through a decrease in private vehicle purchases and the efficiency of vehicles used in the schemes. However, often cars are not available in high-demand zones or have long idle times in low-demand zones, leading to operator redistributions. This of course negates CO2 savings and increases operation costs.

Process and methods (for empirical research)

In a first step we investigated preferences for four/five incentive strategies (extra driving time, financial discount, collecting points (money) for social or environmental projects, gamification approach, guaranteed parking space*only for dropping off) for user-based redistribution to motivate users to walk further when picking-up cars in low-demand zones and dropping-off cars in high-demand zones. We now test the most popular strategy, receiving extra time with different time-variations, in a 6 months RCT (one experiment group and one control group) field experiment lasting from 01.22 - 07.22. The field experiment collects booking information and survey data.

Main results (or main arguments in the case of critical reviews)

The talk will provide an overview of the project and report the latest (preliminary) findings.

Implications for research and practice/policy | Importance and originality of the contribution

To achieve a significant reduction in CO2 new modes of operation are needed in all energy sectors, including the mobility sector. The findings of this study will inform businesses and other sharing operators on how to best incentivise user-based redistribution of cars so that maximum CO2 savings can be achieved within a free-floating carsharing scheme.

IC - (21016) - SUSTAINABLE AGRICULTURAL DEVELOPMENT THROUGH THE LENS OF RURAL-URBAN DIVIDE: A COMPUTATIONAL TEXT ANALYSIS OF THE MEDIA COVERAGE OF SWISS POPULAR INITIATIVES ON PESTICIDE POLICIES

Antonia Kaiser[1,2]

1 - Department of Socioeconomics, Agroscope, Switzerland; 2 - Sustainability Research Group, Department of Social Sciences, University of Basel, Switzerland

Background and objectives

In June 2021, the people of Switzerland voted on two popular initiatives that aimed to introduce stricter pesticide policies. Both initiatives were rejected with around 60 per cent negative votes. However, large urban centres voted in favour of what would have meant pesticide-free agricultural production in Switzerland with on average 56 per cent, whereas this number was as low as 28 per cent in rural areas. Such polarised voting results have been interpreted as evidence for an existing rural-urban divide. Sustainability transitions, like the one to pesticide-free agriculture, have the potential to exacerbate the divide, for example due to diverse understandings of sustainability as well as perceived injustices that become unevenly relevant for population groups. Against this backdrop, the purpose of this study is to examine differences in print media coverage of topics related to the popular initiatives on pesticide policies.

Process and methods (for empirical research)

Taking media coverage as a reflection of societal discourses as well as of dominant political tendencies and ideologies, we use topic modelling and sentiment analysis (two text mining techniques) to analyse text corpora from two different print media landscapes. These corpora are built from articles in media outlets that speak to the rural versus the urban Swiss population.

Main results (or main arguments in the case of critical reviews)

We expect that the analysis will generate further insights into discourses (conveyed through the print media) that evolve around initiatives of sustainable agricultural development and that are presumably urban or rural biased.

Implications for research and practice/policy | Importance and originality of the contribution

Mapping the diverse discourses will help to better understand the nature and argumentation of diverging perspectives on sustainability transitions in agriculture. The findings may be used for (bottom-up) agricultural and transition policy problem framing.

IC - (21038) - MAINSTREAMING ENERGY CITIZENSHIP THROUGH RESEARCH: HORIZON2020 PROJECTS AS ACTORS IN STRATEGIC NICHE MANAGEMENT

Darja Mihailova[1]
1 - University of Basel

Background and objectives

The EU has made allowances for a variety of actors to participate in the energy transition. Most recently, the Directive on common rules for the internal electricity market ((EU) 2019/944) introduced rules that would enable citizens and energy communities to actively participate in the energy system as energy generators, consumers, or as providers of flexibility services. Actual participation, however, is can still be considered niche-level. Through EU funding schemes like Horizon2020, a number of research and innovation projects aim to support this directive by mainstreaming energy citizenship. By applying strategic niche management theory, this paper investigates to what extent these projects engage local actors, build knowledge, and expand support networks among existing bottom-up renewable energy initiatives.

Process and methods (for empirical research)

The analysis is based on an analysis of deliverables from 37 H2020 projects in the realm of "Secure, clean and efficient energy" as well as semi-structured interviews from two case study projects. The resulting content is analyzed into order to understand how knowledge from bottom-up energy initiatives is integrated into the projects.

Main results (or main arguments in the case of critical reviews)

Through their research and innovation agenda, H2020 projects may have the power to represent niche-level actors – like energy communities and citizen-driven renewable energy initiatives – to the regime and integrate their knowledge into their own project. This article seeks to understand the degree to which Horizon 2020 projects aggregate and integrate learnings from local actors and foster a network that supports the further development of the niche.

Implications for research and practice/policy | Importance and originality of the contribution

The outcome of this research may point to ways in which innovation-focused research projects in the renewable energy domain generate visions for the energy transition amidst the work of existing bottom-up actors; this hold implications for how knowledge is created in these types of projects and what role they play in strategic niche management in the renewable energy domain.

Hour: 13:45:00
Session: G3 - Citizenship
Room: Room 3

Theme: Governance (5)

IC - (20860) - TRANSFORMING THE INDUSTRIAL ENVIRONMENT: CITIZEN ENGAGEMENT WITH FUTURE LOW-CARBON ENERGY SYSTEM TRANSITIONS IN A STEEL TOWN

Nick Pidgeon[1]; Karen Henwood[1]; Gareth Thomas[1]; Erin Roberts[1]; Christopher Groves[1]; Catherine Cherry[1]
1 - Cardiff University

Background and objectives

The implications, perceived risks and unintended consequences of new technologies for patterns of everyday life will be one of the major challenges in many countries as they move to implement the low carbon, secure energy systems of the future to combat climate change. A significant research gap is to develop methods for engaging citizens with the whole systems energy transitions needed to combat climate change at either country or regional level. Using methods from interpretive and deliberative risk research, this paper describes a novel methodology and findings of a project to engage citizens of an industrial UK town with the transitions that might be required to achieve low carbon energy in their local environment. The fieldwork location for this research was the town of Port Talbot in South Wales, a region dominated by an existing major steelworks which is also one of the UK's largest single site emitters of greenhouse gasses.

Process and methods (for empirical research)

The paper describes how a multi-disciplinary team (social psychology, human geography, technology studies) developed 4 different scenarios of decarbonising the industrial and enery system for the town, and the conduct of interviews and 5 deliberative workshops with citizens living in or with connections to the town to explore their responses.

Main results (or main arguments in the case of critical reviews)

Findings point to the importance of local context and place in the interpretation of the risks and benefits of energy system futures, alongside the impacts of proposed changes upon other issues such as local air quality and health.

Implications for research and practice/policy | Importance and originality of the contribution

This paper adds important methods and empirical evidence to support the growing movement to engage citizens with the macro-level societal changes to combat climate change, as well as to build a social contract for such change.

IC - (20952) - PSYCHOSOCIAL ISSUES OF NEW URBAN DESIGNS

Marisa Bonnot[1]; Sabine Caillaud[1]; Valérie Haas[1]
1 - Université Lyon 2

Background and objectives

By acknowledging environmental emergency, we are witnessing a major change in our way of life. Local political discourse as well as territorial projects inscribe their actions in the framework of sustainable development and show the emergence of new standards in the production of the city. The transformation of the Duchère district (in Lyon, France) into an eco-district, and more particularly the redevelopment of its park, through a participatory project including inhabitants, is a good example. By considering how negotiations around space engage different actors with different social identities and realities, social psychology is well-positioned to study social change as well as the resistance it may entail.

Process and methods (for empirical research)

A first study from a larger research project explores what is and what must become a changing neighborhood for different actors involved in and by its renovation. We conducted qualitative interviews coupled with cognitive maps with residents (N= 10) as well as an analysis of the institutional discourse (N= 63).

Main results (or main arguments in the case of critical reviews)

The discourse of the local press and that of the new inhabitants converge around the need to integrate more nature in the city. Moreover, divergent experiences in terms of social relationships were described by old and new residents, the older reporting the renovation causing the degradation of the conviviality and more recent inhabitants reporting about social harmony characterizing this neighborhood. All in one, the results show how the discourses of the different actors meet, combine, or oppose each other, each driven by its own dynamic.

Implications for research and practice/policy | Importance and originality of the contribution

This study is based on strong political stakes at the local and national levels, and engages in a reflection on contemporary urban models, on the relationships we maintain with our living spaces, and on the meanings, we give them.

IC - (20954) - BRIDGING CITIZENSHIP, SCIENCE AND POLITICS: COMMUNITY-BASED LABORATORIES FOR DISCUSSING AND CO-DESIGNING CLIMATE ADAPTATION

Juliana Lima[1]; Sara Pinheiro[1]; Ana Cristina Torres[1]; Bruna Pereira[2]; Carla Malafaia[1]
1 - CIIE/FPCEUP; 2 - Centro de Investigação e Intervenção Educativas (CIIE)

Background and objectives

In order to develop solutions for transformative adaptation [1] to climate change in local communities [2], dialogue between scientists, young students, activists, economic agents and policy-makers should be promoted. This study intends to co-design strategies to promote the involvement of different actors into territorial climate adaptation. We argue that knowledge transfer is not a one-way process, but rather a collaborative process of sharing and mutual learning, bringing diverse actors in a co-creation approach [3], tackling the challenges of climate resilience.

Process and methods (for empirical research)

First, we present the analysis of Climate Change Adaptation Plans developed by eight Intermunicipal Communities (CIM's) of Northern Portugal, pinpointing the major climate risks and the adaptation strategies in each region. Secondly, we explore how these normative political discourses echo within local collaborative 'laboratories'. These labs aim at integrating economic agents, policy-makers, activists, young students in responding to climate change at the local level. Based on participatory approaches of citizen science [4], the labs will be rooted in climate-related projects developed by students in schools [5] in the 8 regions, bridging their voices with the know-hows of other relevant social actors towards a systematic dialogue.

Main results (or main arguments in the case of critical reviews)

An initial document analysis of the Plans reveals that adaptation measures do not seem to integrate the different actors or involve young people. We aim to shed light on the articulation between climate adaptation measures, as outlined by the CIM's, and the climate proposals discussed by young people [6] with local actors within collective and participative spaces for developing community resilience.

Implications for research and practice/policy | Importance and originality of the contribution

The collaborative laboratories intend to create spaces for dialogue between different actors. They are expected to fill the gaps diagnosed in the CIM's documents, as well as co-create actionable solutions for climate adaptation, creating a model to be replicated in other territories and contributing to research on practices of knowledge transfer in climate adaptation.

IC - (20957) - PARTICIPATION FOR BUILDING URBAN CLIMATE RESILIENCE: AN EVALUATION STUDY OF PARTICIPATION EFFECTS AND THE SUCCESS FACTORS INFLUENCING THEM

Torsten Grothmann[1]; Theresa Michel[1]
1 - University of Oldenburg

Background and objectives

High expectations—in science and in practice—are associated with participation especially at local levels for building resilience to increasing climate change impacts. Nevertheless, there is a lack of evaluation studies that a) empirically confirm the many expected positive participation effects and b) identify success factors important for these effects.

Process and methods (for empirical research)

To evaluate the effects, we developed a new resilience concept differentiating three dimensions: resilience knowledge (including risk and action knowledge), resilience action (including action and its psychological determinants such as efficacy and responsibility beliefs) and resilience network (including networks within and between actor groups). We used this concept in participant questionnaires to evaluate the effects of eight government-led public participation events that focused on urban adaptation to climate change. To analyse the success factors responsible for the effects, several indicators of possibilities for learning and for "having a say" in the events were included in the questionnaires.

Main results (or main arguments in the case of critical reviews)

The events were effective in increasing participants' knowledge (particularly knowledge integration), action (supporting rather than triggering action) and networks. Increases were moderate and could not be achieved for all participants. Hence, effects of participatory approaches on building resilience should not be overestimated. Correlation analyses indicated that possibilities for learning were positively related with knowledge increases, possibilities for "having a say" in the events correlated positively with increases in participants' action motivation.

Implications for research and practice/policy | Importance and originality of the contribution

The increases in collective efficacy beliefs regarding collective action of governmental actors together with citizens as well as increases in perceptions of governmental *and* private responsibilities for taking action support ideas of co-management and a shared responsibility for urban resilience. The apparent influence of "having a say" in the participation events on the participants' action motivation indicate that mere information events are not sufficient to motivate citizens to take measures to protect themselves from increasing climate change impacts. "Real" participation is needed.

IC - (21005) - REPRESENTING ENERGY CITIZENSHIP IN POSITIVE ENERGY DISTRICTS: PROSUMERISM, ENHANCING LOCAL IDENTITIES OR POLITICAL PARTICIPATION?

Minh Thu Nguyen[1]; Susana Batel[2]
1 - ISCTE-IUL; 2 - CIS, ISCTE-IUL

Background and objectives

Positive Energy Districts (PEDs) is an Europe Union's initiative aiming to build districts that produce more renewable energy than its consumption. To facilitate this, European states are shifting from a state-centric to more participatory governance where the implementations of PEDs involves different actors, including citizens. Although the relevance of energy citizenship in shaping the large societal transformations and changing people-environment relations has been increasingly highlighted in both policy and academic spheres, they are focusing mainly on individual responsibility to produce more or consume less energy. This limited definition of energy citizenship as market participation risks to perpetuate the inequalities, injustices and exclusions of and towards marginalised citizens and non-citizens in energy transitions. Thus, the objective of this research is to understand how energy citizenship is being represented by different key stakeholders and what is its implications for fairness, inclusivity and well-being in PEDs.

Process and methods (for empirical research)

For that, Torres Vedras, a planned PED town in Portugal, was selected as the case study for this research. 20 in-depth interviews with various key stakeholders in PED implementation were carried out. Interviews were then analyzed using pragmatic discourse analysis to identify as much the key representations of energy citizenship present in participants' discourses; as the discursive strategies used by participants to negotiate, promote or resist changes in the role of energy citizens.

Main results (or main arguments in the case of critical reviews)

The analyses will explore if and to what extend participants' discourses reproduce more conventional and hegemonic ideas of energy citizenship and which implications those might have for justice, inclusion and well-being in people-environment relations; and if and which alternative representations are presented and what are the potentialities for these to become more hegemonic discourses.

Implications for research and practice/policy | Importance and originality of the contribution

As such, this research will contribute to identify and unpack alternative views to energy citizenship that will be crucial to promote sustainable energy transitions that are fair and just.

Hour: 13:45:00
Session: S4- Adressing Sustainability II
Room: Room 4

Theme: Sustainability (5)

IC - (20875) - PREFIGURING A VEGAN FUTURE IN A MEAT DOMINATED PRESENT: REINVIGORATING AND RECHARGING ACTIVISM AT THE VEGAN CAMPOUT

Annayah Prosser Annayah Prosser[1]; Leda Blackwood[1]; Saffron O'neill[2]; Lorraine Whitmarsh[1]; Jan Willem Bolderdijk[3]; Tim Kurz[4]
1 - University of Bath; 2 - University of Exeter; 3 - University of Groningen; 4 - University of Western Australia

Background and objectives

Many people who are concerned about the environment make immense social sacrifices to act in line with their moral values. Vegans, for example, are often stigmatised and derogated by the societal majority who continue to eat meat, and maintaining vegan activism in the face of staunch opposition is exhausting for many. To counter this, many vegans seek out prefigurative community gatherings and festivals: events that create a physical example of a fully vegan future, in the present day. However, little is understood about the meaning of these spaces to participants, and the value they might provide to interpersonal and societal activism surrounding environmental issues.

Process and methods (for empirical research)

The Vegan Campout is the world's largest organised festival for vegans, hosting over 10,000 vegans over one weekend in the UK. The festival prioritises vegan perspectives: all food outlets, performing artists, speakers and retail outlets are vegan.

To explore the significance of this majority-vegan space for vegans, we conducted on-site field interviews at the end of the event, with vegans from across the UK and Europe of a variety of ages and genders.

Main results (or main arguments in the case of critical reviews)

Through reflexive thematic analysis, we examined whether the Vegan Campout acted as a reinvigorating and recharging space for vegans who attended. Our analysis demonstrated that the event empowered vegans to continue and enhance their vegan activism and lifestyle. Our themes suggest that this may be due to participants: forming new social connections, experiencing a 'vegan future' in person, expressing typically forbidden moral emotions, and (re)discovering the joy in veganism.

Implications for research and practice/policy | Importance and originality of the contribution

Our work uses interdisciplinary perspectives from psychology, sociology, politics and human geography to offer an original insight into the transformative significance of prefigurative community gatherings for environmental groups typically in the societal minority. Overall, we demonstrate the importance of these identity-centred spaces for minority-driven societal change, and imagining a greener, more sustainable future.

IC - (20974) - VERNACULAR ARCHITECTURE AS SUSTAINABILITY MODEL FOR BIOMIMICRY ARCHITECTURE

Hakim Herbane[1]
1 - Université Laval

Background and objectives

Sustainability is one of the most important challenges of our time, but despite the efforts invested in its achievement, the approaches adopted do not seem to give satisfactory results in general and particularly in architecture. Among these approaches, biomimicry, which aims at innovation and sustainability by emulating proven models and strategies of nature, is also struggling to implement sustainability even though it introduces a recovering philosophy of the relationship between humans and nature.

Meanwhile, Inuit communities in Nunavik are seeking a sustainable production system of their built environment that would integrate human, technological, technical, economic, and ecological needs accordingly with Inuit aspirations. In this context, Biomimicry's relationship with nature that evokes the Inuit one is promising but its' lack of success in implementing sustainability leads us to request what the reasons for such malfunction are and if it could be remedied.

Process and methods (for empirical research)

To answer these questions, a literature review is led to explore the concept of sustainability in general, in architecture and in biomimicry. We aim to circumscribe this notion to better understand its relationship with biomimicry, as we investigate its' developments in terms of its' significance, its' implementation in general and specifically in architecture.

Main results (or main arguments in the case of critical reviews)

This investigation revealed the role of public participation in the definition of the notion itself and its' implementation tools which refers to a central role of humans in sustainability. Furthermore, vernacular architectures seem to embody models that can provide precious guidance for sustainability. Hence, reintegrating Inuit communities and Inuit vernacular architecture that succeeded to combine different needs and constraints of the built environment that becomes a potential path towards a sustainable Inuit built environment in Nunavik and could also benefit architectural biomimicry.

The presentation exposes the topics developments, critics, and findings that the literature review allowed and the methodology it suggests.

IC - (21124) - TRANSFORMATIVE AND AWARENESS-BASED SCIENCE: HOW TO DESIGN SUCCESSFUL COLLABORATIONS

Petra Schweizer-Ries[1]; Fabienne Peddinghaus[1]; Alena Schüren[1]
1 - Hochschule Bochum

Background and objectives

The great transformation towards sustainability requires many small changes within our society, including our way of thinking about science and collaboration. Interdisciplinarity and transdisciplinarity are frequently mentioned terms in scientific literature, but an implementation in practice is still difficult. In all our projects based on the awareness based action research for sustainability (Iser, Schüren & Schweizer-Ries, in press) we are facing challenges regarding appreciative communication and successful collaboration (see e.g. Münger & Riemer, 2012) among different sectors like science, administration, citizens or policy but also between different disciplines like humanities, natural science, engineering and arts. More knowledge of how to achieve this kind of appreciative inter- and transdisciplinary collaboration, is urgently needed to accelerate the social transitions and the paradigm- and mind-shifts asked for (Göpel/Meadows).

Process and methods (for empirical research)

Since 2017 we are applying and investigating new methods of the awareness based science in our projects, that are built on inner change (Banks/Woiwode et al. 2021/Iser & Schweizer-Ries, 2021). We try to foster collaboration and create spaces in which good communication is practiced and where we are able to come into joint action for a more sustainable world. Among other methods, we practice mindfulness, collaboration circles and the art of hosting.

Main results (or main arguments in the case of critical reviews)

To date, we are experiencing resistance as well as breakthroughs in communicative blockades.

Implications for research and practice/policy | Importance and originality of the contribution

In the future we would like to involve citizens, politicians and artists, building on the long known but not often applied practices of embodiment (see e.g. systemsfieldbook.org/tools/), creativity (Beaule, Roth, Marchand & Awashish, 2021) and arts-based research (e.g. the Social Presencing Theater developed by Hayashi & Scharmer, 2021) for a development from within (see also Bradbury et al.(2019), Banks (2007) and Heron & Reason (2007)).

IC - (21191) - THE FIELD GUIDE SERIES: CREATING A YOUTH-LED AND PLACE-BASED PODCAST TO PROMOTE INTEREST IN NATURE

Alexandra Rocha Silva[1,3]; Rosalina Gabriel[1,2]; Isabel R. Amorim[1,2]; Daniel Sousa[3]; Ana Moura Arroz[1,2]; Sónia Matos[3,4]
1 - Azorean Biodiversity Group / Centre for Ecology, Evolution and Environmental Change (GBA/cE3c); 2 - University of the Azores; 3 - Interactive Technologies Institute (ITI-LARSyS); 4 - University of Edinburgh

Background and objectives

We propose the Field Guide podcast series to improve the scientific, conservation and environmental literacies of youths living in the Azorean archipelago. Despite its relatively low human population density, the archipelago faces ecological challenges, such as increasing human intervention, land-use change, invasive species and climatic shifts. Therefore, it is imperative to involve local communities in their natural heritage, experiencing nature and learning about biodiversity loss through active participation via mobile technology.

Process and methods (for empirical research)

In a previous study, a group of youths (N=36) formulated 168 questions during an activity in a nature trail in the Nature Park of Terceira island (Azores, Portugal). Afterwards, participants ranked these questions using the Q-sort method according to their interests and 18 questions were selected. We later invited several experts to answer those questions, each a specific question, and to record it as an audio session. In total we were able to prepare a podcast with 16 episodes that soon will be made available to the public.

Main results (or main arguments in the case of critical reviews)

The podcast series integrates a mobile application (App) designed by our team. Both draw on the importance of exposing younger generations to nature-rich environments by creating a multimedia tool that appeals to their interests and by transmitting scientific knowledge in an accessible way through questioning. Our Q-sort ranking results show that youths are more interested in questions focused on *species* (58%) and related to *biodiversity dynamics* (35%).

Implications for research and practice/policy | Importance and originality of the contribution

Today, youths disconnection from nature progresses alongside the catastrophic loss of biodiversity worldwide. The design of a digital field guide in the format of a mobile application, that among other functionalities, provides an audio series, offers a younger generation the opportunity to explore, learn about and monitor their immediate environment by posing questions to scientists engaged in studying Azorean biodiversity.

IC - (21383) - CO-DESIGNING A TEMPORARY INTERVENTION WITH CHILDREN FROM FAVELA PINDURA SAIA IN BELO HORIZONTE, BRAZIL: LESSONS TOWARD HEALTHIER CITIES

Paula Barros[1]; Adriana Fontes Sansão[2]; Matluba Khan[3]; Helen Woolley[4]

1 - Universidade Federal de Minas Gerais; 2 - Universidade Federal do Rio de Janeiro; 3 - Cardiff University; 4 - University of Sheffield

Background and objectives

There has been a proliferation of adult-only urban open spaces with children withdrawn to indoor spaces. Girls and boys have been increasingly confined to home, school, and child-specific spaces (e.g., playgrounds) due to a range of social, physical, and legal factors. Yet, freedom to access, play, move around, meet friends, and explore urban open spaces is very important for their health and sense of well-being.

In contradiction with the right of every child to be heard and have their views to be taken seriously in decision making processes that will impact on the quality of their lives, planning, designing and management of urban open spaces have been informed most and foremost by the values of producers and consumers of goods and services: adults. Recently, there has been a move towards co-design: people not trained in design co-creating together with designers. Co-design with children matters because it can challenge the adult hegemony in the decision-making that has shaped the built environment while contributing towards the creation of more playful and, therefore, healthy cities for all.

Given the potential of co-design with children to promote health, this exploratory qualitative research aims to explore what aspects of co-design process facilitate creative encounters with children.

Process and methods (for empirical research)

To do so, we report the lessons learned by architecture students during the co-design process of a temporary intervention with children from the favela Pindura Saia at Nossa Pracinha, an urban square in Belo Horizonte (Brazil).

Main results (or main arguments in the case of critical reviews)

Drawing on the thematic analysis of the reports written by the students, the findings revealed the value of temporal in-betweenness, behavioural looseness and functional openness in facilitating creative encounters with children during the design process.

Implications for research and practice/policy | Importance and originality of the contribution

Our findings have implications for design education, practices and policymaking processes aligned with the achievement of the Sustainable Development Goal: Good health and well-being.

Hour: 13:45:00
Session: S5 - Restorative Experiences II
Room: Room 5

Theme: Sustainability (5)

IC - (20829) - RELATIONSHIP AMONG COMMUNITY ENVIRONMENTAL CHARACTERISTICS, COMMUNITY ATTACHMENT AND RESTORATIVE EXPERIENCES

Seiji Shibata[1]
1 - Sagami Women's University

Background and objectives

Perceived desirability of the environment is one of the important factors in the formation of place attachment, and therefore it can be hypothesized that high restorative properties of the environment can serve as a predictor of place attachment formation. However, there has been little research on the relationship between place attachment and environmental restorative properties, and the relationship is not well understood. In this study, we examined the relationship between the physical and social characteristics of an area that bring about recovery experiences and attachment to the area.

Process and methods (for empirical research)

We conducted an online survey of adults who had lived in their current area for at least three years. A total of 1,964 complete responses were collected. As for the characteristics of the local environment, we used a scale consisting of 17 items, including the amount of greenery and the size of the sky. For attachment to the community, eight items — such as "I feel attached to this community"— were used, and for restorative experiences in the community, five items — such as "I feel relieved from fatigue"— were used. All scales were rated on a five-point scale.

Main results (or main arguments in the case of critical reviews)

There was a strong positive correlation between the environmental characteristics of the community, attachment to the community, and the restorative experiences, all of which were more than 0.60. In addition, the results of multiple regression analyses showed that, in addition to the general environmental quality, rural nature and social cohesiveness had positive effects on attachment.

Implications for research and practice/policy | Importance and originality of the contribution

The accumulation of "micro-restorative experiences" in daily life is important for people's psychological well-being. In this study, restorative characteristics in the community were shown to affect attachment to the community positively. Since their community is where people spend most of their daily lives, making it more restorative would significantly impact psychological well-being.

IC - (20841) - THE INFLUENCE OF VIRTUAL ENVIRONMENT ON THERMAL PERCEPTION: PHYSICAL REACTION AND SUBJECTIVE THERMAL PERCEPTION ON OUTDOOR SCENARIOS IN VIRTUAL REALITY

Chunya Wu[1,2]; Jinyuan Cui[1]; Xiaowan Xu[1]; Dexuan Song[1,2]

1 - College of Architecture and Urban Planning, Tongji University, Shanghai, 200092, China; 2 - Key Laboratory of Ecology and Energy-saving Study of Dense Habitat (Tongji University), China

Background and objectives

Positive thermal perception can affect users' climate-controlling behavior, then indirectly reduce a building's operational carbon emission. Studies show that some visual elements, such as window sizes and light colors, can influence thermal perception. However, until recently there has been little interest in the interaction of thermal perception and outdoor visual scenarios or natural elements like water or trees, and little quantitative evidence has been found associating visual and thermal comfort. This experiment explores and quantifies the extent to which visual scenarios outdoors affect thermal perception.

Process and methods (for empirical research)

The experiment used a double-blind clinical trial. To eliminate temperature changes, all tests were done in a stable laboratory environment, and scenarios were shown through a virtual reality (VR) headset. 45 participants were divided into three groups randomly, separately watched VR-outdoor scenarios with natural elements, VR-indoor scenarios, and a control scenario of the real laboratory, then finished a subjective questionnaire conducted to evaluate their thermal, environmental and overall perception while their physical data (heartbeat, blood pressure, pulse) was real-time recorded.

Main results (or main arguments in the case of critical reviews)

Results show that visual scenarios could significantly influence thermal perception (Cohen's d between groups $>$0.8). Significant positive correlations were found between key thermal perception index, thermal comfort, and visual perception indexes including visual comfort, pleasantness, and relaxation (all PCCs$\leq$0.01). Outdoor scenarios, with better visual perception, ranks higher average scores (M±SD=1.0±0.7) in thermal comfort than indoor groups (average M±SD=0.3±1.0) while the physical environment remains unchanged.

Implications for research and practice/policy | Importance and originality of the contribution

This connection between thermal and environmental perception can be used in building design. By being visually exposed to pleasing outdoor environments, positive thermal perception will increase, and thus reduce building energy consumption. Designing positive visual environments with outdoor natural elements is not only a requirement of health but also a feasible path toward a sustainable net-zero future.

Global Challenges, Local Impacts
Rethinking governance, sustainability and consumption in light of climate change
05 - 08 JULY '22

IC - (20966) - RESTORATIVE HOUSING QUALITIES BASED ON IMAGINARY SCENARIOS AND ARTS-BASED INTERVIEWS

Mina Sufineyestani Mina Sufineyestani[1]; Harry Smith[2]; Sarah Payne[3]

1 - Heriot-Watt University; 2 - Professor, The Urban Institute, School of Energy, Geoscience, Infrastructure and Society, Heriot-Watt University, Edinburgh, United Kingdom; 3 - Associate Professor, The Urban Institute, School of Energy, Geoscience, Infrastructure and Society, Heriot-Watt University, Edinburgh, United Kingdom

Background and objectives

The home is one of the most significant built environments for residents' health and wellbeing, offering various opportunities to rest, relax and restore. This research aims to understand expectations of an ideal healthy and restorative home based on psychological needs and coping mechanisms.

Process and methods (for empirical research)

Arts-based interviews (n=30) were used to collect data from Edinburgh residents living in different housing types. Interviews took around one hour and were split into two half-hour activities. Volunteers were given a pre-assignment to complete in their own time and return in 2 weeks for the first activity. This activity was flexibly outlined to encourage volunteers' imagination and creativity, as well as provide them with the opportunity to present, describe, or visualise their dream and imaginary house using a variety of media. These interviews were based on imagined scenarios in which they could be either a) in a negative mood, perhaps after an argument or b) mentally fatigued after working hard on a task and finding it difficult to concentrate. Interviews were analysed through content and thematic analysis with Nvivo.

Main results (or main arguments in the case of critical reviews)

The findings demonstrated the importance of providing indoor-outdoor connections, connection to nature, sensory experiences, proximity to sensory stimulations and opportunities for restorative activities based on different psychological needs.

Implications for research and practice/policy | Importance and originality of the contribution

The recent Covid-19 pandemic has raised awareness among designers, planners, and policymakers that how our homes are designed and built can impact our health and wellbeing. Consequently, design guidelines that prioritise resident health and wellbeing are emerging, but they are not yet comprehensive and easy to use. This study is one of the first focusing on exploring relations between healthy home design and needs for restoration based on the current housing development projects and different groups of urban residents using an innovative method. It will provide recommendations for future residential buildings with access to suitable at-home restorative environments.

IC - (20980) - WILDLIFE PRESENCE AND THE RESTORATIVE POTENTIAL OF NATURE SETTINGS

Maria Johansson[4]; Anders Flykt[3]; Jens Frank[2]; Terry Hartig[1]

1 - Uppsala University, Sweden; 2 - Swedish University of Agricultural Scienes, Sweden; 3 - Mid Sweden University, Sweden; 4 - Lund University, Sweden

Background and objectives

The presence of wildlife may contribute to or hinder people's opportunities for psychological restoration. This study aims to provide a nuanced understanding of people's appraisals of a potential wildlife encounter and opportunities for restorative outdoor activities in local natural settings. The research is based on recent frameworks connecting biodiversity with human health and well-being outcomes (Marselle et al., 2021; Johansson et al., 2021).

Process and methods (for empirical research)

The research combines qualitative content analysis of focus groups discussions and a quantitative analysis of a scenario study systematically varying species densities (ongoing). The focus is upon four mammalian species present in Sweden, two controversial (wild boar, wolf) and two less so (squirrel, roe dear). Participants are from three regions with different species composition.

Main results (or main arguments in the case of critical reviews)

Content analyses of the discussions reveal that the participants adapt to potential wildlife encounters in their choice of recreational setting and activity. This adaptation includes both avoidance and approach behaviour. Moments of direct interaction between a person and an animal are reported as vivid memories. In an encounter, people seem to be attentive to animals' movements in the landscape, specific species features and sounds, and their behaviour. This applies to all four of the investigated species. However, personal appraisal of an animal as threatening or unthreatening to humans and human activity appears to affect restorative potential. The role of animal density will be further analysed.

Implications for research and practice/policy | Importance and originality of the contribution

The presence of wildlife should be considered in discussions of the availability of green spaces and their recreational value. The research integrates research on restorative qualities of natur settings and human dimensions of wildlife. The results will inform wildlife management and public health strategies with regard to potential synergies and trade-offs on species conservation and management close to the built environment.

IC - (21382) - RESTORATIVE BENEFITS OF MULTISENSORY EXPERIENCE OF NATURE: THE ROLE OF THERMAL SENSE

Kun Lyu[1]
1 - The University of Sydney

Background and objectives

The design and operation of contemporary workplace is dominated by the goal of achieving thermal sensory neutrality (neither cool nor warm). Huge effort and energy consumption has been invested into the building façade system and air-conditioning system to maintain the indoor environment homogeneous and static. However, this severs building occupants' multisensory connection to the outdoor environment, which potentially will determine the psychological benefits of experience of nature for the building occupants. This research aims to investigate the role of thermal senses and thermal environment in the psychological restorative process in semi-outdoor environment at workplace.

Process and methods (for empirical research)

A multisensory Virtual Reality experimentation system has been created and implemented for the study of psychological benefits of multisensory natural experience. A pretest-posttest experiment was conducted during which subjects' cognitive performance (backward digit span, sustained attention to response task), psychophysiological stress (as indicated by skin conductance level) and perceived mood were measured before and after the environmental exposure. Subjects' sensory pleasantness votes (thermal, visual, auditory) were collected through questionnaire after the environment exposure, along with the perceived restorativeness scale survey. 42 subjects participated the experiment.

Main results (or main arguments in the case of critical reviews)

The results suggested thermal pleasantness is positively associated with the psychological restorative benefits in terms of attention restoration, stress recovery and mood improvement. Thermal pleasure was positively associated with the restorative component of Being-away.

Implications for research and practice/policy | Importance and originality of the contribution

The findings of the research suggests thermal pleasure plays a significant role in the overall restorative process in determining the restorative benefits, including cognitive performance, stress level and mood. Current environmental design practice in workplace needs a rethink to incorporate the thermal experience into the design process.

Hour: 15:15:00
Session: C3 - Saving Resources
Room: Room 1

Theme: Consumption (4)

IC - (21036) - FOSTERING PRO-ENVIRONMENTAL SHOWER BEHAVIOUR THROUGH SMART TECHNOLOGY AND PERSUASIVE COMMUNICATION

Pablo Pereira Doel[1]; Xavier Font[1]; Kayleigh Wyles[2]; Jorge Pereira Moliner[3]; Ian Walker[1]; James Daly[1]
1 - University of Surrey; 2 - University of Plymouth; 3 - Universidad de Alicante

Background and objectives

Depletion of freshwater is a global environmental threat for humanity that is increasing with the climate breakdown. Yet water literacy and conservation are still under-researched. Showering is one of the most water-intensive behaviours, at home and away, also contributing to energy use and carbon emissions. This project aims at fostering pro-environmental shower behaviour using smart technology and persuasive messages.

Process and methods (for empirical research)

Randomised, covert control trials are developed in different contexts (i.e., seven tourism accommodations and two student accommodations), installing in shower cubicles an innovative smart technology that detects showers through different sensors and informs the user in real-time, via a displayed timer, how long they are showering for. In addition, different persuasive messages appealing to personal values are used in combination with the technology. Actual shower duration and time of the day are unobtrusively collected through the technology, measuring the effect of the behavioural interventions.

Main results (or main arguments in the case of critical reviews)

In tourism accommodations, shower duration (N=16,041) is found to be 13.56% shorter when the real-time information is provided compared to the control. The messages further reduce shower duration, with showers 21.27% shorter with the message appealing to selfless values. Similarly, shower duration (N=1,411) in student accommodation is found to be 24.41% shorter with the selfless message. Contextual factors (within and between) have also an effect on shower duration. Further longitudinal experiments are on-going using Greta Thunberg's messaging.

Implications for research and practice/policy | Importance and originality of the contribution

This intervention provides shower duration data about a hidden behaviour (i.e., showering) in different contexts. It enhances the role of appealing to personal values and contextual factors to foster pro-environmental behaviour, contributing to current behavioural change theories. Methodologically, the project uses innovative, smart, technology to provide information in real-time to the user and to measure actual shower behaviour. The project fosters pro-environmental shower behaviour, achieves water and energy reductions, and contributes to the Sustainable Development Goals 6, 7, 12, & 13.

IC - (21106) - PROMOTING PRO-ENVIRONMENTAL BEHAVIORS AT THE WORKPLACE: THE ROLE OF ENVIRONMENTAL CORPORATE SOCIAL RESPONSIBILITY, PERSON-ORGANIZATION FIT AND ORGANIZATIONAL IDENTIFICATION

Ana Patrícia Duarte[1]; Carla Mouro[2]

1 - ISCTE Instituto Universitário de Lisboa, Business Research Unit (BRU-IUL); 2 - ISCTE Instituto Universitário de Lisboa, CIS-IUL

Background and objectives

Organizations' environmental performance has come increasingly under scrutiny given the need for sustainable, low-carbon economies. Workers' pro-environmental behaviors can contribute to greener operations, but research on workplace pro-environmental behaviors is still an emerging field. This study examined how employees' perceptions of environmental corporate social responsibility policies and practices are related to their self-reported voluntary pro-environmental behaviors, including person-organization fit and organizational identification's role as sequential mediators.

Process and methods (for empirical research)

Data were gathered from a non-probabilistic, convenience sample including 178 workers from different organizations via an online survey. The survey included measures selected from the literature and procedures were taken to prevent common method variance.

Main results (or main arguments in the case of critical reviews)

The results, obtained via Process macro, reveal a positive relationship between perceived environmental corporate social responsibility practices and work pro-environmental behaviors, which are both directly and indirectly connected through person-organization fit and organizational identification.

Implications for research and practice/policy | Importance and originality of the contribution

The findings indicate that organizational-level environmental practices promote stronger perceived personal fit between workers and their organization, thereby reinforcing their organizational identification and generating more voluntary workplace pro-environmental behaviors. These two variables' sequential effects had not been previously explored, and the results confirm the importance of examining how multiple mechanisms contribute to greater engagement in voluntary pro-environmental behaviors. At a practical level, the results indicate that managers can encourage their workers' pro-environmental behaviors by making their organization's pro-environmental objectives and activities more explicit to them.

IC - (21126) - WHAT DETERMINES CONSUMERS´ BEHAVIOR IN WATER AND ELECTRICITY MARKETS: IS PRICE AN EFFECTIVE DETERRENCE MECHANISM?

Paulo Ramísio[2]; Lígia Pinto[1]; Marieta Valente[1]
1 - NIPE, Universidade do Minho; 2 - CTAC, Universidade do Minho

Background and objectives

The physical and economical accessibility to secure water and electricity are between the most fundamental societal's needs. Additionally, in many regions, water resources have also a significant, and competitive, role in electricity production. Therefore, a call for a more efficient and sustainable water consumption and electricity use are common in environmental and economic policy.

Understanding the determinants of water and electricity consumption is therefore crucial for designing demand side policies. This paper focuses on households' consumption of water and electricity and whether prices can moderate consumption of these utilities, through eliciting consumers' willingness to accept increases in price without adjusting their consumption. In addition, we examine consumers' willingness to adopt practices to reduce water and electricity consumption.

Process and methods (for empirical research)

A survey for the elicitation of household preferences with respect to water and electricity consumption was designed and administered online to a sample of 400 consumers in Portugal.

Main results (or main arguments in the case of critical reviews)

Overall, preliminary results show that:

- consumers engage more frequently in saving electricity than water;

- more consumers consider price an important determinant of consumption with respect to electricity consumption than water;

- most consumers (50,75%) consider their water price as fair, while 45% consider it high. On the other hand, 76% consider electric prices high, and only 23% consider it fair.

- consumers would be willing to accept, on average, a price increase of 35% in their water bill without adjusting consumption, while that percentage is 28% for the case of electricity.

Implications for research and practice/policy | Importance and originality of the contribution

In the context of increasing uncertainty in water availability, and the pressure on renewable energy sources for electricity production, it is of utmost importance to incentivize an efficiency behavioral change. Our results show that price alone is likely to be a poor instrument for policies aimed at increasing the sustainability of water and electricity consumption.

IC - (21317) - LOOKING OVER THE WALL: A LITERATURE REVIEW OF ENERGY CONSUMPTION INTERVENTIONS MAPPED ON A DOMAIN-INDEPENDENT NUDGING MECHANISMS FRAMEWORK.

Peter Conradie[1]; Bram Van Acker[1]; Koen Ponnet[1]
1 - Institute for European Energy and Climate Policy

Background and objectives

Studies within social sciences and environmental psychology point towards the potential of behavioural interventions to encourage households to reduce energy consumption. However, a limited number of nudging mechanisms have been corroborated extensively, whereas other effective mechanisms are largely overlooked.

Process and methods (for empirical research)

This study reviews forty-seven intervention studies conducted over the last 20 years targeting energy conservation behaviour of households through nudging mechanisms. It differs from past literature reviews by mapping the studies onto the framework of Caraban et al. (2019), consisting of six categories: facilitate, confront, deceive, social influence, fear, and reinforce. Best practices, issues, and leveraged cognitive biases are reported per category in this paper.

Main results (or main arguments in the case of critical reviews)

The vast majority of reviewed studies implemented reinforcement nudges, with feedback standing out above any other nudging type. Traditionally, feedback serves as the basis in treatment groups, which is further amended with other nudging types, such as social comparison, normative appeal or goal setting. Social influence nudges are the second most evaluated category. These primarily leverage the herd-instinct bias, whereas the spotlight effect, which is leveraged by public rankings and commitments, has only been evaluated in very few studies. In contrast to these two nudging categories, the other categories are almost uncharted territory in energy-reducing nudging, although particular types have been found effective in other domains. Recommendations are given to inform future interventions about novel yet effective nudging mechanisms.

Implications for research and practice/policy | Importance and originality of the contribution

<u>About NUDGE</u>

The Horizon2020 project NUDGE aspires to systematically assess and unleash the potential of behavioural interventions towards achieving higher energy efficiency, paving the way to the generalized use of such interventions as a worthy addition to the policy-making toolbox.

NUDGE is set up to analyze people's behaviour and design and test nudging interventions in five EU Member States in households, energy communities and schools. All interventions are rooted in fundamental principles of behavioural science, using a broad range of methodologies and tools, including field experiments and surveys to assess the impact of interventions coupled with randomized control trials to assess effectiveness. Most of the research and experimentation is also focused on the formulation of policy recommendations.

Hour: 15:15:00
Session: G4 - Symposia - Social housing upgrading considering residents' needs: how to cope with global challenges at the local level in four different cultural contexts
Room: Room 2
Theme: Governance (4); Governance (1)

(20982) - SOCIAL HOUSING UPGRADING CONSIDERING RESIDENTS' NEEDS: HOW TO COPE WITH GLOBAL CHALLENGES AT THE LOCAL LEVEL IN FOUR DIFFERENT CULTURAL CONTEXTS

Sigrun Kabisch[1]; Janine Pößneck[1]; Clarine Van Oel[2]; Patricia Tzortzopoulos[3]
1 - Helmholtz Centre for Environmental Research, Dept. Urban and Environmental Sociology, Leipzig, Permoserstraße 15, GErmany; 2 - Delft University of Technology, department of Architecture and the Built Environment; 3 - Innovative Design Lab, School of Arts and Humanities, University of Huddersfield, UK

Background and objectives

Current systems of Social Housing (SH) delivery are relatively slow in incorporating the dynamics of social and technological change. The existing stock of SH offers a unique opportunity to intervene through innovation to alleviate social costs and in many countries housing deficits while improving sustainability performance and general comfort conditions for low-income tenants and owners. The elevation of SH to sustainable standards is urgently needed, in view of challenges such as climate and demographic changes. Social costs represent strong non-economic arguments for the introduction of change in existing SH. Housing quality, affordability, and project location are closely related to social challenges such as stress-related health risks, isolation, negative social behaviour, neighbourhood instability, and abandonment. Inadequate housing conditions and a lack of adjustments to the dynamics of ways of living affect wellbeing at both the dwelling and the community levels in SH neighbourhoods. However, upgrading programs can also lead to social exclusion, gentrification, and increased social polarization of residential areas. Thus, social housing estates can experience further stigmatization. Therefore, cautious planning and execution of renovation, refurbishment in terms of upgrading of the SH-stock, and participation of residents become essential. To pursue this aim, the living lab approach will be used.

Based on the transatlantic research project uVital dedicated to this topic, experiences and insights of four different case study areas will be presented and compared. The aim is to check the transferability of local solutions and insights as well as the limitations due to the specific cultural context.

The symposium will begin with an introduction to the research project and its main objectives. Then, four presentations from four case study areas in four countries (Brazil, UK, Netherlands, Germany) will describe the local findings and integrate them into a common project approach. All four presentations address three questions: a) What is your specific design for studying SH upgrading? b) How do you explore the differentiated needs of residents in the upgrading process? c) Which particular challenges did you face and which surprising issues have emerged? Afterward, the conveners will formulate "lessons learned" in terms of research content, methods, and international comparative studies in times of pandemic and invite the audience to discuss the outcome and insights of the symposium.

Significance for the advancement of People-Environment relations

The symposium delivers new insights into interdisciplinary and international collaboration in a highly topical research field of people-environment studies. It provides very appropriate methodological and empirically sound research results with regard to global challenges and their local impacts. The symposium will discuss experiences and recommendations for comprehensive research projects in times of the pandemic.

IC - (20998) - SOCIAL HOUSING UPGRADING THROUGH LIVING LABS: A BRAZILIAN EXAMPLE

Daniel De Carvalho Moreira[1]; Arivaldo Denis Granja[1]; Marcelle Bridi[1]; Regina Ruschel[1]; Elisa Muianga[1]; Vanessa Gomes Da Silva[1]; Clara, Pereira[1]; Doris, Kowaltowski[1]; Mariela Mezalira[1]
1 - University of Campinas - UNICAMP

Background and objectives

Contextual aspects play key roles in Social Housing (SH) upgrading. Energy efficiency governs European programmes. Brazilian official upgradings are concerned with maintenance without a mandate for interventions, thus educational gains through multi-agent discussions become critical. Our study is part of the uVITAL project, focused on user values as a driving force to improve SH upgrading programmes.

Process and methods (for empirical research)

Our research approach is based on Living Lab (LL) experiments. This paper refers to the second phase of the Brazilian LL of uVITAL: a neighbourhood in the city of Campinas. Transformations occurred here, signaling desires for upgrading. The diagnosis LL phase prioritized upgrading interventions. The co-design LL phase addresses priorities with appropriate tools. A guidance/implementation phase will consolidate the actions and recommendations for implementation. The specific LL design should develop a lasting network with housing users, public administration (housing and social assistance departments), private construction companies, NGOs, and the university. This network is envisioned as a platform to make dwellers' needs visible and engage interested parties in finding creative solutions for all stakeholders. The case study peculiarities should be generalizable to similar contexts.

Main results (or main arguments in the case of critical reviews)

The first LL phase is concluded. Co-designed solutions will range from public area urban design, with attention to waste management, sustainability, and environmental comfort of homes. A range of methods to foster stakeholder engagement is being tested to identify and handle the different needs of all participants. Social engagement needs stimulus and applied social science methods need creative applications, with technological developments as key interest stimulators in LL activities. The pandemic increased research challenges, being solved however through step-by-step innovative implementations. Lessons learned are that participatory research needs careful planning, positive first engagement, establishing trust, and real results for all.

Implications for research and practice/policy | Importance and originality of the contribution

Viable solutions based on scientific knowledge, reflexive, transparent bottom-up methods, and open network platforms for SH upgrading are innovative contributions.

IC - (21015) - LIMITATIONS OF RESIDENT PARTICIPATION IN SOCIAL HOUSING UPGRADING – THE EXAMPLE OF A GERMAN HOUSING ESTATE

Janine Poessneck[1]; Sigrun Kabisch[1]

1 - Helmholtz Centre for Environmental Research GmbH (UFZ), Department of Urban and Environmental Sociology, Leipzig - Germany

Background and objectives

The call for resident participation in social housing (SH) upgrading faces a pitfall: While the rental housing stock in Germany requires upgrading in light of climate and demographic change, the residents' needs and concerns receive only limited attention.

The overall objective is to find out how to achieve appropriate resident participation in the SH upgrading process in order to make their voices heard. The residents in the German case study are mainly elderly people with low incomes or pensions. Many of them live alone in small rental apartments. The Covid-19 pandemic amplifies social isolation.

Process and methods (for empirical research)

The research design focuses on the residents' values and needs in the refurbishment process. Despite the Covid-19 contact restrictions, we could conduct interviews with residents, but also with representatives of the housing company, the construction firms and craftsmen. This was part of the intended living lab. However, it became clear that residents' involvement in building refurbishment is limited. Therefore, the next steps will be to put greater emphasis on redesigning the residential environment outside the buildings together with the residents.

Main results (or main arguments in the case of critical reviews)

We have identified obstacles and dilemmas related to the upgrading process. From the residents' perspective, this includes different burdens during the construction work (lack of privacy, exposure to dirt and noise) and concerns by low-income households about rent increases after upgrading. Apart from information exchange with the housing company in advance of the refurbishment, we could not find evidence for active participation in the process.

Implications for research and practice/policy | Importance and originality of the contribution

Sociological research on housing upgrading in SH estates requires a tailored methodical design to discover both realistic opportunities and limitations of resident participation.

The contribution is embedded in the symposium that presents an international and interdisciplinary research project. By introducing the German approach, which is sociologically oriented, limitations of resident participation become obvious.

IC - (21052) - LIVING LABS IN SOCIAL HOUSING UPGRADES: THE CASE OF A PILOT ENERGY RETROFIT PROJECT IN THE UK

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1 - Innovative Design Lab, School of Arts and Humanities, University of Huddersfield, UK

Background and objectives

There is a need to improve the energy efficiency of the existing UK's social housing stock through upgrades or retrofits / refurbishments. Users' participation and engagement in upgrades is fundamental for successful outcomes. However, in practice, end-users (i.e., tenants or house occupiers) are rarely consulted during design and their needs are often overlooked.

Process and methods (for empirical research)

This presentation reports preliminary findings of an ongoing Living Lab (LL) located in West Yorkshire (UK), involving the retrofit of 8 social houses to improve their energy efficiency. Different actors involved in the project (e.g., local authority, designers, consultants, and end-users) were involved in the LL. The focus of the LL is to identify users' values and support shared understanding between stakeholders. The LL enables collaboration and involves the use of diverse tools (boundary objects) such as a Virtual Reality (VR) immersive cave, BIM models, Value Cards and Hierarchical Value Maps (HVMs). Data was collected through workshops (the Living Labs), interviews, observations, and participation in project meetings.

Main results (or main arguments in the case of critical reviews)

As the retrofit project is ongoing, so is the LL, findings highlight preliminary contributions for LL research and practice. They relate to the importance of creating a collaborative and transparent environment that allows appropriate communication and discussion between participants, in which end-users can express their perceptions and real needs. The main challenges observed to date relate to: (i) difficulties in ensuring teamwork formation and Living Lab initiation due to restricted face-to-face contact because of Covid-19; (ii) establishing adequate communication with project stakeholders and particularly with end-users; and (iii) difficulties related to engagement which affected the research workflow.

Implications for research and practice/policy | Importance and originality of the contribution

This research is part of a larger international network, therefore next steps involve the development of further workshops aiming to evaluate how effective tools are to facilitate the elicitation of requirements and values, as well as to improve the LL methodology itself.

IC - (21127) - DEVELOPING A LIVING LAB TO IMPROVE TENANT PARTICIPATION IN RENOVATION PRACTICES

Clarine Van Oel[1]; Jelle Koolwijk[1]; Huu Dat Nguyen[2]; Arno Freeke[2]; Chris Benning[1]; Meloek Mlihi[1]

1 - Delft University of Technology, department of Architecture and the Built Environment; 2 - Delft University of Technology, New Media Centre VR-Zone

Background and objectives

Sustainable renovation of homes is a necessary step to meet the EU goals of energy efficiency. In social housing, sustainable renovation requires the consent of tenants as typically the rents will be increased upon renovation. Tenant acceptance is thus of great relevance for the success of social housing upgrading (Blomsterberg & Pedersen, 2015).

In this context, we use the concept of a Living Lab as a means to introduce immersive visualization design models to communicate renovation measures to tenants. Living Labs were created as a social innovation to improve participatory processes. Therefore, we develop the project in close collaboration with the housing association and the involved contractor using a practice-based approach. As a first step, in this part of the project we aim to gain insight into how we are to understand the concept of participation. Second, we aim to investigate how virtual reality as a boundary object can support participatory design processes in Living Labs.

Process and methods (for empirical research)

We conducted (partly online) in-depth interviews with 6 professionals involved in the Living Lab, and are complementing these interviews with in-depth interviews on empowering social tenants from another Living Lab. Data was recorded as audio, and will be analyzed in Atlas.ti, using an interpretive lens.

Main results (or main arguments in the case of critical reviews)

Participation of social tenants in renovation processes is enforced by Dutch law. Interviewees defined participation in different ways, emphasizing either communicative aspects or empowering aspects as a core element. Outcomes of additional interviews will be used to investigate to what extent virtual reality goes beyond mere communication and empower tenants in their contact with the housing association and the contractor and helped tenants to master their situation.

Implications for research and practice/policy | Importance and originality of the contribution

Based on the interviews we proposed to use Cross Reality to enable social tenants to participate in redesigning their communal garden as a means to enhance social cohesion, and to support their well-being.

Hour: 15:15:00
Session: S6 - Communication & Social media
Room: Room 3

Theme: Sustainability (4); Consumption (1)

IC - (20902) - SOCIAL MEDIA INFLUENCERS PROMOTING SUSTAINABLE CONSUMPTION: THE EFFECT OF ARGUMENT QUALITY AND DYNAMIC NORMS ON POST CREDIBILITY AND PERSUASIVENESS

Ágnes Buvár[1]; Ágnes Zsila[2]; Gábor Orosz[3]
1 - Institute of People–Environment Transaction, ELTE Eötvös Loránd University, Budapest, Hungary; 2 - Institute of Psychology, Pázmány Péter Catholic University, Budapest, Hungary; 3 - Univ. Artois, Univ. Lille, Univ. Littoral Côte d'Opale, ULR 7369 -URePSSS - Unité de Recherche Pluridisciplinaire Sport Santé Société, Sherpas, France

Background and objectives

Although social media has numerous advantages, these networks are loosely controlled, which can raise concerns regarding content credibility. Social media influencers, although not experts, can also encourage sustainable consumption. Previous studies indicated that both argument quality and the inclusion of dynamic norms can affect the persuasiveness of a message that is positively related to message credibility. This study investigates whether stronger arguments such as reference to a well-known sustainability expert and the presence of dynamic norms affect perceived credibility and persuasiveness.

Process and methods (for empirical research)

We designed a 2 (control vs strong arguments) x 2 (control vs dynamic norm) online mixed-method experiment. The sample comprised 386 participants (M_{age}=22.0, 71.9% female). A real Instagram post about reducing the consumption of single-use plastic was selected, posted by a lifestyle-fitness influencer, which was modified to correspond to the experiment's goals. Highly reliable open-ended and Likert measures were used to assess the credibility and persuasiveness.

Main results (or main arguments in the case of critical reviews)

Spontaneously mentioning that the post is not credible was influenced by the interaction of argument quality and dynamic norms: dynamic norms improved the credibility if the message lacked strong arguments. We also found a robust positive main effect of argument quality regarding quantitative assessment of post credibility and persuasiveness.

Implications for research and practice/policy | Importance and originality of the contribution

Stronger arguments improve the credibility and persuasiveness of a social media influencer's post promoting sustainable consumption. However, the dynamic norms can improve the post's credibility without strong arguments.

This study contributes to the emerging field of influencers' sustainability communication. This pioneering study simultaneously examines the effect of argument quality and dynamic norms on the credibility and persuasiveness of their posts.

IC - (20916) - VISUALISING COP26: HOW COP26 WAS VISUALLY COMMUNICATED BY UK MEDIA

Sylvia Hayes Sylvia Hayes[1]
1 - University of Exeter

Background and objectives

The 2021 Conference of Parties (COP26) in Glasgow was a significant moment in the fight against climate change, and the public mostly get their information about COPs from news media. Visual representations of climate change issues have become an important area of study in recent years (O'Neill, 2019; Pearce et al., 2020). While research exists on the (textual and visual) frames used in media coverage of COPs (Wessler et al., 2016), there have been recent shifts in the visual representation of climate issues, particularly climate protest (Hayes & O'Neill, 2021). This study aims to identify the visual discourse of COP26 in UK news media, and to understand the role that photographer experiences and photo and wire agencies play in constructing that discourse.

Process and methods (for empirical research)

This study takes a mixed-methods qualitative visual content approach to analyse 1,335 images collected from eight leading UK newspapers over the duration of COP26. First, the denotative content of images was coded according to a codebook adapted from Wessler et al. (2016). Then, particularly common or salient visual themes were analysed in more detail using visual critical discourse analysis (Rose, 2016). Leading wire agency photographers at COP26 were also interviewed.

Main results (or main arguments in the case of critical reviews)

Findings indicate a consistent visual discourse of COP26 reproduced by leading UK news organisations (though ideological differences exist), with depictions of people being most common. In particular, experiences of photographers (including access issues and professional relationships) and the power of wire agencies in constructing visual discourse is discussed.

Implications for research and practice/policy | Importance and originality of the contribution

This study provides the first empirical analysis of the images used by UK media publications to visually represent COP26, and, unlike most studies in this area, takes a broader approach to understanding visual discourse, studying not only the images themselves but also the photographers and, crucially, the photo and wire agencies which are responsible for the vast majority of news images.

IC - (21109) - MONITORING PSYCHOLOGICAL DISTANCE AND DENIAL IN SOCIAL MEDIA: A MACHINE LEARNING APPROACH TO STUDY RISK PERCEPTION RELATED TO ENVIRONMENTAL AND HEALTH CRISIS

Valentina Rizzoli[1]; Laura Soledad Norton[1]; Jessica Neri[2]; Mauro Sarrica[1]

1 - Department of Communication and Social Research, Sapienza University of Rome; 2 - Department of Philosophy, Sociology, Education and Applied Psychology, University of Padua

Background and objectives

Several studies shed light on the role of denial and psychological distance as barriers to implementing effective coping behaviors to face risks, such as environmental (cf. climate change) and health (cf. Covid-19 pandemic) crisis-related risks. Furthermore, literature showed that climate change and Covid-19 pandemic can be considered two sides of the same urgent crisis, involving various (and overlapping) types of risks, even if perceived differently, thus emphasizing the necessity of a systemic approach to risk management (cf. multi-hazard perspectives).

While the role of these processes as psychological barriers is already well known, little is known about how they are expressed in the natural language in social networks. Social media, by enabling communication at different levels (i.e., societal and contextual), serve as a space for the construction of risk perception. The aim of this contribution is to present a tool that enables the identification of psychological distance and denial in the interactions that occur online. This will allow, on one hand, to capture how risk is constructed, and on the other hand, to implement effective communication strategies promoting, ultimately, social change.

Process and methods (for empirical research)

Two corpora of Italian tweets related to the Covid-19 pandemic and climate change will be examined by a team of researchers to: I) identify the linguistic features expressing the processes of denial and psychological distance; II) create an analyzed corpus and test its effectiveness to detect the same processes through the application of machine learning algorithms for classification (Support-Vector Machines and Random Forest).

Implications for research and practice/policy | Importance and originality of the contribution

The results will be discussed focusing on the use of the proposed tool as a monitoring strategy and as a starting point for the implementation of effective communication which take in consideration the community within which the same processes of risk construction are generated.

IC - (21120) - OVERCOMING DISTANCE: EFFECTS OF MESSAGE FRAMING ON PARTICIPANTS' WILLINGNESS TO PAY FOR SUSTAINABLY PRODUCED CHOCOLATE

Hannes Campe[1]; Shirin Betzler[1]; Ann-Kathrin Koessler[2]; Karsten Müller[1]; Stefanie Engel[1]
1 - Osnabrück University; 2 - Leibniz University Hannover

Background and objectives

Social and ecological aspects in purchasing decisions are becoming increasingly important for consumers, but globalized value chains create social and cultural distance between consumers and producers. Thus, the environmental and social impact of consumer decisions are becoming more complex and therefore less comprehensible for consumers. However, companies lack the knowledge to communicate sustainability information to consumers effectively. Therefore, this study investigates how information on cocoa production in Ghana can be communicated to motivate socially and ecologically sustainable chocolate consumption.

Process and methods (for empirical research)

A written text manipulation in a 2x2 factorial design was developed. To manipulate a gain vs. loss frame, positive consequences of sustainable cocoa farming or negative consequences of non-sustainable cocoa farming in Ghana are made explicit. To manipulate proximity between producer and consumer, the messages focus on a subjective report by a Ghanaian cocoa farmer or an objective documentary-like report by an anonymous third party. Effects on participants' willingness to pay (WTP) a premium for a chocolate bar with fairtrade and organic certification in comparison to a chocolate bar without certification were examined.

Main results (or main arguments in the case of critical reviews)

Results of the manipulation check indicate that the personal message frame induced significantly higher perceived proximity to the producer than the objective message frame, as measured by a self-developed scale of perceived proximity. Also, in the loss frame condition, the consequences of cocoa farming were perceived as significantly more negative than in the gain frame condition. Thus, the manipulation can be regarded as effective. However, preliminary ANOVA results for WTP did not indicate any significant effects of proximity or gain/loss framing. The possibility of ceiling effects is discussed.

Implications for research and practice/policy | Importance and originality of the contribution

Examining the effects of information regarding distant producers on consumers' WTP is relevant for the design of product packaging, websites or campaigns, which aim to promote consumer decisions in favor of products that meet ecological and social standards.

IC - (21189) - CHANGE IN BAT ATTITUDES: RESULTS BASED ON LONGITUDINAL CITIZEN SCIENCE PROJECT AMONG HIGH SCHOOL STUDENTS

Piia Lundberg[1]; Ann Ojala[2]; Thomas Lilley[3]; Annukka Vainio[4]

1 - University of Helsinki; 2 - Natural Resources Institute Finland (Luke); 3 - Finnish Museum of Natural History; 4 - Helsinki Institute of Sustainability Science (HELSUS)

Background and objectives

Bats have significant functions in the ecosystem, and they provide humans with different types of ecosystem services. They make use of human-made buildings and infrastructure, for example, as their day roosts, which makes them our secretive neighbors. However, because of several misconceptions, bats are generally often negatively evaluated. Therefore, a more in depth understanding of human perceptions towards bats are needed to be able to reduce the negative perceptions towards this species group in the future.

Process and methods (for empirical research)

We invited Finnish upper secondary school students (16-18 yo) to participate in a citizen science project to collect acoustic data on bats during the summers 2019 and 2020. Before initiating project and after participating in the acoustic data collection, students responded to our online survey about their opinions towards bats and their knowledge of bats. A new "bat distance scale" based on Bogardus social distance scale was used to measure how close a respondent would physically allow bats and the general knowledge of bats was measured using a four-question scale. Our aim was to study whether the preferred physical distance of the participant to bats changes during participating in the project and whether participation increases their knowledge of bats.

Main results (or main arguments in the case of critical reviews)

A total of 114 students responded to both surveys. We used Wilcoxon signed-rank test to compare their bat distance scores and the bat knowledge scores before and after participation in the citizen science project. Wilcoxon signed-rank test revealed statistically significant increase in the bat knowledge scores after participating in a citizen science project, with moderate effect size. The bat distance scores decreased during participation in the project, with small effect size.

Implications for research and practice/policy | Importance and originality of the contribution

This was the first study to investigate people's perceived physical distance to animals. Our study suggests that participation in a citizen science project is associated with increased knowledge and more positive attitudes.

Hour: 15:15:00
Session: S7 - Mobility
Room: Room 4

Theme: Sustainability (5)

IC - (20797) - BEYOND THE VULNERABLE ROAD USER: AN ECOLOGICAL MODEL OF ROAD USER VULNERABILITY

Catherine Naughtie[1]; Ian Walker[2]
1 - University of Bath; 2 - University of Surrey

Background and objectives

The need to minimise transport emissions has inspired policies to encourage active travel and micro-mobility. However, achieving widespread adoption is challenging as these road users are at greater risk of injury and death than other modes and report high levels of perceived vulnerability. This vulnerability means that many people avoid using these modes or do not sustain their use long-term. Yet, despite its importance to research, 'vulnerability' remains largely a common-sense construct, with no firm definition. This makes designing and evaluating interventions to minimise vulnerability difficult. The objective of this research was to address this knowledge gap by developing the first comprehensive conceptual model of road user vulnerability.

Main results (or main arguments in the case of critical reviews)

We identified limitations in understandings of road user vulnerability in research and policy literature. These include reductionism (reducing vulnerability to physical risk), ambiguity (the lack of a consistent conceptual definition of vulnerability), and framing (presenting vulnerability as an intrinsic attribute of the road user). Based on these findings, we developed an "ecological" model of vulnerability. This model decomposes vulnerability into state, trait, and environmental components. Here, vulnerability is not a static attribute of the individual. Instead, it is a dynamic construct that emerges from interactions between individuals and their environments. This model provides a framework to analyse the impact of different factors on the expression of vulnerability.

Implications for research and practice/policy | Importance and originality of the contribution

This approach to conceptualising vulnerability has important benefits for research and practice. It disambiguates different forms of vulnerability, meaning we can design targeted interventions to address the root causes while understanding these might vary across people and across time. It improves the clarity, consistency, and comparability of discussions of vulnerability, differentiating between vulnerabilities that can be addressed at different levels. Consequently, this new conceptual framework is a valuable analytical tool for researchers and practitioners working on active travel, road safety, and sustainable mobility.

IC - (20940) - DISENGAGEMENT AND REENGAGEMENT IN THE MOBILITY STRATEGIES OF OLDER ADULTS: WHAT LESSONS FOR SUSTAINABLE MOBILITY AND TRANSPORTATION

Michel Després[1]
1 - School of Urbanism and Landscape architecture

Background and objectives

In the face of rapid population aging, there is a growing pressure on cities to makes sure older adults can retain their autonomy regarding daily mobility, if possible, to minimize the financial, human and ecological costs of at-home services, deliveries and caregivers. To advance the ecological transition to sustainable mobility, it appears crucial to provide age-friendly solutions to facilitate mobility in various urban environments and help older adults to maintain their autonomy for as long as possible.

Older adults aren't passive in the aging process and are known to develop strategies to adapt to difficulties impacting their daily mobility. Inspired by ecological perspectives, we studied how daily activities of various profiles of individuals changes over the life course following patterns of "disengagement or reengagement"

Process and methods (for empirical research)

To this end, the research used data from 34 semi-directed interviews and 19 go-along with adults aged between 55 and 93 years living in a continuum of urban to suburban environments in Montréal metro area, as part of a doctoral thesis. Interviews and go-along focused on the place attachment and daily activities of respondents, as well as the change of their daily travels over the years.

Main results (or main arguments in the case of critical reviews)

The results of these interviews, which followed a previous questionnaire survey (n=153) and spatial analysis of residential environments as part of the doctoral thesis, show how mobility strategies vary according to residential aspirations and lifestyles for both age groups, and the large role played by social support system in adaptation strategies. However, results also show how life in different residential environments can provide options for "re-engagement" in daily activities following events of disengagement

Implications for research and practice/policy | Importance and originality of the contribution

In a perspective of advancing the ecological transition, the paper concludes that differential solutions appear necessary to provide sustainable mobility and transportation resources adapted to different lifestyles and urban environments, for older adults and everyone else.

IC - (21111) - COVID-19: BUMP IN THE ROAD OR REAL TURNING POINT ON THE WAY TOWARDS MORE SUSTAINABLE MOBILITY?

Stefanie Ruf[1,2]; Daniel Zwangsleitner[1]

1 - Associate Professorship of Urban Design, School of Engineering and Design, TU Munich; 2 - Chair of Diagnostics and Assessment, Faculty of Psychology, TU Dresden

Background and objectives

Living in an urban area is attractive due to a variety of social, educational or economic opportunities – at the same time, it has become apparent in recent years that cities, and within cities the mobility sector in particular, account for a large share of global CO_2 emissions and the acceleration of the climate crisis. Additionally, urban mobility is highly unjust, with a disproportionate amount of space being dedicated to motorized traffic. Times of crises show a potential to disrupt deadlocked patterns of mobility behavior, raising the question as to whether the Covid-19-pandemic has the potential for a shift towards more sustainable mobility, or whether the preliminary results that so far have shown some changes towards more sustainable modes of transport will not hold in the longer term.

Process and methods (for empirical research)

The present study is part of the project "Transformative Mobility Experiments (TrEx)" within the Munich Cluster for the Future of Mobility in Metropolitan Regions and is funded by the BMBF. A total of 3 rounds of focus group interviews with 12 expert stakeholders each will be carried out in the urban area of Munich, Germany. It will be investigated what opportunities and challenges disruptive interventions like pop-up bike lanes or travel restrictions that were implemented during the Covid-19 pandemic presented and what impact they had on people's mobility.

Main results (or main arguments in the case of critical reviews)

The results will provide information about existing expert knowledge on the (perceived) democratic legitimacy and justness and of such interventions, attitudes towards the temporality or permanence of the interventions, and adaptability beyond the pandemic.

Implications for research and practice/policy | Importance and originality of the contribution

The study will help understand ways in which crises like a global pandemic can (and cannot) be agents for systemic change in the mobility sector. (Note: At the time of abstract submission, the work is still ongoing. However, it will be completed before the conference.)

IC - (21129) - DESIGNING CITIES FOR SUSTAINABLE MOBILITY MINDSETS

Ana Cláudia Proença[1]; Cecília Silva[1]; José Palma-Oliveira[2]

1 - Faculty of Engineering of the University of Porto; 2 - Faculty of Psychology of the University of Lisbon

Background and objectives

The concept of sustainability in mobility has gained a new momentum when faced with a new pandemic challenge that required cities to adapt to a new reality of confinement and limited mobility. Issues such as traffic congestion, air and noise pollution and resulting climate change and health problems that were once pushing for more sustainable means of transportation to be prevalent in cities, may now suffer a setback when social distancing is a new norm for personal safety.
This thesis aimed to contribute to the discussion of this problem by assessing the impact of different urban designs on the mobility mindsets of the population and how these mobility mindsets in turn affect dialogue and collective problem solving when dealing with the allocation of public space towards different modes of transportation.

Process and methods (for empirical research)

Through an online survey open for the Portuguese population, individual and family interviews and mindset segregated workshops, it was possible to identify the main design characteristics associated with each of the four mindsets, as well as their tolerance of others.

Main results (or main arguments in the case of critical reviews)

It was found that Fixed and Car-Oriented Mindsets (24% of survey respondents) resided in areas with few attributes that efficiently supported other alternatives of mobility and, consequently, instilled a denigrated vision of users of those alternatives, along with a lower acceptance of new sustainable policies that affected their day-to-day mobility. Growth and Alternative Modes-Oriented Mindsets (19%) tended to live in city centres with a high level of accessibility and a high diversity and quality of public spaces.

Implications for research and practice/policy | Importance and originality of the contribution

This resulting insight of how the environment affects the way we think, decide and support sustainable modes of transportation can help tailor municipalities' mobility strategies, not only while facing emergent challenges like a pandemic, but also long-term problems such as climate change, both being threats to the health and sustainability of the future.

IC - (21185) - THE INFLUENCE OF THE NEIGHBOURHOOD BUILT ENVIRONMENT ON THE OUTDOOR MOBILITY OF PEOPLE WITH VISUAL AND HEARING DISABILITIES: A SCOPING REVIEW

Atiya Mahmood[1]; Farinaz Richtehgaran[3]; Kishore Seetharaman[2]; Hailey-Thomas Jenkins[2]; Alison Chung[4]

1 - Associate Professor, Gerontology Department, Simon Fraser University, Vancouver, Canada; 2 - PhD. Candidate, Gerontology Department, Simon Fraser University; 3 - MA Student, Gerontology Department, Simon Fraser University; 4 - Research Assistant, Gerontology Department, Simon Fraser University

Background and objectives

The Convention on the Rights of Persons with Disabilities emphasizes creating equitable access to the outdoor environment, underscoring implications for the health and quality of life of people with disabilities. Making neighbourhoods accessible requires attention to the diverse needs and challenges of people with different types of disabilities. The paucity of literature reviews on neighbourhood accessibility for people with sensory disabilities prompted us to conduct a scoping review on the influence of the neighbourhood built environment on the outdoor mobility of people with i) low vision and blindness, and ii) deafness and hearing loss.

Process and methods (for empirical research)

Following the six-stage process outlined by Levac et al. (2010) for conducting scoping reviews, peer-reviewed journal articles, book chapters, and conference papers from eight databases, published in English from 2000 to 2020, were reviewed using Covidence. Articles were independently screened by graduate research assistants at the title-and-abstract and full-text article stages, respectively. Data from 57 articles was extracted, tabulated, and coded to identify the extent of literature on this topic, and key substantive findings. Preliminary findings were validated through a series of online consultations with two people with sensory disabilities, who are disability advocates and/or working with a local non-profit disability organization.

Main results (or main arguments in the case of critical reviews)

Preliminary findings suggest neighbourhood environmental aspects/features such as, street crossings (traffic signals, tactile surfaces, auditory cues), sidewalks (temporary/permanent barriers, width), traffic safety (detecting and negotiating vehicles and cyclists), street furniture (seating, transit stops, lighting), landmarks and signage, and land-use (mixed-use, open spaces) are important for the outdoor mobility of people with visual and hearing disabilities.

Implications for research and practice/policy | Importance and originality of the contribution

The findings are being used to adapt an existing user-led neighbourhood environment audit tool to enable people with visual/hearing disabilities to evaluate the outdoor built environment for walkability/wheelability issues. This tool will help municipalities systematically consult stakeholders with lived experience to plan and implement city-wide accessibility initiatives.

Hour: 15:15:00
Session: S8 - Education & Citizenship
Room: Room 5

Theme: Sustainability (4)

IC - (20799) - DESIGNING A SIMPLE AND INTERVENTION-FRIENDLY MODEL OF ENVIRONMENTAL CITIZENSHIP

Mykolas Simas Poškus[1]
1 - Vytautas Magnus University

Background and objectives

Environmental activism is becoming increasingly more popular, especially with young people and young adults. At the same time, there is a resurgence in research directed at understanding environmental citizenship, how it develops and how to best educate people for it. One of the more prominent expressions of environmental citizenship is youth environmental activism, which can be a vector for positive social and political change, provided that activists have sufficient factual knowledge and seek evidence-based solutions. There is, however, a lack of a simple framework or a model that would enable the study of these processes from a developmental perspective or in intervention contexts.

Process and methods (for empirical research)

A convenience sample of 267 young adults from 18 to 40 years of age participated in the study by filling in a questionnaire that assessed various components that comprise a model of environ-mental citizenship and filled in measures of the big five personality traits and political orientation.

Main results (or main arguments in the case of critical reviews)

The results uncovered a functioning data-driven model that can be used as a change model in interventions as well as in longitudinal research. The data uncovered a mismatch between factual knowledge regarding environmental issues and participants' perceived competence regarding these issues, indicating that their environmental citizenship might be more influenced by their subjective beliefs, rather than factual knowledge.

Implications for research and practice/policy | Importance and originality of the contribution

Based on the data, a gap in environmental education and education for environmental citizenship was identified, namely – the mismatch between real and perceived competence regarding environmental issues. This gap provides a practical starting point for interventions that can be addressed through education for environmental citizenship. By addressing this gap, we could move closer toward more evidence-driven civic participation and more sustainable solutions to our current environmental problems.

IC - (21157) - THE ROLE OF INTERGENERATIONAL TRANSMISSION OF BIOSPHERIC VALUES IN YOUNG ADULTS' PRO-ENVIRONMENTAL BEHAVIORS AND THEIR PSYCHOSOCIAL MECHANISMS

Massimiliano Scopelliti[1]; Daniela Barni[2]; Elena Rinallo[1]

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Background and objectives

The global community has become more aware of the seriousness of the environmental situation, and, as a consequence, psychological research has changed its focus: from the quantifications of the damages caused by man to the study of the inter- and intra-individual dynamics which inspire pro-environmental vs. harmful behaviors. In this regard, the psychological literature has identified several determinants of Pro-Environmental Behavior (PEB), such as values, attitudes, and norms, also considered in comprehensive models (e.g. the Value-Belief-Norm Theory). Less investigation has been devoted to the role of emotions and identity processes. In addition, the relevance of intergenerational transmission processes in PEBs of young adults has recently started gaining attention. The aim of this paper was to investigate the relationships between the intergenerational transmission of biospheric values and young adults' PEBs, considering their cognitive, emotional, and identity processes within a comprehensive framework.

Process and methods (for empirical research)

An online survey was administered to 172 Italian young adults, measuring the following variables: Maternal, paternal, and personal Biospheric Values; Environmental Concern (NEP); Connectedness to Nature (CNS); Dispositional Empathy with Nature (DEN); Environmental Identity (EID); and PEBs. HMR Analyses were performed for different PEBs in order to identify the pattern of associations between the considered variables.

Main results (or main arguments in the case of critical reviews)

Results showed the existence of the hypothesized chain association between intergenerational transmission of biospheric values, cognitive, emotional and identity processes, and PEBs of young adults. Moreover, different and specific paths of association for each of the PEB analyzed were identified.

Implications for research and practice/policy | Importance and originality of the contribution

These results can contribute to a better understanding of the role of emotions and identity processes on PEBs and they shed light on the importance of the intergenerational transmission of values in these mechanisms. The study also has practical implications for environmental education; for example, by suggesting the relevance of direct contact with nature to promote an emotional association with the natural world.

IC - (21169) - MODERNIZING QUEBEC'S PUBLIC SCHOOLS: THE CONTRIBUTION OF SCHOLA'S TRANSDISCIPLINARY RESEARCH AND ACTION PROGRAM

Carole Després[1]
1 - Laval University, Qubec (Canada)

Background and objectives

In Québec (Canada), public schools were built in majority in the wake of the baby boom. Most buildings having reached the end of their first life cycle, the government has announced investments of nearly $14 billion over the next 10 years. This communication presents the transdisciplinary research and action program put forward by Schola, a consortium of researchers commissioned by the Ministry of Education, to produce decision support tools to guide the modernization of these buildings to better support education success.

Process and methods (for empirical research)

Providing guidance for the modernization of over 2,700 buildings is a complex problem, between generalized global objectives and the specificity of each school. It requires understanding the decision-making process of actors involved in school renovation, as well as to inventory trustworthy knowledge, namely the ones dominating in professional practice (aesthetic and technical), and the ones found in scholarly research and in the experiences of school users (scientific and ethical). The information must then organized in user-friendly interfaces. This process involved so far nearly 60 school boards, 1,000 school staff members, and 15 partner associations and federations.

Main results (or main arguments in the case of critical reviews)

Five types of decision-aid tools were designed: *referential and cognitive tools*, *diagnostic tools, programming tools*, *design tools*, and finally *specification tools*. Four types of actors were targeted: the Ministry of Education public servants, school board building managers, architects and designers in private practice, and school administrations. The ENA digital learning environment was selected to develop the Schola platform. The functioning of the platform and the tools designed for primary schools will be briefly presented.

Implications for research and practice/policy | Importance and originality of the contribution

Discussion of how this transdisciplinary process addresses sustainability, as well as new challenges for future research, will be discussed in conclusion.

IC - (21205) - VIRTUAL INTERNATIONAL GROUP STUDY: TEACHING SUSTAINABILITY USING SUSTAINABLE PEDAGOGICAL APPROACHES

Christine Walsh[1]; Rita Dhungel[2]; Hana Curties[3]

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Background and objectives

Despite the proliferation of study abroad programs, few have attended to issues of sustainability and sustainable development. Our intention to deliver an international undergraduate elective two-course field study to Nepal focussing on intercultural competence and the United Nations 2015-2030 Sustainable Development Goals (SDGs(Spring of 2021 was derailed due to the Covid-19 pandemic. This presented an opportunity to re-envision, design, deliver, and evaluate a one-month virtual collaborative group study program on SDGs using sustainable teaching approaches.

Process and methods (for empirical research)

The study received institutional approval and participants provided informed consent. Canadian students (n=24) provided their course assignments including a reflective journal and Nepali students (n=25) and their instructors (n=2) participated in one of two one-hour focus groups, led by trained research assistants, via Zoom technology. The Zoom mediated audio-recorded was reviewed for accuracy and assignment and recordings were thematically analysed.

Main results (or main arguments in the case of critical reviews)

Canadian students reported that partnering with students from Nepal allowed them to better understand the history, knowledge, and geo- and socio-political contexts of Nepal, as well as the social issues and policies that impact social work and community development. Intercultural competence was promoted through interaction with panels of Nepalese scholars, practitioners and community leaders, virtual tours of local historical, environmental, and cultural sites and community development agencies as well as experiential learning activities, such as practicing Nepali language, dance, meditation, and the preparation of traditional food, offered hands-on cultural immersion in sustainable ways. All students advised that they were previously unaware of the SDG; the final group project on an SDG of their choice allowed them to appreciate the issues, develop effective solutions and make connections across global context. Challenges to sustainability included technology, limited access to information and unfamiliarity with inquiry-based learning for the Nepalese students and minimal experience working cross-culturally for all.

Implications for research and practice/policy | Importance and originality of the contribution

Future delivery virtual international courses are important to deliver content of the SDG in sustainable ways.

Hour: 17:00:00
Session: G5 - Senses of Place
Room: Room 2

Theme: Governance (5)

IC - (20959) - NEIGHBORHOODS ARE ALL THE SAME BUT SOME ARE MORE EQUAL THAN OTHERS: ENTITATIVITY JUDGMENTS OF THE URBAN DESIGN

José Palma-Oliveira[1]; Fatima Bernardo[2]
1 - Faculdade de Psicologia, Universidade de Lisboa; 2 - Psychology Department, University of Évora

Background and objectives

Being a Group is different in what concerns the way its perceived. Campell (1958) introduced the concept of "entitativity", which "refers to the degree to which a social aggregate is perceived as "having the nature of an entity, or having real existence" (p.17). Bernardo & Palma-Oliveira (in press) showed that neighbourhoods can be evaluated as possessing different levels of entitativity. It was found that people made consistent inferences about the psychosocial characteristics of the neighbourhood and its inhabitants. Since high entitativity can be a positive feature of urban design it is relevant to understand exactly what are the triggers of that evaluation and it´s cultural consistency.

Process and methods (for empirical research)

The first study was done with an international sample with a total of 400 people. The results shown an incredible degree of consistency amongst different neighbourhoods evaluation.

However what is the determinant of the judgment of entitativity is still elusive. In another study with 340 subjects we presented a set of manipulated photos where we were able to distinguish different features of the urban environment (roads, squares, urban features etc.) and obtain judgments of entitativity.

Main results (or main arguments in the case of critical reviews)

From the results of the first study one can conclude that not only the concept is an important to understand perception of urban spaces but also for argue for a large consistency of evaluations.

The results of the second study show that the relation between the judgment of entitativity and social psychological inferences about people in different urban places is, as predicted, much more complex than what the first studies led us to believe and have huge consequences for the design of urban spaces

Implications for research and practice/policy | Importance and originality of the contribution

The theoretical consequences of these studies will be discussed and the practical implications will be presented with reference to concrete features of the urban design that augments the perception of groupeness and entitativity of urban design

IC - (20962) - LATIN AMERICAN ENVIRONMENTAL PSYCHOLOGY: BETWEEN UNIFICATION AND DIVERSIFICATION

Raquel Diniz[1]; Victor Gomes[1]
1 - UFRN

Background and objectives

This research focuses on the developments of Environmental Psychology (EP) in Latin America, and its relevance to the consolidation of the area in the Global South. The objective was to analyze the contributions of scientific production, considering its potential in facing impacts of the environmental issue on the periphery of capitalism

Process and methods (for empirical research)

In a systematic review in open access latin american databases, we found 276 scientific articles related to EP, authored by psychologists with Latin American affiliation. The articles were: published between 1994 and 2019; in Portuguese (N = 149 / 54%), Spanish (N = 115 / 41.7%) or English (N = 12 / 4.3%); and classified according to their thematic focus. 18 articles were classified as "Theoretical-Epistemological", approaching the history of the area, theoretical-methodological bases, the object of study, and interdisciplinary. Despite corresponding to a small fraction of the database, these works are influential in the area, which motivated a qualitative and critical analysis of their content.

Main results (or main arguments in the case of critical reviews)

The reception of EP in Latin America was marked by the uncritical importation of North American and European knowledge until the 1990s, despite its total disconnection from the realities of the Global South, which are determined by colonization and exploitation processes. Throughout the 2000s, two groups of researchers differed in their analysis of the history of the area in Latin American, its characterization and its objectives. One hegemonic group defended the Unification of the area around a universal EP, and the other demanded the Diversification in local and contextualized environmental psychologies.

Implications for research and practice/policy | Importance and originality of the contribution

In the first two decades of the 21st century, the hegemonic project of universal EP established a consensus around its methodologies and key concepts. However, the contemporary discussions on decoloniality and the epistemological critique proposed by a new generation of researchers update the debate, changing the course of the area on the continent.

IC - (20975) - EXPERIENCING CEMETERIES AS PLACES FOR THE LIVING: COMMON USAGE AND MEANING

Ruth Rae[1]; Amy Beth[2]
1 - New York University; 2 - City University of New York

Background and objectives

Cemeteries are multifunctional spaces with a myriad of meanings and uses. They are both sacred spaces for burial and memorialization of the dead, and places of restoration and activity for the living. Cemeteries provide public space especially important to their communities for everyday use, and research has shown that a range of activities happen there. Alternative uses of cemeteries, particularly as green spaces for recreation, exercise, and nature-based interests, have provided opportunities to investigate the place attachment narratives of the living.

As geographic spaces, cemeteries hold historical, cultural, and social meanings. Their primary purpose has always been to provide final resting places for the deceased who are memorialized by the living. The living visit cemeteries to remember their dead. As such, gravesites can be places of attachment that have great personal meaning. The tending of the burial sites also reflects place identity since grave care practices involve personalization and territorial marking.

While academic literature on place attachment is prolific, there is rare mention of it in cemetery studies, though it is quite applicable and deserving of consideration. The use of cemeteries *a*s places of open access welcomes everyday use by the living. Cemeteries have evolved as places of significant meaning to those who enjoy them in ways that are less commonly documented or not acknowledged.

Implications for research and practice/policy | Importance and originality of the contribution

This research examines how various dimensions of place attachment applies to the use of cemeteries as both sacred and public spaces. In bringing these uses and narratives of cemeteries as places of attachment, cemeteries stand to be recognized as places of meaning over the life course. This poses compelling invitations for city planners, public-use policy makers and urban landscape architects, to rethink how cemeteries are used with the living in mind.

IC - (21067) - FROM APPROPRIATION OF SPACE TO APPROPRIATION OF PLACE: A THEORETICAL-METHODOLOGICAL REVIEW OF THE CONCEPT BASED ON HERMENEUTIC PHENOMENOLOGY

Diogo Arnaldo Corrêa[1]; Marlise A. Bassani[1]
1 - Pontifícia Universidade Católica de São Paulo (PUC-SP)

Background and objectives

The study conducted by Corrêa and Bassani (2017), which aimed to understand the adoption of sustainable lifestyles resulting from the meanings of dance for the elderly around the bandstand in the town square of Poços de Caldas, State of Minas Gerais, Brazil, evidenced the transformation of a space in place to overcome the challenges of aging, strengthening of sociocultural identity and construction of politics and citizenship. After presenting these results at the IAPS 25 Conference (2018), a new problematization emerged: do we appropriate space or place? With a new theoretical-methodological research, this work aims to distinguish the terms "space" and "place" based on Hermeneutic Phenomenology.

Main results (or main arguments in the case of critical reviews)

In Geography, the definition of space is heterogeneous. For David Harvey (2009), space is absolute, relative, and relational. Henri Lefebvre (1974) defends the social construction of space. And Milton Santos (2008) indicates that space is dynamic and unitary, bringing together materiality and human action. In Heidegger's Phenomenology, space is liberation, the opening of a region to be inhabited, as noted in his essay "Art and Space" (1969). Place, in turn, is abode, occupation involuted by meanings detached from the ways of being-in-the-world. Thus, the space is willing to the affections and values of the person and becomes a place, as evidenced in the research of Corrêa and Bassani (2017). Space is transformed into a place as it receives meaning (Tuan, 2013).

Implications for research and practice/policy | Importance and originality of the contribution

These distinctions suggest the modification of the term "appropriation of space", introduced in Environmental Psychology by Perla Korosec and expanded by Enric Pol, to "appropriation of place", implying robust epistemic foundations and heuristic quality in research and actions in human-environmental problems. With this, it will contribute to the elaboration and fulfillment of public policies in places demarcated by singular meanings that unseat directions for the continuity of life and guarantee the common good.

IC - (21030) - LIVING IN A NEIGHBOURHOOD WITH LOW REPUTATION: UNDERSTAND THE COPING STRATEGIES TO ACHIEVE A POSITIVE PLACE IDENTITY IN THE INTERGROUP CONTEXT

Fátima Bernardo[1,2]; José-Manuel Palma-Oliveira[3]; Inês Valério[4]

1 - University of Évora, Department of Psychology; 2 - Citua-IST-University of Lisbon; 3 - CIPSI, Faculdade de Psicologia, Universidade de Lisboa; 4 - Camara Municipal de Vila- Franca

Background and objectives

The place where people live is an important source of identity for them, so living in a neighbourhood with low reputation can threaten people's identity. When residents have little possibility of moving house, which is often the case for those inhabiting social housing projects, it is important to understand the strategies that might be used to cope with this negative identity. Although we do not know studies that address directly the issue of strategies of escape from identity to places of low prestige, in the field of environmental psychology, some place identity studies have identified some of these strategies that fit into the strategies identified within the framework of social identity theory (e.g.,Bernardo & Palma-Oliveira, 2016; Parmentier, van Ham & Bolt, 2007; Hasting, 2004; Musterd, Ostendorf & de Vos, 2003; Twigger-Ross and Uzzell, 1996).

Process and methods (for empirical research)

Using two case studies, both in Portugal, the main objective of this presentation is to identify a typology of identity management strategies to cope with a negative place identity. In the first case study we explore the influence of place identity and the economic power of the group on the choice of identity management strategies. In the second case study we explore the influence of place identity and socio-structural characteristics of intergroup relations (legitimacy, stability and permeability) on choice of identity management strategies.

Seventy participantes in the study 1, and one hundred and sixty-five participants, study 2, from two urban neighbourhoods with low reputation responded to a questionnaire.

Main results (or main arguments in the case of critical reviews)

The results shines light on the intergrupal circumstances in which different identity management strategies are used by low prestige groups.

Implications for research and practice/policy | Importance and originality of the contribution

The results also boost our understanding of intergroup relations between neighbourhoods, particularly the processes of discrimination and social conflict in an urban context.

Hour: 17:00:00
Session: S10 - Children Spaces
Room: Room 4

Theme: Sustainability (5)

IC - (20798) - THE DEVELOPMENT OF AN ASSESSMENT TOOL THAT SUPPORTS THE DESIGN AND EVALUATION OF HEALTHY, BIODIVERSE AND CLIMATE-RESILIENT GREEN SCHOOLYARDS

Nicole Van Den Bogerd[1]; Jolanda Maas[1]
1 - Vrije Universiteit Amsterdam

Background and objectives

To support healthy child development, biodiversity and climate resilience, primary schools are increasingly greening their schoolyard. However, little attention has been paid to how the design of green schoolyards can accommodate these benefits. This study aimed to create a green schoolyard assessment tool (GSAT) that supports the design and evaluation of green schoolyards.

Process and methods (for empirical research)

Based on the available literature, we created a first draft of the GSAT. The GSAT was further developed in an online two-round Delphi study for which academic, practice, and policy experts were invited to participate. In Round 1, 40 experts (response rate 37%) and in Round 2 32 experts (response rate 63%) participated in a survey about the relevance, clarity, applicability, and comprehensibility of the proposed GSAT items. After the Delphi study, the newly developed GSAT was pilot tested at 19 green schoolyards to evaluate its interrater reliability and usability.

Main results (or main arguments in the case of critical reviews)

In Round 1, the panel considered 82% of the proposed GSAT items relevant, but there was little consensus about the clarity, comprehensibility, and applicability. Based on panellist's comments, rigorous changes were made to the formulation of the items and measurement scales. In Round 2, the panel was satisfied with 79% of the proposed items. Items for which there was no consensus were modified or deleted based on panellists' comments. Findings of the pilot test showed good interrater reliability (ICC = 0.82, 95% CI = 0.80 – 0.97) and provided input for some additional minor changes to improve usability.

Implications for research and practice/policy | Importance and originality of the contribution

The GSAT is an agreement-based tool that provides insight into critical design aspects of green schoolyards for healthy child development, biodiversity, and climate resilience. It can support schools, designers, and other stakeholders with designing green schoolyards and it can be used by researchers to assess the design of green schoolyards, which may improve the generalizability of future studies.

IC - (20865) - EXPOSURE TO GREENSPACE AND BLUE SPACE AND INTELLIGENCE IN POLISH SCHOOL CHILDREN

Dorota Buczyłowska[1]; Clemens Baumbach[1]; Jakub Bratkowski[2]; Yarema Mysak[1]; Maja Wierzba-Łukaszyk[1]; Krzysztof Skotak[2]; Katarzyna Sitnik-Waruchulska[3]; Małgorzata Lipowska[3,4]; Bernadetta Izydorczyk[1,3]; Marcin Szwed[1]; Iana Markevych[1]

1 - Institute of Psychology, Jagiellonian University, Krakow, Poland; 2 - Institute of Environmental Protection-National Research Institute, Warsaw, Poland; 3 - Faculty of Management and Social Communication, Institute of Applied Psychology, Jagiellonian University, Krakow, Poland; 4 - Institute of Psychology, University of Gdansk, Gdansk, Poland,

Background and objectives

Studies investigating associations between exposure to greenspace or bluespace and intelligence in children are scarce and findings are inconsistent. We examined whether higher exposure to greenspace and blue space is associated with higher intelligence scores in 10-13 aged children.

Process and methods (for empirical research)

The sample (N = 239) was collected from the on-going NeuroSmog case-control study where healthy children and children with Attention Deficit Hyperactivity Disorder (ADHD) were enrolled from 18 towns in southern Poland.

Green and bluespace was assessed by the tree, grass, and water cover in 500m and 1000m circular buffers around current residential and school addresses, as well as by the Normalized Difference Vegetation Index (NDVI). Intelligence was assessed by Stanford-Binet Intelligence Scales, 5th edition (SB5). SB5 Full scale IQ, nonverbal IQ and verbal IQ scores were used in the analyses as measures of overall intelligence, nonverbal, and verbal intelligence.

Associations of greenspace and bluespace with the IQ scores were assessed by linear regressions. First, we regressed outcome variables on exposure variables. Then, we adjusted the models by sex, age, maternal education level, and urbanicity, as well as stratified the analysis by ADHD status.

Main results (or main arguments in the case of critical reviews)

None of the greenspace or bluespace measures was consistently associated with IQ scores, neither in crude models nor in adjusted models nor in stratified analysis.

Implications for research and practice/policy | Importance and originality of the contribution

We could not find evidence that higher greenspace or bluespace exposure is associated with higher intelligence in school children. As the development of intelligence is a long-term process, future research should include lifelong greenspace and bluespace exposure data.

IC - (20964) - PLAYING IN 'THE BACKYARD': ENVIRONMENTAL FEATURES AND CONDITIONS OF A NATURAL PLAYSPACE WHICH SUPPORT DIVERSE OUTDOOR PLAY TYPES

Janet Loebach[1]; Adina Cox[2]
1 - Cornell University; 2 - Iowa State University

Background and objectives

Engagement in play has been definitively linked to the healthy development of children across physical, social, cognitive, and emotional domains. The enriched nature of high-quality outdoor play environments can afford a greater diversity of opportunities for play than indoor settings. To more effectively design natural playspaces, we must better understand how the physical environment supports, or hinders, the different types of play which suit children's needs and interests. This study seeks to identify environmental features and conditions which support specific outdoor play types by examining children's play patterns before and after an extensive renovation of 'The Backyard', a nature play and learning space at the Santa Barbara Museum of Natural History.

Process and methods (for empirical research)

An extensive behavior mapping protocol was carried out in the nature playspace over 7 days pre-renovation and again several months after its completion. Outdoor play types were recorded using the Tool for Observing Play Outdoors (TOPO; Loebach & Cox, 2020) for more than 800 individual play events at both time 1 and Time 2; additional play and environmental data were recorded for each play event including physical activity levels, peer interactions and loose parts engagement.

Main results (or main arguments in the case of critical reviews)

In this presentation, findings from quantitative and spatial analyses will highlight the environmental features and interactions found to support each of the TOPO's eight primary outdoor play types: physical play, exploratory play, imaginative play, play with rules, bio play, expressive play, restorative play and digital play. Patterns in each outdoor play type by age group will also be presented, highlighting play environment features which support play for diverse ages.

Implications for research and practice/policy | Importance and originality of the contribution

Findings will not only highlight the value and efficacy of the TOPO for capturing outdoor play type patterns, but will provide insights on specific outdoor play environment features which afford high-quality play interactions for diverse child users and interests.

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IC - (20965) - SCHOOL GREENSPACE AUGMENTS THE EFFECTS OF ACADEMIC INTERVENTIONS ON ANNUAL READING IMPROVEMENT FOR LOW- INCOME ELEMENTARY STUDENTS OF COLOR

Rouzbeh Rahai[1]; Nancy Wells[1]; Gary Evans[1]
1 - Cornell University

Background and objectives

Evidence demonstrating nature's restorative benefits on attention and cognition among children suggests potential for green spaces to cultivate greater learning outcomes during school-based instruction. In this study, we pursue two primary research questions. **Research Question 1:** Does school greenspace accentuate the positive effects of literacy intervention sessions on student academic improvement conducted by a literacy intervention program operating in multiple urban contexts? **Research Question 2:** Do school greenspace measures demonstrate a positive relationship with student academic improvement?

Process and methods (for empirical research)

Students in California were sampled from a state-wide, literacy improvement program operating in Title 1 schools. Our dependent variable is one-year improvement outcomes on a reading benchmark test. We estimated student's experience of nature in their school environments as represented by green cover area on school property (based on 1m by 1m land classification). We examined **RQ 1** by investigating whether there was a Greenspace (IV 1) by Program Attendance (IV 2) interaction effect on student academic improvement. We examined **RQ 2** by investigating whether Greenspace (IV 1) demonstrated a main effect on student academic improvement.

Main results (or main arguments in the case of critical reviews)

Elementary school settings (N=85) with greater greenspace areas augmented the salutary effects of a reading enrichment program on annual academic improvement (F=9.74 B=.018, SE=.006, p=.002) for low income, individual students (k-6^{th} grade, N=6080) of color attending a school-based literacy program throughout California. Multi-level modeling incorporated extensive individual, school, and community level covariates. A granular analysis demonstrated that trees, shrubs, herbaceous, and grass cover each enhanced the effect of academic instruction on annual reading improvement. However, no main effect of greenspace cover on academic improvement was found.

Implications for research and practice/policy | Importance and originality of the contribution

This study finds that greenspace in schools augments the effect of academic instruction on learning outcomes in reading. Moreover, this research highlights how nature can help bolster academic outcomes in youth who need the most support.

IC - (21117) - GARDENING IN CHILDCARE CENTERS: A CLUSTER RANDOMIZED CONTROLLED TRIAL EXAMINING EFFECTS ON OUTCOMES RELATED TO HEALTHY EATING

Nancy Wells[1]; Nilda G. Cosco[2]; Muntazar Monsur[3]; L. Suzanne Goodell[4]; Daowen Zhang[5]; Tong Xu[6]; Robin C. Moore[2]
1 - Cornell University; 2 - Department of Landscape Architecture and Environmental Planning, College of Design, North Carolina State University, Raleigh, NC; 3 - Department of Landscape Architecture, Davis College of Agricultural Sciences and Natural Resources, Texas Tech University; 4 - Department of Food, Bioprocessing and Nutrition Sciences, College of Agriculture and Life Sciences, North Carolina State University; 5 - Department of Statistics, College of Sciences, North Carolina State University; 6 - Department of Human Centered Design, College of Human Ecology, Cornell University

Background and objectives

Around the globe, young children fall short of recommended daily fruit and vegetable (FV) consumption. Childcare or "day care" environments have the potential to foster healthy dietary habits early in life. Gardening may promote healthy eating but childcare center gardening is seldom studied. We examine the impact of a childcare gardening intervention on children's tasting of FV; FV identification; and FV consumption during snack time.

Process and methods (for empirical research)

In this randomized controlled trial (RCT) 15 childcare centers in low-income areas within Wake County, North Carolina, were randomly assigned to: (1) intervention (in year 1), (2) waitlist control (year 2 intervention), or (3) control group (no intervention). The baseline sample includes 250 children aged 3–5 years old. The garden intervention comprised six raised garden beds planted with vegetables and fruits, and a booklet of 12 gardening activities. FV identification and tasting were measured using a tablet-enabled protocol. FV consumption was measured by weighing FV before and after snack time. Analyses combine year 1 and 2 data and employ linear mixed models with childcare center random effect and nested child random effect within childcare center.

Main results (or main arguments in the case of critical reviews)

In comparison to the control group(s), children who received the intervention showed statistically greater increases in: (a) identifying fruit (F) ($p<.05$), vegetables (V) ($p<.005$), FV ($p<.005$); (b) reports of having tasted: F ($p<.05$), V ($p<.05$), FV ($p<.01$); and (c) FV consumption during snack time: F ($p<.005$), V ($p<.001$), FV ($p<.001$). Results were consistently in the hypothesized direction, with intervention children showing greater increases than control group children.

Implications for research and practice/policy | Importance and originality of the contribution

This study employs compelling research design and methods addressing a critical gap in the empirical literature. Results suggest that FV gardening within childcare centers may be an effective strategy to encouraging healthy eating early in life. Regulatory education, and extension policies should require gardening in childcare environments.

Hour: 17:00:00
Session: S11 - Animals & Outdoor Spaces
Room: Room 5

Theme: Sustainability (4)

IC - (20820) - DO CHILDREN'S JUDGMENTS OF HARMFUL ACTIONS TOWARDS ANIMALS DEPEND ON THEIR ATTRACTIVENESS?

Silvia Collado[1]; Rocío Rodríguez-Rey[2]; Miguel Sorrel[3]; José A. Corraliza[3]
1 - Universidad de Zaragoza; 2 - Universidad Pontificia Comillas; 3 - Universidad Autónoma de Madrid

Background and objectives

Nature has an aesthetic value, which has been demonstrated to influence people's preferences for landscapes, plants, and animals. This aesthetic value or perceived attractiveness influences people's attitudes towards animal conservation more strongly than objective characteristics such as the animal's ecological value or its usefulness to humans. This, in turn, has an impact for many species' survival prospects.

Nature conservation has long been thought to have moral roots, and individuals who believe that nature has a moral standing tend to behave in a pro-environmental way. Considering this, the current research asks whether children's judgments of harmful actions towards animals depend on animals' perceived attractiveness.

Process and methods (for empirical research)

We conducted two complementary studies. In Study 1, primary school children (N = 359) rated the perceived attractiveness of six animals and judged how severe it is to hurt them, as compared to moral transgressions, social-conventional transgressions, and personal choices. In Study 2, we experimentally tested whether the attractiveness of animals rated as unattractive in Study 1 could be influenced by an environmental education intervention.

Main results (or main arguments in the case of critical reviews)

In Study 1, our results showed that hurting attractive animals was perceived as severe as hurting another child, while hurting unattractive animals was evaluated as less serious than social-conventional transgressions. After the intervention (study 2), children in the experimental group (N = 21) rated unattractive animals as more attractive than before the intervention, and this led to judging harming these animals more severely than before the intervention. No changes were found in the control group (N = 20).

Implications for research and practice/policy | Importance and originality of the contribution

Our findings show that perceived attractiveness plays a role in children's moral judgments of actions against animals. Hurting attractive animals was assessed more severely than hurting unattractive ones. Fortunately, animals' perceived attractiveness can be enhanced by environmental education interventions, leading children to consider harming animals previously seen as unattractive less acceptable.

IC - (21001) - ANALYSIS OF LIVING SPACES IN EVACUATION SHELTERS ON COMBINED DISASTERS OF INFECTIOUS DISEASES AND NATURAL DISASTERS -A CASE STUDY OF EVACUATION SHELTERS IN JAPAN-

Takayuki Kumazawa[1]
1 - Ibaraki University

Background and objectives

Heavy rains in the Kyushu region of Japan in July 2021 resulted in severe flood damage. In evacuation shelters, appropriate management is required to protect evacuees from the flood and to prevent contraction of infectious diseases. However, the use of living spaces as evacuation shelters during the occurrence of a combination of disasters, such as spread of infectious diseases and natural disasters, has hardly been analyzed in previous studies. In this study, the actual operational conditions for the evacuation shelters established during the heavy rains in the Kyushu region were investigated. Subsequently, the usage of the living spaces in the shelter was analyzed.

Process and methods (for empirical research)

The subject of the survey was the largest shelter established at the Sports Palace (H.S.P.) in Hitoyoshi City, Kumamoto Prefecture, which was used for six months from July 4 to December 28, 2020. During this period, evacuees from smaller shelters in the nearby municipalities were accepted. H.S.P continued operation until all evacuees were evacuated from the disaster area. Using hearsay, the life style in the shelter in relation to foods, goods, public health, living space, management, and other factors was investigated.

Main results (or main arguments in the case of critical reviews)

From the results, it was found that special areas were installed for persons requiring special considerations and those with physical disorders. The areas were partitioned using materials such as cardboard. The partitions were set up to ensure maximum privacy and prevention of infections. The dedicated spaces were analyzed by categorizing them on the basis of bedding, body dimensions, and surrounding spaces. It was concluded that the unit space model based on the distance among the bedding, operating space, and compartment can be used as an index for the living space per person.

Implications for research and practice/policy | Importance and originality of the contribution

The findings of this study also reveal the importance of securing the living spaces considering the common spaces and exclusive spaces in the shelter.

IC - (21065) - TAKING THE PSYCHOPHYSIOLOGY LAB OUTDOORS

Caroline Hägerhäll[1]; Gunnar Cerwén[1]

1 - Swedish University of Agricultural Sciences SLU, Department of People and Society

Background and objectives

There is a convincing body of theory and research showing that experiencing nature have positive effects on human health and well-being. Often distinctly different, green versus built environments are compared by assessing still images in an indoor laboratory setting. Although this approach has given insights on a general level, it neglects important factors of how people experience the outdoor environments in everyday life, potentially limiting our insight about processes and content that can promote wellbeing. In real life, outdoor experiences are multisensory, temporal and dynamic. We discuss how the development in sensor technology in real life settings could change the scene.

Process and methods (for empirical research)

We present results from the newly established SLU Multisensory Outdoor Lab illustrating potentials and obstacles in methodology. A pilot study compared the performance of three wearable device systems (Bionomadix, Empatica E4 and Polar H10) in both indoor and outdoor settings in both sedentary and active walking conditions. Sessions were video recorded to assist the analysis.

Main results (or main arguments in the case of critical reviews)

The analysis show that data quality varied. Heart data gathered with PPG sensor (Bionomadix and Empatica E4) is sensitive to movement and light, while heart data gathered with ECG (Bionomadix and Polar H10) is resistant to such disturbances. Skin conductance data (Empatica E4 and Bionomadix) is potentially fruitful in all tested settings, but temperature and activity level needs to be given consideration. Conclusively, the study highlights obstacles as well as potentials for psychophysiological research in situ. With modification, the method employed could be used to design a large-scale experiment.

Implications for research and practice/policy | Importance and originality of the contribution

The use of wearable sensors can enable research on new topics as well as shed new light on established knowledge. It possibly also fosters collaborations with practice since wearable technology can be applied directly in field settings. The increased ecological validity of real-life data could increase the relevance and impact of results in policy and practise.

IC - (21070) - FAVOURITE PLACES IN WESTERN CITIES: WHY ARE THEY VALUED, AND WHAT RESTORATIVE BENEFITS DO PEOPLE GAIN FROM THEM?

Eleanor Ratcliffe[1]; Mikel Subiza-Pérez[2]; Anna Bornioli[3]; Tytti Pasanen[4]; Kate Lee[5]; Clara Weber[6]; Tamala Anderson[1]; Kalevi Korpela[7]

1 - University of Surrey; 2 - University of the Basque Country UPV/EHU; 3 - Erasmus University Rotterdam; 4 - Finnish Institute for Health and Welfare (THL); 5 - University of Melbourne; 6 - Zurich University of Applied Sciences; 7 - Tampere University

Background and objectives

Research on restorative environments tends to focus on natural settings, while the restorative potential of urban spaces is understudied. Recent reviews on this topic indicate that, within cities, areas of desirable architecture, cultural value, leisure affordance, and place attachment can also be restorative. We have previously shown that favourite indoor and outdoor urban places are associated with subjective restoration, but reasons for these evaluations are poorly understood. In this study we use a qualitative approach to understand why such settings are preferred and how this relates to positive psychological outcomes such as restoration.

Process and methods (for empirical research)

We analyse qualitative survey data from N = 945 participants, recruited online from Finland, Spain, the Netherlands, UK and Australia, regarding favourite indoor and outdoor urban places. We examine reasons why certain urban places are considered favourite, and motivations for and subjective outcomes experienced in those places, such as place attachment and/or restoration. We will use structural topic modelling, a computer-aided text analysis method, to identify common themes in these responses, and to examine any overlap between reasons for the places being favourite and the motivations for/outcomes of visiting. We will compare results between key types of place (indoor versus outdoor; homes; bars/cafés/restaurants; libraries; museums/cultural centres; and urban quares/streets/terraces), and between countries to examine cross-cultural differences and similarities.

Main results (or main arguments in the case of critical reviews)

Data will be analysed in Spring 2022 and results will be presented at the conference.

Implications for research and practice/policy | Importance and originality of the contribution

Findings from this study will enhance understanding of why people value certain places in cities and indoor environments, and how these places can lead to positive psychological outcomes such as happiness, relaxation, and/or restoration. This work is important in order to better represent the types of everyday environments that could support wellbeing in an urbanised society, and to move study of restorative environments beyond the 'natural versus urban' dichotomy.

Hour: 17:00:00
Session: S9 - Symposia - Public spaces for urban sustainability: usage, appropriation, and cohabitation in Montreal (Canada)
Room: Room 3

Theme: Sustainability (3); Sustainability (1)

IC - (20910) - ARE PEDESTRIAN STREETS PATHS OF MOVEMENT, A COMMERCIAL SPACE, OR A SOCIAL SPACE? A COMPARATIVE STUDY IN MONTREAL, CANADA

Huu Lieu Dang[1]; Thi Thanh Hien Pham[1]
1 - Département d'études urbaines et touristiques, Université du Québec à Montréal

Background and objectives

Cities increasingly embrace tactile and temporary urbanism to improve their street liveliness. Pedestrian streets become one of such strategies, especially since the COVID-19 pandemic, that cities use to handle social distancing measures and boost the local economy. Against that backdrop, we ask how the microscale physical characteristics of pedestrian streets impact their usage and appropriation by people, especially their stationary activities. The Montreal case merits investigation because of the diversity of 13 commercial streets pedestrianized in 2021.

Process and methods (for empirical research)

We examine two commercial streets that were temporarily pedestrianized in summertime, having different goals and designs of pedestrianization. In summer, 2021 we conducted a systematic observation of users in each street, at 20 times slots (from 9 a.m.to 9 p.m.) on Fridays and Saturdays- the most crowded days of the week. Statistical analyses of observation points were undertaken in R-Studio and ArcGIS. We also support our quantitative analyses with policy analysis and a press review.

Main results (or main arguments in the case of critical reviews)

We find that microscale physical characteristics have differential influences on usage. In both streets, large groups are consistently more present in terraces provided by restaurants. Individuals and small groups, especially young adults, tend to be found in street segments having high environment/physical qualities (benches and shade) in Wellington but not in Mont-Royal. Three other groups have their own ways of appropriating the streets, independently of the street characteristics, i.e., homeless people, seniors, and street vendors. We also show that the pedestrian campaign did not fully respond to the local's demand regarding greening and public furniture, underline the preponderant role of commercial usage of the streets and question the publicness of the pedestrian streets in Montreal.

Implications for research and practice/policy | Importance and originality of the contribution

Our research enriches the literature of street liveliness (Mehta 2007, 2021) and the relationship between design and appropriation (Goliˇcnik, 2010). The findings also help designers to create more inclusive and lively public spaces.

(20793) - PUBLIC SPACES FOR URBAN SUSTAINABILITY: USAGE, APPROPRIATION, AND COHABITATION IN MONTREAL (CANADA)

Thi Thanh Hien Pham[1]; Huu Lieu Dang[1]; Sylvie Paré[1]; Marie-Soleil Cloutier[2]
1 - Département d'études urbaines et touristiques, Université du Québec à Montréal; 2 - Urbanisation Culture Société Research Centre, Institut national de la recherche scientifique

Background and objectives

Public spaces such as parks, squares, and pedestrian streets, have substantial contributions to city sustainability, since they provide a wide range of social and health benefits for citizens (Anderson 2016, Chiasura 2004). More specifically, public spaces are meeting places that facilitate and improve social relationships between neighbors, and hence enhance a sense of community (Francis *et al.*, 2012). They also promote innovation and creativity by allowing individuals to have their own ways of using space (Németh, 2012). As such, public spaces help decrease social segregation and tensions (Tonnelat, 2010) and positively influence momentary happiness (Benita *et al.*, 2019). They also enhance democracy by encouraging expressions of political actions (Mitchell, 1995; Staeheli & Mitchell, 2007; Staeheli *et al.*, 2009). Providing enough public spaces is therefore a crucial strategy that city governments use to meet citizens' needs for leisure, community activities and other social interactions (Fan *et al.*, 2016).

Since the 2000s, studies have pointed out important transformations of the design and planning of public spaces, such as privatisation, over-surveillance and judicialization of spaces, especially within urban revitalisation projects (Carmona 2015). Montreal (Canada) is no exception with observed tensions and frustration in public spaces, generated by urban revitalisation and gentrification in different neighbourhoods of the city (Pazarelli 2021, Bélanger 2014). Furthermore, the COVID-19 pandemic has been pushing the city government to create more attractive public spaces while assuring a safe circulation space, active mobility and local economic development.

This symposium aims to re-examine public spaces' publicness (Németh 2012) in Montreal, in the context of gentrification and the COVID-19 pandemic. We will concentrate on pedestrian streets, squares, and parks in three neighbourhoods of Montreal, with an affluent one and two others that are undergoing gentrification and ethnic diversification. We explore two following questions: (1) how different social groups (age, gender, and ethnicity) appropriate public spaces and adapt to the physical settings of the space; (2) how walkers, cyclists, and small businesses cohabit in public spaces.

Significance for the advancement of People-Environment relations

Using the case of Montréal, this symposium opens discussions on the production, usage, appropriation, and cohabitation of public spaces, enriching our understanding of the relationship between people and the environment. Our symposium falls within two branches of People-Environment studies: i) design of and experiences in public spaces; and ii) social use of space: crowding, territoriality, personal space. We will add new insight into the experiences and social use of public spaces (Cao & Kang, 2019; Goličnik & Ward Thompson, 2010), especially under social distancing conditions and local economic needs due to the pandemic. The socially and physically diverse contexts that we look at in the symposium will allow us to shed light into use of space by marginalized and non-marginalized populations (Villani & Talamini, 2021). Insight from our findings will inform new design and planning processes to ensure more sustainable and equitable access to public spaces.

IC - (21234) - ALLOWING CYCLIST TO ROLL ON A PEDESTRIAN STREET: INSIGHTS FROM A PILOT-PROJECT IN MONTREAL, CANADA

Cloutier Marie-Soleil Cloutier Marie-Soleil[1]; Philippe Brodeur-Ouimet[1]; Audrey-Anne Lamarche[1]; Pierre-Maxime Leduc[1]
1 - Institut National de la Recherche Scientifique

Background and objectives

Among Montreal's 13 pedestrian street summer projects in 2021, two locations (Avenue du Mont-Royal and Rue Wellington) have set up a pilot project considering cohabitation between pedestrians and cyclists by authorizing cyclists to stay on their bike at a slow pace instead of dismounting. Our objective is to evaluate safety issues related to this cohabitation in a specific context: the pedestrian street.

Process and methods (for empirical research)

Our method is based on non-participatory field observation of the cyclists when they were moving along specific street segments (n=4). Previously trained observers collected data (on IPads) on cyclists (age, gender, type of vehicle), their actions (adequate speed, going straight, stopping, etc.) and interactions with pedestrians. Data collection was carried out in blocks of 3 hours, twice per selected segment in July and August 2021.

Main results (or main arguments in the case of critical reviews)

A total of 1371 cyclists were observed. Cyclists behaviours, measured with a pre-determined list of actions they could do as they cycle, did not change much along the stretch: the majority of them rode *straight as prescribed* (66%) and a small proportion only were zig zagging or changed direction (10%). Similarly, a very small minority were considered to cycle “dangerously” (6%), even if this proportion was higher (24%) for users of a wheel-vehicle other than a bicycle (e.g. motorized mobility aid, scooter, etc.). As for the interactions between cyclists and pedestrians, they represent 30% of all their actions while in more than half of these interactions, the cyclist avoided the pedestrian ahead of the potential collision point, a similar proportion in all observation sites.

Implications for research and practice/policy | Importance and originality of the contribution

Our unique observation dataset shows that the coexistence of pedestrians and cyclists on pedestrian streets generally poses few risks to the safety of users. The success of this pilot project in Montreal could lead to more widespread cohabitation between pedestrians and cyclists on the vast network of pedestrian streets.

Global Challenges, Local Impacts
Rethinking governance, sustainability and consumption in light of climate change
05 - 08 JULY '22

IC - (21235) - L'ACCESSIBILITÉ DIFFÉRENCIÉE À L'ESPACE PUBLIC: UNE ANALYSE COMPARATIVE DE DEUX PLACES PUBLIQUES DANS HOCHELAGA-MAISONNEUVE À MONTRÉAL.

Sylvie Paré Sylvie Paré[1]
1 - UQAM

Background and objectives

L'accessibilité à l'espace public n'est pas toujours la même pour toutes et tous. Il existe certaines modulations selon le genre, l'ethnicité et/ou la classe sociale. En ce sens, cette présentation jette un éclairage sur les rapports sociaux intersectionnels intervenant dans l'accessibilité aux espaces publics, plus spécifiquement dans un contexte de transformations des quartiers centraux montréalais.

Depuis les années 2000, le quartier Hochelaga-Maisonneuve connait non seulement d'importants réaménagements urbains, mais aussi une gentrification et une diversification ethnique de sa population, pouvant ainsi poser des enjeux de cohabitation.

Process and methods (for empirical research)

Nous prenons l'étude de cas comparés des places Gennevilliers-Laliberté et Simon-Valois qui sont situées au cœur du quartier Hochelaga-Maisonneuve.

Nos données recueillies à l'aide d'observations directes et de courts questionnaires montrent généralement que la cohabitation intergroupe sur les deux places publiques se déroule dans un climat relativement pacifique.

Main results (or main arguments in the case of critical reviews)

Mais, alors que l'analyse fine de nos données met à jour des pratiques de l'espace différenciées selon les variables du genre et de l'appartenance ethnique, nous évoquons néanmoins que l'inattention civile dans l'espace public cache une certaine réalité. Plusieurs choisissent de s'approprier l'espace périphérique en adoptant une stratégie d'évitement sur l'une ou l'autre des places publiques étudiées.

Implications for research and practice/policy | Importance and originality of the contribution

L'aménagement des places publiques mérite une attention particulière des urbanistes et designers urbains, surtout dans les quartiers à forte densité. Les aires de repos, la canopée et le revêtement des surfaces sont autant de facteurs pouvant contribuer au confort des usagers et usagères de l'espace. En temps de pandémie, on doit aussi songer à la distanciation physique, ce qui ajoute aux défis des planificateurs.

Dia: 07/07/2022

Hour: 09:00:00
Session: C4 - Symposia - 'Moments of Change': the dynamics of sustainable lifestyles
Room: Room 1
Theme: Consumption

(20894) - 'MOMENTS OF CHANGE': THE DYNAMICS OF SUSTAINABLE LIFESTYLES
Lorraine Whitmarsh1
1 - University of Bath

Background and objectives
Responding to sustainability issues like climate change requires profound changes to individual behaviour. However, much of our behaviour is habitual, resistant to change, and cued by stable contexts (i.e., same time, place and/or social group). When these habits are disrupted, though, it provides an opportunity to foster pro-environmental behaviour. 'Moments of change' are when individual life circumstances shift within a short time frame, and include biographical and external changes (e.g., becoming a parent, travel disruption). The relationship between moments of change and environmental impact is complex, with differences between individuals, cultures, and behaviours. Furthermore, while we know much about how to intervene to foster sustainable lifestyles, we know far less about when to intervene. Yet, initial studies in this area have shown that behaviour change interventions targeted to moments of change (e.g. relocation) can be far more effective than when applied during more stable times (Bamberg, 2006; Verplanken et al., 2016).
This symposium brings together insights from several fields to provide a much-needed focus on the temporal dimension of pro-environmental behaviour change. The session aims to showcase new research on moments of change that apply diverse methodologies, including large-scale secondary data analysis (Swanke), longitudinal depth interviews across cultures (Nash), and field experiments on travel (Tipping), water (Swaffield), and food (Mitev) behaviours. Papers reflect both biographical (personal, planned) moments of change, as well as external (societal, unplanned) disruptions, including: relocation, parenthood, retirement, and COVID-19. They also span studies of how moments of change in themselves (without intervention) and moments of change in combination with interventions may reshape consumption patterns in more versus less sustainable directions.

Chair: Prof. Lorraine Whitmarsh, University of Bath, UK

1. Picking the Right Moment: Comparing Different Life Changes and their Impact on Pro-Environmental Behaviour – Sarah Swanke; Max Plank Institute for Human Development, Germany
2. Parenthood and retirement as windows of opportunity for environmentally sustainable lifestyle changes in the time of COVID19: Some qualitative, cross-cultural insights - Nick Nash; University of Bath, UK
3. The effects of COVID-19 and starting university on young people's green behaviours - Kaloyan Mitev; University of Bath, UK
4. Reducing water consumption in the home: Water smart technology and moments of change - Joanne Swaffield; Cardiff University, UK
5. The impact of a social media campaign on individual travel behaviour in the UK during the COVID-19 pandemic - Christianne Tipping; Cardiff University, UK

Discussant – Dr. Ganga Shreedhar, LSE, UK

Significance for the advancement of People-Environment relations This is an exciting area of developing research for people-environment studies that situates the individual within the socio-environmental context to explore how they interact over time and what this means for sustainability.

The symposium integrates various methods and theoretical insights on the timing of shifts and interventions towards sustainable lifestyles.

Keyword's : moments of change, sustainable lifestyles, behaviour change, life transitions, COVID-19

IC - (20895) - PICKING THE RIGHT MOMENT: COMPARING DIFFERENT LIFE CHANGES AND THEIR IMPACT ON PRO-ENVIRONMENTAL BEHAVIOUR

Sarah Swanke[1]
1 - Max Planck Institute for Human Development

Background and objectives

Non-environmentally friendly habits (like transportation or diet) are particularly 'sticky' and resistant to interventions and even individual willpower (Thomas et al., 2016, Wood, 2019). However, a substantial change in an individual's life over a short time frame (a 'moment of change') provides an opportunity to break habits (Verplanken et al., 2008). These moments are impactful opportunities for pro-environmental lifestyle shifts (Capstick et al., 2014, Marsden et al., 2020). While the literature has shown moments of change are an important opportunity, little research has examined which types of life event are most promising to engender pro-environmental change. This gap is critical for policy makers to understand when to intervene.

Process and methods (for empirical research)

Using the UK's Understanding Society dataset, we examine changes in pro-environmental behaviour of 26,519 individuals over a span of 4 years. Fixed effects regressions compare the impact of five life events: a partner change, a household size change, a move, a job change, and a significant change in health. We also examine whether a previously expressed desire to do more for the environment mediate the effect of a moment of change.

Main results (or main arguments in the case of critical reviews)

Our analysis finds changes in health and household size predict a negative change in pro-environmental behaviour. Other transformative life events have a positive influence (moving and job change) but do not appear significant long term. As for pro-environmental intentions, they either have no effect, or (in the case of a partner change) make negative environmental behaviour changes worse.

Implications for research and practice/policy | Importance and originality of the contribution

Our results demonstrate that not all moments of change impact pro-environmental behaviour equally. Critically for a post-Covid policy world, we show that changes in health can have a lasting negative impact on pro-environmental behaviour.

IC - (20897) - PARENTHOOD AND RETIREMENT AS WINDOWS OF OPPORTUNITY FOR ENVIRONMENTALLY SUSTAINABLE LIFESTYLE CHANGES IN THE TIME OF COVID19: SOME QUALITATIVE, CROSS-CULTURAL INSIGHTS

Nick Nash[1]
1 - University of Bath

Background and objectives

A significant body of research supports the theory that major life transitions can catalyse a range of lifestyle changes germane to environmental sustainability. However, the evidence is mixed, with studies emerging from a range of disciplines, each with its own underlying assumptions, methodological approaches and analytic techniques. Moreover, few studies from within the life course change literature have attempted to interrogate the conventions and assumptions underpinning relationships between 'moments of change' and environmentally relevant behaviour. Recent work has been directed towards the complex subjective nature of these relationships, grounded in the ongoing flux of social and cultural life. Therefore, acknowledging the wider complex nature of these events is crucial to understanding prospects for environmentally sustainable lifestyle changes.

Process and methods (for empirical research)

Our presentation offers a range of novel insights from longitudinal qualitative research examining two types of life event; first-time parenthood and retirement. Three sets of individual interviews were conducted over an eight-month period with 20 new parents and 20 retirees in four countries (Canada, Lithuania, Nigeria, UK). Using a narrative approach, we examined continuity and change across a range of lifestyle dimensions of relevance to environmental sustainability, including diet, travel, consumption and leisure.

Main results (or main arguments in the case of critical reviews)

The study findings provide evidence that parenthood and retirement lead to significant lifestyle changes, including impacts of relevance to environmental sustainability. Against a backdrop of COVID19, we show how significant life events converge and shape the ways that individuals negotiate transitions, and the consequences for policies and interventions targeting sustainable lifestyle change.

Implications for research and practice/policy | Importance and originality of the contribution

We conclude that the pathways and processes governing life change are complex, contingent, and culturally divergent. Existing conventions and assumptions underpinning life transitions and behaviour cannot adequately accommodate lived experience and behaviour change, and we outline prospects for novel pro-sustainable lifestyle interventions within an expanded theoretical framework.

IC - (20898) - THE EFFECTS OF COVID-19 AND STARTING UNIVERSITY ON YOUNG PEOPLE'S GREEN BEHAVIOURS

Kaloyan Mitev[1]
1 - University of Bath

Background and objectives

Moments of change are periods in people's lives characterised by significant changes in the physical or social surrounding, which could serve as windows of opportunity for behaviour change in the domain of pro-environmental behaviours. Examples of these life transitions include starting a new job, transferring from school to university. The latter one is specific to people in their late adolescence. They represent an understudied but crucial population given their high levels of concern about climate change but sometimes lower levels of engagement with tackling the issue. In the present research we investigate locking in green habits after undergoing two moments of change: the end of COVID-19 restrictions in the UK in July 2021, and the start of university for new students in October 2021.

Process and methods (for empirical research)

This is done using data from two longitudinal experiments. In both studies the participants were between the ages of 16 and 25, they were randomly assigned to one of three groups: self-affirmation, behaviour self-reflection, control group. All three groups were shown two posters: 1) informing them about the consequences of climate change and 2) giving information about climate-friendly behaviours. Food waste, consumption, and commuting behaviours data was collected at baseline, at a seven-day follow-up, and a 30-day follow-up.

Main results (or main arguments in the case of critical reviews)

The findings revealed these two moments of change had a significant effect on the pro-environmental behaviours (particularly food waste and consumption) of people in their late adolescence. Specific to the second experiment, we discuss the possible stronger effect for young people who had experienced a physical change (relocation) compared to those who had not.

Implications for research and practice/policy | Importance and originality of the contribution

The present research identified and tested the application of two different intervention techniques on a distinct sample of participants, i.e. young people. It further shed more light on a novel moment of change (COVID-19) compared to a more traditional one (starting university).

IC - (20899) - REDUCING WATER CONSUMPTION IN THE HOME: WATER SMART TECHNOLOGY AND MOMENTS OF CHANGE

Joanne Swaffield[1]
1 - Cardiff University

Background and objectives

In the context of a changing climate, water scarcity is a significant and multifaceted problem. Increased temperatures and reduced rainfall will decrease available freshwater in countries across the globe, while simultaneously increasing water demand for hydrating, cooling and irrigating. This paper focuses on water consumption in UK households and the ways in which we might encourage a change in water use behaviours. Specifically, it evaluates the effect of introducing a behaviour change intervention at a 'moment of change' in a person's life. Many environmentally significant actions are strongly influenced by habitual behaviour and, even when we want to protect the climate, our everyday actions are constrained by the habits we have formed (e.g. leaving the tap running while we brush our teeth, taking long showers). However, at a 'moment of change' (e.g. moving house, retiring) an individual is more likely to be able to form and sustain new climate protecting habits.

Process and methods (for empirical research)

In collaboration with the water utility Anglian Water, we tested this hypothesis by providing home movers in the East of England with information about the impact of water 'wasted' in the shower and a device that records shower duration (a smart shower sensor). We analyse shower duration and overall daily water consumption of this group compared to non-home movers and those who are not part of the intervention.

Main results (or main arguments in the case of critical reviews)

We find that customers who are provided with a smart shower sensor and information at the point at which they move house (a moment of change) save more water than customers who are either not moving house or do not receive the device and information.

Implications for research and practice/policy | Importance and originality of the contribution

Implications for habit disruption theory and intervention design will be discussed. This is one of the first field experiments on moments of change, and perhaps the only one to focus on water consumption.

IC - (21014) - THE IMPACT OF A SOCIAL MEDIA CAMPAIGN ON INDIVIDUAL TRAVEL BEHAVIOUR IN THE UK DURING THE COVID-19 PANDEMIC

Christianne Tipping[1]
1 - Cardiff University

Background and objectives

Many everyday actions that have an environmental impact are habitual and difficult to change within a stable context. However, disruptions to the context provide an opportunity to modify behaviours. These disruptions, or 'moments of change', can arise from life transitions (e.g. moving house) or can be precipitated by external events (e.g. economic downturns). The COVID-19 pandemic constitutes an exogenous moment of change which has significantly disrupted people's lives. This research project investigates whether a social media campaign to promote active travel in the wake of the first UK lockdown led to changes in transport mode choices among participants.

Process and methods (for empirical research)

During the campaign, which ran in Summer 2020, individuals were asked to pledge to use active travel modes at least five times in a fortnight, or to commit to travelling 100km in a month by active means. Everyone who signed up was invited to participate in an evaluative study; those who did so formed the experimental groups for this project (N=390). A control group was recruited via Facebook (N=100). All participants completed online surveys which assessed whether behavioural change had occurred. The survey was repeated in Spring 2022 to determine whether any changes endured over time. Survey findings were supplemented by material from qualitative interviews to gain a fuller understanding of the enablers or barriers to the adoption of active travel modes.

Main results (or main arguments in the case of critical reviews)

Approximately two-thirds of participants met their pledges while those who did not cited barriers such as lack of infrastructure to support safe active travel. Participants in all groups expressed an intention to walk or cycle more, drive less, and fly less once all COVID-19 restrictions were lifted.

Implications for research and practice/policy | Importance and originality of the contribution

Findings indicate the pandemic represented an opportunity to reconfigure travel habits in a more sustainable direction. This research advances moment of change research by applying a field experiment design during an exogenous disruption.

Hour: 09:00:00
Session: Fishbowl Idiographic approach
Room: Room 5

Theme: Governance (1)

WF - (20977) - THE IDIOGRAPHIC - UNTANGLING THE CONFOUNDS IN RESEARCH METHODS AND CORRELATIONAL ANALYSES OF ORDINAL DATA

Mark Del Aguila[1]
1 - Australia

Expected audience

Physical spaces become places with human actions, events and their effects varying from moment to moment connected through time. A process distinct from construction of space where the law-like properties of materials align building regulations, performance, and design specifications. Strength and flexibility, fire resistance, thermal conductivity, vapour permeability, surface friction and reflectivity, tested objectively through repeating patterns of observations occurring invariantly in closed homogenous systems. An understanding of built environments aspired to in environmental psychology where affect and cognition, and behaviour cannot be predicted through a deductive search in a determinate system. A system where meaning has as many possibilities as there are people, and theory is an empirical strategy for describing knowledge centred on the individuality and uniqueness of phenomena experienced by individuals. The only possibility for a covering law is recognition that people environment interactions is an experience of individuals. An understanding recently arrived at in architectural theory while environmental psychology remains constrained by statistical theories based in closed homogeneous systems.

Researchers routinely face anomalous interpretations from their analyses and fail to replicate results. Data presents with a restricted range of response, or the distributions are skewed. It may be attributed to sampling errors or effects of scale lengths and addressed with data transformations or choice of a different coefficient. In two parts, this paper addresses the estimation of inter-item relationships which serve the interests of multivariate analyses for hypothesis testing and theory building. A computational method for correlation that employs known structural attributes of ordinal response scale formats is presented. The computational method is then applied in a worked example of multivariate descriptive statistics which highlights method effects of measurement of individual differences.

Pertinence and scope of the topics addressed

The investigation of a well articulated research question in environmental pshchology is dependent on the assumptions of method and analyses used. To date, where correlational analyses of ordinal data are involved, the assumptions of statistical theory have shaped environmental psychology. As research moves forward in addressing important questions facing this planet, it is essential that the methods and analyses do not distort the validation of theoretical models or bring into question research addressing global challenges of climate change.

Appropriateness and interest to the conference and its thematic lines

Relevant to every research analysis of ordinal data in environmental psychology. I put it under the heading of governance, because there are questions to fbe adressed in the governance of research. research methods and analyses of ordinal data are questioned.

Hour: 09:00:00

Session: G6 - Houses & Public Spaces
Room: Room 2

Theme: Governance (5)

IC - (20796) - DEVELOPING A NOVEL AUGMENTED REALITY TOOL FOR ASSESSING HOME ACCESSIBILITY FOR AGING IN PLACE

Jung-Hye Shin[1]; Kevin Ponto[1]; Beth Field[1]; Ross Tredinnick[1]; Bryce Sprecher[1]
1 - University of Wisconsin-Madison

Background and objectives

Home modification interventions can remedy deficiencies in the home environments of the growing number of older adults that want to age in place. Conceptualized as biopsychosocial in nature, these interventions are most often informed by systematic assessment and delivered by skilled occupational therapy practitioners employed in the home health care setting. However, a shortage of the occupational therapy workforce hinders this approach, especially in rural areas. Furthermore, on a structural level, this health care approach inhibits systematic documentation and dissemination of architectural information that can favorably affect the functional independence and safety of older adults at home at a larger scale.

Process and methods (for empirical research)

To address these gaps in practice, we used an iterative co-design process to develop **a first prototype of a novel augmented reality home assessment tool (ARHAT) that can be utilized more rapidly by both individuals in and outside of health care, as well as performed either on or off-site.** The ARHAT is theoretically based on the tripartite model of person-environment-activities (Law et al., 1996), and draws from regional accessibility guidelines and multiple established home environment assessment tools, such as the Housing Enabler (Iwarsson et al., 1996), I-HOPE (Stark et al., 2010), HESTIA (Burns et al. 2017), and CASPAR (Sanford et al., 2002).

Main results (or main arguments in the case of critical reviews)

As a result, the tool includes four different approaches to home assessment: (1) by disability types, (2) by spaces, (3) by activity types, and (4) the whole house. Our next steps include content validation and usability and acceptability testing by an interprofessional panel of experts. Information gleaned from the expert panel will be used to further refine the ARHAT.

Implications for research and practice/policy | Importance and originality of the contribution

Ultimately, it is our hope that ARHAT will have a transformative impact for major stakeholders involved in supporting housing design and aging in place, thereby reaching and **making a difference in the lives of more older adults**

IC - (20920) - USING DIGITAL TOOLS TO FACILITATE CO-DESIGN IN HOUSING PROJECTS

Micaela Raposo[1]; Sara Eloy[1]

1 - Instituto Universitário de Lisboa (ISCTE-IUL), ISTAR, Lisboa, Portugal

Background and objectives

Community participation in architecture and urban planning is crucial for the satisfaction of end users. Housing that are not adjusted to inhabitants' needs lead to modification works that generate unnecessary waste. This could be avoided if the design of houses was defined from the beginning with the participation of inhabitants.

The use of digital technologies benefits design participatory processes by allowing non-design specialists to obtain a better understanding of space and design possibilities. There exist digital tools for housing customization, but these were not developed along with potential users.

The aim of the present work is to define the requirements for a digital design tool that facilitates the involvement of inhabitants in the definition of the design of their homes.

Process and methods (for empirical research)

Interviews were conducted with professionals, representatives of housing cooperatives and inhabitants of these cooperatives. The aim was to identify how participatory processes occur and could occur, and how digital tools can help these processes. Descriptive statistics method was used to summarize the results and define requirements for a co-design tool.

Main results (or main arguments in the case of critical reviews)

The results show that professionals consider these participatory processes complex but necessary. Currently, inhabitants are not usually involved in defining the projects, but rather in more advanced stages where only small choices or changes can be made. The inhabitants expressed an interest in participating more actively and exploring the design possibilities.

Implications for research and practice/policy | Importance and originality of the contribution

A digital tool that facilitates housing co-design must consider the following main requirements: i) allow user to decide on the characteristics of spaces; ii) provide a simple interaction that does not require advanced skills; iii) enable a 3D visualization, and iv) enable the visualization on large screen devices such as a computer.

The originality of this contributions lies on the fact that the requirements were extracted from direct contact with potential users.

IC - (20976) - HOUSING JAPANESE IN A SUPER-AGEING SOCIETY: HOW FAR HAVE WE PROGRESSED AND WHAT REMAIN TO BE DONE?

Satoshi Kose[1]
1 - Shizuoka University of Art and Culture

Background and objectives

Japan started policy preparation to cope with its ageing in mid-1980s when alarming forecast told that a quarter of population would be 65 and over in 2030. Housing policy was no exception, and the author was involved in the development of dwelling design guidelines for an ageing society (not for aged persons) at a research institute. A proposal of design guidelines was drafted in 1991/92, with three essential requirements: elimination of unnecessary step differences; installation of hand/grab rails for securing stability; and widening of corridors/doors for temporary use of an indoor wheelchair.

Process and methods (for empirical research)

The application of guidelines started in the early 1990s, and the government introduced a policy to make the design recommendation to work – extra subsidies for housing mortgages in 1996 if the dwelling design was prepared for the ageing. Although the scheme was terminated in about ten years, major housing providers were persuaded to abide by the requirements since they were fairly easy to follow for new construction. Afterwards, similar policy measures were introduced intermittently to give incentives for new housing construction (but difficult to modify afterwards).

Main results (or main arguments in the case of critical reviews)

An optimistic forecast was that existing housing will be demolished and replaced at a speed of one million dwelling units per year. The reality was that roughly only half a million were demolished every year, the other half survived with poorer quality in many aspects, accommodating graying frail seniors.

As of 2022, people aged 65 and over is nearly 30% of total population, but housing survey conducted in 2018 suggests that about 42.4 %% of seniors live in dwellings complying at least one of three key requirements although only about 8.8 % of seniors live in dwellings that meet all three requirements.

Implications for research and practice/policy | Importance and originality of the contribution

Will Japan need another 25 years to eliminate the mismatch between the ageing/aged residents and design?

IC - (21019) - SMART HOMES FOR ALL? A QUALITATIVE STUDY OF PUBLIC PERCEPTIONS OF SMART HOME LIVING IN THE UK

Christopher Jones[1]; Valentine Seymour[1]; Maria Xenitidou[1]; Lada Timotijevic[1]; Charo Hodgkins[1]; Eleanor Ratcliffe[1]; Birgitta Gatersleben[1]; Nigel Gilbert[1]
1 - University of Surrey

Background and objectives

The construction industry is experiencing considerable pressure to provide homes which are affordable, adaptable, and supportive of occupants' needs. The University of Surrey is working in partnership with MyGlobalHome to build a state-of-the-art modular, 'smart home' concept on the University campus. Smart homes are digitally-connected homes equipped with lighting, heating, and electronic devices that that are automatically regulated or can be remotely controlled by users (e.g. via smartphone). Developing a fuller understanding the factors shaping end-user acceptance of smart homes (incl. a willingness to live in one) will be essential for their longer-term commercial viability.

Process and methods (for empirical research)

We report on the findings of an online Citizens' Jury held with 20 members of the general UK public, across 2-days in Summer 2021. Questioning within the CJ focused on exploring participants' opinions on issues of data security, and accessibility to and control over the use of devices and technological appliances associated with smart homes. Participants were selected to fall into one of four groups, determined by their age (younger vs. older) and techno-scepticism (sceptic vs. enthusiast). Four expert witnesses provided short presentations to the participants about the core issues of data-security and control before these topics were debated through facilitated discussion.

Main results (or main arguments in the case of critical reviews)

Thematic analysis (using NVivo 12) was conducted to code the themes arising from participant discussions. Key themes related to the benefits of smart home living (e.g., enhanced QoL), sense of control (e.g., feelings about automation), ensuring design meets with user needs (e.g., designing for diversity), general perceptions of smart home living, accessibility (e.g., affordability), and data-sharing governance and management.

Implications for research and practice/policy | Importance and originality of the contribution

The findings confirm the importance of developers acting transparently and providing assurances over matters of consent, data sharing, privacy and security; and highlight the desire for both the regulation of the sector, and the increased affordability and accessibility of smart homes for wider user-groups.

IC - (21158) - THE TRANSFORMATION OF FRONT/BACK-SIDE SPACE IN JINBOCHO, TOKYO – FROM 1980S TILL NOW

Jingyao Dong[1]
1 - Southeast University (China)

Background and objectives

This study focuses on a pair of dualistic concepts of front-side and back-side in urban space. The build and demolish constructions reform the built environment and drive the back-side space to appear and disappear in some places during the past years.

Process and methods (for empirical research)

This paper aims to clarify the characteristics of these 2 kinds of space in contemporary Japanese urban exterior space through years as well as to explain the attendant usage patterns, taking Jinbocho as the main research site. Initially, the space enclosed by the interface with the main access of buildings is extracted as front-side space. Otherwise, the space is regarded as back-side space. Secondly, 4 typical years are extracted between the 1980s till now, and the locations and configurations of front-side space and back-side space of each year are mapped for morphological analysis respectively and transformational analysis comparatively. Thirdly, the usage patterns of front/back-side space are achieved by the observation of temporary events and permanent usage.

Main results (or main arguments in the case of critical reviews)

Finally, as a result, front-side space is inclined to be continuous while back-side space is inclined to be fragmentary. Meanwhile, though front-side space and back-side space are the opposite concepts, they are not clearly separated in the Japanese urban context. In other words, there exist some states in between. Besides, compared to front-side space, back-side space has more flexibility to hold different events or provide a place to stay as potential urban publicly accessible space.

Implications for research and practice/policy | Importance and originality of the contribution

The urban structure is clarified by the concept of the front and back, and the results could be used in the urban revitalization in the future.

Hour: 09:00:00
Session: S12 Global- Local Interplay
Room: Room 3

Theme: Sustainability (3); Consumption (1)

IC - (20824) - ATTITUDES TOWARD HISTORIC ARCHITECTURE: A COMPARATIVE ANALYSIS OF MALAYSIAN AND JAPANESE CITIZENS ON SHOPHOUSE IN IPOH, MALAYSIA

Rui Jing Khoo[1]; Ryota Yanase[1]
1 - Shinshu University

Background and objectives

Shophouses are vernacular architectural buildings that are commonly seen in Southeast Asia. Due to the early history of Ipoh, as a settlement was all down to its mining industry, stylistic facades which have hybrid characteristics incorporating architectural vocabulary from the West, Chinese, and Malay were formed into shophouses in Ipoh, , and it takes an essential role in representing Malaysian's wealthiest assets, cultural diversity.

This study intends to review Malaysian residents' perception and Japanese perception of shophouses in Ipoh for proposing references to help conserve and develop the future of the shophouses in Malaysia.

Process and methods (for empirical research)

In this study, photo-based methods were used in an online questionnaire. This method is considered the best method to enhance the status and acceptability of the broader research community during the COVID-19 pandemic. Furthermore, a comparative analysis was conducted to explore the similarities and differences in residents' perceptions of historic architecture in Ipoh.

Main results (or main arguments in the case of critical reviews)

The research findings show that shophouses in Ipoh possess many historically significant features, which enables the local communities to recognize shophouses as Malaysian historical buildings. The Japanese only recognized Malaysian buildings with those unfamiliar architectural styles.

Besides, this study also indicates both Malaysian and Japanese's will to protect shophouses in Ipoh. However, Malaysian residents think that shophouses create a nostalgic atmosphere which is essential to towns and cities in Malaysia. On the other hand, exotic architecture style led to Japanese decisions primarily based on buildings' functionality and their fondness for them.

Implications for research and practice/policy | Importance and originality of the contribution

Unlike Japan which has carried out a heritage protection system for more than 150 years, the awareness of conserving heritage buildings in Malaysia is slowly increasing, though relatively slowly. Extra efforts on conserving these buildings can bring immense benefits to the country, especially for future generations. Thus, this study clarified the relationship between the psychological impact and conservation value of shophouses in Ipoh.

IC - (20855) - GROWING TOGETHER - TOWARDS A BETTER UNDERSTANDING OF AGRICULTURAL PROSUMPTION IN SWITZERLAND

Stefan Galley[1]; Christian Ritzel[1]
1 - Agroscope

Background and objectives

Prosumption, i.e. the interrelatedness and conjunction of production and consumption, can be seen as a way to change food sovereignty and the agricultural landscape as a whole, especially in urban areas. Regardless of its potential benefits for society and ecology, it has been a neglected research topic for agricultural sociologist. With our work, we establish a broader understanding of different forms of agricultural prosumption for urbanized European countries using a data and theory driven approach. Thereby, we look into the possibility of widespread change in consumption behaviour towards a sustainable, green way of generating food, whilst rebuilding local, urban communities.

Process and methods (for empirical research)

Through qualitative and ethnographic fieldwork, we established a theoretical structure to differentiate and characterise varying types of prosumption activities, such as community supported agriculture, allotment gardens or private gardening. This structure consists of three main concepts: barriers, activity and effects. The framework illustrates the heterogenic specifications for various socio-demographic groups, concerning the accessibility and the consequences of the group's corresponding ecological and social surroundings.

Main results (or main arguments in the case of critical reviews)

Using Bourdieu's theory of capital, we further expand our proposed structure. We show how specific community-based forms of prosumption transform different forms of capital and use their social network to form a circular amplification of these capitals. This amplification of symbolic capital is the reason for the popularity of prosumption. It also shows why prosumption is hardly ever established in low-education, low-income households or neighbourhoods.

Implications for research and practice/policy | Importance and originality of the contribution

Our broad, theory and data driven analysis of the potential of agricultural prosumption shows the importance and the obstacles of shifting to a more sustainable way of feeding large populations in urban areas. Our work aims to improve the situation of prosumption organisations, and provides a guideline to politics on a local and national level. Further research can use our structural framework to ground their work in an underlying theory.

IC - (20917) - ART-CULTURAL APPROACH - RE-BRANDING THE PLACE - RE-AWAKENING IDENTITY

Heba Eissa[1]; Ingy El Zeini[2]; Aleya Abdel-Hadi[3]

1 - Interior Architecture, Faculty of Art & Design, King Salman International University, Sharm Elsheikh; 2 - Art, Design & Media, School of Design & Media, Coventry University, Egypt; 3 - Interior Architecture, Faculty of Fine Arts, Helwan University, Egypt

Background and objectives

Egypt's well-known historic culture has been considered a magnet for tourism attraction; hence, a marketplace strength. However, nowadays the Egyptian destination faces great competition due to other countries' strong city branding campaigns. A 'Holistic Art-Cultural' approach including forms of interior design has created a powerful impact on the community, it acted as a method that fostered Egyptian ancient-modern revival; it benefited in 'Rebranding' some places thus, re-awakening self-identity and uplifting the sense of belongingness in the minds and feelings of the Egyptian People.

Process and methods (for empirical research)

This exploratory study aims to affirm the previous hypothesis and to investigate mega events and their influence on people 'Glocally'. In 2021, Egypt witnessed the happening of three mega-events: The Pharaohs' Golden Parade in Cairo, the Opening Ceremony of the Sphinx Avenue in Luxor, and Art D'Égypte 'Forever Is Now' Egyptian/international exhibition by the Pyramids in Giza. A multi-method of enquiry is adopted in which data is gathered through: 1)- interviews with the Egyptian designers who carried out those events; 2)- analysis of each event in relation to spatial mapping as means of place re-branding and cultural approach (identity); and 3)- two online surveys, one with a random sample of Egyptians to capture the events' perception and its relation to national confidence feelings, and the other with a random sample of tourists to inspect how these events encourage their future visits; 4)- additionally, interviews with tourism industry representatives to measure the effects of those events.

Main results (or main arguments in the case of critical reviews)

Findings review statistics measuring the perception of local citizens, international audiences, and tourism industry. Results highlight the contribution of interior design as a part of a holistic art-cultural approach in mega-events which when successfully staged, can stimulate growth over an extended period, thus achieving place rebranding and re-awakening identity.

Implications for research and practice/policy | Importance and originality of the contribution

To verify the relationship between a boosting economy from achieving a place re-branding

IC - (20927) - SUSTAINABLE COCOA FARMING IN GHANA: THE IMPACT OF COOPERATIVES AND SUSTAINABILITY LABELS ON SMALLHOLDER FARMERS' LIVES

Jana Ruelke[1]
1 - Osnabrueck University

Background and objectives

Cocoa production causes a long list of negative externalities, such as health problems and poverty among farmers, as well as deforestation and destruction of valuable ecosystems. To find solutions to these complex problems, it is necessary to consider social and environmental issues together in an interdisciplinary way. This research problematizes these causal links between global production networks (GPNs), the control of sustainability of Ghanaian cocoa production, and its final consumption. It examines the extent to which smallholder cocoa farmers benefit from membership in cooperatives, producing to certain standards, and how this affects their embeddedness in the cocoa GPN. Aspects of power and dependency are examined and how certain actors influence the production system.

Process and methods (for empirical research)

Data is obtained from 210 quantitative surveys of smallholder producers involved in various cultivation systems, 44 qualitative interviews of different actors in Ghana and Europe, 6 ethnographic observations and the preparation of a 150-page field diary containing information from 37 informal conversations. This data will be analyzed to identify the embeddedness of cocoa producers in the existing GPN.

Main results (or main arguments in the case of critical reviews)

Preliminary results suggest that sustainability labels are not ineffective, but reach farmers still to a far too small extent. Power, trust and communication are unequally distributed between individual actors, which leads to imbalances that become a self-reinforcing process due to the lack of acceptance of responsibility by powerful actors.

Implications for research and practice/policy | Importance and originality of the contribution

Approaches such as providing information to consumers about the origin and production of cocoa can help to make the opaque parts of the GPN, the producing farmers and their situation visible. However, the extent to which individual producers and entire cooperatives have a voice in the sector is questionable. Therefore, this study focuses on the social, environmental, and economic impacts of this system in order to make recommendations for improving the embeddedness of smallholder cocoa farmers in the GPN.

Hour: 09:00:00
Session: S13 - Symposia - The social context of restoration
Room: Room 4

Theme: Governance (2); Sustainability (3); Sustainability (1)

(21047) - THE SOCIAL CONTEXT OF RESTORATION

Henk Staats[1]; Terry Hartig[2]; Keren Kaplan-Mintz[3]; Jose Antonio Corraliza[4]; Ferdinando Fornara[5]; Birgitta Gatersleben[6]; Kelton Minor[7]; Thomas Astell-Burt[8]
1 - Department of Social, Economic, and Organizational Psychology, Leiden University; 2 - Institute for Housing and Urban Research, Uppsala University; 3 - Shamir Research Institute, University of Haifa; 4 - Departamento Psicología Social y Metodología, Universidad Autonoma de Madrid; 5 - Department of Education, Psychology, Philosophy, University of Cagliari; 6 - Environmental Psychology Research Group, University of Surrey; 7 - Copenhagen Center for Social Data Science, University of Copenhagen; 8 - Population Wellbeing and Environment Research Lab (PowerLab), University of Wollongong

Background and objectives

This symposium focuses on a topic we feel is underresearched in the study of restorative environments. Traditionally the focus of restoration studies is on qualities of the physical environment. We argue that to really understand the concept of restorative environments asks for an in depth analysis of what the social context is of experiences leading to restoration. As argued by Long and Averill (2003), never is the presence or absence of others a negligible characteristic of the situation and we are sure this also applies to restorative environments. To advance knowledge on this topic is the goal of this symposium.

Significance for the advancement of People-Environment relations

We are happy to present six contributions that testify to the importance of this social dimension of restorative environments. The contributions cover a number of different and timely issues, from social and cultural influences on restorative emotions of forest visitors (Kaplan-Mintz, Ayalon, Eshet, & Nathan), to reflections on the importance of shared restorative experiences in the past (Corraliza); from the effects of the Covid-19 lockdown on the importance and effects of visiting green urban spaces compared to social interaction (Fornara, Rinallo, Carrus, & Scopelliti), as well as on the frequency and role of socializing in natural places for restoration during the pandemy (Gatersleben, White, Wyles, Golding, Scarles, Xu, &Willis). A virtual mode of socializing is investigated by studying smartphone screen use for social purposes as competing with nature experiences while in the outdoors (Minor, Glavindl, Schwartz, Danforth, Lehmann, & Bjerre-Nielsen). Finally an overview of studies will be presented on the extent to which different kinds of greenspace affect general feelings of loneliness and its different dimensions (Astell-Burt, Hartig, Putra, Walsan, Dendup, & Feng).

IC - (20886) - SOCIAL AND CULTURAL CONTEXT OF RESTORATIVE EXPERIENCE

Keren Kaplan Mintz[1,2]; Ofira Ayalon[2,3]; Tzipi Eshet[3]; Orly Nathan[3]

1 - Shamir Research Institute; 2 - University of Haifa; 3 - Samuel Neaman Institute

Background and objectives

While the restorative benefits of being in nature are well documented, inter-personal differences may exist in the extent of restorative experience. One of the factors that might lead to inter-personal differences in restorative experience, and in the judgment of nature contribution to personal well-being is the social and cultural context. The aim of the present research was to study how social and cultural context affect the perceived benefits of forests, and the restorative experience while being in a forest.

Process and methods (for empirical research)

The research was composed of two studies. In the first study a questionnaire was distributed to a representative sample of Israel population to identify the role of socio-demographic context in perceptions of forest contribution to well-being. In the second study a questionnaire was distributed among forests visitors to identify the ways social and cultural context is related to restoration while being in a forest.

Main results (or main arguments in the case of critical reviews)

Study 1: Perceived contribution of forests to emotional well-being was significantly higher among women than among men, and among secular compared to religious people. Study 2: Most of the respondents (93.5%) reported visiting the forest with other people. The social configuration of the visit was not found to be related to the emotional level. Nevertheless, lower level of positive emotions was found among those who came to the forest with children, compared to those who were not accompanied by children.

Implications for research and practice/policy | Importance and originality of the contribution

The applied aim of the study is to provide recommendations regarding how to produce higher awareness of the public and of professionals in the fields of health, culture, and sports concerning the potential contribution of forests.

Few studies thus far have paid attention to the social context of restoration. This study adds to the understanding of how social and cultural context may affect restorative nature experiences, and judgment of nature contribution to the well-being

IC - (21032) - RESTORATIVE EXPERIENCES DURING THE COVID-19 LOCKDOWN. THE ROLE OF CONTACT WITH NATURE AND SOCIAL INTERACTION.

Ferdinando Fornara[1]; Giuseppe Carrus[2]; Massimiliano Scopelliti[3]

1 - University of Cagliari; 2 - Department of Education, Roma Tre University; 3 - Department of Human Studies, Libera Università Maria Ss. Assunta (LUMSA) of Rome

Background and objectives

The COVID-19 pandemic has dramatically impacted human health and well-being. This was true not only because of its effects in terms of numbers of infected and deceased persons worldwide, but also considering the stress-related psychological negative consequences of long lockdown periods for the general population (Odriozola-González, 2020; Roma et al., 2020; Shevlin et al., 2020; Shah et al., 2021). Contact with nature and social interaction have been found in literature as relevant mechanisms for reducing stress-related negative consequences and improving health and well-being (Berkman, 1995; Bratman et al., 2012; Hartig et al., 2014). Evidence of a positive amplification effect of nature exposure and social contact has also been proven (Staats & Hartig, 2004; Scopelliti & Giuliani, 2004).

The present survey study aims at assessing the positive effects of experiencing urban green spaces and social interaction on human well-being during the first lockdown in Italy due to the COVID-19 pandemic.

Process and methods (for empirical research)

The data collection is still ongoing. Participants are requested to fill in an online questionnaire that includes measures of social interaction and nature experience during the pandemic, perceived restorative qualities of the nature experience (Italian version of the Perceived Restorativeness Scale: Carrus et al., 2015), nature connectedness (Connectedness to Nature Scale: Mayer & Frantz, 2004), anxiety (short version of the Spielberger State-Trait Anxiety Inventory: Marteau & Bekker, 1992), and overall well-being (short version of the Oxford Happiness Questionnaire: Hills & Argyle, 2002). Sociodemographic indices were also detected.

Main results (or main arguments in the case of critical reviews)

Results will be discussed in the light of their theoretical and practical implications.

Implications for research and practice/policy | Importance and originality of the contribution

In particular, the focus will be put on the consequences of nature and social deprivation on people well-being, in order to provide useful suggestions to the policy side.

IC - (21040) - SOCIAL ASPECTS OF NATURE ENGAGEMENT DURING COVID-19

Birgitta Gatersleben[1]; Emma White[1]; Kayleigh Wyles[2]; Sarah Golding[1]; Caroline Scarles[1]; Tracey Xu[1]
1 - University of Surrey; 2 - Plymouth University

Background and objectives

During the Covid-19 lockdown periods many countries saw a significant increase in visits to local natural spaces (Corley et al., 2021; Soga et al (2021). Having access to greenspace during the pandemic has been associated with greater wellbeing (Dzhambox, 2021; Hubbard et al., 2021; Poortinga et al., 2021; Tomasso et al. 2021). Such benefits of nature engagement are well documented (e.g., Capaldi et al., 2015; Houlden et al, 2018; Bowler et al., 2011). In environmental psychology they tend to be studied from the perspective of environmental restoration theory (Kaplan & Kaplan, 1989) and often as a solitary experience (Korpela & Staats, 2021, 2014).

We examined whether the pandemic and lockdown restrictions affected social aspects of nature engagement and wellbeing during the pandemic. Nearby natural spaces may have been "used" more during the pandemic to meet with others as well as to get away from those we lived with.

Process and methods (for empirical research)

A longitudinal survey was conducted with a representative sample of 850 UK households examining nature engagement in spring/summer 2020 and approximately one year later.

Main results (or main arguments in the case of critical reviews)

Preliminary findings found no change in frequency of nature visits alone (or with others). Participants were less likely to visit natural places to socialise during 2020 (in line with restrictions) than one year later. Visiting alone was not linked to restorative experiences. However, visiting nearby nature to socialise with others was. Further analyses will examine in more depth these relationships to understand how social experiences in nature benefit wellbeing.

Implications for research and practice/policy | Importance and originality of the contribution

Findings can help gain insight into the value of providing natural spaces for social interaction as well as solitude to support people's wellbeing.

IC - (21057) - MEMORIES OF RESTORATIVE EXPERIENCES IN NATURE: THE ROLE OF SHARED EXPERIENCES

José A. Corraliza[1]

1 - Universidad Autónoma de Madrid

Background and objectives

Research on restorative experiences tends to assume a relationship between the satisfaction of a personal need and the environmental resources offered by a given situation. Recently, Hartig (2021) raises the need to go further and believes it is also necessary to analyze the interdependence of the restorative experience in the present with the memory of past experiences. In this presentation, it is intended, on the one hand, to recover some basic concepts of Environmental Psychology that describe the role of past experiences in the interaction with the environment and the resources it contains in the present. Based on these insights and concepts, I will analyze the role that shared experiences have in the formation of restorative experiences in nature in the past. I will argue that the content of environmental memories is based on the interdependence of the physical and spatial variables that make them up and the people, real or imaginary present, in the place that is remembered. In preliminary studies carried out on the experience of nostalgia for lost places in a sample of aged Spanish people, both the feelings for the loss of the place and the feelings produced by the memory of the people with whom the place has been shared in the past play an important role. It can be deduced that this interdependence will also occur in the memory of restorative experiences in which landscape features are connected with the people who were part of the nature restorative places, such as nuclear family and other relatives (grandparents, aunts and uncles), friends, teachers and neighbours. Social experience are part of anchor restorative place experience. This presentation also includes methodological proposals to study the relational component of restorative experiences in nature.

IC - (21123) - NATURE UNPLUGGED OR CONNECTED? SMARTPHONE USE AND VIRTUAL SOCIAL INTERACTION IN NATURAL AND URBAN ENVIRONMENTS

Kelton Minor[1]; Kristoffer Lind Glavind[2]; Aaron J. Schwartz[3]; Christopher M. Danforth[4]; Sune Lehmann[5]; Andreas Bjerre-Nielsen[1,2]

1 - University of Copenhagen, Center for Social Data Science; 2 - University of Copenhagen, Department of Economics; 3 - Department of Ecology and Evolutionary Biology, University of Colorado Boulder; 4 - University of Vermont, Department of Mathematics and Statistics; 5 - Department of Applied Mathematics and Computer Science, Technical University of Denmark

Background and objectives

Modern lifestyles have led to what some researchers have described as an ''extinction of experience'' for younger generations, a lack of interaction with the natural environment on which life in the biosphere depends. Indeed, evidence suggests that youth today spend less time in nature than previous generations, with implications for planetary health and human well-being. Scholars have recently suggested that mobile devices may both curtail time in nature and disrupt restorative nature encounters, yet only scarce self-report evidence exists in this setting. Meanwhile, “green time” is increasingly prescribed to young adults as a digital detox for excessive screen time, despite a dearth of empirical backing.

Process and methods (for empirical research)

Here, we analyzed ~2.5 million minute-level observations of smartphone screen use, texting, calling, and environmental exposures for 701 young adults over two years. We employ a within-person fixed effects specification that enables us to estimate the relationship between environmental exposures and within-person changes in smartphone use while controlling for unobserved individual factors and other time-varying confounding factors.

Main results (or main arguments in the case of critical reviews)

Participants’ weekly smartphone screen-time was over double their green-time. The relationship between exposure to greenspace and smartphone activity differed by exposure dose, type and mobility state. Virtual social activities such as calling and texting increased during short recreational greenspace visits while all smartphone use declined over the first three hours in nature areas, suggesting that visiting less-programmed nature may support digital impulse inhibition in-situ. Those with elevated baseline screen-time or green-time significantly reduced device use in nature, indicating that parts of the biosphere may provide a reprieve from the cybersphere for highly connected young adults.

Implications for research and practice/policy | Importance and originality of the contribution

Urban areas and recreational green spaces may be characterized by not only a higher density of stimuli in the physical environment but also in the digital environment. By contrast, nature areas may provide respite from digital demands.

IC - (21204) - GREEN SPACE AND LONELINESS: A SYSTEMATIC REVIEW WITH THEORETICAL AND METHODOLOGICAL GUIDANCE FOR FUTURE RESEARCH

Thomas Astell-Burt[1,2]; Terry Hartig[3,4]; Edi Putra[1]; Ramya Walsan[1,5]; Tashi Dendup[1]; Xiaoqi Feng[1,2,5]

1 - Population Wellbeing and Environment Research Lab (PowerLab), School of Health and Society, Faculty of Arts, Social Sciences, and Humanities, University of Wollongong, Wollongong, Australia; 2 - Menzies Centre for Health Policy, University of Sydney, Sydney, Australia; 3 - Institute for Housing and Urban Research, Uppsala University, Sweden; 4 - Department of Psychology, Uppsala University, Sweden; 5 - School of Population Health, Faculty of Medicine, University of New South Wales, Sydney, Australia

Background and objectives

Urban greening may help to reduce the population health impacts of loneliness and its concomitants, such as hopelessness and despair. However, the literature lacks both a critical appraisal of extant evidence and a conceptual model to explain how green space would work as a structural intervention. Both are needed to guide decision making and further research. We conducted a systematic review of quantitative studies testing associations between green space and loneliness, searching seven databases. Twenty two studies were identified by 25/01/2022. Most of the studies were conducted in high-income countries and fifteen (68%) had cross-sectional designs. Green space was measured inconsistently using either objective or subjective indicators. Few studies examined specific green space types or qualities. The majority of studies measured general loneliness (e.g. using the UCLA loneliness scale). Different types of loneliness (social, emotional, existential) were not analysed. Potentially protective associations between green space and loneliness were reported in 88 from a total of 132 (66.6%), with 44 (33.3%) reaching statistical significance ($p<0.05$). We integrated these findings with evidence from qualitative studies to elaborate and extend the existing pathway domains model linking green space and health. These elaborations and extensions acknowledge the following: (a) different types of green space have implications for different types of loneliness; (b) multilevel circumstances influence the likelihood a person will benefit or suffer harm from green space; (c) the personal, relational, and collective processes at work within different domains of pathways linking greenspace with loneliness and its concomitants; (d) the explicit positioning of loneliness and its concomitants as mediators within the broader causal system that links green space with health and wellbeing. This review and model provides guidance for decision making and further epidemiological research on green space and loneliness.

Hour: 11:45:00
Session: G10 - School Settings
Room: Room 5

Theme: Governance (3)

IC - (20857) - THE RELATIONSHIP BETWEEN STUDENT'S PERCEPTIONS OF THEIR SCHOOL ENVIRONMENT AND ACADEMIC PERFORMANCE

Edward Edgerton[1]; Jim Mckechnie[1]
1 - University of the West of Scotland

Background and objectives

Research has demonstrated the impact of a range of environmental variables on students within learning environments. However, studies focusing on the impact of the 'whole school environment' are relatively rare. At the same time, education research has demonstrated the importance of variables such as socioeconomic status, gender and school attendance as predictors of educational achievement. There has been little (if any) research that examines the relative contribution of the school environment and sociodemographic variables on academic achievement.

Process and methods (for empirical research)

This study marks the conclusion of a large scale, longitudinal study examining the impact of new secondary school buildings in Scotland. In this paper, we explore how academic achievement relates to students' perceptions of their new school in comparison with established variables such as school attendance and level of socioeconomic deprivation. In addition, we also examined a range of other important variables that could be potential mediating factors between environmental perceptions and academic achievement. These additional variables include: "within school behaviour", learning goals and self-esteem. S5 students (age 15-16) from four different secondary schools completed a questionnaire that measured their perceptions (ratings) of their school environment, their behaviour in school, their learning goals and self-esteem. In addition data on student academic achievement, attendance and level of deprivation was provided by the local Authority. Data for all variables was available for 441 students

Main results (or main arguments in the case of critical reviews)

A preliminary regression analysis indicates that environmental perception, attendance, deprivation level and gender are all significant predictors of academic achievement

Implications for research and practice/policy | Importance and originality of the contribution

Understanding students' subjective perceptions of their school environment and how these relate to other variables, is important for explaining and enhancing academic achievement. This has rarely been done at the 'whole school environment' level.

IC - (20996) - THE SCHOOL ENVIRONMENT BETWEEN HERITAGE AND SOCIAL CONTROL

Lisiê Kremer Cabral[1]; Adriana Araújo Portella[2]; José Henrique Carlucio Cordeiro[2]

1 - Universidade Federal do Rio Grande do Sul (PROPAR/UFRGS); 2 - Universidade Federal de Pelotas (PROGRAU/UFPEL)

Background and objectives

During the 20th century, the buildings presented measures to improve sanitary conditions. Although, health control is also related to behavioural domain, being a political tool of social discipline. How are the buildings idealized in the beginning of the 20th century, in southern Brazil, meeting the current needs of society? To find how these architecture works nowadays, a case study was realized in the Ponche Verde School, an exemplar of 1930s with its original features preserved, located in Piratini, in the state of Rio Grande do Sul, in Brazil.

Process and methods (for empirical research)

Based on the walk-through, a phenomenological analysis was performed in the Ponche Verde school, considering the perceptions of the observer/researcher, through reading and subjective experimentation. For this were used the plants, images of the facades, the interior setting, as well as a visit for walk and observation of spatial quality in the object of study of this work.

Main results (or main arguments in the case of critical reviews)

On 1930s, in southern Brazil, standard projects were carried out for educational institutions. These buildings correspond to a nationalist discourse of social, educational, and architectural changes. The Ponche Verde school is an example of these projects, the architecture of the building has characteristics of classical composition, with symmetry of shaft, columns, and pediment. The needs program, in addition to the classrooms, boardroom and library, had space for medical-dental office and sanitary educator. The ideals of government were materialized in the school to control social behaviours. However, the institution still is relevant to the population of the city, as it is part of the student's daily lives and has the participation of the entire school community.

Implications for research and practice/policy | Importance and originality of the contribution

It is concluded that this school, which maintained its originals construction and function, remains a tool of social control, acting through subjective methods in the conduct of man according to political demands.

IC - (21116) - THE ROLE OF THE CAMPUS IN A DISTRIBUTED UNIVERSITY: LEARNING FROM POST-PANDEMIC CHANGES IN NEW YORK CITY CAMPUSES

Manju Adikesavan[1]
1 - The Graduate Center, City University of New York, New York, USA

Background and objectives

The university campus is in a state of flux. The social distancing measures implemented to contain the COVID-19 pandemic disrupted university learning, teaching, and research (LTR) by forcing campuses to operate remotely. As a result, researchers, students, faculty, and staff members experienced unprecedented levels of flexibility in time and location for conducting LTR. As campuses in the United States reopen following the availability of vaccines, universities are instituting distributed LTR arrangements such as hy-flex (courses that can be simultaneously attended in-person or online) and bi-chronous (courses with a blend of asynchronous and synchronous sessions) that support LTR in diverse on- and off-campus settings due to a widespread preference for continued flexibility in LTR practices. This project examines: What types of distributed LTR arrangements have been intensified or are emerging in the aftermath of the COVID-19 pandemic? How is the purpose, function, and usage of various physical campus settings evolving vis-a-vis distributed LTR practices? How is the changing purpose, function, and usage of campus settings affecting campus space design, planning, and policies?

Process and methods (for empirical research)

The project unfolds in the following phases: (1) summative content analysis of virtual meetings and conferences on US post-pandemic campus planning held between December 2020 to December 2021, (2) thematic analysis of interviews with New York City (NYC) campus planners and consultants examining how campus spaces and policies are changing due to distributed LTR practices, supplemented with (3) behavior mapping and observation of campus spaces in NYC campuses that have been redesigned for distributed LTR.

Main results (or main arguments in the case of critical reviews)

A knowledge base of post-pandemic distributed LTR practices in US universities, and case studies of the resultant changes in the purpose, function, and usage of various NYC campus settings, and associated campus designs, plans, and policies.

Implications for research and practice/policy | Importance and originality of the contribution

The knowledge base and case studies will support informed distributed LTR implementation in universities.

Hour: 11:45:00
Session: G9 - Institutional Spaces
Room: Room 4

Theme: Governance (3)

IC - (20988) - THE RELATIONSHIP BETWEEN AGE-FRIENDLY COMMUNITY RESEARCH AND GOVERNANCE—THE CHANGE OF PUBLIC SPACE IN RURAL COMMUNITY AS AN EXAMPLE

Li-Wen Sung[1]; Ting-Ting Cheng[1]
1 - National Cheng Kung University

Background and objectives

This study investigated community designs for rural community which inhabited by elderly with dementia during the COVID-19 era, and the implications for public space policy. Xishi Village, a small and closely-knit village in Taiwan, was selected as the research site.

There are two objectives in this research:

(1) Attempt to visualize community research data for analysis.

(2) Develop public space improvement strategies based on data.

Process and methods (for empirical research)

In 2020, sensor devices were introduced to the research site to track the residents. A total number of 757 participants partook in this study, among which 61.69% were aged 60 or above. Participants were required to wear the sensing devices when traversing the community, allowing the researcher to observe where the participants gathered from the lab.

The study adopted the empirical research method to analyze the effectiveness of the designed community spaces. The residents' degree of participation in the proposed community design and in past community designs were compared, and the community design, street route planning, and identification systems for elderly were subsequently adjusted.

Main results (or main arguments in the case of critical reviews)

The study results are as follows:

(1) Community research visualization: This study used software to compile data from sensing devices to determine the participants' actual stay and gathering locations. Scientifically provide mobile medical stations with regular and fixed service recommendations.

(2) Route signs: Based on previous research, researcher cooperated with government departments to draw indicator routes, which has become one of the indicators for the identification of the environment in an age-friendly community and can provide a clear target orientation for foreign elderly.

Implications for research and practice/policy | Importance and originality of the contribution

Research Contribution:

(1) This study provides evidence on how sensory data can be used to develop community service policy

(2) Through community-built facilities, it is possible to continuously test how to change the way of life of rural community residents and provide reference for future policy formulation.

IC - (21085) - DIALOGUES AND DESIGN EDUCATION: AN INTERDISCIPLINARY DESIGN STUDIO TO RECONCILIATE A RACIAL PAST

Asha Kutty Asha Kutty[1]
1 - University of North Carolina Greensboro

Background and objectives

This panel presentation will focus on an interdisciplinary design studio collaboration between faculty and students of both Interior Architecture and African American Diaspora studies. The two departments collaborated to design a memorial space of Guilford County's (USA) lynching monument. This studio forms a part of Guilford County's effort to retrieve its lynching monument from the National Museum for Peace and Justice in Montgomery Alabama

Main results (or main arguments in the case of critical reviews)

In 2018, the Equal Justice Initiative (EJI), opened the National Memorial for Peace and Justice to the public. Part of the journey through the memorial includes a public square with 800 steel monuments, one for each county in the United States where lynching took place. Each monument bears an engraving of the names of the lynching victims who perished in that particular county. As part of an initiative by the EJI to make counties acknowledge their racial pasts, counties have been offered an opportunity to reclaim a replica of their monument. In order to fulfill this opportunity, counties need to propose a design idea to explain how they will honor and showcase their monument within a particular location.

Implications for research and practice/policy | Importance and originality of the contribution

The purpose of the interdisciplinary studio was to develop collaboration between the Department of Interior Architecture and the Department of African American Diaspora Studies, with the aim of designing a space for Guilford County to reclaim its lynching monument from the National Memorial for Peace and Justice, and to honor and showcase its victims.

Through collaboration the studio aimed at creating a somber, meaningful space that would make local residents learn from their pasts and move forward in new directions. The studio is part of a new momentum in the United States to bring the discourse of Race in America into design education.

Global Challenges, Local Impacts
Rethinking governance, sustainability and consumption in light of climate change
05 - 08 JULY '22

IC - (21385) - EFFECT OF IMAGES ON POWER SHIFT IN URBAN GOVERNANCE: A CASE STUDY OF SHENNONG ST. AND TAINAN ART MUSEUM BUILDING 2

Guan-Ying Chou-Huang[1]; Li-Wen Sung[1]; Ting-Ting Cheng[1]
1 - National Cheng Kung University

Background and objectives

This study explored the gap between urban spaces derived from image translation and real sites, as well as how people of different social classes affect urban governance and environment through images. Since its invention, imaging technology has greatly changed how people perceive the world and interact with the environment, especially with the recent outbreak of the COVID-19 pandemic forcing people to more often connect with the outside world through image translation. This study investigated two urban core zones in Tainan, namely Shennong St., an old street exuding traditional vibes, and Tainan Art Museum Building 2, a venue built using contemporary techniques.

Process and methods (for empirical research)

1. Collect official promotional images

2. Identify on social media using hashtags

3. Compare images; discuss the effects of the government and people on the two places

4. Compile the research results

Main results (or main arguments in the case of critical reviews)

1. Images for promoting public policies are often taken from a reliable point of view, which makes them misleading and disconnected from reality.

2. The sense of space cannot be presented in image, and multiple aspects of the city are lost because of the government's deliberate choices.

Implications for research and practice/policy | Importance and originality of the contribution

1. Under the impact of the COVID-19 pandemic over the past year, people were required by policy to restrict their movements. This has considerably increased people's reliance on images to connect with the outside world.

2. The right to express the city's discourse through images, which was once controlled by the government, has now become available to the general public thanks to online platforms.

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1. The advancement of contemporary media technology allows for people to express themselves freely through images, thereby overcoming the traditional one-way information transmission mechanism.

2. The function of using hashtags to collect images on online platforms assists people in exercising personal expression, but can also lead users to unrealistic expectations about where in the image.

Hour: 13:30:00

Session: C5 - Nature and Well-being
Room: Room 1

Theme: Governance (2); Consumption (3)

IC - (21006) - THE STUDY OF RESTORATIVENESS AND PLACE ATTACHMENT IN MUSEUMS

Dukwoo Kim[1]; Yurika Yokoyama[1]
1 - The University of Tokyo

Background and objectives

The restorativeness of museums was mentioned by Kaplan et al (1993) and Packer and Bond (2010) for specific museums. This paper tries to develop a wholistic understanding of museums' restorativeness, including those with negative image.

In addition, some studies indicate that an environment with high restorativeness tends to be preferred. If this tendency is confirmed even in the temporary experience environment such as museums, it can be suggested that making museums highly restorative will help people perceive place attachment in the city.

This paper verifies restorativeness and place attachment of a positively perceived museum and a negatively perceived museum, and their correlation.

Process and methods (for empirical research)

We conducted a web questionnaire to 137 students at the University of Tokyo and asked the names of the museums they had visited that met the following evaluation: A. most healing, B. most exhausting, C. most favorite, and D. not preferred. And they reported the number and purpose of the visit to each facility, restorativeness, and place attachment.

Main results (or main arguments in the case of critical reviews)

The positively perceived facilities, A. most healing and C. most favorite showed high levels of restorativeness and place attachment. The negatively perceived facilities, while D. not preferred was low rated in both restorativeness and attachment scales, even B. most exhausting was relatively highly rated for scales of restorativeness. And a strong correlation was confirmed between restorativeness and place attachment.

In addition, it was confirmed that physical factors such as spatial design and natural elements of a museum are important factors for visitors to experience restoration in a museum.

Implications for research and practice/policy | Importance and originality of the contribution

It is important that a museum is designed not only as a place to exhibit works but also as a place that provides restorative environment to visitors. Then, a museum can exist as a precious place for urban people while at the same time recovering from their mental fatigue.

IC - (21084) - THE RELATIONSHIP BETWEEN PRO-ENVIRONMENTAL BEHAVIOR, SUBJECTIVE WELL-BEING AND ENVIRONMENTAL IMPACT: A META-ANALYSIS

Laura Krumm[1]
1 - Copenhagen Business School

Background and objectives

A substantial change towards more pro-environmental behavior (PEB) is essential to reach the required reduction in greenhouse gas emissions and mitigate climate change. These behavior changes will have consequences on people's daily lives and thus might affect individual well-being.

Previous research generally finds positive correlations between PEB and well-being. Until now however, empirical work on this relationship mainly focuses on measures of PEB that are only weakly linked to actual environmental impact. This meta-analysis explores whether the relationship between PEB and well-being differs depending on the environmental impact of the performed PEB.

Process and methods (for empirical research)

I systematically collected and analyzed studies that investigate the relationship between PEB of varying environmental impact with individual well-being, categorizing the environmental impact of each PEB measured. The final sample includes 58 articles and 68 studies.

Main results (or main arguments in the case of critical reviews)

The meta-analysis reveals a very small positive association between PEB and well-being overall and a negative moderation effect of environmental impact. I find that the relationship between low-impact PEB and well-being is positive and statistically significant, albeit small, whereas the relationship between high-impact PEB and well-being is virtually zero.

Implications for research and practice/policy | Importance and originality of the contribution

While a positive relationship between low-impact behavior and well-being is already established in the literature, this paper provides the first systematic evaluation of the relationship between high-impact PEB and well-being. While I find no evidence for a positive relationship between high-impact PEB and well-being, engagement in high-impact PEB does not seem to harm well-being either. These findings demonstrate that there is more ambiguity in the relationship between PEB and well-being than previously expected in the literature and that environmental impact of PEB matters when evaluating its relationship with well-being.

IC - (21130) - SEEING ATTRACTIVE NATURE AS A MEANS TO DECREASE THE PROPENSITY TO CHEAT

Sergejus Muravjovas[1]

1 - ISM University of Management and Economics

Background and objectives

In a preregistered online experiment (N = 299; see: osf.io/pu89s) we investigated how the exposure to three different nature conditions (beautiful nature, ugly nature and ugly urban) affects cheating behavior in reporting the outcome of a coin-flip. Participants were informed that upon getting "heads" they would receive a bonus of 0,50 USD upon completion of the survey. Those who got "tails" would not get any bonus. We based our experiment on the premise that attractive nature images can both provide an aesthetic reward and inspire awe (and thus prompt feelings of lesser self), which in turn would encourage more ethical behavior.

Process and methods (for empirical research)

Our main analysis was a logistic regression, with the coin flip outcome (heads =1 and tails = 0) as the DV, and the environmental condition (dummy coded) as the IV. We also tested for moderation of the main effect by BAS Reward Responsiveness, HEXACO Model of Personality Structure (a measure for the traits "Fairness" and "Greed-Avoidance"), and the trait "awe". For this we conducted a multicategorical moderation analysis in PROCESS (model 1), with the coin flip outcome as the DV, the environmental condition as the IV, and BIS/BAS, HEXACO and the trait "awe" as moderators.

Main results (or main arguments in the case of critical reviews)

We find that people have a general tendency to cheat, although those exposed to beautiful nature and ugly urban conditions do so less. Moderation analyses show that individuals who score high on BAS Reward Responsiveness and the trait "awe" cheat less, when exposed to the beautiful nature condition. We did not find any statistically significant differences in reporting behavior between either of the three manipulation conditions.

Implications for research and practice/policy | Importance and originality of the contribution

The findings suggest a link between exposure to beautiful nature and ethical behavior and may have practical value to urban design, good governance and anti-corruption policy agendas.

IC - (21372) - YOU GET WHAT YOU DEFINE - OPERATIONALIZATIONS INDUCE DIFFERENT FORMS OF AWE EXPERIENCES AND PARTLY PREDICT PRO-ENVIRONMENTAL BEHAVIOR

Laura Christin Katz[1]; Benedikt Seger[2]; Laura S Loy[1]
1 - University of Koblenz-Landau; 2 - University of Würzburg

Background and objectives

Experiences of extraordinary vastness (e.g., when seeing impressive nature scenes) and the need to accommodate one's mental structures in order to incorporate these experiences are called *awe experiences.* They contain a big potential for changing people's view of the world. However, definitions and operationalizations of awe diverge considerably within this growing research field.

Process and methods (for empirical research)

We tested the hypothesis that awe experiences associated with autobiographical elicitors result in a stronger need for accommodation (NFA) than those associated with universal elicitors. Moreover, we examined awe's effects on pro-environmental behavior. In an online experimental between-subject design, participants (N = 320) were either asked to remember and report a personal awe experience, to imagine and report a universal awe experience, or to watch a series of photographs that are validated as inducing awe. Subsequently, we measured the central components of awe (need for accommodation, actual accommodation, vastness, and connectedness), the ecological worldview, and the intended and situational pro-environmental behavior.

Main results (or main arguments in the case of critical reviews)

The way of inducing awe influenced the NFA: Compared to visual perception, NFA was significantly stronger when reporting awe experiences (d = 0.65). Contrary to our hypothesis, the type of awe experience did not affect NFA (i.e., no difference between autobiographical and universal experiences). As expected, the influence of awe on pro-environmental behavior was fully mediated by the ecological worldview.

Implications for research and practice/policy | Importance and originality of the contribution

The current study contributes to the construct definition and valid operationalization of awe.

IC - (21399) - GREEN SPACES OVER A ROOF OR ON THE GROUND, DOES IT MATTER? IMPACT IN TERMS OF CULTURAL SERVICES AND RESTORATIVE EFFECTS PERCEPTION

Cristina Matos Silva[1]; Isabel Loupa Ramos[3]; Maria Manso[1]; Fátima Bernardo[2,3]

1 - CERIS-Instituto Superior Técnico, University of Lisbon, 1049-001 Lisbon, Portugal; 2 - Psychology Department, University of Évora, 7000 Évora, Portugal; 3 - CITUA-Instituto Superior Técnico, University of Lisbon, 1049-001 Lisbon, Portugal

Background and objectives

Dense urban areas usually have high overall soil sealing and lack of urban greening. Soil sealing affects ecosystem services, causing increased air temperature and reduced water infiltration. Cities become more vulnerable to climate change and need appropriate adaptation measures to increase urban greening, as the integration of green roofs in buildings.

Urban green spaces contribute to urban resilience, improving the health and the well-being of urban residents. Previous studies have been demonstrating that Nature-based Solutions (NbS) provide multiple Ecosystem Services (ESS). Although different NbS provide different provisioning, regulating, cultural or supporting services, depending on their composition and configuration.

Process and methods (for empirical research)

An image-based online survey performed to 376 Portuguese undergraduate students aims to understand if there is a perception of the real limitations in the supply of provision and regulating services by different types of green roofs. And determine if the green space conditions (access and vegetation) affect the perception of cultural ecosystem services, and restorative effects.

Main results (or main arguments in the case of critical reviews)

The perception pattern of results relating vegetation type and roof type are generically the same across all ESS. The results demonstrate a lower perception of delivery of regulating and provisioning services when compared with cultural services suggesting a lack of understanding of the basic biophysical processes and functions underlying the NBS provision of services. And there isn´t a clear awareness of the roof structure existence and its influence on natural processes, notably its effect on the water cycle and biomass development. The presence of vegetation has a significant value increase when compared with areas with no vegetation. Higher values of Perceived Restorativeness (PRS) and Restoration outcomes (ROS) were also identified on the ground green spaces with an increase on the situations with more vegetation.

Implications for research and practice/policy | Importance and originality of the contribution

This work shows that stakeholders' engagement can be a great strategy to better design NbS and identify potential directions for policy making.

Hour: 13:30:00
Session: G11 - Responses to Environmental (in)Justice
Room: Room 2

Theme: Governance (5)

IC - (20831) - ADOLESCENTS' INTEREST IN ENVIRONMENTAL ACTIVISM: THE ROLE OF GENERAL ENVIRONMENTAL CONSIDERATIONS

Audra Balundė[1]; Mykolas Simas Poškus[1]
1 - Environmental Psychology Research Centre, Applied Psychology Research Laboratory, Institute of Psychology, Mykolas Romeris University

Background and objectives

Various forms of environmental activism are crucial to achieve much needed tightening of national and international environmental crisis-related policies as well as to stimulate actions of relevant stakeholders. Environmental activism could be expressed via participating in protests, signing petitions, contacting politicians, initiating environment protection actions at the community, national or international level, among many others. Studies show that, for example, environmental activism events can significantly increase society's interest in climate change issues (Sisco et al., 2021). This suggests that environmental activism could be considered as important competence and it is crucial to foster it. Especially among young people, because they will need to deal with the complexities of the environmental crisis in the near future. Environmental considerations such as environmental values, self-identity and personal norms have shown to explain multiple environmental actions. Thus, they also might be important factors that explain young people's interest in environmental activism.

Process and methods (for empirical research)

We tested this in a pilot study (November-December 2021) among adolescents (N = 114; 56.1% were girls; M = 15.45, SD = 0.79), from schools in one administrative region. The Value-Identiy-Personal norm model (VIP; van der Werff & Steg, 2016) was used to explore the extent to which environmental considerations can explain adolescents' interest in environmental activism, which was measured with five items created specifically for this study (e.g., "I considered my participation in protests against climate change and the ecological crisis"). Other constructs were measured with the established instruments.

Main results (or main arguments in the case of critical reviews)

The results indicated that indeed biospheric values, environmental self-identity and personal norms can explain adolescents' interest in environmental activism.

Implications for research and practice/policy | Importance and originality of the contribution

This initial evidence suggests that environmental considerations can be the way to facilitate young people's involvement in environmental activism. These results might be of interest to stakeholders that work in the educational institutions.

IC - (20919) - DECARBONIZATION WITHOUT CITIZENS. THE DISCURSIVE REPRODUCTION OF EXCLUSION AND DISEMPOWERMENT IN COAL REGIONS FACING TRANSITION

Mauro Sarrica[1]; Elena Apostoli Cappello[1]; Fulvio Biddau[2]; Valentina Rizzoli[1]; Ludovica Forcella[1]
1 - Sapienza University of Rome; 2 - University of Padua

Background and objectives

Political anthropology and environmental psychology insist that, in order to be effective, international decarbonisation policies need to be translated into locally meaningful discourses and practices. Moreover, a dialogical stance is needed in order not to replicate cultural and structural forms of violence, rhetoric of exclusion and disempowerment.

Process and methods (for empirical research)

The current study (carried out within the Tipping+ H2020 project) examines these mechanisms in a former Italian coal region. Sulcis, located in Southern Sardinia, is an exemplar case of 'extractivist' models: the region saw the expansion of coal mines and industries across the 19th and 20th century, and since their closure from the 1970s it is facing industrial and social crises. Currently Sulcis is facing the final phase out of coal, and further deindustrialization processes.

In this context we aimed to examine the psychological and cultural factors that could favour a radical shift towards new systems, based on renewables and on sustainable energy communities. The study followed a mixed method approach including lexicometric analysis of the press, interviews with stakeholders and local inhabitants, ethnographic observation.

Main results (or main arguments in the case of critical reviews)

Results show that societal and institutional discourses about transition largely reproduce disempowerment rhetoric: citizens are represented as passive and dependent on decisions or technologies coming from "the outside". Local communities are lacking voice and are positioned as conflictual actors at most. These rhetoric seems to be so hegemonic that even the most proactive subjects in the area show a lack of collective ownership and agency.

Implications for research and practice/policy | Importance and originality of the contribution

Energy transition is, at most, represented as an economic opportunity for individuals or families, whereas environmental, political or collective changes are absent from the discourse. Results are discussed reflecting on the importance of accompanying transitional political projects with social and cultural change.

IC - (21024) - POLITICIZING HYDROPOWER PLANTS IN PORTUGAL: ENVIRONMENTAL INJUSTICES AND PSYCHOSOCIAL IMPACTS OF HYDROPOWER IN RURAL COMMUNITIES ACROSS TIME

Susana Batel[1]; Sophia Küpers[1]
1 - University Institute of Lisbon (ISCTE-IUL)

Background and objectives

The recent sale of three large-scale Portuguese hydroelectric power dams to an international consortium gave rise to local protests reopening old wounds of rural communities affected by these infrastructures (Luís et al., 2015). In this paper, we retell the history of key dams in Portugal through their discursive constructions, lived experiences, and psychosocial impacts and embeddedness through a psychosocial historiography.

Process and methods (for empirical research)

For this, we rely both upon primary and secondary sources of data, i.e. archival television footage (N =19), newspaper articles (N=12) and narrative interviews with participants of a protest movement (N=2). We applied pragmatic discourse analysis focused on identifying the main discourses related with justice dimensions of hydropower in rural areas in Portugal and with the infrastructural harm, discursive construction, and psychosocial impacts of the selected dams.

Main results (or main arguments in the case of critical reviews)

Our analyses reveal that 1. Dams are rhetorically constructed by authorities at different levels and across time as promoting local development and as green, despite their main role in providing urban centers with electricity and negative local impacts for rural communities; 2. the psycho-social impacts and harms caused by dams as infrastructures to rural local communities were often caused even when the dams existed only as plans, and also during their construction and after it, across generations; 3. rural local communities were mostly made invisible as political subjects by developers and authorities across the history of hydro politics in Portugal, from the dictatorship to the democratic regime. However, there were also several instances of communities' contestations to hydropower across time that these analyses bring to the fore.

Implications for research and practice/policy | Importance and originality of the contribution

As such, these analyses and findings highlight the relevance of going beyond mainstream dimensions of energy/environmental justice and considering more structural dimensions, based on historical and territorial power dynamics, that create psychosocial impacts across generations and that stay engraved in communities' collective memories.

IC - (21056) - YOUTH CLIMATE MOVEMENT IN PORTUGAL: NARRATIVES OF TRANSFORMATION IN YOUTH-LED GROUPS

Maria Fernandes-Jesus[1]; Anabela Carvalho[2]; Carla Malafaia[3]; Mehmet Ali Uzelgun[4]
1 - York St John University; 2 - Universidade do Minho; 3 - Universidade do Porto; 4 - Universidade Nova de Lisboa

Background and objectives

In recent years, the youth climate movement has visibly expanded and gained more prominence in the streets, the media, and other public spaces. Following this trend, several studies have started to examine motives for young people increased engagement with climate change and the potential impacts of the movement. However, little is still known about how young people envision transformations towards sustainability and their roles in shaping those changes. Focusing on the youth climate movement in Portugal, this paper aims to map youth-led groups engaging with climate change-related issues and their narratives of change and transformations.

Process and methods (for empirical research)

In this study, we will consider youth groups focusing on climate change as well groups intersecting climate change with other issues (e.g., feminism). We identified these groups (n=205) via an analysis of websites and social media, as well as through a survey (n=68) completed by groups and organisations.

Main results (or main arguments in the case of critical reviews)

We will first provide a detailed characterisation of the Portuguese youth climate movement (e.g., memberships, demands, etc.). Then, we will examine the main narratives of change and transformation of the groups with more public visibility, including how they describe climate change and desired futures and how they see their role and agency in shaping and building climate futures.

Implications for research and practice/policy | Importance and originality of the contribution

By focusing on the voices of young people, this study will contribute to further understand the processes leading to just transformations toward sustainability.

IC - (21079) - PSYCHOSOCIAL VARIABLES DETERMINING THE ACCEPTANCE OF THE PROPOSAL FOR THE DEVELOPMENT AND EXPLOITATION OF A URANIUM MINE BY THE AFFECTED POPULATION

Gonzalo Sánchez Tabernero[1]; Carmen Tabernero[1]
1 - University of Salamanca

Background and objectives

In recent decades, numerous alternative energy sources have been explored, often accompanied by the rejection of the population most directly affected by the construction of these infrastructures, highlighting the debate concerning development and nature conservation. Our research aims to analyze the psychosocial determinants of the social conflict generated (rejection/acceptance) by the project development of a uranium mine at southwestern Spain "Salamanca_Project".

Process and methods (for empirical research)

202 citizens related to the affected area and 169 university students (M_age 43.63 and 21.46; male 52% and 19%, respectively) responded to a questionnaire that included items about sociodemographic variables (age, gender, income and educational level, proximity and knowledge of affected area), environmental beliefs (nature conservation versus energy development; perception of risks versus benefits), emotional reactions activated (positive and negative emotions), active participation in protests (for and against), and level of agreement with the proposal.

Main results (or main arguments in the case of critical reviews)

Different ANOVAs showed that citizens presented significantly stronger environmental beliefs, negative emotions, level of information, participation in protest activities (both in support and against) than students; on contrast, they showed lower perception of benefits associated with the mine and lower level of agreement with the mine. Regression analyses showed that the variables predicting higher agreement with uranium mine development among citizens were higher income level, higher positive emotions, and lower perception of risks versus higher perception of benefits (R2adj.=.37; F=17.72,p<.001). Among students, the predictor variables were similar (lower risk, greater benefits, fewer negative emotions, and more positive emotions; R2adj.=.36). However, when we analyzed the variables predicting participation in citizen protest activities, only environmental beliefs, risks, and benefits were influential (R2adj.=.32). Analyses of predictive trajectories were performed including the variables studied considering multigroup designs by gender and proximity.

Implications for research and practice/policy | Importance and originality of the contribution

The results found allow us to analyze the social conflict generated in the populations affected by the energy intervention proposals in relation to the psychosocial variables studied.

Hour: 13:30:00
Session: S17 - Risk and Climate Change
Room: Room 3

Theme: Sustainability (5)

IC - (20839) - THE SOCIAL COGNITIVE DETERMINANTS OF AVOIDING CROWDED PLACES: A COMPARISON ACROSS FOUR LARGE CITIES

Lucas Heiki Matsunaga[1]; Toshiaki Aoki[1]; Cristiane Faiad[2]; Daniel Aldrich[3]; Po-Hsing Tseng[4]; Jun Aida[5]
1 - Tohoku University; 2 - University of Brasilia; 3 - Northeastern University; 4 - National Taiwan Ocean University; 5 - Tokyo Medical and Dental University

Background and objectives

Why citizens undertake physical distancing from crowded places during pandemics remains understudied. This study seeks to explain this behavior through an integrated model using a multinational sample and then analyze cultural differences in their components.

Process and methods (for empirical research)

The survey was conducted online with 1196 respondents in four cities: Taipei, Tokyo, New York, and Brasilia. Questions in a Likert-type scale of five points focused on the theory of planned behavior, risk perception, and moral norms.

Main results (or main arguments in the case of critical reviews)

In the total sample, the model explained roughly 40% of the variance in behavior by risk perception, moral norms, and the determinants of planned behavior. Differences in injunctive norms, risk evaluation, perceived behavioral control, and intention explained 47% of variation in behavior in Brasilia, 36% in Tokyo, 33% in New York, and 20% in Taipei. Significant differences were found across their mean scores especially in risk perception, moral norms, and behavior. The results suggested that in (1) Tokyo, the determinants explained behavior well, but they lack salience, due to relatively low scores; (2) Taipei presented results that reflect its controlled situation, showing that model's sensitiveness to the public health situation; (3) Brasilia, in a low-income country under emergency, had the largest scores for fear, moral norms, and behavior; (4) New York citizens can be most motivated to avoid crowded places by positive beliefs and injunctive norms, which its administrative policies could reflect.

Implications for research and practice/policy | Importance and originality of the contribution

The results underscore that authorities and researchers should consider social-cognitive determinants along with cities' cultural and public health differences in environment behavior studies in the COVID-19 pandemic. Also, scholars should include (1) risk perception, due to willingness for self-protection, and (2) moral norms, due to feelings of moral obligation that are, in nature, independent from social norms.

IC - (20944) - BASIC SURVEY OF DISASTER RISK AND COPING SKILLS OF RESIDENTS

Mieko Saito[1]; Yukari Sato[1]
1 - Okayama Prefectural University / JAPAN

Background and objectives

In Japan, disasters caused by typhoons and heavy rains occur almost annually. Municipalities provide support by transmitting weather information to residents, instructing evacuations, and opening evacuation shelters. To plan for evacuation actions, the residents are expected to understand the relevant information, make flexible and timely decisions accordingly, and convert them into appropriate actions for evacuation, which involves a high degree of thought, analysis, and judgment. In this study, these abilities are referred to as disaster coping skills. Moreover, in recent years, the COVID-19 epidemic may have affected residents' evacuation behavior. This study aims to clarify the relationship between disaster coping skills and evacuation behavior, and between COVID-19 and evacuation behavior.

Process and methods (for empirical research)

In July 2018, a heavy rain disaster occurred in Japan. Subsequently, we conducted a questionnaire survey about "disaster risk" and "disaster coping skills" among the residents of the disaster affected area in 2020. The relationships between disaster coping skills and evacuation behavior and between COVID-19 and evacuation behavior were analyzed in the data obtained from a questionnaire survey.

Main results (or main arguments in the case of critical reviews)

We focused on four abilities to support disaster response: "disaster information comprehension," "disaster judgment," "disaster action," and "disaster physical strength." We found each related factor. Furthermore, we focused on the differences in evacuation behavior when COVID-19 was widespread and when it was no, and found differences depending on gender.

Implications for research and practice/policy | Importance and originality of the contribution

"Disaster risk" and "disaster coping skills" present individual differences such as age, physical characteristics, number of years of residence, and family structure, and it is considered useful for local residents to understand each other in times of disaster and recovery. Therefore, we plan to develop a "flood risk communication site for residents" to enable local residents to understand the risks for themselves and the difference in risk from others.

IC - (21064) - PERCEPTION OF CLIMATE CHANGE IN TWO SPANISH PROTECTED NATURAL AREAS

Adrián Moll[1]; José Antonio Corraliza[1]; Silvia Collado[2]

1 - Universidad Autónoma de Madrid; 2 - Universidad de Zaragoza

Background and objectives

Climate change has been listed as the greatest risk to humanity by the World Economic Forum (2016). Both the assessment of the dimension of climate change and the most appropriate strategies to deal with the situation depend largely on the perception of the problem and the beliefs, attitudes and emotions related to it. The objective of this study is to identify the social perception (judgments and beliefs) about the causes, risks and scenarios associated with climate change, as well as the assessment of some of the measures required to implement adaptive strategies, in visitors and residents of two Spanish protected natural areas.

Process and methods (for empirical research)

The total sample was of 334 participants (M = 46.9 years old). A questionnaire was designed to assess concern and scepticism about climate change, as well as indicators on attachment and identity with the place. Additionally, a record was included on the estimation of impacts due to climate change, local measures that should be implemented and personal changes necessary to mitigate climate change.

Main results (or main arguments in the case of critical reviews)

Participants showed high levels of concern about climate change, high levels of attachment and identity with the place, as well as low degree of scepticism about the existence of climate change and its effects. The most notable records include the perception of increased risk of fires and more periods of drought, taking personal actions to increase consumption of local products and reduce water consumption as well as using renewable energies.

Implications for research and practice/policy | Importance and originality of the contribution

A high degree of concern about climate change and a remarkable ability to detect relevant threats that it poses for the maintenance of the evaluated areas was observed. This study shows the strategic value of protected areas for the analysis of perceptual patterns associated with climate change, as well as for the detection of its effects and consequences.

IC - (21359) - EXPLORING PERCEPTIONS OF CDR IN THE GLOBAL SOUTH

Elspeth Spence[1]
1 - Cardiff University

Background and objectives

Carbon dioxide removal (CDR) is increasingly viewed as a necessary approach to help tackle climate change alongside other measures, with research into a variety of strategies ongoing around the world. This project aims to explore perceptions around CDR in the Global South with a focus on South-East Asia and particularly Malaysian Borneo, where agriculture and palm oil crops are crucial.

Process and methods (for empirical research)

Stakeholder interviews (N=20) were conducted with respondents mainly in Malaysia and the UK including NGOs, scientists, and government bodies to examine perspectives on the use of CDRs and the potential implications. One strategy known as enhanced weathering involves crushing and spreading minerals over land to absorb carbon dioxide with materials eventually ending up in the ocean thus removing carbon dioxide from the atmosphere. It is expected to be particularly effective in tropical regions due to the climatic conditions of high temperatures and rainfall. However, these regions are also some of the most biodiverse on the planet with a wide variety of species found only in such locations.

Main results (or main arguments in the case of critical reviews)

Initial findings shall be presented exploring understanding of CDRs including enhanced weathering, issues of biodiversity and land-use, as well as concerns about long-term impacts in this region both of CDR and climate change. It is clear that adaptation, development of green technology, and so called 'nature-based' approaches like reforestation are perceived as most appropriate for this region due to the already severe climate impacts endured, however there is support for public engagement with environmental education seen as a key priority.

Implications for research and practice/policy | Importance and originality of the contribution

Typically those in the Global North produce most of the knowledge in this field and little is known about perspectives of those in the Global South. This research provides stakeholders and communities the opportunity to share their insights into potential proposals helping to inform future decisions around research and development of technologies.

IC - (21392) - PLACE ATTACHMENT, RISK AND EMOTIONS WHEN COPING WITH CLIMATE CHANGE

Natacha Parreira[1]; Carla Mouro[1]
1 - ISCTE - UNIVERSITY INSTITUTE OF LISBON

Background and objectives

Climate change poses a major threat to coastal areas. For example, the sea-level is expected to rise in the next decades with implications on coastal regions and communities. In Portugal, Aveiro is expected to be one of the most affected regions due to the exposure of urbanized areas to coastal hazards.

The prospects of such future threats may trigger a set of cognitions (risk perceptions) and emotions (eco-anxiety) in response. Literature suggests that coping strategies to deal with such risks may vary according to the threat evaluation and the type of place attachment (active vs traditional) of residents.

We hypothesize that residents with traditional place attachment would show lower risk perception and lower levels of eco-anxiety, accepting the risk as part of their living condition and adopting passive coping strategies (e.g., relativization). Active place attachment would be related with higher risk perception, higher eco-anxiety, and the adoption of active coping strategies (e.g., problem-solving).

Process and methods (for empirical research)

An online self-report questionnaire was conducted to examine Aveiro's residents cognitive and emotional responses to sea-level rise threat and the mediating role of risk perception and eco-anxiety in the relationship between place attachment and coping. Data collection is in course, but preliminary analyses were conducted with 141 participants.

Main results (or main arguments in the case of critical reviews)

Preliminary analyses suggest a sequential mediation for predicting active coping, confirming that higher active place attachment relates to higher levels of risk perception, which in turn relate to higher eco-anxiety, and this positively relates to adopt active coping strategies. Results also suggest that a low level of eco-anxiety (as found in this sample) is positively related with adopting more active coping strategies and less passive coping strategies.

Implications for research and practice/policy | Importance and originality of the contribution

This study contributes to better understand the relevance of affective variables on how people cope with climate change, contributing with important information for the design and implementation of coastal strategies.

Hour: 13:30:00
Session: S18 - Uses of Spaces I
Room: Room 4

Theme: Sustainability (4)

IC - (21041) - A COMPREHENSIVE MODEL OF STRESSORS AND ADAPTATION ON SHIFT WORKERS DAILY WORK LIFE: CONSEQUENCES FOR SUSTAINABLE LIFESTYLES

Amelia Fraga-Mosquera[1]; Ricardo García-Mira[1]
1 - Universidade da Coruña

Background and objectives

Environmental psychology has long been interested in the effect of different environments on the health of users (Gifford, 2007). The work environment has also started to be studied as a promoter or hinderer of health and to a part of support of green lifestyles (García Mira, 2017).

This study aims to explore workers´ perception of characteristics on the work environment that most affect their Quality of Life (QoL) within the context of shift work as a part of promoters or hinderer of green lifestyles. We will answer the questions "What are the QoL barriers from the shift-worker's perception?" and "What are the dimensions that defined de shift-workers´ QoL?

Process and methods (for empirical research)

We used a multimethod approach consisting of both qualitative and quantitative analysis. Firstly, collected data is the result of 3 different focus groups (19 shift workers). Atlas.ti was used to analyse this qualitative data. At the second part of the study we developed a specific questionnaire from focus group data collected, we applied it in a factory located in Ferrol (n=115). The SPSS was used to analyse the data.

Main results (or main arguments in the case of critical reviews)

Results obtained show relevant dimensions to take into account because could characterize a healthy organization promoting healthy workers. As we have pointed out previously (Fraga, 2014),15 dimensions as QoL barriers were derived from our analysis with 3 focus groups.

The second part of the study identified 8 dimensions, from the previous 15, classified in 3 factors. Factor 2, named "hourly organization", contribute to explain the labour satisfaction and the shift-workers´ QoL in a 35,6%.

Implications for research and practice/policy | Importance and originality of the contribution

The conclusions in this study will be used to formulate recommendations to improve working environments and the shift worker´ daily life; to provide trade unions with information that will support them in their efforts to achieve better workplace environments and to support corporate social responsibility policies in organizations.

IC - (21140) - READING ON THE POTENTIALS OF SQUATTER AS A POST-PANDEMIC HEALTHY HOUSING REFERENCE

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Background and objectives

Having created a major paradigm shift, the rapid spread of COVID-19 enabled us to spend more time at home and reconsider the quality of the spaces/places we live in. The quarantine measures taken have shaped the housing preferences of individuals while changing their daily routines. This indicates the need to re-examine the potential of the squatters inhabited by disadvantaged groups most affected by covid-19. In this paper based on the thesis research conducted within the scope of "…… University, Urban and Architecture Master's Program, Advanced-Design-Research-Laboratory" aims to examine potentials and the fragility of squatter with the Covid-19-pandemic, self-producing housing morphology, street, and settlement patterns; and to determine the findings for healthy housing design in post-pandemic.

Process and methods (for empirical research)

A mixed-method(qualitative-quantitative) research design was utilised. The effects of Covid-19-pandemic on housing preference were examined through national-international-studies conducted between 2020-2022. By using a bibliometric method, the concepts of "squatter-settlements" which are considered as heterotopic-spaces,"heterotopia","thresholds", and their relationship with squatters were also investigated.

Main results (or main arguments in the case of critical reviews)

The concept of "heterotopia" emphasizes spatialities where different and incompatible beings can live together on the same spatial plane. In the literature, heterotopia is associated with the concepts of "difference","ambiguity","liminal space","intermediate space","unplanned","instantaneous", and it's closely related to squatter phenomenon. When public space is inaccessible at the quarantine, semi-open spaces in squatters create collective spaces. These spaces, which are always open to change in the city, enable locals to shape their daily practices. The distinction between interior-exterior, private-public, home-street are blurred, therefore allowing for unexpected, collective interactions, and different experiences. All these directly meet the primary concepts such as "green","flexibility","commonality","threshold space" when pandemic and housing are associated.

Implications for research and practice/policy | Importance and originality of the contribution

How it will affect the choice of housing and urban changes in the future will be discussed and future projections will be created. The data to be obtained will contribute to the development processes of cities and urban housing planning.

IC - (21160) - YARDS AS SEMI-PROTECTED SOCIAL PLACES FOR CHILDREN AND NEIGHBOURHOOD SOCIAL ENVIRONMENTS FOR ADULTS

Deniz Yatagan Baumeister[1]
1 - Karlsruhe Institute of Technology

Background and objectives

The layouts of apartment buildings in many cities feature spacious backyards. These places often don't have the best of reputations: They can be neglected and untidy, with none of the building's residents feeling responsible for their upkeep. However, as this research shows, they have the potential to become important social places for adults as well as provide children with safe environments where they can play and socialize without constant direct adult involvement.

Process and methods (for empirical research)

Over the course of the qualitative research for a dissertation, 34 persons from different migrant generations were interviewed in Berlin, all of which had Turkish cultural backgrounds. In the in-depth interviews, they describe the challenges children faced when growing up in an urban environment as opposed to the settlements of 20th century Anatolia.

Main results (or main arguments in the case of critical reviews)

Interviewees mentioned their own or their children's childhood memories. They described how they considered outside social spaces in 20th century Anatolia to be safe, due in part to the architecture and settlement conditions there, and how migrants could not easy replicate these familiar conditions in Berlin. The research showed how they took advantage of the semi-protected nature of Berlin's backyards. For children, these combined the safety of having adults nearby with the freedom of being able explore a space on their own, and for adults they provided a space to socialize.

Implications for research and practice/policy | Importance and originality of the contribution

New urban and residential projects in large cities may aim to build or improve environments in back yards of apartment buildings to provide semi-protected social spaces. These kinds of designed spaces would allow children to play freely while still under a level of adult oversight and could also encourage supportive neighbourhood relations by giving residents a place to meet. This could help both children and adults feel better about the safety conditions in their environments.

IC - (21371) - KNOWING AND EXPERIENCING THE BENEFITS: FACTORS INFLUENCING RESTORATION EVOKED BY NATURE PHOTOGRAPHS

Claudia Menzel[1]; Miriam Gessler[1]; Sonja Hoffmann[1,2]; Stefan Kenst[1]
1 - University of Koblenz-Landau; 2 - University of Cologne

Background and objectives

Nature experiences improve well-being. Even viewing nature photographs can lead to some effects. To understand how merely viewing images can promote these outcomes, we investigated whether knowledge about such beneficial effects related to nature experiences predicts restoration after viewing nature photographs.

Process and methods (for empirical research)

Therefore, we conducted three online studies with convenience samples (Study 1: *N* = 224, Study 2: *N* = 490, Study 3: *N* = 360). In Study 1 and 2, we manipulated knowledge about physical and mental health effects related to nature experiences before participants viewed nature photographs and rated them for restorativeness (Study 1) or preference (Study 2).

Main results (or main arguments in the case of critical reviews)

In Study 1, knowledge manipulation had no influence, but, in Study 2, we found small effects on preference and restoration outcome. In Study 3, we varied between-subjects the assessment of outcome expectancy. Although the assessment itself did not predict restoration, for the respective sub-sample expected restoration was positively related to actual restoration. Moreover, measured knowledge about beneficial effects of nature and - even stronger - reported restorative effects of the participants' last stay in nature positively predicted restoration evoked by the nature images.

Implications for research and practice/policy | Importance and originality of the contribution

Overall, our results show that knowledge about beneficial effects of nature exposure can be predictive for restoration evoked by virtual nature. However, related factors, such as previous experiences and outcome expectation, may play more important roles than factual knowledge.

Hour: 13:30:00
Session: S19 - Contact with Nature
Room: Room 5

Theme: Sustainability (5)

IC - (20986) - EXPLORING NATURE CONNECTEDNESS THROUGH THE EYES OF EXPERTS: A MODIFIED-DELPHI STUDY

Cassandra Murphy[2,3]; Dr Tadhg Macintyre[2]; Dr Elaine Gallagher[1]; Dr Aoife Donnelly[4]
1 - Department of Psychology, Univeristy of Limerick; 2 - Department of Psychology, Maynooth University; 3 - GoGreenRoutes; 4 - School of Food Science and Environmental Health, Technological University Dublin

Background and objectives

It is important to understand the human-nature relationship for the health and wellbeing of both humans and the environment. The biophilia hypothesis is referenced to understand this relationship. Wilson's (1984) theory suggests that due to evolution, humans have an innate urge to seek out nature. The concept of nature connectedness was developed from this hypothesis. This newly constructed idea is rooted in the belief that human identity and nature can be intertwined (Nisbet, Zelenski and Murphy 2009).

Process and methods (for empirical research)

This project aims to explore nature connectedness in a meaningful way using a modified Delphi method. Typically Delphi studies aim to gather the consensus of a group of experts in a specific area of interest (Avella 2016). This modified Delphi aims to break down the barrier between public and expert by creating a second category of participants referred to as our 'expanded experts.' Expand experts are described as individuals with lived-experience of being connected to nature in the everyday. These category comprises of artists, city planners, activists and many more. This allows for much more inclusive and real-world exploration of experiences.

The participants will first take part in a semi-structured interview process to investigate the concept of nature connectedness. Following a thematic analysis of the interviews, participants will be asked to take part in Delphi rounds. These rounds will involve weighting the importance of the different themes found to allow a deeper understanding of the construct.

Main results (or main arguments in the case of critical reviews)

At time of submission the research was in the data collection stage. Preliminary data will be available for the conference.

Implications for research and practice/policy | Importance and originality of the contribution

The results of this project will contribute to and shape the development of a state-of-the-art nature-connectedness scale. Furthermore, understanding how nature connectedness fits into our modern world will allow for more appropriate nature based interventions for urban residents and beyond.

IC - (21075) - VALUING THE DYNAMIC STABILITY OF SALTMARSHES FOR HUMAN HEALTH AND WELLBEING: LIMINALITY, AMBIGUITY, AND THE EVER-CHANGING QUALITIES OF INTERTIDAL HABITATS

Karen Henwood[1]; Erin Roberts[1]; Nick Pidgeon[1]; Merryn Thomas[2]
1 - Cardiff University; 2 - Swansea University

Background and objectives

- In a world facing a dual crisis of climate and biodiversity, a growing priority is how to better understand human-environment relations and the wellbeing benefits they might bring.

- Coasts in particular are experiencing increasing pressures due to climate change, sea-level rise and human development, and intertidal habitats such as saltmarshes are especially vulnerable. Whilst these liminal spaces are increasingly recognised in coastal management for a variety of benefits, including coastal protection, flood regulation and carbon sequestration, little is known about how people relate to them, or their importance for non-material aspects of human wellbeing. There is a need to better understand how saltmarshes are valued and how these values influence -and are influenced by- the ways in which people interact with places and gain wellbeing from them.

Process and methods (for empirical research)

A bespoke multi-modal qualitative methodology (including mobile and visual methods) was employed to draw out intangible environmental values in relation to saltmarshes at two case study estuaries in Wales (UK) as part of the wider interdisciplinary CoastWEB project.

Main results (or main arguments in the case of critical reviews)

Saltmarshes do not have one obvious meaning – they are ambiguous and open to more than one interpretation. This ambiguousness is related to the ways in which people relate to them. Our approach enabled us to gain insights on situated understandings of local environmental change in relation to more global ecological risk and matters of wellbeing and health, providing further insights. Participants at both case-sites deeply valued the sense of what we term "dynamic stability" gained from interacting with saltmarshes and the wider coast.

Implications for research and practice/policy | Importance and originality of the contribution

Saltmarshes are places of exclusive, privileged human-nature relationships. Individual capabilities to use them do not come easily and future management will need to consider the liminality, ambiguity, and the ever-changing qualities of intertidal habitats if adopting what Fischer and Eastwood (2016: 49) describe as 'targeted measures to increase capabilities'.

IC - (21162) - CURVY OR EDGY? EXPLORING EXPLICIT AND IMPLICIT RESPONSES TO SIMULATED INDOOR ENVIRONMENTS

Nour Tawil[1]; Leonie Ascone-Michelis[2]; Simone Kühn[1,2]

1 - Max Planck Institute for Human Development, Lise Meitner Group for Environmental Neuroscience; 2 - University Medical Center Hamburg-Eppendorf, Department of Psychiatry and Psychotherapy

Background and objectives

The interest in the response to contours has recently re-emerged in aesthetics and psychology research, with various studies proposing that humans of different ages and cultures prefer curved over edgy stimuli. While the evidence for this preference in the context of abstract shapes and lines seems robust, it doesn't seem as strong in architectural settings. The scarce available research in fact primarily depends on schematic or unmatched stimuli, and faces limitations in replicating results.

Process and methods (for empirical research)

In a within-subject study, we aimed to systematically examine the curvature preference hypothesis in photorealistic indoor environments. 200 participants reacted to well-matched simulated living room images representing contrast in contour (angular vs. curved) and style (modern vs. classic). The set of measures included four reaction time paradigms intended to capture implicit responses in terms of preferences, attentional and motoric biases, in addition to explicit evaluations on different affective and spatial dimensions.

Main results (or main arguments in the case of critical reviews)

We will perform an analysis on the behavioural and cognitive data, in which we mainly compare angular-vs-curved and modern-vs-classic conditions.

Implications for research and practice/policy | Importance and originality of the contribution

Given the considerable time we spend indoor, such findings would contribute to identifying design elements that affect emotions and cognition, and therefore can inform design strategies to achieve optimized spaces that enhance well-being.

IC - (21180) - CONTACT WITH NATURE AND WELL-BEING: A STUDY WITH VIRTUAL REALITY

Ana Loureiro[1]

1 - Lusófona University, HEI-Lab

Background and objectives

Contact with nature has proved to impact positively on health and well-being in different contexts and in several ways (e.g. Hartig et al, 2014 for a review). Different studies show effects on physiological (e.g. cortisol, blood pressure, etc), and psychological processes (e.g. positive mood, attention, vitality, stress reduction, less anxiety or depression, etc). But more research is needed to better identify and clarify this process and to understand what type of nature (naturalness/degree of nature/human intervention) better produce these effects, as well the differences between the "real" nature or "virtual/simulated" nature. Previous research found differences for positive and negative mood, happiness, preference and connectedness to nature between the exposure to urban environment and both quasi natural and totally natural settings. The present study, extending the procedure and measures, uses virtual reality (VR) scenarios exposure.

Process and methods (for empirical research)

The three VR scenarios differ on the level of naturalness (forest, urban park and city), to test the effects on self-reported mood and well-being, as well psychophysiological indicators (skin conductance, heart rate, eye-tracking). The study is a between subjects design, where participants are being randomly assigned to one of the three experimental conditions (virtual scenario).

Main results (or main arguments in the case of critical reviews)

Results are being analysed to confirm previous results and to understand the effects of virtual reality exposure.

Implications for research and practice/policy | Importance and originality of the contribution

The research results will be discussed on the implications for several context applications (urban development, clinical, social intervention, work contexts, …).

IC - (21233) - A PROPOSAL OF SEMI-PERMANENT CAMP MODEL FOR SUSTAINABILITY OF AGRICULTURAL SETTLEMENTS

İrem Tunçbiz Özgür[1]; Arzu Çahantimur[2]; Rengin Beceren Öztürk[2]

1 - Ph.D. Candidate, Bursa Uludag University, Institute of Science and Technology, Program of Architecture; 2 - Lecturer, Ph.D., Bursa Uludağ University, Faculty of Architecture

Background and objectives

Agricultural settlements and their near environments including cultivated fields, face the problems of interfaces between rural and urban settings. One of these problems is the insufficient living conditions of seasonal agricultural workers that cause many health problems not only for the workers, but also for local people. To overcome these problems and achieve sustainability of these rural settlements may be possible by balancing the relations of these two different groups of people both with each other and with their environments via some spatial organizations especially in and around the common places they have to use. A semi-permanent camp model is proposed to meet the sheltering and social needs of workers and to provide a multi-purpose area for the locals during off-season periods.

Process and methods (for empirical research)

The study includes five sections, including a brief introduction explaining the urgency of the problem and the situation in the world. Health and well-being problems derived from insufficient living conditions and legal-administrative processes of different countries are examined. A comparative analysis of the camp models worldwide is presented. The applicability of semi-permanent camp model in some agricultural settlements in Bursa, Turkey is evaluated together with the essential features and implementation steps of the model in the fourth part. Some worldwide implemented semi-permanent camp models are presented to the seasonal workers and the host community. Their sufficiency according to cultural and geographical needs are evaluated via data obtained from site analysis, observations, interviews. The study concludes with a discussion about the flexibility and adaptability of the model.

Main results (or main arguments in the case of critical reviews)

Natural, social, economic features of the host settlement affect seasonal workers' living/working conditions.

The model should meet both the workers' and local people's needs and a participatory approach is essential.

Implications for research and practice/policy | Importance and originality of the contribution

The study sets light to develop strategies / policies to overcome the problems of rural settlements and agricultural activities.

Hour: 16:15:00
Session: G12 - Environmental Activism
Room: Room 5

Theme: Governance (5)

IC - (20837) - HOW ARE DIFFERENT TYPES OF ENVIRONMENTALISTS PERCEIVED? AND HOW DO THESE PERCEPTIONS CHANGE BY PERCEIVER? APPROACHING MULTIPLE DIMENSIONS OF U.S. RESIDENTS' IMPRESSIONS AND STEREOTYPES OF ENVIRONMENTALISTS THROUGH A CONJOINT ANALYSIS

Karolin Maria Kibele[3]; Miriam Rosa[1]; Milan Obaidi[2]
1 - Iscte - Instituto Universitário de Lisboa; 2 - UiO - Universitetet i Oslo; 3 - Global-MINDS

Background and objectives

Previous research found stereotypes of environmentalists as barriers to public engagement and identification with environmentalism (Bashir et al., 2013; Pearson et al., 2018). What they missed to identify were the attributes of an environmentalist that affect people's impressions and self-identification, as well as how participant's own group membership(s) influence this relationship. The present project tried to fill this gap by measuring responses to diverse fictitious profile descriptions of environmentalists (Stenhouse & Heinrich, 2019).

Process and methods (for empirical research)

More specifically, by investigating the complex influence of environmentalist profiles' multiple features (e.g., gender, occupation, type of pro-environmentalism, etc.) on participants' stereotypes (competence, friendliness, and trustworthiness), perceived typicality, and self-identification with the described profiles. Through applying the (for psychological research) novel method of a conjoint experiment, responses of a sample of 678 U.S. residents were measured and analyzed.

Main results (or main arguments in the case of critical reviews)

Participants generally perceived, among other results, profiles of women, Asian, cleaners or office clerks, political moderates or liberals, private to moderate behaviors, with mainly global environmental concerns to be more typical for environmentalists. Moreover, participants identified themselves most with profiles of women, cleaners, and who were privately pro-environmental. Atypical profile descriptions only improved the participants' impressions regarding private pro-environmental behaviors and the occupation cleaner. Also, responses were influenced by self-assessed categorizations (e.g., political orientation).

Implications for research and practice/policy | Importance and originality of the contribution

Despite limitations such as multiple sampling strategies, these findings extend the knowledge on dimension-specific perceptions of the strongly stereotyped and politicized social category of environmentalists in the U.S. Hereby, this project opens new directions regarding impression formation research, and the application of conjoint analyses in psychological research. Moreover, we provide the environmental movement valuable input regarding message source and content in relation to the targeted audience.

IC - (21088) - I, WE, AND THE PLANET: UNDERSTANDING THE PSYCHOLOGICAL LEVERS OF CITIZENS ACTIONS FOR THE ECOLOGICAL TRANSITION

Marie Chevrier[1]; Lucia Bosone[1]; Patricia Delhomme[1]; Franck Zenasni[1]
1 - Laboratoire de Psychologie et d'Ergonomie Appliquées

Background and objectives

The crisis caused by the acceleration of anthropogenic climate change needs systemic, social, and political transformations. Vast research has focused on how citizens can be motivated to change their individual behaviours (e.g., buying local products). However, individuals can also contribute to social and systemic changes. Other than being consumers and users, individuals are part of a community, and can act publicly and collectively, by supporting public policies, by protesting to raise environmental awareness, or by voting for pro-environmental candidates. Individual, public and collective efforts are complementary; it is thus fundamental to understand what are the psychological levers and barriers that can determine individuals' decision to engage at all levels in favour of climate change mitigation. For this purpose, we tested a socio-cognitive model aiming to understand whether the same psychological levers can predict individuals' intention to engage in individual vs public vs collective actions.

Process and methods (for empirical research)

A correlational survey is ongoing, collecting data through a questionnaire concerning the different psychological dimensions included in the model: behaviours and intentions - at an individual (e.g., buying local produce), public (e.g., donating, voting) and collective level (e.g. demonstrations and gatherings) - are expected to be determined by individuals' appraisal of the environmental threat, our collective coping skills to deal with it, and their attribution of the responsibility of the change (structural or individual). Data is collected on a random sample of French citizens (N= 800 min).

Main results (or main arguments in the case of critical reviews)

Correlations and linear models will be carried out to explore how the different psychological levers interact and influence individuals' intention to act at the three levels.

Implications for research and practice/policy | Importance and originality of the contribution

Understanding whether individuals' decision to engage at the three levels is determined by common psychological levers will have an important applied impact, advising deciders, policy-makers, and field organisations on how to motivate citizens to engage individually and collectively in the ecological transition.

IC - (21104) - PLACE ATTACHMENTS & SPATIAL IMAGINATIONS IN UK COMMUNITIES FACING SHALE GAS DEVELOPMENT

Stacia Ryder[1]; Patrick Devine-Wright[1]
1 - University of Exeter

Background and objectives

A plethora of research focuses on place attachment in the context of energy infrastructure, yet little has focused on shale gas sites which have garnered significant resistance worldwide. Here, we highlight how community members facing shale gas conceptualize space and place, how place attachment is crucial for understanding their concerns about shale risks. In addition, we highlight the importance of interviewees' conceptualizations of 'placeless' space, the social construction of 'place' in the underground, and how concerns about place disruption span time and space to create both immediate concerns and a collective vision of a negative sociotechnical imaginary if the shale gas projects were to move forward.

Process and methods (for empirical research)

We developed two case studies to explore place-based concerns of residents who faced potential shale exploration. Fieldwork (including 45 interviews with local residents and locan government) was conducted in 2019-20. In addition local surveys were conducted (~200/community) in 2020 (Altcar) and 2021 (Woodsetts).

Main results (or main arguments in the case of critical reviews)

Conceptualizations of place expand across space (distances from site locations, disruption across horizontal and vertical planes), scale (body, household, community, nation, fears about scale of drilling) and time (immediate, long-term and intergenerational concerns). Connections are embedded in social interactions, as well as interactions with landscapes and the physical location. With several unknwons and a lack in community engagement, residents are left to fill in their own blanks—this process often leads to a collective worst-case scenario, a vision of a future where the sociotechnical imaginary is a bleak 'place-pocalypse.'

Implications for research and practice/policy | Importance and originality of the contribution

Research importance and implications:

(1) Contributes to more holistic understanding of place attachment, and perceived threats to place

(2) Draws connections between place-based attachment and collective sociotechnical imaginaries

(3) Points to relationship between unknowns and uncertainties and place-based concerns about shale

(4) Demonstrates importance for policies and processes to address potential unknowns and uncertainties for energy technologies *prior* to beginning these projects

IC - (21110) - EXPERIMENTAL EVIDENCE ON FRAMING ACTORS AND VICTIMS IN CONSERVATION NARRATIVES

Ganga Shreedhar[1]

1 - London School of Economics and Political Science

Background and objectives

Media narratives play a crucial role in framing marine conservation dilemmas by depicting human actors like fish consumers or the fishing industry as responsible for impacting species and ecosystems. Bycatch, the incidental death and injury of non-target marine species while fishing, is a major threat to marine wildlife and ecosystems because it driectly reduces populations (e.g. wales and dolphins), and has indirect effects at the ecosystem level, altering food web interactions. However, there is little evidence documenting the effect of such narratives. The framing of actors and victims is likely to be significant, as behavioural science research shows that people can act less pro-socially when more actors are responsible for a collective outcome (the responsibility diffusion effect), and when more victims need to be helped (the compassion fade effect).

Process and methods (for empirical research)

In a pre-registered online experiment (1,548 UK participants), we conduct the first test of responsibility diffusion and compassion fade in a marine context by varying the type of actors responsible for fisheries bycatch (e.g., consumers and industry), and victims (e.g., a single species, multiple species, and ecosystems) in media narratives.

Main results (or main arguments in the case of critical reviews)

Rather than increase the number of individual actors or victims, we increase higher-level types of actors (e.g. businesses, third-parties) and victims (different species and eco-systems). Unexpectedly, we find that attributing responsibility to both consumers and industry (rather than just consumers) increase support for fisheries policies (e.g., bycatch enforcement or consumer taxes). These effects were primarily driven by female participants in our sample. We find no impact on personal intentions to consume fish, nor any effect from varying the type of victim.

Implications for research and practice/policy | Importance and originality of the contribution

Our results suggest that, neither responsibility diffusion nor compassion fade automatically follows from increasing the types of actors and victims in media narratives, and that effects can depend on the type of outcome and population sub-group.

IC - (21154) - ATTACHMENT AND THE EMERGENCE OF HOUSING RIGHTS MOVEMENTS: CASE OF COMMUNITIES AFFECTED BY A BRAZILIAN PUBLIC AQUEDUCT

Cícera Mônica Da Silva Sousa Martins[1]; Zulmira Áurea Cruz Bomfim[1]
1 - Universidade Federal do Ceará

Background and objectives

Esteem of the place concept demonstrates the spot of affection in the person-environment relationship, understanding that the affects that manifest themselves in this relationship are crucial for understanding the singularities of the forms of the subject appropriating and intervening in the space where he lives. Affective Map Generator Instrument was used for this study in order to measure potentializing, depotentializing and contrast esteem. One of the esteems mapped by the instrument is attachment, which makes the subject visualize himself as a member of a certain place and can trigger greater participation in social movements that defend his place. This research aims to understand how the esteem of attachment in the affection maps of the leaders of the "Somos Todos Baixio das Palmeiras", a movement that defends the housing rights of the residents of a rural community, where several will be expropriated by account of the construction of the aqueduct "Cinturão das Águas do Ceará".

Process and methods (for empirical research)

This is a qualitative study, based on data collected by AMGI from six community leaders.

Main results (or main arguments in the case of critical reviews)

It was observed that two interviewees had an image of belonging on the attachment map, while the other four had a potentiating contrast, where the estimates of belonging and insecurity were more visible, a fact justified by the phenomenon of fear about possible negative consequences related to the experience of years of fight in defense of its territory and claiming their rights.

Implications for research and practice/policy | Importance and originality of the contribution

Community attachment feeling, community bonds strength and dwelling time factor were observed as primordial for the promotion of the first actions of resistance of the construction of aqueduct and the transmission of clarifications that the Public management did not provide to the community. Therefore, the feeling of belonging is paramount to the promotion of grassroots popular actions to defend social rights.

Hour: 16:15:00
Session: S20 - Healthcare Settings
Room: Room 1

Theme: Sustainability (5)

IC - (20823) - CODESIGNING HEALTHCARE BUILDINGS FOR PEOPLE WITH PSYCHOLOGICAL DISTRESS: CONSIDERING CONTRIBUTIONS FROM EVERY USER.

Fernanda De Moraes Goulart[1]; Rosaria Ono[1]
1 - Faculdade de Arquitetura e Urbanismo da Universidade de São Paulo

Background and objectives

Mental Healthcare facilities should support the patients with physical and cognitive deficiencies and facilitate the work of the caregivers. However, the design process of these spaces rarely includes end-users in decision-making. Some of the reasons are the difficulties of laypeople in understanding architectural blueprints and concisely expressing their impressions about the intended built environment. There is also the bias that the mental health patient supposedly "lacks insights", ultimately leading to the neglect of their voice in co-designing processes. This study explores using the co-creation framework "Participatory prototyping Cycle (PPC)" to accommodate healthcare providers' and patients' opinions in the design process.

Process and methods (for empirical research)

Three Psychosocial Care Centers (CAPS) were selected in São Paulo as case-study facilities for this research. The PPC of this study was entitled "Dream CAPS", consisting of three tools/activities: Interviews with illustrated cards, "Wish poems", and a 1:10 scale physical model of a Mental Healthcare Facility. The model is entirely customizable: each group of participants should decide the wall and floor finishings, the type of openings (windows, doors), furniture, and ornaments. Inpatients and healthcare workers participated at the PPC. All activities were audio-recorded, and textual analysis will qualify and categorize the content of conversations using the "Descending Hierarchical Classification" method.

Main results (or main arguments in the case of critical reviews)

By using the PCC it was possible to discuss several aspects of the physical environment. Preliminary results indicate that the model proved to be an excellent tool to keep the focus of the conversation onthe topic. However, to be successful, co-designing activities need to be flexible, with greater emphasis placed on listening to end-users.

Implications for research and practice/policy | Importance and originality of the contribution

This research contributes to the environmental quality of Mental Healthcare facilities by developing a Codesign framework proper for participatory projects in this context. Codesigning is a promising tool for facilitating communication between users and architects, designing spaces that promote the well-being of patients and caregivers.

IC - (21023) - PRESENTING A DYNAMIC USER EXPERIENCE ASSESSMENT (D-UXA) FOR ENHANCING URBAN RESEARCH AND DESIGN PRACTICE

Sába Schramkó[1]; Gideon Spanjar[1]; Frank Suurenbroek[1]
1 - Amsterdam University of Applied Sciences (AUAS), Faculty of Engineering, Urban Technology, The Netherlands

Background and objectives

Before the Covid-19 pandemic, important social studies already indicated the severe negative feedback associated with high-rise developments. During the Covid-19 pandemic, citizens were confronted with their neighbourhoods' insufficient restorative capacity to maintain their health and well-being. New methods are urgently required to analyse and learn from existing high-density developments to prevent a repetition of past mistakes and to catalyse the salutary effects of architecture in new developments.

Process and methods (for empirical research)

The Sensing Streetscapes research investigated the potential of emerging biometric technologies to examine the effects of commonly applied urban design principles in six western cities. In one outdoor and four laboratory tests, eye-tracking technology with sound-recording and Galvanic Skin Response captured subjects' (un)conscious attention patterns and arousal levels when viewing streets on eye level. Triangulation with other techniques, such as mouse tracking to record participants' appreciation value and expert panels from spatial design practice, showed the positive and negative impact of stimuli.

Main results (or main arguments in the case of critical reviews)

The preliminary results provide a dynamic understanding of urban experience and how it is affected by the presence or absence of design principles. The results suggest that streets with high levels of detail and variety may contribute to a high level of engagement with the built environment. It also shows that traffic is likely an important factor in causing stress and diminishing the restorative capacity society seeks.

Implications for research and practice/policy | Importance and originality of the contribution

The research study led to the development of a Dynamic User Experience Assessment (D-UXA) tool that supports researchers and designers in understanding the impact of design decisions on users' experience, spatial perception and (walking) behaviour. D-UXA enables a human-centred analysis and is designed to fill the gap between traditional empirical methods and aspirations for an evidence-based promotion of human health and wellbeing in (high-density) urban developments.

IC - (21029) - DEPLOYING CITIES AS RESOURCE FOR FOSTERING MENTAL HEALTH AND WELLBEING

Helena Müller[1]; Anna Wasmer[1]; Jonas Rehn-Groenendijk[1]
1 - Darmstadt University of Applied Sciences

Background and objectives

With roughly half of the global population living in cities and expected to rise up to 85% by 2050, urban environments become a central public health aspect, often perceived as health risk factors due to e.g., noise, pollution, crowding, and anonymity. Indeed, mental disorders show higher incidence in urban contexts compared to rural areas, generally increasing, e.g., due to the Covid19-pandemic as well as climate change. However, we argue that there is also a rich potential of urban environments to act as a resource for mental health and to address mental health issues in the public space.

Process and methods (for empirical research)

Main results (or main arguments in the case of critical reviews)

Based on the concept of salutogenesis and referring to the Restorative Cities Framework (Roe & McCay, 2021), we propose a strategy to identify various city characteristics to act as biopsychosocial resources and to derive minimal, resource-efficient interventions while utilizing already existent features of a city. We advocate inter- and transdisciplinary collaboration including researchers (e.g., from psychology, geography, design research) as well as citizen stakeholders, especially - but not only - vulnerable people whose needs are often neglected in urban planning. We illustrate one potential implementation of the concept that makes use of a variety of points of interaction between citizens and the urban environment along a designated trail across neighborhoods.

Implications for research and practice/policy | Importance and originality of the contribution

With this approach, we aim for using evidence-based, salutogenic, psychosocially supportive design to help increase awareness for mental health in the urban context, thus contributing to a destigmatisation of the topic, and potentially foster mental health, social cohesion as well as place attachment. Focusing on mental health instead of mainly physical health and bringing this topic to the public space by implementing low threshold activities in the existing urban context, illustrates new directions of research for urban person-environment interactions, public health, and beyond.

IC - (21031) - THE DEVELOPMENT OF A FRAMEWORK FOR EFFECTIVE IMPLEMENTATION OF NATURE-BASED INTERVENTIONS IN HEALTHCARE FACILITIES

Rosanne Steensma[1]; Nicole Van Den Bogerd[1]; Karin Dijkstra[2]; Maryska Janssen-Heijnen[3]; Lydia Krabbendam[1]; Wendy Meijboom[4]; Jolanda Maas[1]

1 - Vrije Universiteit Amsterdam; 2 - Saxion Hogeschool; 3 - VieCuri Medisch Centrum voor Noord-Limburg; 4 - OLVG

Background and objectives

Since the benefits of nature are becoming increasingly apparent, healthcare facilities are gradually introducing nature-based interventions (NBIs) to support health and well-being of patients and staff. However, daily practice learns that NBIs are often not used or not used as intended. To optimize the integration in healthcare practice, this study aimed to develop a framework to support effective and sustainable implementation of NBIs in healthcare facilities.

Process and methods (for empirical research)

An online two-round modified Delphi study was conducted, using input of experts (healthcare managers, healthcare staff and green designers) who had been involved in the implementation of NBIs in healthcare facilities. In Round 1, an open-ended survey was administered to identify factors important for the implementation of NBIs. Factors mentioned by 31 experts were thematically analyzed using the Consolidated Framework of Implementation Research (CFIR). Together with literature on both implementation science and NBIs, these results were combined into a new implementation framework suitable for NBIs. In Round 2, experts (N=24) rated the importance of the framework factors based on a five-point scale. Factors with at least 70% consensus about the importance were included in the framework.

Main results (or main arguments in the case of critical reviews)

Round 1 revealed a variety of factors important for the implementation of NBIs, including factors related to the design, the organizational context and users. These factors combined with evidence from literature resulted in a framework with 100 factors divided into 5 main domains: the NBI, Inner-, Outer setting, Users and Process. In Round 2, consensus was reached for 89 factors (89%), which were included in the final framework.

Implications for research and practice/policy | Importance and originality of the contribution

This study resulted in an implementation framework for NBIs in healthcare facilities. This framework is the first to include all relevant aspects for implementation of NBIs, an often overlooked part of the process. It provides professionals a tool to support effective and sustainable implementation of NBIs in healthcare facilities.

Global Challenges, Local Impacts
Rethinking governance, sustainability and consumption in light of climate change
05 - 08 JULY '22

IC - (21364) - EFFECTS OF SIMULATED RESTORATIVE ENVIRONMENTS IN CANCER PATIENTS

Patricia Ortega-Andeane[1]; Maricela Irepan-Aguilar[1]; Cesareo Estrada-Rodriguez[1]
1 - National Autonomous University of Mexico

Background and objectives

In cancer treatment, radiotherapy is administered to most patients as first-line therapy. It has been identified that patients receive information of an anecdotal nature, for example, believing that RT is only palliative care, uncertainty due to radiation or being injured by the equipment, which, together with the physical conditions of the waiting room, generate high levels of stress in patients who are going to face radiotherapy for the first time.

Although positive results have been reported in the literature between simulated restorative environments and psychophysiological stress reduction, it is of great importance to test these effects in scenarios where stress is experienced.

This study examined the influence of simulated restorative environments on patients stress levels whilst seated in a radiotherapy waiting area.

Process and methods (for empirical research)

For this study, a quasi-experimental, randomized design was used, with a control group and recording of physiological signals. A psychophysiological stress profile was developed with cognitive and emotional stress tasks and a relaxation phase in which one of three possible restorative environmental simulations or a simulation with neutral content was presented. To assess stress, used psychometric instruments before and after; and as physiological markers, the electrical resistance of the skin and the heart rate were recorded. The final sample consisted of 117 patients who were waiting for the first time for radiotherapy treatment.

Main results (or main arguments in the case of critical reviews)

After analyzing between and within groups, it was found that the simulated restorative environments in their three modalities (static, dynamic and virtual reality) have stress-reducing effects.

Implications for research and practice/policy | Importance and originality of the contribution

The results point toward the use of non-invasive psycho environmental strategies for stress recovery, through simulated restorative environments that make it easier for the patient to recover in the site where he experiences acute stress, without having to move to a natural restorative environment inside or outside of the hospital. These are relevant for hospital without access to nature.

Hour: 16:15:00
Session: S21 - Energy & Low-carbon Transitions
Room: Room 2

Theme: Sustainability (4)

IC - (21025) - TIME, HISTORY AND MEANING-MAKING – A CONCEPTUAL FRAMEWORK FOR RESEARCH ON PEOPLE'S RESPONSES TO RENEWABLE ENERGY PROJECTS

Sophia Küpers[1]; Susana Batel[1]
1 - CIS_ISCTE

Background and objectives

Time is an omni-present reality in current low-carbon energy transitions. The field of research on the social acceptance of renewable energy technologies (RET) is interested in how people relate to renewable energy projects, sees people as central actors within energy transitions and has shown that their responses are highly diverse depending on global and local power dynamics entangled with RET deployment.

Process and methods (for empirical research)

In this paper, we show that most research so far has been cross sectional, both by examining people's responses at a specific moment in a project's lifecycle and by considering RET projects as independent from histories of infrastructure and place as well as people's experience. We further point out how references to the perception of time and meaning-making in social acceptance work are frequently vague and often used as a mere backdrop to the main story. However, an embryonic body of literature cross-disciplinary contributions is already showing a way forward, towards increased temporal awareness (Sarrica et al., 2016; Sherren et al. 2016; Lai, 2021).

Main results (or main arguments in the case of critical reviews)

Inspired by these authors, we develop a first conceptual framework for the systematization of time dimensions in social acceptance research. We propose differentiating physical and historical time (Aminzade, 1992) for social acceptance research as a first step towards grasping the diverse meanings people attribute to temporal dynamics and specifically the role of collective memories.

Implications for research and practice/policy | Importance and originality of the contribution

Our deeper engagement with temporality contributes to recent critical work in social acceptance research and will provide a helpful analytical tool to researchers who intend to approach the temporal embeddedness of the very processes the field tries to understand.

IC - (21028) - USE CASE SCENARIOS AS STARTING POINT FOR THE DEVELOPMENT OF INTELLIGENT ENERGY STORAGE SERVICES WITHIN SMART ENERGY SYSTEMS

Kathrin Röderer[1]; Katja Corcoran[1]; Eva Hofmann[1]
1 - University of Graz

Background and objectives

Successfully transforming our energy systems towards a human-centered and renewable, service-oriented energy supply is crucial for reaching the ambitious CO_2-emission goals in the EU. However, it is still a challenge to integrate the user perspective into strongly technology-oriented research approaches in interdisciplinary projects. In order to support the user-centered development of smart energy systems and storage solutions based on users' and stakeholders' needs, we developed four exemplary use case scenarios with an explicit user focus based on a collection of 13 use cases that were identified within project consortium of the ERA-Net project I-GReta.

Process and methods (for empirical research)

The use case scenarios were generated based on interviews and iterative discussion with the international consortium members from various disciplines. They represent an easy-to-understand textual description of a typical or representative user behavior.

Main results (or main arguments in the case of critical reviews)

The user scenario *Flexible and bidirectional charging of e-cars* (1) creates a vision for an improved use of e-cars from an end-user's perspective. Flexible and bidirectional charging are in the focus. The scenario *Making energy flows visible* (2) shows two different possibilities to assist a facility manager in his/her work, e.g., in an office or a large university building, by visualizing energy flows and providing opportunities to adapt the level of energy consumption. The scenario *End-user interaction with energy management system* (3) is narrated from a classical household perspective, showing the possibilities to reduce and flexibilise the use of energy in a smart home. The scenario *Energy community investment planning* (4) focuses on investment planning in a small energy community, specifically on an investment in PV and a connected storage.

Implications for research and practice/policy | Importance and originality of the contribution

All scenarios are related to a sustainable future use of the technological solutions developed and tested within the field trials of the I-GReta project. Thereby, they contribute to a more human-centered renewable smart energy system and intelligent energy storage services.

IC - (21090) - ACTING LOCALLY: INTERMEDIARY ACTORS AND THE TRANSITION TO A LOWER CARBON ECONOMY

Alice Hague[1]; Tami Stevenson[1]; Tony Craig[1]; Kathryn Colley[1]; Phoebe Somervail[1]
1 - The James Hutton Institute, Aberdeen, UK

Background and objectives

The transition to a more sustainable future is a challenge that requires action on many levels, and involves many actors. The concept of intermediary actors in sustainability transitions is well-established (Kivimaa et al, 2019) but often focused on how intermediary actors act to stimulate socio-technological change through professional organisations and industry associations that mediate between the local and the global level. In this presentation we draw on insights from multi-level governance and sustainability transitions to consider how organisations create and take on a role as intermediary actors, most actively at the local level, to facilitate change in areas such as the transition to a circular economy and climate change adaptation.

Process and methods (for empirical research)

In this presentation we draw on empirical research in the north-east of Scotland based on semi-structured interviews with representatives of environmentally-focused organisations. Taking a place-based approach, we investigate how local contexts can contribute to creating or hindering change, and show how individuals seeking to achieve a more sustainable society act within organisational settings to adopt an intermediary role for their organisation.

Main results (or main arguments in the case of critical reviews)

We argue that intermediary actors have a vital role in the delivery of a more sustainable society, and crucially, that place- and locally-based organisations are key to this transition. We highlight how local government actors work to adopt an intermediary role at the organisational level, working as 'go-betweens' to overcome some of the barriers to action, and drawing on transdisciplinary approaches and partnerships to facilitate change.

Implications for research and practice/policy | Importance and originality of the contribution

Understanding the role that people and organisations can adopt as intermediary actors at the local level can be crucial to our ability to move to a more sustainable future. With lessons for researchers, policy and practice, our work builds existing research to provide additional insights into how intermediary actors adopt place-based approaches and adapt to their local and organisational contexts to deliver change.

IC - (21128) - SOCIAL ASPECTS OF TRANSITIONS TO CLEAN ENERGY: A CO-CREATION APPROACH

Ricardo García Mira[1]; Nachatter Singh[1]
1 - University of A Coruna

Background and objectives

One of the main objectives of the EU is to accelerate the energy transition, decarbonising the energy sector, to cut emissions by at least 40% below 1990 levels by 2030, in order to reach carbon neutrality by 2050. The discussion is how to manage the de-carbonisation process in those regions still dependent on fossil-fuel-based industries, as well as what kind of processes characterize the transition currently ongoing.

The main objective of our research is to analyse the social aspects of the transition to clean energy, focusing at: a) producing a comprehensive knowledge on this transition; b) Develop a better understanding of the differentiated problems faced by European coal and carbon-intensive regions in transition and the coping strategies they developed; c) Co-create a set of policy recommendations reflecting the lessons learned.

Process and methods (for empirical research)

We explore 13 case studies under: Coal mining regions and Carbon intensive regions, providing models and evidence on key processes of transitions, through multi-scale, multi-region comprenhensive research involving a number of disciplines from social and psychological sciences. We will present here the case of As Pontes in the NW of Spain.

Main results (or main arguments in the case of critical reviews)

A short report on socio-psychological key factors, dynamics and patterns will be presented in order to contribute to better understand how clean energy trasition can be understood to the light of recent developements of the theories of attachment to place, place identity and outguard migration.

Implications for research and practice/policy | Importance and originality of the contribution

The de-territorialisation process in these regions has raised critical constraints for management, because the progressive weakening of the tie between a community and its territory. Europe has technology to move from fossil fuels to clean energy, but we need to identify the factors, dynamics and patterns that make that social dynamics remains challenging. On the other hand, planning of clean energy transition, requires to understand the entrenched attitudes in which people see themselves.

Hour: 16:15:00
Session: S22 - Health and the Pandemic
Room: Room 3

Theme: Sustainability (5)

IC - (20805) - NATURAL ENVIRONMENTS AND GOOD HEALTH: COMPARISONS OF EXPOSURES AND MECHANISMS ACROSS 18 COUNTRIES

Lewis Elliott[1]; Tytti Pasanen[2]; Mathew P White[11]; James Grellier[1,3]; Gregory N Bratman[4]; Marta Cirach[5,6,7]; Mark Nieuwenhuijsen[5,6,7]; Ann Ojala[8]; Anne Roiko[9]; Matilda Van Den Bosch[5,6,7]; Maria L Lima[10]; Lora E Fleming[1]; Benedict W Wheeler[1]

1 - European Centre for Environment and Human Health, University of Exeter; 2 - Finnish Institute for Health and Welfare, Finland; 3 - Jagiellonian University, Poland; 4 - University of Washington, USA; 5 - ISGlobal, Barcelona, Spain; 6 - Universitat Pompeu Fabra, Barcelona, Spain; 7 - CIBER Epidemiología y Salud Pública, Madrid, Spain; 8 - Natural Resources Institute Finland, Finland; 9 - School of Medicine, Griffith University, Australia; 10 - Department of Social and Organizational Psychology, ISCTE – University Institute of Lisbon, Portugal; 11 - Cognitive Science HUB, University of Vienna, Vienna, Austria

Background and objectives

Various frameworks exist which depict mechanistic pathways by which neighbourhood exposure to nature impacts general health such as environmental, social, physical activity-related, and psychological. All might rely to differing extents on direct recreational contact with nature. Studies testing these pathways are limited by heterogeneous exposure and outcome measures, the inability to assess recreational contact and distinct environment types, focus on specific geographies, and suboptimal conducting of mediation.

Process and methods (for empirical research)

We used data from an 18-country survey to test pathways proposed by a well-known framework (Hartig et al., 2014) within one structural equation model. Our outcome measure was self-reported general health, our exposure variables were greenspace, freshwater, and coastal water within 1km of residence, and our mediators consisted of: (a) frequency of recreational visits to greenspaces, freshwater, and the coast, (b) air pollution concentrations at the residence, (c) self-reported physical activity, (d) self-reported social contact, and (e) psychological wellbeing.

Main results (or main arguments in the case of critical reviews)

Greenspace linked to health through greenspace visits and in turn, physical activity, social contact, and psychological wellbeing. Freshwater linked to health through freshwater visits and in turn, social contact. Coastal proximity linked to health through coastal visits and in turn, both social contact and psychological wellbeing. Coastal proximity also linked to health through physical activity and mental health in the absence of recreational visits. Mental health pathways typically explained larger proportions of the total effect.

Implications for research and practice/policy | Importance and originality of the contribution

The results underline the importance of neighbourhood nature in supporting outdoor recreation which in turn benefits health through different pathways depending on the environment type. They support the need for research into not just greenpace provision, but promotion i.e. how to support people to use greenspace in health-enhancing ways. Furthermore, the fact that social contact was consistently a significant mediating pathway regardless of environment type partially lends support to contemporary theories of relational and/or collective restoration.

IC - (20816) - CLIMATE CHANGE ANXIETY: AN EXPLORATORY STUDY WITH SPANISH ADOLESCENTS

Rocío Rodríguez Rey[1]; Silvia Collado[2]; Myriam Sanandrés[1]; José Antonio Corraliza[3]

1 - Universidad Pontificia de Comillas; 2 - Universidad de Zaragoza; 3 - Universidad Autónoma de Madrid

Background and objectives

Climate change anxiety (CCA) has been defined as the distress caused by climate change where people are becoming anxious about their future. In 2020, the climate change anxiety scale (CCAS) was developed to be used in EEUU. Since then, it has been used to measure CCA in adults from different countries (i.e., Italy and Germany), showing that adults tend to report relatively low levels of CCA. To our knowledge, there are no studies examining CCA with the climate change anxiety scale in adolescents. The main objective of this study is to examine Spanish adolescents' CCA and to evaluate CCA's correlates.

Process and methods (for empirical research)

Participants were 250 adolescents (12-18 years old). Data were collected through a pen a pencil questionnaire including the following variables: demographic data, CCA, climate change knowledge, anxiety and depression symptoms, frequency of contact with nature, connection to nature, pro-environmental behaviors, coping strategies in relation to climate change, personality traits and social influence.

Main results (or main arguments in the case of critical reviews)

Results show that the CASS is a useful instrument to measure Spanish adolescents' CCA. Spanish adolescents' report low levels of CCA (M=1.47; SD=.40). Scores were higher in the emotional dimension, followed by the cognitive and functional ones. Girls showed higher CCA than boys. Participants who feel more connected to nature reported higher levels of CCA and tend to behave in a more pro-environmental way. Regarding coping strategies: adolescents who use a problem-focused strategy tend to report lower levels of CCA, while those that use a meaning-focused strategy report higher levels of CCA.

Implications for research and practice/policy | Importance and originality of the contribution

The CCAS is a useful tool to register CCA in Spanish adolescents. In line with studies with adults, some adolescents suffer emotionally due to climate change and its consequences, and CCA is related to adolescents' social group's perception of climate change and their behaviors towards the environment.

IC - (20836) - THE IMPACT OF RESTORATIVE ENVIRONMENTS ON MENTAL WELLBEING: A COMPARISON BETWEEN FLAT-SCREEN AND IMMERSIVE VIRTUAL REALITY (IVR) EXPOSURE.

Rebecca Reece[1]; Issy Bray[1]; Chris Alford[1]; Nigel Newbutt[2]; Anna Bornioli[3]; David Satenstein[1]

1 - The University of the West of England (UWE Bristol); 2 - University of Florida; 3 - Erasmus Centre for Urban Port and Transport Economics

Background and objectives

Exposure to virtual natural and historic environments can be beneficial for mental well-being. However, it is still unclear how different virtual exposure methods can impact well-being, and whether physiological and subjective measurements of well-being show similar results. This study aimed to address this gap and compare the benefits of exposure to restorative environments when viewed on a flat-screen monitor versus using immersive virtual reality (IVR).

Process and methods (for empirical research)

Employing a between subject's design, participants (N = 30) were exposed to three restorative environment videos (green, blue, historic), after viewing stress-inducing traffic videos. Participants were randomly assigned to view restorative environments on a flat-screen monitor or using an IVR head-mounted display (Oculus Go). After each environment exposure, mood and anxiety were subjectively measured. Physiological measurements (skin conductance and EEG) were recorded continuously throughout the experiment.

Main results (or main arguments in the case of critical reviews)

Preliminary results show state anxiety improved after exposure to green and historic environments, compared to traffic. This effect was found to be stronger with exposure to the green environment. No significant differences were found between methods of exposure (flat-screen vs IVR). Analyses of physiological measurements are underway.

Implications for research and practice/policy | Importance and originality of the contribution

The findings from this study highlight the possibilities that virtual environment exposure can provide for improving mental well-being in populations with limited mobility or who are unable to leave their homes (e.g. Covid-19 isolation). As this study involved university students, further research should use an intergenerational population to examine if similar results are found across age groups.

This research shows how virtual restorative environment exposure can impact physiological and subjective well-being and how effective different exposure methods are. Further, this study highlights the importance of viewing virtual restorative environments and the benefits that can be gained, especially for when going outdoors is not feasible.

IC - (20946) - THE IMPORTANCE OF NATURE DURING COVID-19 RESTRICTIONS: A LONGITUDINAL STUDY EXAMINING HOW AND WHY NATURE PROVIDED A HAVEN DURING A GLOBAL PANDEMIC

Kayleigh Wyles[1]; Emma White[2]; Birgitta Gatersleben[2]; Sarah Golding[2]; Tracy Xu[2]; Caroline Scarles[2]
1 - University of Plymouth; 2 - University of Surrey

Background and objectives

The health and wellbeing benefits of spending time in nature is well recognised (Capaldi et al., 2014; Coventry et al., 2021). When the world experienced severe lockdowns and restrictions, interfering in people's everyday lives and introducing the world to new global stressors, nature was especially used and found to help improve people's health and wellbeing (Hubbard et al., 2021; Poortinga et al., 2021). But what was it about these experiences that had these positive impacts? Were these experiences heightened and more sensitive during the most severe lockdowns? (How) did people's experiences of nature change after the restrictions subsided? And ultimately, what can we learn from this disruptive time for both theory and application?

Process and methods (for empirical research)

To examine the key features, mechanisms and potential changes in experiences with nature, a longitudinal questionnaire survey was conducted. Recruiting a nationally representative sample of 850 UK households, individuals shared their experiences of spending time in nature during the first UK lockdown (March-June 2020) and after the lockdown (October 2020 and October 2021).

Main results (or main arguments in the case of critical reviews)

Preliminary analysis indicates that spending time in nature was similarly beneficial for mood after the lockdown as it was during the lockdown. However, the key predictors and the strength of these key predictors on the positive experiences did differ. This talk will overview the role of numerous factors on mood at both time points (during restrictions vs. after), including the importance of the type of environment visited (e.g. key features, the extent the Attention Restoration Theory's properties were met), *how* people engaged with the environment, and the importance of their connection to nature.

Implications for research and practice/policy | Importance and originality of the contribution

Findings will advance the scientific insight on how and why nature is beneficial to our wellbeing and can also aid recommendations on how we can best engage with nature to maximise the benefits it can have on us.

IC - (21395) - WALKING AND WALKABILITY IN THE FACE OF THE PANDEMIC

Anaëlle Morgane Paulet[2]; Sergio Cortez[3]; Carole Després[1]

1 - Laval University (Canada); 2 - Master's student, M. Sc (urban design), Laval University (Canada); 3 - PhD, Biostatistician, Direction of VITAM - Centre de recherche en santé durable (Canada)

Background and objectives

The implementation of emergency measures during the first pandemic lockdown dramatically changed the travel habits of the population. People, young and old, were at home, telecommuting, or in distance learning. Grocery stores, convenience stores, and pharmacies were the only businesses open, with access limited to one person per household. How did it affect people's amount of walking? Did areas with higher walkability indices keep people walking? How did more peripheral, car-friendly, areas performed with traffic drastically reduced?

Process and methods (for empirical research)

This communication compares the walking weekly time before and during the 2020 Spring confinement of 893 respondents from the MAVIPAN longitudinal panel web survey (Leblanc et al. 2020). The self-reported measures were also georeferenced based on postal codes with three first digits to verify if the tendency to walk more in neighborhoods with higher walkability indexes fades during the confinement period, such as work, schools, shopping, and entertaining no longer acted as generators of active travel.

Main results (or main arguments in the case of critical reviews)

The results of the analyses revealed a general downward trend of 11% in weekly walking time during the confinement (negative binomial repeated measures regression model, TI=0.894, p=0.060). Two binomial negative regression models also confirmed that before the confinement, respondents who lived in higher walk score areas (TI=2,762, p=0,001*) and in more central neighborhoods (TI=0,930; p=0,052*) walked more than those living in less walkable areas and more remote areas. In contrast, during the confinement, there was no longer any differences detected (TI=1,004, p=0.931; TI=1,246, p=0,579). In times of strict confinement, the best predictors of weekly walking, revealed by a multivariate regression model combining 18 indicators, are the respondent's age– the older the more walking (T1=1,011, p=0,001) – and the level of cardiovascular activity before confinement – the higher, the more walking (T1=1,189, p=0,001). Neither income, gender, being a single parent, student, teleworker, or health professional, nor feeling physically or mentally healthy or not during confinement were significant, nor did having access to large bodies of water, parks, local services, or sidewalks.

Implications for research and practice/policy | Importance and originality of the contribution

Further analyses are needed but the dimensions of the built environment associated with the walkability index do not seem to be good predictors of walking during confinement. The impact of telework on lowering high traffic levels and its related nuisances (pollution, noise, pedestrian safety), as well as the free time it generated for recreative walking, needs to be further investigated.

Hour: 16:15:00
Session: S23 - Uses of Spaces II
Room: Room 4

Theme: Sustainability (5)

IC - (20947) - PLACES OF CRE-ACTIVE AGING: PHOTOGRAPHIC DIARIES IN THE CITIES OF PELOTAS, BELO HORIZONTE AND BRASÍLIA

Eduardo Rocha[1]; Adriana Portella[1]; Lorena Resende[2]; Ryan Woolrych[3]
1 - Federal University of Pelotas; 2 - Federal University of Rio de Janeiro; 3 - Heriot-Watt University

Background and objectives

Brazil, like other countries in the world, has been presenting increasingly long-living population growth. In the last decade, much research focused on understanding the complexity and the impacts of ageing. However, it is not yet clear if there is a relationship between specific lifestyles of the elderly and the sense of place they experience. Thus, we ask: what places and kind of activities can contribute to a better quality of life for the elderly at their home, neighborhood, and city? Aiming to analyze how the elderly interact with the places where they live in contemporary urban, in order to provide new strategies for inclusive urban planning, the research has used the method of photographic diaries to understand those dynamics.

Process and methods (for empirical research)

The study was carried out in the Brazilian cities of Pelotas (RS), Belo Horizonte (MG), and Brasilia (DF), each one with three selected neighborhoods, chosen according to income ranges (high, middle, and low). Even with great urban, economic, and cultural differences, these cities have in common the transformations in the age pyramid, which allowed the study to be more heterogeneous and diverse.

Main results (or main arguments in the case of critical reviews)

As a result, it was possible to make an approximation with the concept of the *becoming-child*, addressing French contemporary philosophy, together with the sense of a *good place* found in the elderly in the research. Such coexistences have led us to propose an exercise of composing a *becoming-child-elderly*, towards a will to power and affirmation of architectural and urban life for *cre-active* elderly.

Implications for research and practice/policy | Importance and originality of the contribution

The project, in its final phase, carried out public policy workshops based on the results, with the participation of users and local authorities.

IC - (21156) - A REFLECTION ABOUT AGEING IN POVERTY IN A PANDEMIC WORLD: THE BRAZIL CASE

Adriana Portella1; Sinval Cantarelli Xavier2 ; Eduardo Rocha1 ; Celina Britto Correia1 ; Nirce Saffer Medvedoski Medvedoski1 ; Ryan Wollrych3

1 - Department of Architecture, Federal University of Pelotas; 2 - Federal University of Pelotas, Brazil; 3 - Heriot-Watt University, UK

Background and objectives

This paper aims to bring reflections about how communities can be designed to better integrate the sense of place needs of older adults considering people's perceptions from different social incomes in Brazil. Our findings are based on a longitudinal study that began in 2016 in nine different communities from the south, southeast, and Midwest regions of the country. The COVID-19 pandemic makes all of us discuss the healthy quality of the design of our cities and homes, and the way society has been living and connecting with the natural landscape. Public spaces with high air pollution, natural areas replaced by high-density buildings, and public green squares being more difficult to reach in cities, will make urban planners re-think new ways of healthy urban living.

This research aims to challenge the following question: How can vulnerable communities in Brazil be designed to better integrate the sense of place needs of older adults? The results presented in this paper seeks to translate the findings obtained from community participatory methods into design guidelines for designing a sense of place for older adults reflecting the user´s needs from different social incomes communities in Brazil, which accommodate both the need for independence and mobility whilst encouraging social participation and community engagement. The design guidelines are directed towards identifying urban design and planning principles for practitioners, urban regeneration professionals, and policymakers to guide the development of healthy age-friendly cities and communities.

IC - (20971) - METRICS FOR PUBLIC SPHERE BEHAVIOURS AT SMALL SCALE: A CASE STUDY OF TWO PUBLIC SPACES IN RIO DE JANEIRO

Diego Crescencio[1]; Patricia Drach[1,2]

1 - Urbanism Program (PROURB), Federal University of Rio de Janeiro, Brazil; 2 - Departament of Architecture and Urbanism (DAU), University of Rio de Janeiro State, Brazil

Background and objectives

UNESCO states the importance of public space as crucial for sustainable cities and communities: providing ecosystem services, improving health and well-being, ensuring social inclusion and economic exchange, offering an opportunity to enrich the quality of life of all urban dwellers, leaving no one behind. This paper is part of a research project and aims to measure and model the personal and social uses of public spaces. The study was conducted in two squares at Rio de Janeiro and aims to address the question: Can we use a common language to observe people-environment relations and analyze trends and actions in public spaces?

Process and methods (for empirical research)

Trough Public Life Data Protocol data specification developed by Jan Gehl and applied in several cities, two open-source protocols were used in field surveys to collect data about people and place.

Main results (or main arguments in the case of critical reviews)

Preliminary results indicate that quantitative and qualitative data gathered thought standardized methods in Geographic Information Systems (GIS) can be used to model essential characterisations of public spaces at social and physical levels.

Implications for research and practice/policy | Importance and originality of the contribution

The methodological approach was shown to be replicable in systematic investigation of different public spaces. Depending on future results and analyses, this research may shed light to interdisciplinary perspectives and methods, contributing with the study and development of indicators and metrics about human behaviour and public spaces.

IC - (20990) - EFFECT OF FLEXIBILITY OF HOME ON RESIDENT'S PSYCHOLOGICAL WELLBEING

Sadhana Jagannath[1]; Prof Birgitta Gatersleben[1]; Dr Eleanor Ratcliffe[1]
1 - University of Surrey

Background and objectives

Residential environments support many psychological needs and behaviours that are important for wellbeing. However, not all homes are flexible enough to adapt to resident's different and changing needs. And nor is the effect of flexibility of home on wellbeing empirically explored. Therefore, this paper presents two studies that investigate if homes with more flexible built environments, as measured on an architectural (AF) and behavioural (BF) basis, support higher psychological wellbeing in residents.

Process and methods (for empirical research)

In an online mixed-method survey, 187 UK residents rated flexibility of their homes on a scale based on the two sub-dimensions of flexibility, and rated satisfaction of their basic eudaimonic needs of autonomy, competence, and relatedness (BPNT; Deci and Ryan, 2000), and hedonic needs of positive and negative affect (SWB; Diener, 1984b) that are important for wellbeing. Residents were asked to list rooms, objects and features at home that supported their need satisfaction (AF), including any changes they had made to their home (BF).

Main results (or main arguments in the case of critical reviews)

Flexibility of home explained 21% and 15% of variance in hedonic and eudaimonic need satisfaction scores respectively, suggesting that a more flexible home could support higher psychological need satisfaction. A list of rooms, objects and features, and types of changes made at home were identified and subsequently used to create an objective measure of AF and BF. The psychometric properties of these measures and the relationship between flexibility and wellbeing are being explored in an ongoing follow-up survey (N = 214).

Implications for research and practice/policy | Importance and originality of the contribution

The findings provide rich insights into the elements of a home that are associated with psychological wellbeing. It has implications in creating design guidelines for new homes or changing policies for retrofitting existing homes, thereby supporting residents in achieving higher wellbeing in a world where home environments are becoming increasingly important.

IC - (21114) - MAPPING DISABILITY EXPERIENCES DURING THE COVID-19 PANDEMIC

Delphine Labbé[1]; Yochai Eisenberg[1]; Alyson Patsavas[1]
1 - University of Illinois at Chicago

Background and objectives

The COVID-19 pandemic brought change to the world, as we cycled in and out of lockdowns. These changes created new ways of relating to others, to the world, and to disability, especially for people with disabilities. This project explored how the pandemic has impacted (or not) disabled people's use and understanding of space.

Process and methods (for empirical research)

For this project, we invited map submissions, envisioned in the broadest possible sense, capturing how people used space. The invitations were sent through the diverse local, national and international networks of people with disabilities. The submissions were collected between Spring and Fall of 2020.

Main results (or main arguments in the case of critical reviews)

The array of maps received included hand-drawn maps, poems, pictures, and digital renderings. The majority of the maps were from USA, with some from Nepal and UK. These submissions were grouped under four themes. *Home/Circles* reflected the circular dynamic of routines both disrupted and created by stay-at-home orders. *Outward/Community* grouped maps that reflect on new relationships with neighbors, community spaces, and cities. Maps in the *Inward/Reflection* theme showed how the pandemic caused many people to turn inward, sometimes expressing negative emotions such as anxiety, while others focused on art and creativity. The last theme *Isolation/Stagnation* captured the feelings of loss and the lack of movement that stay-at-home orders initiated. These maps were shared in a gallery format through a website for community sharing.

Implications for research and practice/policy | Importance and originality of the contribution

Collectively, these maps captured the many ways that the interactions with the environments tell the story of the pandemic and its unfolding impact on disabled people's lives. It highlighted that these experiences were varied and impacted different levels of spatial relations. This project also revealed how map-making is a creative tool that provides a way to reflect on person-environment interaction and can be used to capture significant changes in lives of people and reveal everyday patterns.

Dia: 08/07/2022

Hour: 09:00:00
Session: C6 - Environmental Education & Lifestyles
Room: Room 1

Theme: Governance (1); Consumption (4)

IC - (20868) - ENVIRONMENTAL EDUCATION PRACTICES IN PRESCHOOLS IN SWEDEN AND JAPAN: A COMPARATIVE STUDY THROUGH ACTIVELY CARING MODEL

Pimkamol Mattsson[1]; Shimpei Iwasaki[2]
1 - Lund University; 2 - Fukuoka Women's University

Background and objectives

There has been an increased interest in education for the environment in early childhood, but little is known about how the education influence young children's behavior. Moreover, the knowledge in different educational contexts is still limited. To adopt pro-environment behaviors, the children should be taught about caring for the environment and feel confident in their ability. With such recognition, this study explores the aspects of early childhood environmental education by targeting preschools affiliating to Green Flag program (an international environmental certificate for the education for sustainable development) in Sweden and Japan.

Process and methods (for empirical research)

The empirical data were obtained through nine interviews with educators involving in the program, and relevant documents received from the informants. Initially, the data obtained from two countries subject to a content analysis respectively to categorize environmental education activities. Subsequently, a deductive approach is applied in which all brought up aspects relating to the activities will be interpreted and discusses based on the three constructs of the actively caring model for the environment (Geller, 1995): (i) empowerment, (ii) self-esteem and (iii) belongingness.

Main results (or main arguments in the case of critical reviews)

Preliminary results have pointed out the important role of everyday green environments in environmental education activities in Sweden that could be associated with self-esteem and belongingness. The focus in Japan seems to be on performing actual pro-environmental behaviors due to a lack of local green space. The activities (e.g. making compost, growing own vegetables and making food, and energy saving competitions) could be considered as having tendencies that promote empowerment as well as belongingness.

Implications for research and practice/policy | Importance and originality of the contribution

The actively caring model was used to examine the potential for environmental education to increase the propensity of young children's care for the environment and therefore, pro-environmental behaviors. It is expected that the findings will facilitate design of environmental education activities taking into consideration different preschool contexts.

IC - (20885) - WOODEN ARCHITECTURE BASED ON EMPIRICAL RESEARCH OF THE 'WOODLAND CAMPUS' PROJECT IN JAPAN: BENEFITS OF CONTACT WITH NATURE FOR CHILDREN

Nobuaki Furuya[1]; Shingo Saito[2]; Haruka Miyajima[1]; Michisato Ikeda[1]; Ayako Naka[3]

1 - Department of Architecture, School of Creative Science and Engineering, Waseda University; 2 - Department of Architecture, Faculty of Engineering, Tokyo University of Science; 3 - Department of Human Environment Design, Faculty of Human Life Design, Toyo University

Background and objectives

The importance of forests in preventing climate change has been significantly increasing. Forest area comprises 67 percent of the total land area in Japan. However, most people no longer have any relationship with forests. Contact with nature is necessary for the healthy development of children. The lack of exposure to nature may cause physical and mental problems, referred to as 'nature deficit disorder'. The 'C. W. Nicol Afan Woodland Trust' started a reconstruction project for children's care after the Great East Japan Earthquake in 2011. In collaboration with industries, governments and academia, the project, which was initially aimed at children living in disaster areas, has now developed into a general project applicable to all children. Our research aims to propose architectural design principles that can connect children with nature.

Process and methods (for empirical research)

The process of our empirical research comprised designing and constructing pieces of wooden architecture, holding workshops, and conducting questionnaires, interviews and field surveys. Based on these activities, we established the design principles.

Main results (or main arguments in the case of critical reviews)

1. To appreciate nature, an outdoor observation deck (2014), a sound shelter (2015), and a theatre (2017) in the forests were designed and constructed using wooden dowels instead of metal nails. Horse logging was also adopted for sustainable forest management.

2. Workshops on how to use and maintain the wooden architecture were held. These workshops were effective in getting children and teachers involved in the project.

3. The results of the surveys showed that children became more interested in living beings and felt more attached to nature after experiencing the wooden architecture.

Implications for research and practice/policy | Importance and originality of the contribution

Our design principles, including the materials and devices used, signify unprecedented approaches towards a sustainable future. Our processes, such as design, construction, workshops and surveys, in collaboration with industries, governments and academia, have been fruitful for the environmental education of children and the 'Education for Sustainable Development'.

Global Challenges, Local Impacts
Rethinking governance, sustainability and consumption in light of climate change
05 - 08 JULY '22

IC - (21007) - GREEN EXPERIENCE: THE EFFECT OF HORTICULTURAL ACTIVITIES ON CHILDREN'S PHYSICAL AND MENTAL HEALTH AND DIETARY BEHAVIOR

Tzuhui Angie Tseng[1]; Jui-Jung Chang[2]
1 - National Tsing Hua Universisty; 2 - National Tsing Hua University

Background and objectives

Childhood obesity is one of the most serious global public health issues in the 21st century. Due to the continuous increase in childhood obesity and long-term negative health consequences, it is more important to pay attention to children's eating behaviors and how to effectively improve children's health and quality of life. The objective with this study is to explore the effects of horticultural activities on the physical activities, natural connection, eating behavior and health of primary school students.

Process and methods (for empirical research)

The sample were 129 3rd-6th grade school students in the Hsinchu City who were divided into an experimental group and a control group. The total of 68 children of the experimental group members undertook school horticultural activities which was held once a week, each about 40 minutes, and a total of six times. Research tools are The Connection to Nature Index for children, Children's Physical Activity Scale, willing to try fruits and vegetables and Pediatric quality of life questionnaire, and these were taken pre- and post- intervention in two groups. The descriptive statistic and Analysis of Covariance were applied to analyze data.

Main results (or main arguments in the case of critical reviews)

The study found that there had significant difference of physical activity, natural connection and health between the groups; however willing to try fruits and vegetables had no significant difference. This study uses open-ended questions to further understand the main reasons that affect children's eating vegetables and fruits is the taste and appearance of the food itself, as well as the influence of parents. By interview, Children believed that gardening activities not only increased their knowledge and experience of gardening, but also found that they also significantly improved their feelings of pleasure and interpersonal social relationships.

Implications for research and practice/policy | Importance and originality of the contribution

This study suggests that the design of the primary school should adopt a natural environment concept.

IC - (21174) - THE ROLE OF LOCAL SOCIAL INNOVATIONS DRIVING SUSTAINABLE LIFESTYLES

Isabel Lema Blanco[1]; Ricardo García Mira[1]
1 - Universidade da Coruña

Background and objectives

Green consumption has become the focus of research on climate action and the promotion of sustainable lifestyles and several authors (Kastner & Matthies, 2014) have highlighted the need to empower people, and educate and motivate consumers to be able to seek new opportunities for sustainable behaviour. The purpose of this study is to deepen the understanding the educational role that grassroots innovations play in the food domain, studing the social learning processes nurtured within these bottom-up organizations and its relevance for the adoption of new climate-relevant behaviours.

Process and methods (for empirical research)

Following a qualitative approach, a multi-method design was used, which combined three data-collection techniques: participatory observation, document analysis and 26 in-depth interviews with members and ex-members of eight local food coops located in the Galician region (Spain).

Main results (or main arguments in the case of critical reviews)

The results of the study show that the Galician initiatives of responsible consumption function as spaces for collective experimentation that also favor learning processes in the individual sphere and in the collective sphere of the participants, transforming the meanings, competencies and shared structures. Learning in the individual sphere corresponds to the acquisition of new knowledge and attitudes, awareness of global and complex problems, as well as political awareness, which causes the understanding of new worldviews and interpretive frameworks. The collective sphere includes learning of a cooperative, democratic and relational nature, linked to new ways of doing, relating and organizing in the economy, promoting cooperative organization models and horizontal participation formulas. These include, among others, the development of skills for democratic participation, effective communication or cooperative management.

Implications for research and practice/policy | Importance and originality of the contribution

The study highlights the relevance of social learning processes that emerge within conscious consumption initiatives that constitute innovative formulas of environmental participation, which foster the acquisition of new knowledge, skills and abilities as a result of collaborative action. , social interaction and joint reflection that occur in the social innovations.

IC - (21374) - A PSYCHOLOGICAL ASSESSMENT THROUGH A MOBILE APP FOR INVESTIGATING NBS IN URBAN TRANSFORMATIONS

Marco Boffi[1]; Nicola Rainisio[1]; Barbara Ester Adele Piga[2]; Gabriele Stancato[2]; Sonia Muhammad[2]
1 - Università degli Studi di Milano; 2 - Politecnico di Milano

Background and objectives

Citizens' participation is nowadays pivotal to urban planning processes. Co-design practices, indeed, foster a fruitful dialogue and negotiation between citizens, real estate developers, and public administrations, thus reducing the social and psychological risks associated with urban transformations.

Process and methods (for empirical research)

We present the Experiential Environmental Impact Assessment method (exp-EIA©), integrated into a web and mobile app (https://citysense.fr/en/) supporting the participatory approach. It enables the simulation of prospective environmental transformations through Augmented Reality (AR) and Virtual Reality (VR), and the assessment of related subjective experience. Unlike other existing tools, the environmental (e.g., physical exploration behavior, color features) and subjective data (e.g., emotions, 2 items based on Self-Assessment Manikin; restoration, 4 items on a 5-points Likert scale; prefigured activities, one multiple-choice item) are combined. Two case studies are investigated: 1) a design project including NBS in Milan (Italy) (by Covivio and CRA), including a new building and its surroundings, explored in AR (N=63); 2) an urban park in Atlanta (Georgia, USA) (by Atlanta Beltline), including a passive and an active/recreational area, explored in VR (N=46).

Main results (or main arguments in the case of critical reviews)

The results show:

1- Participants' exploration behavior, including preferred points of view and related isovists on a map;

2- The emotions, restoration and prefigured activities associated to the points of view, represented on a map;

3- The correlation between emotions (pleasure factor) and colors, in particular both lightness and lime tone;

4- The consistency between design goals and subjective environmental experience.

Implications for research and practice/policy | Importance and originality of the contribution

The presented method integrates an effective engagement tool for presenting design solutions to citizens and an innovative analysis for collected data. The cartographic representation (patented) makes the psychological geography of the place immediately accessible for experts and laypeople, favoring the integration of subjective and environmental goals when integrating NBS in the urban context.

Hour: 09:00:00
Session: G13 - Symposia - Building collective climate action around the world by understanding motivations, barriers, and behaviours
Room: Room 2

Theme: Governance (4); Governance (1)

(21099) - BUILDING COLLECTIVE CLIMATE ACTION AROUND THE WORLD BY UNDERSTANDING MOTIVATIONS, BARRIERS, AND BEHAVIOURS

Katarzyna Mikolajczak[2]; Ganga Shreedhar[1]
1 - London School of Economics and Political Science; 2 - Grantham Institute for Climate Change and the Environment

Background and objectives

Building collective climate action around the world by understanding motivations, barriers, and behaviours

Facilitating and growing collective responses to climate change is arguably amongst one of the most complex but urgent challenges facing humanity today. Several social movements are trying to build collective climate action around the world. Apart from increasing awareness of climate change, explicit goals typically include facilitating pro-environmental behaviour change and growing public support for policies. Increasing engagement with climate and environmental movements is crucial, achieved by reaching out to the public directly (e.g., campaigns) and building solidarity across issues (e.g., supporting other movements). Thus, understanding how best to motivate collective action for the climate and build bridges with other social movements is of particular interest to environmental and climate movement advocates and activists.

Psychological motivations to engage in collective action are complex, with significant differences between individuals, cultures, and collective action behaviours. There is a growing evidence from the WEIRD (Western Educated Industrialised Rich and Democratic) contexts, but far less evidence from non-WEIRD parts of the world. We know far less about what happens when climate movements intervene in other social struggles to build solidarity across movements. Yet, this is an increasingly important strategy, partly reflecting the the interlinkages between climate change and other issues from food security to war.

Chair: Dr Ganga Shreedhar, London School of Economics & Political Science (LSE), UK

1. Social identification with Extinction Rebellion as a driver of collective climate action in the UK – Dr Ganga Shreedhar, LSE

2. Affective nature connection and transcendental values shape conservation attitudes among Amazonian colonist farmers - Dr Katarzyna Mikolajczak, Grantham Research Institute for Climate change and the Environment

3. Differences in motivations and wellbeing across forms of political activism: Emerging evidence from the Occupied Palestinian Territories – Nils Mallock, LSE

4. The unintentional impacts of building solidarity between climate and social movements on support for climate action: The case of Greta Thunberg and the Indian Farmers' Protest – Anandita Sabherwal, LSE

Significance for the advancement of People-Environment relations

The session aims to showcase new research on the cognitive and affective factors (perceived social norms, values, political beliefs, social identification, wellbeing, emotions) influencing types of collective actions (eco- and political activism, and support for movements or policies) alongside external factors (behavioural interventions like pre-bunks, biophysical factors, local governance, and institutional arrangements). All papers use quantitative methods via nationally representative (Shreedhar), field (Mikolajczak), or experimental (Sabherwal) and Mallock) surveys in across different country contexts (UK, India, Palestine, Brazil). Three authors self-identify as female and two as non-white minority ethnic. By studying how to build collective action across the world using distinct settings, therefore, we hope to diversify people-environment studies and broaden insights about what motivates people to support and engage in climate movements.

IC - (21100) - WHAT DRIVES SOCIAL IDENTIFICATION WITH EXTINCTION REBELLION AND COLLECTIVE CLIMATE ACTION IN THE UK

Ganga Shreedhar[1]
1 - London School of Economics

Background and objectives

Even though concern for climate change and intention to take climate action is on the rise among the UK public, engagement with activist groups remains lower than desired. We investigate how intentions to take collective environmental action can be translated into engagement. We empirically test the social identity model of pro-environmental action to explore what drives social identification with XR, and if social identification in turn, predicts collective climate action intentions.

Process and methods (for empirical research)

We recruit a nationally representative sample of UK adults (N=1098) and collaborate with an active climate movement (Extinction Rebellion i.e., XR).

Main results (or main arguments in the case of critical reviews)

We found that as people's social identification with XR increases, their general pro-environmental intentions become more closely related to them viewing XR as effective advocates (e.g., wanting to learn from XR, trusting the information XR provides, and wanting to join XR-driven campaigns). In other words, amongst those who have strong pro-environmental intentions, those who strongly identify with XR are more likely to be influenced by their advocacy.

When turning to who these people are, we find that younger people, and females, hold a better image of XR, and in turn have taken (and intend to take) more XR related actions. We also found that those self-identifying as white have performed fewer XR-related behaviours, have lower intentions to engage with XR and perceive a lower norm of XR participation. On the other hand, those self-identifying as black performed more XR-related behaviours, performed higher intentions to engage with XR, and perceived a stronger social norm of XR participation.

Implications for research and practice/policy | Importance and originality of the contribution

This study is the first unpack social identification in predicting support for XR in a nationally representative sample, by paying attention to the role of different groups (age, gender, ethnicity) and co-develop a multi-component measure of collective action behaviours with XR (e.g. digital versus in-person actions, effort, visibility, disruptiveness etc.).

IC - (21101) - THE UNINTENTIONAL IMPACTS OF BUILDING SOLIDARITY BETWEEN CLIMATE AND SOCIAL MOVEMENTS ON SUPPORT FOR CLIMATE ACTION: THE CASE OF GRETA THUNBERG AND THE INDIAN FARMERS' PROTEST

Anandita Sabherwal[1]
1 - London School of Economics

Background and objectives

An important and emerging strategy in climate movements is to build solidarity with other social movements to mobilize support for climate action. But can this backfire by unintentionally reducing support for climate movements instead? We investigated the effect of Greta Thunberg's support for the Indian farmers' protest on her effectiveness as a climate advocate and Indians' intentions to take collective climate action.

Process and methods (for empirical research)

We investigate this possibility in two experiments, one pre-registered (N=641) in a sample of Indian adults.

Main results (or main arguments in the case of critical reviews)

Protest support moderated the effect of her Thunberg's tweets in support of the farmers' protest such that after reading her tweets, those who opposed the farmers' protest found Thunberg to be less effective and those who supported the farmers' protest found her to be more effective as a climate advocate, relative to those in the control condition. Pre-emptively clarifying Thunberg's intentions and values successfully inoculated against the negative effects on her image. Exposure to the tweets also lowered protest opposers' intention to take collective climate action. Climate advocates' involvement in issues unrelated to climate change can polarise public opinion about them and engagement with the climate movement. This can be mitigated by clarifying advocates' intentions before they engage with diverse social movements.

Implications for research and practice/policy | Importance and originality of the contribution

This work is one of the first to test the effectiveness of inoculation theory in protecting activists' image and restoring collective climate action intentions in a sample that remains underrepresented in psychological research. Since intersection with other social issues is inevitable, and even desirable to build cross-movement solidarity and climate awareness, our findings suggest that one way climate advocates can protect against threats to their image is by clarifying their intentions before engaging with diverse social movements.

IC - (21103) - AFFECTIVE NATURE CONNECTION AND TRANSCENDENTAL VALUES SHAPE CONSERVATION ATTITUDES AMONG AMAZONIAN COLONIST FARMERS

Katarzyna Mikolajczak[1]
1 - Grantham Institute for Climate Change and the Environment

Background and objectives

The conservation of tropical forests is a key ingredient of climate policy, but these remain globally threatened by deforestation, defaunation, and forest degradation. Much of this damage occurs on private, family-run farms in places like the Amazon. One form of collective action in this setting is to support pro-conservation policies that can effectively help local farmers switch to more profitable and ecologically sustainable practices are urgently needed.

Process and methods (for empirical research)

In a field-based survey among farmers living at a major deforestation frontier in the Brazilian Amazon, we evaluate how two kinds of deep inner motivations– nature connection and transcendental values – influence pro-conservation attitudes among farmers living along a major deforestation frontier, relative to more external factors.

Main results (or main arguments in the case of critical reviews)

Our findings 1) support the importance of inner motivations for shaping conservation attitudes, 2) show that internal motivations to protect nature can be common in low-income rural areas in the Global South, and 3) demonstrate that farmers' internal motivations and attitudes generally support nature protection and could be leveraged for greater conservation on farms, if support was provided to overcome the external barriers in place.

Implications for research and practice/policy | Importance and originality of the contribution

Whilst much research has been devoted to understanding the structural barriers to forest conservation, comparatively little attention has been paid to farmers and their 'inner worlds' – the meanings, motivations, identities, psychological relationships etc – and their role in shaping conservation outcomes. The conventional wisdom holds that people in societies undergoing development and industrialisation prioritise materialistic values and rarely care about nature beyond utilitarian reasons, but empirical data on tropical farmers' motivations remains scare.

We argue that forest conservation policy should strategically focus on providing enabling external conditions for the adoption of sustainable practices by tropical farmers and on the cultivation of 'inner world' qualities supportive of conservation goals.

IC - (21107) - MOTIVATIONS CROWDING ACROSS FORMS OF POLITICAL ACTIVISM: EVIDENCE FROM THE UK AND OCCUPIED PALESTINIAN TERRITORY

Nils Mallock[1]
1 - London School of Economics and Political Science

Background and objectives

Participating in pro-environmental collective action can pose a social dilemma to individuals - while costs and potential risks of engagement are borne by individual activists themselves, policy goals are a public good. Many can prefer to not join movements, but still benefit from them, possibly leading to a 'participation paradox' i.e., a lower number of people participate than is socially desirable. Various theoretical suggestions to explain the 'participation paradox' (such as ideological commitment, social context and self-identity) have so far not been robustly validated in different settings due to insufficient differentiation between activism forms and their implications for individual participation behaviour over time.

Process and methods (for empirical research)

A randomised controlled trial (N≈200) is conducted among a general population sample in the Occupied Palestinian Territories. After completing a mortality salience treatment, participants indicate their willingness to engage in pro-environmental vs. other political campaigns as well as their subjective wellbeing.

Main results (or main arguments in the case of critical reviews)

Mortality salience positively predicts willingness to engage in political activism, and subjective wellbeing mediates activist engagement. There is a partial crowding out of pro-environmental concerns.

Implications for research and practice/policy | Importance and originality of the contribution

This study is the first to empirically test for differences in motivational factors, and potential crowding-out effects, between activism forms within a consistent regional and cultural context. Moreover, wellbeing measures of life satisfaction are introduced as potential predictors of activism engagement. Results offer novel insights into the drivers of pro-environmental collective action in general and in settings of ongoing political conflict.

Hour: 09:00:00
Session: S24 - Risk Perception & Environ. Attitudes
Room: Room 3

Theme: Sustainability (5)

IC - (20825) - THE GRETA EFFECT: IS THERE MORE SUPPORT FOR CLIMATE PROTESTORS WHO ARE YOUNG AND FEMALE?

Yu Shuang Gan[1]; Sylvia Hayes[2]; Lorraine Whitmarsh[1]
1 - University of Bath, Department of Psychology; 2 - University of Exeter, Department of Geography

Background and objectives

The media coverage of climate change has seen a significant increase in capturing images of climate protests (Hayes & O'Neill, 2021). Of particular interest are the youths who have recently started to take part in climate change protests, including "school strikes" initiated by the young Swedish activist, Greta Thunberg. Contrary to the norm, it has been argued that young people are particularly powerful climate advocates as they have a higher "moral standing" than adults (Bain, 2020). However, although images of protestors tend to elicit different, or even contradictory, responses from audiences (Chapman et al., 2016), no research has yet explored the impact of younger protestors, especially girls, on audience responses towards climate change protest; in particular, how engaged the audiences are with the issue, and how much they identify with the protestors.

Process and methods (for empirical research)

With the use of photo editing, we manipulated the gender of the main climate protestor as (a) male or female; and their age as (b) pre-teenager, teenager or adult. Moreover, we investigated whether the presence of police in the image had an effect. Audiences were also disaggregated by age and gender. Our dependent variables were climate change attitudes and intentions, and support for climate protests and protestors. In a pilot study, we pre-tested a battery of edited and non-edited images to identify a final image pool of eight images.

Main results (or main arguments in the case of critical reviews)

Our findings indicate that the age and gender of climate protestors were significant in shaping participants' engagement with the image itself and the issue of climate change.

Implications for research and practice/policy | Importance and originality of the contribution

The current study is one of the first to investigate the efficacy of climate protest imagery to engage audiences. We find images of young female activists to be particularly engaging. Implications for theory and design of climate engagement campaigns will be discussed.

IC - (20997) - CHILL GRETA, CHILL!": STEREOTYPE ATTRIBUTION TOWARDS YOUNG ACTIVISTS

Catarina Farinha[2]; Miriam Rosa[1]

1 - Instituto Universitário de Lisboa (Iscte-IUL), CIS-IUL; 2 - Instituto Universitário de Lisboa (Iscte-IUL)

Background and objectives

Climate change is an increasingly mobilizing issue, brought forward by activists (Murray, 2020). However, activists are prone to negative stereotypes, which leads to resistance by society (Bashir et al., 2013). Youth are particularly interested and innovative in contributing to environmental issues (Arnold et al., 2009), but they feel disregarded by formal environmental movements (Earl et al., 2017). The present research aimed at examining stereotypical dimensions attributed to (youth vs adult) activists, using the Stereotype Content Model (SCM), also including a morality/trustworthiness dimension.

Process and methods (for empirical research)

In Study 1 (N=276), with real public figures, Greta Thunberg or Jane Fonda were the real models used, and randomly assigned to participants, but being attributed the same discourse excerpt. Warmth, competence and trustorthiness stereotypes were measured. In Study 2 (N=228), fictional characters were used, with the same discourse being assigned to an activist presented as teenager or adult.

Main results (or main arguments in the case of critical reviews)

In study 1, the results showed a sanction towards Thunberg in all stereotypical dimensions. This might be due to her characterization in the media. In Sudy 2, no differences were found in warmth or competence dimensions, only on the morality/trustworthiness dimension, penalizing the young activist as less trustworthy.

Implications for research and practice/policy | Importance and originality of the contribution

These results showcase the importance of studying environmental activists in the framework of the SCM, and the interplay between different social categories (age, activism/agency) in stereotypical appraisals. They also contribute to understanding resistance towards environmental activists, thus helping to reduce barriers to social influence and innovation from pro-environmental agents of all ages.

IC - (21027) - A FREE WORD ASSOCIATION ANALYSIS OF GERMAN LAYPEOPLE'S PERCEPTION OF BIODIVERSITY AND ITS LOSS

Annike Eylering[1]; Kerstin Neufeld[1]; Jana Borghorst[1]; Florian Fiebelkorn[1]
1 - Osnabrück University

Background and objectives

In light of the urgent biodiversity crisis, it is crucial to gain an understanding of how people perceive biological diversity and its loss. This study has three objectives: (1) we aim to capture the naive associations of the German population to the terms "biological diversity and "biological diversity loss". (2) We attempt to validate a newly developed scale to capture biodiversity loss perception. (3) We investigate to what extent the positive and negative framing by the association test affects the perception of biodiversity loss.

Process and methods (for empirical research)

Data collection was performed in September 2021 using an online questionnaire to assess participants' associations with the terms "biodiversity" (*n* =131) and "biodiversity loss" (*n* = 130) using a free-word association test. In addition, we used a newly developed and validated biodiversity loss perception scale to examine whether the positive ("biodiversity") or negative framing ("biodiversity loss") of the association test influenced biodiversity loss perceptions. We additionally surveyed biodiversity loss perceptions of a control group that did not previously perform an association test (*n* = 143).

Main results (or main arguments in the case of critical reviews)

For the term “biological diversity”, we most frequently identified associations related to animals, whereas species extinction was most frequently associated with “loss of biological diversity”. As expected, the naive associations diverged from the scientific concept of biodiversity. We are currently working on creating an association network, validating the biodiversity loss perception scale by assessing factor structure using an EFA, assessing the reliability of the subscale’s using Cronbach’s alpha and we are assessing the convergent validity. Lastly, we will examine the framing effects, using an ANOVA.

Implications for research and practice/policy | Importance and originality of the contribution

The study will provide first indications on the extent to which positive/negative framing is suitable to influence the perception of biodiversity loss. Furthermore, both the association test and the biodiversity loss perception scale are easy-to-apply instruments that could be used in other countries and contexts.

IC - (21053) - CLIMATE CHANGE RISK PERCEPTION MODEL IN A SPANISH SAMPLE

Lucía Poggio[1]; Jose Miguel Hernández[1]; Raquel Pérez-López[2]; Laura Pasca[1]; Juan Ignacio Aragonés[1]

1 - Social Psychology department, Faculty of Psychology, Universidad Complutense de Madrid (SPAIN); 2 - Department of Research and Psychology in Education, Faculty of Education, Universidad Complutense de Madrid

Background and objectives

Climate change is a natural phenomenon that also has an anthropogenic component. The effects of this phenomenon are peculiar, difficult to observe, have global repercussions and affect those who are not yet able to make decisions. These characteristics pose a challenge to study it from a psychological perspective, i.e. how people perceive this phenomenon.

Process and methods (for empirical research)

This study is based on the adaptation to Spanish of the socio-psychological model of climate change risk perception (Van der Linden, 2015) to predict the risk perception of a Spanish sample. For this purpose, the questionnaire underwent several independent translation processes and a subsequent review by a mixed committee of language and field experts.

The model developed by Van der Linden was pilot tested with a sample of 217 Spanish university students who completed the questionnaire online.

Main results (or main arguments in the case of critical reviews)

A multiple regression analysis has made it feasible to establish relationships between the risk perception criterion variable and the cognitive, experiential, sociocultural and sociodemographic variables.

Implications for research and practice/policy | Importance and originality of the contribution

The development of this model in the Spanish population allows theorizing explanations of mitigation behaviors, as well as the study of the theoretical and practical implications of risk communication, and possible comparisons between different nationalities and social groups.

IC - (21337) - INCREASE IN PRO-ENVIRONMENTAL ATTITUDES DUE TO COVID-19

Taciano L. Milfont[1]; Danny Osborne[2]; Chris G. Sibley[2]
1 - University of Waikato; 2 - University of Auckland

Background and objectives

The ongoing COVID-19 pandemic claimed millions of lives and caused unprecedented disruptions. Despite these negative impacts, there is optimism the pandemic may shift public opinion on other global crises by fostering a sense of collective efficacy. Using propensity score matching to compare New Zealanders assessed before (n =12,304) and after (n = 12,370) nationwide lockdowns in 2020, we tested a preregistered mediation model with COVID-19 lockdown experience predicting increases in pro-environmental attitudes via enhanced socio-political efficacy. As hypothesized, socio-political efficacy increased after the successful nationwide lockdowns. In turn, socio-political efficacy amplified respondents' pro-environmental attitudes including climate beliefs and concern, as well as support for a government subsidy for public transport and opposition to government spending on new motorways. The pandemic also enhanced respondents' satisfaction with the quality of the natural environment, which was unmediated by socio-political efficacy. The crisis might offer an opportunity to foster collective pro-environmental actions.

Hour: 09:00:00
Session: S25 - Natural and Built Settings
Room: Room 4

Theme: Sustainability (5)

IC - (20843) - ARE PEOPLE MORE RELAXED AND FEEL BETTER IN THE WOODEN OFFICE ROOM? – RESULTS FROM A RANDOMIZED CONTROLLED TRIAL

Ann Ojala[1]; Joel Kostensalo[1]; Jari Viik[1]; Hanna Matilainen[2]; Ida Wik[3]; Linda Virtanen[3]; Riina Muilu-Mäkelä[1]
1 - Dr; 2 - MSc; 3 - BSc

Background and objectives

People's lives are increasingly lived indoors, as work, study, and free-time activities take largely place in indoor environments. Recent research has been looking ways to study how indoor design or building materials could improve human well-being. Research evidence shows that wood is experienced as pleasant material to see, touch and smell. There is also some evidence that being in a wooden room decreases the activity of the sympathetic nervous system. The objective of this study was to investigate the restorative effects of short-term visits in a wooden room compared with a control room after raising baseline stress and performing cognitive tasks.

Process and methods (for empirical research)

The effects of wooden interior were studied using a randomized controlled trial with a cross-over design (n=61) where participants performed office-work resembling cognitive tasks followed by resting period in a room with wooden elements as well as in a control room with no wood. The results were analysed using a Bayesian approach.

Main results (or main arguments in the case of critical reviews)

More positive and less negative emotions, in particular anxiety, were reported in the wooden room as measured by psychological scales. Performance in sustained attention to response task was similar in both rooms, however, there was an indication that the participants make fewer mistakes in the wooden room (93.6 % posterior probability). Contrary to expectations, the high-frequency band of heart rate variability was lower in the wooden room, indicating the activation of the sympathetic nervous system. The difference was the largest at the beginning and end, while disappearing during cognitive performance.

Implications for research and practice/policy | Importance and originality of the contribution

The productivity of knowledge work is influenced by individual, social, and physical aspects. In this study, the positive effects of wooden room on human well-being were clear, especially supported by psychological measures results. This study serves as a good basis for new research and strengthens the scientific evidence of indoor materials that support well-being.

IC - (20922) - ASSOCIATIONS OF OUTDOOR ARTIFICIAL LIGHT AT NIGHT WITH HUMAN HEALTH AND BEHAVIORS: EVIDENCE FROM QUESTIONNAIRE SURVEY IN TOKYO

Tongyu Wang[1]; Kai Yamazaki[2]; Naoko Kaida[3]; Kosuke Kaida[4]
1 - Graduate School of Systems and Information Engineering, University of Tsukuba; 2 - School of Science and Engineering, University of Tsukuba; 3 - Faculty of Engineering, Information and Systems, University of Tsukuba; 4 - Institute for Information Technology and Human Factors, National Institute of Advanced Industrial Science and Technology (AIST)

Background and objectives

Exposure to artificial light at night (ALAN) is known to harm health and behaviors among animals as it leads to circadian rhythm disruptions, depressive symptoms, and inactiveness. However, this has been little studied on humans particularly from diverse aspects including physiological, psychological, and behavioral impacts. The present study aimed to examine associations between ALAN, human health, and outdoor behaviors at night.

Process and methods (for empirical research)

An online questionnaire survey collected self-reported data of 2,000 adults residing in Tokyo (M_{age} = 49.5 years old, male 50%) in December 2021 on evaluation (e.g., brightness, visibility) and perceptions (safety, convenience, amenity, discomfort, stress, distraction) of ALAN, mental health, sleep quality, and outdoor behaviors at night (e.g., exercise, meeting friends, grocery shopping).

Main results (or main arguments in the case of critical reviews)

Correlation and structural equation modeling results ($ps < .05$) indicate that brightness and visibility are positively correlated with positive ALAN perceptions, which were then positively associated with general health and sleep quality. Brightness and visibility were negatively associated with negative ALAN perceptions, which were found negatively associated with general and mental health and sleep quality but positively with outdoor activities at night. Outdoor activities at night were of negative association to general and mental health and sleep quality.

Implications for research and practice/policy | Importance and originality of the contribution

The current results confirm associations of ALAN with human health and sleep, which is in line with previous findings. Negative perceptions about ALAN tend to make people go out at night for relieving the stress possibly caused by ALAN, deteriorating their health and sleep quality due to increased difficulties in keeping appropriate sleep-wake cycle. This study revealed the pros and cons of artificial light at night in relation to human health and behavior by covering diverse components and perceptions about ALAN based on the empirical metropolitan resident data.

IC - (21009) - HOW NATURE NURTURES: AMYGDALA ACTIVITY DECREASES AS THE RESULT OF A ONE-HOUR WALK IN NATURE

Sonja Sudimac[1]; Vera Sale[1]; Simone Kühn[1,2]

1 - Max Planck Institute for Human Development, Lise Meitner Group for Environmental Neuroscience, Lentzeallee 94, 14195 Berlin, Germany; 2 - University Medical Center Hamburg-Eppendorf, Department of Psychiatry and Psychotherapy, Martinistr. 52, 20251 Hamburg, Germany

Background and objectives

Even though it has many advantages, living in a city is associated with high incidence of mental disorders, such as major depression, anxiety disorders, and schizophrenia. It has been suggested that urban upbringing is the most important environmental factor for developing schizophrenia. Therefore, it is essential to understand how exposure to urban and natural environments affects mental health and the brain. The amygdala, a brain region related to stress and schizophrenia, has been shown to be more activated during a stress task in urban compared to rural dwellers. Nevertheless, intervention studies are needed to demonstrate causal effects of natural and urban environments on stress-related brain mechanisms.

Process and methods (for empirical research)

To address this question, we conducted an intervention study investigating effects of a 60-minute walk in urban (busy street in Berlin) vs. natural environment (forest) on brain activity in regions associated with stress. Amygdala activation was measured in 63 healthy participants, before and after the walk, using fMRI stress paradigms.

Main results (or main arguments in the case of critical reviews)

As predicted, the findings reveal that amygdala activation remains stable after the walk in urban environment, whereas it decreases after the walk in nature.

Implications for research and practice/policy | Importance and originality of the contribution

To our knowledge, this is the first study to demonstrate causal effects of acute exposure to a natural vs. urban environment on stress-related brain regions, disentangling positive effects of nature from negative effects of city. The results strongly argue in favor of salutogenic effects of nature as opposed to urban exposure causing additional stress. This study suggests that going for a walk in nature can have salutogenic effects for stress-related brain regions, and in turn act as a preventive measure against developing a mental disorder. Understanding how urban and natural environments affect stress-related neural mechanisms aims to influence urban design policies to create more green areas and adapt urban environments in a way that are beneficial for citizens' mental health.

IC - (21356) - PREFAB A MORE SUSTAINABLE SOCIETY——PREFABRICATED ARCHITECTURE PRACTICE IN CHINA IN GLOBAL CHALLENGES

Zhao Haoxiang[1]
1 - Tongji University

Background and objectives

A new round of scientific and technological revolution and industrial transformation is gaining momentum around the world, while extreme events represented by the Covid-19 outbreak force us to rethink issues like people-environmental relation and development-sustainability balance. This is such a global challenge every country and every field could not escape.

Process and methods (for empirical research)

This paper selects projects of several Chinese architects such as Jingxiang Zhu and Philip Yuan to expound "why we prefab", "how to prefabricate" and "what prefabrication achieves" through comprehensive analysis of project background, design concept, construction method and completion effect.

Main results (or main arguments in the case of critical reviews)

These representative cases illustrate the application of prefabricated architecture in four scenario of rural vitalization, urban regeneration, emergency recovery and temporary construction in China, showcasing its four characteristics of lightness, precision, swiftness and flexibility to prove its contribution and potential in building a more sustainable society.

Implications for research and practice/policy | Importance and originality of the contribution

Starting from "prefabrication", which is still in its infancy in China, the research describes the new development of Chinese architecture in the face of global challenges to reflect the efforts made by the whole society in addressing sustainability. In addition, hot topics such as discipline boundary extension of “Architecture” and role transformation of “architects” are probed through the discussion of prefabricated “architecture”.

Global Challenges, Local Impacts
Rethinking governance, sustainability and consumption in light of climate change
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IC - (21373) - POLARITY OF CLIMATE VARIATIONS AND ITS IMPACTS ON THE TRAJECTORY OF MENTAL HEALTH

Shravani Bhattacharyya[1]; Chirjiv Anand[2]; Aparna Sahu[3]
1 - Post Graduate Diploma in Urban Planning and Development Student, IGNOU, New Delhi-110068 (India); 2 - NA; 3 - Senior Researcher, Turiyan Psyneuronics Pvt. Ltd, Bangalore-560016 (India)

Background and objectives

The unpredictable intensity and frequency of climatic events impacts psychological well-being. While these impacts are unclear, it is also unknown if the appropriate strategies are implemented to manage these concerns. Solutions to address these impacts are crucial for societal well-being. This paper critically reviews the mental health impacts of five climate events and related interventions, across geographical regions. These include drought, rising temperatures, sea level rise and inundations, melting permafrost, and wildfires.

Process and methods (for empirical research)

Data were collected from 251 papers and categorized for comparisons across geographical locations and event types. Associations between event type and mental health concerns have been drawn through various psychological theories.

Main results (or main arguments in the case of critical reviews)

The impacts of the lesser explored melting permafrost, are equally devastating as other events. While certain interventions are highlighted in the review, there is a lack of data on policy implementation results. There is also limited data from developing countries prone to climate change extremes.

Implications for research and practice/policy | Importance and originality of the contribution

The current review recognizes that despite being equipped with coping abilities, individuals find the constant unpredictability in climate change challenging. Therefore, there is a strong need for data driven policies and interventions that can effectively deal with both climate change and mental health concerns. Moreover, the review identifies non-classifiable mental health concerns that require further research.|

Existing reviews' lack of a comparative perspective on the pattern of mental health concerns across events and locations. This paper presents these similarities and dissimilarities and identifies the need for high impact blanket solutions catering to people across regions. It further calls for research towards very region specific and even individualized solutions to the problems experienced as a result of similar climatic events in different regions.

Hour: 11:45:00
Session: Posters Flash Presentations Session 5
Room: Room 1

Theme: Governance (1); Sustainability (6)

PP - (20844) - THE COMMUNICATION ABOUT SUSTAINABLE MOBILITY: AN EXPLORATIVE STUDY ON SOCIAL NETWORKS

Rosalinda Vavalle[1]; Renata Metastasio[1]; Elena Bocci[1]; Paola Passafaro[1]
1 - Department of Developmental and Social Psychology - Sapienza University of Rome

Research or practical problem and objectives

Research

Social Networks (SNs) are multimodal communication media nowadays people use for a variety of purposes including communicating facts and opinions regarding themes of personal and common interest (e.s. Boyd, Ellison, 2008). Social sciences need to deepen the scientific understanding of this new form of communication with particular reference to the implications for sustainability issues. This presentation will illustrate the preliminary results of an exploratory study focused on the communication regarding sustainable mobility.

Objectives

We aimed at exploring the communication on sustainable mobility posted on particular SNs. More specifically, we focused on the analysis of contents, forms and languages of the posts published on three particular SNs (i.e. Facebook, Twitter and Instagram). The ultimate goal is to lay the ground for future studies that will deepen the impact of social networks on people views and practices regarding sustainable mobility.

Methods and process (for empirical research)

Overall, we collected 794 posts published on the SNs targeted during a 6 months period (i.e., March – September, 2021) responding to various *hashtags* (e.g. # sustainable mobility, #urbanmobility, #greenmobility, etc.). The material collected was content analyzed by the authors with the support of IRAMUTEQ software.

Main results preview and importance (or main arguments in the case of critical reviews)

Main results

Most of the post focused on three main topics:

- political-economic support to the transition towards electric vehicles

- promotion of events and virtual seminars to inform, educate and raise awareness on alternative forms of mobility

- sharing of technical information regarding the characteristics of new vehicles

The presentation will illustrate nature and implications of these and the other contents identified.

Importance

This study is one of the firsts to analyze communications relating to sustainable mobility in the post-pandemic period, focusing on three different NSs. The few existing studies, all published during the pre-Pandean period, have focused only on some specific forms of mobility and on other types of media.

PP - (20883) - CHILDREN'S DAILY MOBILITY CHANGES AND OUTDOOR PARENTING PROFILES: FROM TRAVEL AND PLACE PATTERNS TO EDUCATIONAL REQUIREMENTS

Dias Pierre[1]; Kerouanton Colin[2]; Depeau Sandrine[1]
1 - UMR ESO CNRS; 2 - UMR PACTE CNRS

Research or practical problem and objectives

Facing challenges of climate change, children's mobility is an important issue to understand brakes and levers of the change of travel behavior inside the family. For the past 30 years, a decline in children's independent and active travels has been observed and explained by many factors (spatial, social, psychological). Among them, we can advance the role of parents' educational culture. Indeed, children's mobility can be also explained by the parenting habits, beliefs and attitudes but also by their parents' travel patterns (observing from the "explorer" vs "returner" model describing individual mobility) that can complement the notion of educational culture. Thus, this paper aims to understand the change of children's travel behaviors by showing 1/ how children's daily travel behaviors evolve during the transition from primary to secondary school; 2/ children's mobility profiles for each school level; 3/ how these children's mobility profiles are part of educational cultures related to mobility.

Methods and process (for empirical research)

Data collection was carried out using an integrated device (MK MOBIBACK) mixing GPS data loggers (tracking over five days) and a complementary survey on tablets. This allowed to enrich GPS data (mainly places and trips), and questioning children's socialization, autonomy, free-times and family attitudes about their child's independence. Among all families (n=86) interviewed in Rennes (n= 42) and in a municipality of its urban periphery (n=44), we will focus on children and one of their parents surveyed in both the 5th ($n_{children}$= 90) and 6th grades ($n_{children}$ = 59).

Main results preview and importance (or main arguments in the case of critical reviews)

By focusing on active travels profiles of children, the results of this study will show the changes in children's mobility between the 5th and the 6th grade, and the role of their parents' educative profile, which are based on child-parent interactions in the choices of mobility, daily travel patterns and the frequentation of places (scales, functional types, diversity) similarities.

PP - (20926) - SOCIAL IDENTITY BASED MOTIVATION TO ENGAGE IN COLLECTIVE ACTION SUPPORTING THE REDISTRIBUTION OF STREET SPACE

Viktoria Allert[1]
1 - Technical University of Dortmund

Research or practical problem and objectives

However important for a sustainable mobility transition, reallocation of street space to active travel modes remains contested. Citizen engagement plays a crucial role in pushing city councils to take action and provide safe infrastructure for cyclists and pedestrians. Mobility initiatives often call on an individual's identification with a specific user group, like e.g. cyclists. Using the Social Identity Model of Collective Action, we want to investigate how social identification with user groups predicts intention to become actively involved in discussions around the distribution of street space among different mode of transport user groups.

Methods and process (for empirical research)

In an online survey, we will collect data of 600 panelists, representative of age and gender in the German population. Participants will rate their willingness to engage in collective action to promote transport policies reallocating street space. We will assess social identification with different mode-of-transport-related user groups, their group-based emotions regarding the status quo of street design as well as the transport policies, social norms and collective efficacy beliefs. We will use regression analyses to predict willingness to actively engage in collective action to promote sustainable transport policies redistributing street space.

Main results preview and importance (or main arguments in the case of critical reviews)

We expect social identification with cyclists, pedestrians and public transport users to be associated with a higher willingness to actively support sustainable transport policies and social identification with motorists to be associated with opposition to these measures. Data collection is set in February 2022.

By investigating the importance of social identification with different user groups, we might be able to better understand the conflicts arising around the distribution of street space. We hope to deepen our understanding of how city planners and local initiatives can use social identification mechanisms to encourage people to get actively involved as citizens to fight for a sustainable and inclusive transport infrastructure in their community.

PP - (21181) - A STUDY ON DESIGN CRITERIA FOR STUDENTS' LOUNGES IN POST-CORONA ERA

Soojeong Kim[1]; Xinyue Zhang[1]; Rouhan Wang[1]; Soobeen Park[1]
1 - Dept. of Interior & Environmental Design Pusan National University

Research or practical problem and objectives

The utilization rate of physical space on campus as well as social interaction between students have greatly decreased after the COVID-19 outbreak. In the post-corona era, students will behave and use space on campus differently than in the pre-corona era. In this study, we apply Ray Oldenburg's "Third place" to the campus to propose a break area design criteria that provide the students with a range of options. The Third Place addresses the issues of social interaction and communication in physical space.

Methods and process (for empirical research)

The subjects for survey research were divided into two: Group A, students who had experience on campus before Corona and Group B, students who did not experience campus life before Corona. They completed an online questionnaire about 100 items including general information and changes before and after Corona, such as daily activities, housing type, spaces for breaks, and opinions for the third place. The survey was processed for one month and the data were analyzed through descriptives, t-test, and factor analysis of the SPSS 25 statistical package.

Main results preview and importance (or main arguments in the case of critical reviews)

Through literature review, eight elements of the Third Place were reduced to six break area design elements: accessibility, comfort, interactivity, diversity, safety, and entertainment. Survey showed that both Group A and Group B visited 'commercial facilities' most before Corona, while Group B 'parks and trails' more frequently during Corona era. As the most important Third Place elements, Group A chose 'interactivity' and Group B 'entertainment' before Corona, whereas both Group A and group B chose 'comfort' and 'accessibility' during Corona era. Research showed that student's personalization has accelerated. The campus should provide an open plane lounge as the third place to activate and stimulate students' physical and mental interaction in the post-corona. Students who are accustomed to non-contact behavior will be able to communicate directly there through learning and relaxation.

PP - (21380) - COMPARISON OF PHYSICAL QUANTITIES AND VIEW EVALUATION IN COMMERCIAL BUILDINGS

Keita Matsuda[1]; Kaori Arano[1]; Takanori Kabaki[1]; Yuki Oe[1]; Yoshiro Hori[2]; Shigeki Matsunaga[3]; Nozomu Yoshizawa[1]
1 - Tokyo University of Science; 2 - YKK AP Inc.; 3 - YKK CORPORATION

Research or practical problem and objectives

Daylighting and view provided by windows are essential elements for a comfortable and healthy life. Especially in offices, obtaining a view is important from the viewpoint of productivity. Although there are lots of indices related to the provision of daylighting, quantitative indices related to view still need to be discussed. The purpose of this research is to verify whether the view indices already proposed are valid for commercial buildings, by comparing the physical indices with the evaluation of view obtained from the subjective experiments.

Methods and process (for empirical research)

The experiments were conducted in 23 rooms in commercial buildings and university facilities with different views, and 6 to 10 university students participated in the experiments. They stood 2.4 m away from the window and evaluated “the overall preference of visual environment obtained by the window”. We calculated eight view indices including “solid angle”, “visible volume” (an index weighted by the cube of the distance from the window to the opposite building), view indices of European Daylight Standard and so on. These indices are calculated from fisheye photos and simulation software (Radiance), and visible volume and solid angles were calculated for each view element, including sky, buildings, etc. In the analysis, logistic regression analysis was conducted using these indices as explanatory variables, and evaluation of view as the objective variable.

Main results preview and importance (or main arguments in the case of critical reviews)

As a results, "solid angle of the window", "solid angle of the sky" and "visible volume of each view element" are likely to explain the evaluations of view (p-value<0.05), whereas "solid angle of outdoor building" and the others are unlikely to explain the evaluations of view (p-value>0.05). In addition, since "visible volume" was much higher than that of "solid angle" for outdoor buildings, it was shown that an index that took into account distance to the view element may better explain the evaluation of view.

PP - (21058) - EXPLORING THE ELEMENTS OF ONLINE DESTINATION IMAGE IN TAIWAN MILITARY VILLAGES

Shang-Cheng Lin[1]
1 - Sun Lin

Research or practical problem and objectives

Using a large number of samples of social media to provide analysis data, its characteristics also have voluntary geographic information and interactive texts; the theme clues focus on the image of military village cultural parks as scenic spots to explore, and use social media data to explore. After doing sentiment analysis through the text, photos are used as cognitive components to deconstruct and then organize, and the posts of military village culture on Instagram are classified and compared to the main elements; generally, this aspect will be carried out first.

Methods and process (for empirical research)

Capture the social media information of Taiwan military military villages, including photos and interactive texts, and conduct major element classification and sentiment analysis.

Main results preview and importance (or main arguments in the case of critical reviews)

Tourists' comments about a destination on social media represent their true expression of their cognition and emotions about the destination, and there is no need to communicate with tourists to avoid the impact of investigation intervention.

IC - (21197) - EVALUATING THE SOCIAL AND HEALTH IMPACTS OF COMMUNITY GARDENING FOR VULNERABLE POPULATIONS: A QUALITATIVE STUDY

Eva Peralbo- Rubio[1]; Adina Dumitru[1]; David Tomé- Lourido[1]; Rania Sermpezi[2]
1 - UDC; 2 - Glasgow Council

Research or practical problem and objectives

This study is part of the Connecting Nature project (H2020 Grant Agreement no. 730222), and focuses on the Growchapel Community Allotment Gardens (Glasgow). The project focuses on the potential and impact of nature-based solutions to promote health and wellbeing, social cohesion, economic and environmental improvements within the local community. The objective of this study was to carry out an impact assessment of community gardens on a population at risk of social exclusion through the indicators of the Connecting Nature Framework.

Methods and process (for empirical research)

Glasgow City Council contacted local residents and organizations that work with people at risk of social exclusion and will be allotted a plot for gardening, and inquired into their willingness to participate in a pre- and post-intervention evaluation process, which was carried out using a focus group methodology. Impact indicators had been previously co-defined in the project, together with a sample of city councils, to address several health and wellbeing and social cohesion outcomes. A total of 2 Focus Group were conducted by the Glasgow City Council staff, at the beginning of the study and 2 months after the garden had been allotted. Both focus group were transcribed and analyzed using principles of grounded theory.

Main results preview and importance (or main arguments in the case of critical reviews)

The results of the qualitative study show that social cohesion impacts are among the most important outcomes of allotment gardening. Creating a responsible and inclusive community was one of the main benefits registered by the participants. Other benefits experienced by the participants included improvements in individual health and well-being, opportunities for environmental education and reduction of antisocial behavior among the young population in the neighborhood. We will discuss the implications and difficulties of carrying out social and health evaluation with vulnerable populations and the importance of training and building capacity in cities to carry out carefully crafted and robust outcome evaluations.

PP - (21366) - YOUNG ADULTS' PERCEPTIONS AND THEORIES OF CRISES: INTERRELATIONS BETWEEN CLIMATE CHANGE AND THE COVID-19 PANDEMIC

Vanessa Kulcar1; Barbara Juen1
1 - Department of Psychology, University of Innsbruck, Austria

Research or practical problem and objectives

Since early 2020, the COVID-19 pandemic is dominating peoples' everyday lives globally. However, the pandemic is not the only global crisis as climate change continues to progress and increasingly threatens humanity and the world as we know it. Early on during the pandemic, theoretical articles were published that assess how both crises are related to each other and what we can learn from COVID-19 to improve the response to climate change. Still, folk theories and public perceptions on this matter are rarely researched.

Methods and process (for empirical research)

We conducted 38 in-depth interviews with German-speaking young adults (20 to 33 years old). Young people are considered to be particularly affected by both crises: Their everyday lives are disrupted severely by the COVID-19 pandemic, and they will be more affected by severe consequences of climate change within their lifetime. Both aspects are represented in emotional reactions and psychosocial strains in response to the crises. In the interviews, we assessed young adults' experiences of and views on climate change and the COVID-19 pandemic. Both crises were addressed simultaneously in the interviews to elaborate on similarities, differences, and interrelations from the perspective of young adults. The interviews were analyzed using qualitative content analysis.

Main results preview and importance (or main arguments in the case of critical reviews)

Participants described their perceptions and theories of how both crises are handled, who is responsible, causes, and effects. They also outlined changes regarding climate change due to COVID-19 and their impressions on how both crises interact and are related to each other. Results indicate similarities as well as differences between COVID-19 and climate change, including young adults' reactions to and evaluations of the crises. Based on the interviews, learning opportunities can be highlighted as well as underlying problems that need to be addressed to not only improve humanity's ability to mitigate climate change but also to face large-scale, global crises in general.

Keyword's : climate change, COVID-19, crisis, young adults, perception

Hour: 11:45:00
Session: Posters Flash Presentations Session 6
Room: Room 2

Theme: Governance (1); Sustainability (5)

PP - (21069) - THE SELF-EXPRESSION OF PLANTS IN FRONT OF THE DETACHED HOUSES IN A SUBURB OF JAPAN

Chien-Chung Chen[1]; Daichi Kurihara[2]
1 - Kio University; 2 - Kio University (former)

Research or practical problem and objectives

The self-expression of plants is defined as plantings or potted plants in front of houses that can be seen from the roads. The self-expression of plants is related to the external appearance of houses. It is also a chance that residents can go outside to take care of plants and maybe chat with neighbors.

The subject chosen is the detached houses in a suburb located in Nara prefecture, Japan. The main objective of this paper is to find out how the self-expression of plants are distributed in the suburban residential areas, and study on the relation between the quantities of plants and the types of entrances.

Methods and process (for empirical research)

Methods used include analyses of the maps, as well as non-participation with Google Street View. There are 6 types of entrances classified by the openness of the walls (the first factor) and the setback of gates (the second factor).

The types of entrances and the quantities of plants in front of the detached houses （3 residential areas） are surveyed. The relation between the quantity of plants and the types of entrances are also analyzed.

Main results preview and importance (or main arguments in the case of critical reviews)

The two findings below are worth mentioning.

(1) The openness of the walls (the first factor) influenced the quantity of plants more than the setback of gates (the second factor) in area Ⅰ and area Ⅲ.

(2) The setback of gates (the second factor) influenced the quantity of plants more than the openness of the walls (the first factor) in area Ⅱ.

To conclude, the openness of the walls and the setback of gates in the detached houses of this subject may be relative to the self-expression of plants in residential area. In the future, more self-expression of plants may promote the daily exchange of neighbors and maintain a sustainable community in the residential environment.

PP - (21143) - ELEMENTARY SCHOOL FACILITIES NECESSARY FOR CHILDREN WITH DEVELOPMENTAL DISABILITIES - THROUGH THE CHANGING DAILY LIFE WHICH COVID-19 SHOWED US

Keiko Ito[1]
1 - MERA

Research or practical problem and objectives

In Japan, the project to reduce the maximum number of children in a class of elementary schools to 35 is under way. Still, 35 is quite large, moreover, simultaneous teaching by one class-teacher is common in Japan. This condition might cause distractions for the children, especially for those with developmental disabilities enrolled in the ordinary class.

In order to sustain their educational opportunities, appropriate school facilities are required to support their concentration. However, there are few quantitative studies about their needs. Therefore, the author conducted a web questionnaire to the parents of children with developmental disabilities, and examined the relationship between the types of children's difficulties and the school facilities they need. Furthermore, because COVID-19 showed us the possibility of lockdowns, the author also tried to clarify which school facilities are desired to use during school closure.

Methods and process (for empirical research)

The questionnaire survey was conducted to the parents of children attending support classes for the developmental disabilities in 11 elementary schools in the same municipality near Tokyo, Japan. The number of target children was approximately 1,200, and a total of 168 questionnaires were collected resulting in a response rate of 14%.

The author sorted the children into the five difficulty-tendencies: Attention-Deficit, Hyperactivity-Disorder, Learning-Disability, Autism-Spectrum-Disorder, and Hypersensitivity, then examined the difference in their needs for 8 school facilities. School facilities necessary during long-term school closure were collected as free-form responses, and also examined according to the difficulty-tendency.

Main results preview and importance (or main arguments in the case of critical reviews)

The result showed that the difficulty-tendency may cause different needs, and some needs for facilities which are rarely set up in Japanese ordinary schools were also found. In the case of school closure, those children who seemed to need the relief of stress caused by daily school activities also showed some needs for school facilities. Going to school itself may be considered as a stress relief.

PP - (20931) - REMOTE WORKING AND E-LEARNING SPATIAL SETTING IMPACTS ON WELL-BEING

Alessandro Lorenzo Mura[1]; Silvia Ariccio[1]; Flavia Bonaiuto[2]; Marino Bonaiuto[1]
1 - Sapienza University of Rome; 2 - Universitas Mercatorum

Research or practical problem and objectives

The Covid-19 pandemic period has been characterized by massive uses of online modes for both workers and students worldwide. Regarding Italy, it was estimated that over 6.6 million Italian active workers remotely worked at March 2020 (i.e., 41% of the active national workforce). Approximately 94% of students of all levels carried out their activity remotely in the same period. This contribution aims to analyze how and which characteristics of the physical-spatial setting characterizing the remote work/study activity may have impacted individuals' psychological well-being.

Methods and process (for empirical research)

To test such hypotheses, in Study 1 participants (N = 490 students from various Italian universities engaged in distance learning activities) were asked to fill in an online questionnaire divided into two sections: a scale for the psychological perception of the environmental qualiteis and scales for perceived stress. Through an exploratory factor analysis (EFA) conducted a 5-factor composition emerged on the scale of psychological perception of the physical-spatial elements: safety, visual well-being, acoustic well- being, usability and control, aesthetics. In Study 2, participants (N = 551 italian workers engaged in remote working) filled out a questionnaire divided into four parts: the scale for psychological perception of the environmental qualities, environmental satisfaction, job satisfaction in remote working and finally stress and engagement scales. A confirmatory factor analysis (CFA) confirmed the 5 factors that emerged in study 1.

Main results preview and importance (or main arguments in the case of critical reviews)

The preliminary results for study 2, show how the relationship between psychological perception of spatial qualities, stress and engagement is sequentially mediated by environmental satisfaction and job satisfaction. The study represents one of the first approaches to systematically analyze the importance of the perception of environmental qualities with regard to the setting where the remote work/study activity is carried out.

PP - (21377) - INTERPERSONAL DISTANCING PREFERENCES IN CORPORATE OFFICE ENVIRONMENTS: INVESTIGATING THE INFLUENCE OF PERSONALITY AND GENDER ON SELF-REPORTED DISTANCING PREFERENCES BETWEEN COLLEAGUES BEFORE AND AFTER THE ONSET OF THE COVID19 PANDEMIC.

Archontia Manolakelli[1]
1 - Manchester Metropolitan University

Research or practical problem and objectives

As large organisations continue to adopt activity-based working arrangements for their office environments, characterised by flexible arrangements in the form of varied work settings for different activities, the impact of this approach on employee wellbeing in relation to the Covid19 pandemic remains largely unexplored. This study attempts to synthesise older and contemporary research on proxemic behaviour, personal space, and individual differences to illuminate the effects of personality and gender on the expression of interpersonal distancing preferences in offices.

Methods and process (for empirical research)

The study follows a quantitative correlational design to analyse the relationships between Individual Differences (IVs) and Comfortable Interpersonal Distance (DVs) in a multivariate context, through Canonical Correlation Analysis. It utilises the IPIP 10-item scale and the Interpersonal Visual Analogue Scale to measure Extroversion, Neuroticism and Comfortable Interpersonal Distance (CID) respectively. A total of 100 professionals (51 female, 49 male) based in corporate offices across the UK were asked to complete the personality questionnaire followed by a set of six distancing scenarios (Sitting, Standing and Mixed arrangements), administered online, involving virtual co-workers of the same and opposite Gender, under Normal and Social-Distancing conditions.

Main results preview and importance (or main arguments in the case of critical reviews)

Results indicate that Introversion and opposite-gender interactions are associated with larger CIDs. Extroversion was inversely correlated with CID in Facing and Mixed arrangements in Normal conditions, and all desk-based arrangements in Social-Distancing conditions, with Introversion being a predictor of CID. Female-to-Male pairs also reported larger CIDs than Male-to-Female pairs, with the former exhibiting the largest distancing overall. Gender was the primary CID predictor in Normal conditions. Results on the effects of Neuroticism were inconclusive.

This study sheds light on the impact of various working arrangements on employee comfort based on individual characteristics. The findings can therefore be utilised to create more appropriate post-pandemic environments for employees. Further investigation is required to better understand the effects of these factors post-pandemic

PP - (21017) - DOES HAVING DIFFERENT COMPANIONS AFFECT THE EVALUATION STRUCTURE OF PUBLICLY ACCESSIBLE SPACE?

Jingya Li[1]; Naoyuki Oi[1]
1 - Kyushu University

Research or practical problem and objectives

The objective of this study was to conduct an interview survey using the evaluation grid method in order to find out how the requirements for using publicly accessible spaces (parks and cafes) differ when using them alone or with companions from the user's perspective, and to extract the users' evaluation criteria. We will examine how the atmosphere and elements required by different companions differ.

Methods and process (for empirical research)

The evaluation grid method is a developed version of the repertory grid method based on Kelly's personal construct theory, which was developed by Sanui et al. in 1986 and is widely used as interview research methods. The subjects of this study were university students. This is because they are financially and mentally independent to a certain extent, can use their time relatively freely, have a wide range of activities, and can evaluate spaces in various ways. The target spaces for this survey were parks and cafes, which are considered to be used on a daily basis as spaces used alone or with companions. As companions, we asked them to assume family, friends, and lovers.

Main results preview and importance (or main arguments in the case of critical reviews)

As a result, it was confirmed that the evaluation structure for the target space differed depending on the attributes of the accompanying person(s), and the judgment criteria and related spatial components in each case were understood. When people using those places alone, they tend to need places where they can be calm down, while people using those places with family, friends or lover, they like places where is enjoyable or relax. These findings should be useful for the design of publicly accessible spaces that take into account the attributes of the users.

PP - (21152) - ASSESSING PLACE AUTHENTICITY – A SYSTEMATIC LITERATURE REVIEW

Ana M. Arroz[1]; Bruna Martins[2]; Isabel R. Amorim[3]

1 - cE3c – Centre for Ecology, Evolution and Environmental Changes / Azorean Biodiversity Group and FCSH- School of Social Sciences & Humanities, University of Azores; 2 - School of Agrarian & Environmental Sciences, University of Azores; 3 - cE3c – Centre for Ecology, Evolution and Environmental Changes / Azorean Biodiversity Group and University of Azores

Research or practical problem and objectives

Assessing place authenticity (PA) and uniqueness are crucial to explore place identity. Since identity *of* a place has been less explored than identity *with* a place, both the construct and the assessment of PA dimensions and indicators are not standard. This presentation arises from the need to use an accurate and reliable instrument to evaluate PA, within the scope of a wider research to explore the representations of the Azores (Portugal), among locals, residents, and visitors, and to understand the role of Nature in it. We performed a systematic literature review on how PA has been evaluated in the last seven years.

Methods and process (for empirical research)

"Place authenticity" was used in Google Scholar to search for scholarly literature published between 2016-2022. Of the 645 papers retrieved, those that were not empirical studies nor explored perceived authenticity were excluded. The remaining were used to feed a database including construct operationalization, strategies and instruments for assessing PA, contents of PA assessment, instrument validation process, and scientific domain of the study.

Main results preview and importance (or main arguments in the case of critical reviews)

The dispersion of instruments/strategies found reflects a lack of agreement on PA operationalization. Many studies present specific instruments, while others patchwork items from different sources, making it difficult to compare results. Inconsistencies between the constructs "integrity"/"genuineness", and its operationalization in "traditional"/"unchanged"/"original", and the need to evaluate Azorean natural heritage authenticity, led to the development of a new instrument in which PA is evaluated on a semantic differential scale, in contents related to natural and built heritage, both tangible and intangible. This instrument may contribute to: i) promote construct validity and reliability of perceived PA assessment, whose epistemic and applied potentialities for Environmental Psychology and Tourism are evident; and ii) produce knowledge for the development of sustainable tourist products and the promotion of well-being also among natives/residents while using local places.

PP - (21402) - THE BENEFITS OF NATURE EXPOSITION IN THE WELL-BEING OF ADOLESCENTS WITH ATTENTION DEFICIT DISORDERS

Jesús Adrián Pérez Reales1
1 - Universidade Da Coruña, España

Research or practical problem and objectives

Exposure to nature generates benefits in the psychological well-being of adolescents with attention deficit disorders. The literature explains that exposure to nature increases behavioral regulation, decreases the level of stress, and improves the level of life satisfaction. We propose that exposure to nature improves the symptoms of attention deficit, and life satisfaction levels in adolescents with ADHD. In this study we intend to understand the incidence of exposure to nature in the satisfaction of psychological needs, and in the improvement of the Well-being in the adolescents with ADHD.

Methods and process (for empirical research)

To this end, we present a research proposal with a mixed methodology. First, the qualitative design through initial exploration with focus groups on the relationships between exposure to nature and the psychological well-being described by the participants, followed by a quantitative methodology to establish the possible relationships between mediating variable among the variables studied. In the research we propose a third phase of experimental extension to identify the environmental characteristics of preferences for the population with attention deficit disorder and that can generate benefits in psychological well-being. We consider as a sample adolescent with attention deficit disorders with and without hyperactivity from Galicia, Spain.

Main results preview and importance (or main arguments in the case of critical reviews)

We hope to describe the practices, spaces, and implications of contact with nature, and that can be related to a higher level of psychological well-being in adolescents with ADHD.

Hour: 13:30:00
Session: C7 - Food Production- Consumption
Room: Room 1

Theme: Consumption (4)

IC - (20866) - SWEET CHOCOLATE O' MINE: PSYCHOLOGICAL INFLUENCES ON CONSUMERS' WILLINGNESS TO PAY FOR SUSTAINABLE CHOCOLATE BARS

Shirin Betzler[1]; Janina Arnold[1]; Lena Schmeiduch[1]; Regina Kempen[2]; Karsten Müller[1]
1 - Osnabrück University; 2 - University of Applied Sciences Aalen

Background and objectives

In the struggle for biodiversity conservation, furthering sustainable consumption behaviors is a key field of action. The cocoa sector constitutes a particularly challenging field of consumption, with conflicted global value chains between production countries and end consumers worldwide. In light of problematic conditions such as soil degradation, water pollution or serious health risks for cocoa farmers, a growing number of consumers considers social and ecological aspects when purchasing chocolate. Against this backdrop, understanding the specific factors influencing sustainable chocolate consumption decisions can help foster consumption patterns accordingly.

Process and methods (for empirical research)

Following previous research, this study jointly considers knowledge-based, rational, value-based, and affective factors as influences on individuals' decisions to purchase sustainable chocolate. Data will be obtained from an online panel survey. A model integrating influencing factors to predict sustainable chocolate consumption is proposed and tested with structural equation modelling.

Main results (or main arguments in the case of critical reviews)

Results on participants' problem awareness, feelings of guilt, personal and subjective norms, perceived behavioral control, and intentions as predictors for sustainable chocolate consumption will be presented. As dependent variable, participants' willingness to pay for a fairtrade, organic and carbon-neutral certified chocolate bar will be examined.

Implications for research and practice/policy | Importance and originality of the contribution

Understanding the drivers and obstacles of sustainable chocolate consumption constitutes the basis for effective educational interventions and political measures. Also, these insights are of great value when targeting individuals' receptivity for sustainability information in product design and marketing. The present study incorporates influencing factors from different theoretical streams in order to comprehensively predict chocolate consumption behavior. The influences investigated in this study may serve as an important starting point for promoting a socio-ecological transformation through the purchase of sustainable products.

IC - (21060) - URBAN AND CAMPUS FOOD SYSTEM ALTERNATIVES AS SITES OF TRANSFORMATION AND CLIMATE ACTION

Michael Classens[1]; Nicole Spiegelaar[1]
1 - University of Toronto

Background and objectives

The industrialized, carbon-intensive food system exacerbates climate change, perpetuates social inequity and food insecurity, and threatens biodiversity. The present work seeks to propel paradigmatic shift in urban food system practices by utilizing the role of universities as urban centres of social and scientific innovation. We look at the feedback between pedagogy and governance as a means to shift students' relationship to food system and apply real change to surrounding communities, with a focus on mitigating climate change impact and empowering local food sovereignty as a means of climate adaptation.

Process and methods (for empirical research)

This project is a multi-year collaboration between postsecondary campuses across the City of Toronto examining key urban garden community organizations across Canada, that will generate findings, outputs and policy recommendations relevant to the pursuit of urban food and climate justice. It will involve a series of surveys, interviews and focus groups that will allow us to synthesize current strategies of innovation at pedagogical CFGS. We also draw data from Campus Farms Canada, a national network of campus growing space leaders from across Canada (co-founded by Classens).

Main results (or main arguments in the case of critical reviews)

We will present on how these spaces leverage education (broadly defined) to empower a new generation of eaters, growers, organizers, activists and citizens; how these activities spill out from campuses to effect broader urban change through policy and other levers; how CFGS can inform policy and other movement building initiatives.

Implications for research and practice/policy | Importance and originality of the contribution

This work will provide a framework for effective pedagogical-policy relations of food system transformation relevant to a variety of urban centres and scholarly communities. By the end of this multi-year study, policies will be co-created with our research participants and animated among local policy makers in collaboration with project partners. The project will also yield various pedagogical materials designed to emphasize equity, local food innovation, and climate action.

IC - (21083) - RURAL -URBAN DUALITIES AND INTERFACES: RURAL INJECTION PROPOSAL FOR ISTANBUL

Dilara Girgin[1]; Hulya Turgut[2]

1 - Ozyegin University, Cıty and Architecture Master Program; 2 - Ozyegin UNiversity, Faculty of Architecture and Design, OZU_UHL Urban and Housıng LAB.

Background and objectives

The City of Istanbul faces expansion by demolishing or impelling the rural areas towards its periphery due to the intense migration it has been exposed to for long times. Owing to the rapid and uncontrolled urbanization tendency, rural territories and the places which belong to rural memory in the city have been devastated. Rural areas in the city turn into a built-up urban fabric over time by causing rural practices to evolve. In this context, alternative solutions would be required to feed the city in the near future due to the continuous destruction of rural areas

Process and methods (for empirical research)

This paper, which is based on the research focusing on the change of Istanbul's rural-urban balance based on the production-consumption interactions, consists of three main parts. By giving a conceptual framework explaining the rural-urban / *Rurban* transformation within the morphological structure of the city; A system proposal arising from production-consumption interconnections is developed at the urban scale. In research the alteration of rural-urban relationship and the production-consumption cycle of Istanbul in the historical process will be diagrammed through mapping, and an implementation practice generated for the pilot region.

Main results (or main arguments in the case of critical reviews)

From the above argument in this paper metamorphosing and transforming rural-urban correlation of Istanbul, in the historical process, is discussed in the context of stratified production-consumption practices. The paper is based on findings of a research conducted within the Advanced Design Research Lab I of City and Architecture Master's Program in Ozyegin University.

Implications for research and practice/policy | Importance and originality of the contribution

Based on findings, the analysis of transformation in the rural-urban correlation may offer a different perspective to city and architecture studies through a network from production-consumption spatialization. This perspective is the analysis of the current situation at the scale of society and the city, and the imagination of a potential system that may occur in the future.

IC - (21201) - FROM MEAT TO BEETS: EXPLORING PATHWAYS TO MORE PLANT-FORWARD DIETS

Catarina Possidónio1 ; Marília Prada1 ; Jared Piazza2
1 - Iscte; 2 - Lancaster University

Background and objectives

We aimed to understand consumer perceptions of meat alternatives, and how the way meat alternatives are presented/framed affects its appraisal, with the goal of facilitating a shift toward more sustainable food consumption.

Process and methods (for empirical research)

Qualitative and quantitative methods were applied to examine consumer perceptions of five proposed alternatives to meat: legumes, tofu, seitan, lab-grown meat, and insects. In Study 1, participants provided free associations with regards to conventional animal proteins and the alternatives. In Study 2, the presentation of the product was experimentally manipulated: participants evaluated the five meat alternatives along several dimensions (e.g., edibility, healthiness), either when framed as an individual product or as part of a larger meal.

Main results (or main arguments in the case of critical reviews)

Our findings suggested three profiles of consumers: hedonically motivated meat eaters; health-oriented meat eaters; and ethically conscious meat avoiders. It was also observed that meal framing can help promote meat alternatives, either by highlighting well-known products within individual frames (e.g., legumes), or by demonstrating how less familiar products (e.g., tofu) can be incorporated into a meal. Overall, we found that most meat alternatives benefited from a meal framing, with the notable exception of legumes, which benefited from an individual framing, and insects which were evaluated quite negatively regardless of framing.

Implications for research and practice/policy | Importance and originality of the contribution

Previous research focused on evaluations of a single product, treated in isolation, producing a fragmented body of evidence regarding consumer perceptions of meat substitutes. We aimed to provide a more comprehensive approach, assessing multiple perceptions across a range of products, providing an integrative assessment of how consumers perceive conventional animal proteins and meat alternatives. Additionaly, we provided applicable insights on alternative protein acceptance, by examining how consumer perceptions differ considering if the meat alternative was framed individually versus in a meal. Current findings point to several directions for improving the marketing of meat alternatives to promote healthier and more sustainable diets.

Keyword's : meat alternatives, meat substitutes, plant-based products, meal framing

IC - (21335) - WHAT ARE THE MOST EFFECTIVE STRATEGIES TO IMPROVE PERCEPTIONS AND PURCHASE INTENT OF CULTURED MEAT?

Gonzalo Palomo-Vélez[1]; Sarah Gradidge[2]
1 - Universidad de O'Higgins; 2 - Anglia Ruskin University

Background and objectives

The current meat industry has been associated with a number of environmental and moral concerns. Despite increasing awareness of these negative aspects of conventional meat production, estimates suggest that demand for livestock-derived food will double within the next 30 years. "In-vitro" or "cultured" meat refers to meat tissue that is grown in the laboratory from muscle stem cells, and represents an alternative to conventional meat that incurs in lower environmental costs and virtually no animal suffering. For cultured meat to be an alternative to conventional meat, however, consumers must be willing to accept it. Regarding this, recent findings suggest that when trying to increase cultured meat acceptance, it might be better to focus on the the *negative* aspects of *conventional* meat, instead of highlighting the *positive* aspects of *cultured* meat. Because of this, in the present study, we evaluated whether highlighting common negative aspects of conventional meat (unnaturalness, animal welfare issues, and environmental damage) improves perceptions and buying intent of cultured meat.

Process and methods (for empirical research)

The sample consisted in 299 meat-eaters living in the UK. Participants were randomly presented with one (out of four) essays –three of them emphasizing negative aspects of conventional meat, and a control one. After reading the essay, participants were randomly presented with five pictures of different conventional and cultured meats (pictures were identical, but differed in how the product was labelled) and asked to rate each product in terms of anticipated eating enjoyment (2) purchase intent.

Main results (or main arguments in the case of critical reviews)

Overall, results indicated that while the eating enjoyement gap between conventional meat and cultured meat can be reduced by stressing the negative environmental consequences of conventional meat, its (lack) of naturalness and its detrimental effects on animal welfare, only the latter two reduced the purchase intent gap between the meats.

Implications for research and practice/policy | Importance and originality of the contribution

Results are discussed in line with policy-alternatives for cultured meat acceptance.

Hour: 13:30:00
Session: G14 - Risk Governance
Room: Room 2

Theme: Governance (3); Sustainability (1)

IC - (20801) - EXPERIENCE WITH EXTREME WEATHER EVENTS AND ADAPTATION AND MITIGATION BEHAVIOURS IN A CONTEXT OF CLIMATE CHANGE AND GLACIAL RETREAT IN THE PERUVIAN ANDES

Fredy Monge-Rodríguez[1]; Andy Alvarado-Yepez[1]
1 - National Universuty San Antonio Abad del Cusco

Background and objectives

Glacial retreat in the Peruvian Andes is causing a variety of extreme weather events, due to different geographical factors and anthropogenic actions that are negatively impacting the most vulnerable populations such as Peru (Poveda et al, 2020; Mark et al, 2010; Postigo, 2014). Therefore, studies aimed at understanding adaptation and mitigation behaviours in these scenarios are relevant (de la Riva, Lindner and Pretzsch, 2013; Smith, 2014). The objective of this study was to determine the relationship between experience with extreme weather events (storms, landslides, droughts and floods) and adaptation and mitigation behaviours.

Process and methods (for empirical research)

Using a quantitative research approach, a survey was designed using LimeSurvey software that makes use of online resources (tablets and cell phones) to conduct face-to-face interviews, thus, a sample of N=2024 participants was collected from the main communities of the Vilcanota river basin in Peru-Cusco. Sampling was by random route convenience criterion.

Main results (or main arguments in the case of critical reviews)

Results indicated that participants experienced each extreme event at least once in more than 14% of the sample and that willingness to adapt and mitigate was categorised as "very much" in more than 30% of participants. In addition, there was evidence of significant relationships between experiences with droughts, floods and then landslides with both adaptation and mitigation behaviours. On the other hand, storms were found to be less significant. The conclusion is that the greater the experience with extreme weather events, the greater the willingness to assume adaptation and mitigation behaviours in scenarios of glacial retreat and climate change.

Implications for research and practice/policy | Importance and originality of the contribution

It is suggested that future studies assess cultural aspects that could influence adaptation and mitigation processes, and identify potential water-social conflicts due to the proximity to tropical snow-capped mountains and land and water use (Huggel et al, 2020; Vilímek et al, 2014). The implications of the study for the design of climate change adaptation and mitigation programmes..

IC - (20804) - COMMUNICATING ABOUT AIR POLLUTION: THE PERSUASIVENESS OF A NARRATIVE MESSAGE TO PROMOTE CITIZENS' ENGAGEMENT IN INDIVIDUAL AND COLLECTIVE PRO-ENVIRONMENTAL ACTIONS

Lucia Bosone[1]; Marie Chevrier[1]

1 - Laboratoire de Psychologie et d'Ergonomie Appliquées, Université Gustave Eiffel, Université de Paris

Background and objectives

Today air pollution levels are partly due to individuals' behaviours, such as individual car use, household energy, and the consumption of luxury goods. It is indeed fundamental to understand how people perceive air pollution and its associated risks, in order to motivate them to change their behaviours and improve air quality. This research has two main objectives: (1) to explore the public perception of air pollution, focusing on individuals' perception of the psychological distance of its health and environmental consequences (Study 1); (2) to test whether presenting the risks of air pollution in a narrative vs statistical format is more effective, with regards to narrative engagement, efficacy appraisal, and individuals' intentions to change their behaviours (Study 2 and 3).

Process and methods (for empirical research)

Study 1 (N=263) is based on a survey measuring the public perception of air pollution, the perceived psychological distance of its environmental and health consequences, and the perceived effectiveness of different individual and collective pro-environmental behaviours. Study 2 (N=237) presents a 2(Format: narrative vs statistical) x 2(Focus: health vs environment) protocol. Study 3 (N=258) presents a 2(Format: narrative vs statistical) x 3(Stages of change) protocol, testing the effectiveness of a narrative format depending on individuals' stage of behavioural change.

Main results (or main arguments in the case of critical reviews)

Study 1: perceived distance and perceived effectiveness vary across different stages of behavioural change.

Study 2: format has an impact on engagement, but not on behavioural intention.

Study 3: the intention to engage in specific individual behaviours depends on the stage of behavioural change, and that individuals in the pre-action stage are more sensitive to the effects of narrative vs statistical format.

Implications for research and practice/policy | Importance and originality of the contribution

Overall, this research contributes to understanding narrative persuasion and its effects depending on the stage of behavioural change individuals are at, offering practical advice for the development of education and communication programs.

IC - (21190) - DO YOU KNOW WHAT TO DO AFTER RECEIVING A FLOOD WARNING? ANALYSING EMERGENCY RESPONSE WITH AN ONLINE SURVEY OF LOCAL RESIDENTS FOLLOWING THE JULY 2021 FLOOD EVENT IN WESTERN GERMANY

Anna Heidenreich[1]; Heather Jean Murdock[1]; Philip Bubeck[1]; Annegret H. Thieken[1]
1 - University of Potsdam

Background and objectives

In July 2021 an intense and rapid onset rainfall event resulted in severe flooding for several watersheds in Western regions of Germany as well as Belgium, the Netherlands, and Luxembourg. In the two German federal states of North Rhine-Westphalia (NRW) and Rhineland-Palatinate (RLP) the impacts of flooding were severe, with damage to buildings and infrastructure as well as more than 180 fatalities. This event was highly publicized in the German and international media with a focus on the performance of the early warning system.

Process and methods (for empirical research)

We analyse the warning situation for this flood event based on the results of an online survey with responses from 1348 participants from affected areas in the two federal states. Following the severe flood event in the middle of July 2021 the online survey for local residents was prepared and made available online for 8 weeks starting at the end of August. Among other topics, the survey addressed whether residents received a warning or not, when they received a warning, and whether they knew what to do.

Main results (or main arguments in the case of critical reviews)

Results show that 35% of the survey respondents in NRW did not receive any warning, while the same was true for 29% of respondents in RLP. Of those that did receive a flood warning 85% did not expect it to be severe and 46% did not know what to do. In addition, many respondents reported on personal loss, shared life-threatening experiences, and problems with the warnings. Multiple regression analyses show factors that are linked to higher levels of knowing what to do in the flood event, e.g. demographics, warning elements, personal experience and risk perception.

Implications for research and practice/policy | Importance and originality of the contribution

This presentation will discuss these results and potential conclusions to improve risk management for this type of flood event.

IC - (21202) - COMMUNITIES RESPONDING TO CHALLENGES AND DEMANDS OF FISHING GOVERNANCE

Carla Mouro[1]

1 - Iscte Instituto Universitário de Lisboa

Background and objectives

Nowadays traditional fishing communities are confronted with several new laws and policies that contrast with and affect their customary uses of places and local resources. Drawing on findings of two studies, this presentation focus on psychosocial processes that intervene on the responses of local communities to fishing laws, addressing psychosocial conditions under which the encounter between the legal and the local spheres promotes support or resistance to new laws.

Process and methods (for empirical research)

Study 1 (N=280, survey) examined the heterogeneity of positions towards new professional and recreational fishing laws by comparing groups of residents at different stages of support for these laws, following the Trans-Theoretical Model. Additionally, we examined whether perceived norm conflicts (between laws and local norms, and between local descriptive and injunctive norms) and ambivalence decelerate the support for fishing laws.

Main results (or main arguments in the case of critical reviews)

This comparative analysis showed that higher support for fishing laws was related to perceiving that the community valued and acted in support of the laws. The analysis also showed that perceived norm conflicts between the two community norms tended to be stronger and associated to felt ambivalence at pre-action stages, but not at post-action stages (i.e., after having publicly defended the laws), for both types of laws. Study 2 (N=200, survey) addresses also how fishing laws are evaluated during the Covid19 pandemic and how this relates to place attachment and community relations.

Implications for research and practice/policy | Importance and originality of the contribution

This research highlights the relevance of considering how the (mis)alignment between different sources of influence – the legal and the local spheres - contributes for integration or resistance to changes to traditional ways of living. The discussion focuses on how laws and policies can become more capable of integrating different knowledges and interests, therefore contributing to governance models that are more adapted to their context of implementation.

Hour: 13:30:00
Session: S26 - Representations of Rural Spaces
Room: Room 3

Theme: Sustainability (5)

IC - (20819) - PEOPLESHED AS CRUCIAL ELEMENT IN URBAN-RURAL DEPENDENCIES AND OPPORTUNITIES TO DESIGN NBS FOR RESILIENCE IN EUROPE AND CHINA

Sally Anderson[1]; Ellen Banzhaf[2]; Gwendoline Grandin[3]; Richard Hardiman[4]; Anne Jensen[5]; Laurence Jones[6]; Julius Knopp[2]; Gregor Levin[7]; Duncan Russel[8]; Wanben Wu[2]; Jun Yang[9]; Marianne Zandersen[10]

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Background and objectives

Interrelationships between urban and rural areas are fundamental for the development and safeguarding of viable future living conditions and quality of life. These areas are not well-delineated or self-sufficient, and existing interrelations sometimes bias one over the other. Major urban challenges facing China and Europe are related to changes in climate and environment, and to decision-making that makes urban and rural landscapes more susceptible to environmental pressures. Focusing on six European and Chinese cities and surrounding rural areas under study in the EC-funded REGREEN project, we examine how nature-based solutions (NBS) may assist in counteracting these pressures.

Process and methods (for empirical research)

Focusing on six European and Chinese cities and surrounding rural areas under study in the EC-funded REGREEN project, we examine how nature-based solutions (NBS) may assist in counteracting these pressures. We analyse differences between European and Chinese systems of governance, reflecting on the significance of scale of research needed to understand how NBS provide benefits.

Main results (or main arguments in the case of critical reviews)

The European and Chinese solutions exemplified in this study tackle the nexus of various environmental and peoplesheds. We highlight interactions between differently delineated *sheds* (watershed, airshed, natureshed and peopleshed), which differently influence interrelationships between urban and rural areas. In the urban-rural interface, peoplesheds comprise socio-demographic, socio-economic, and socio-cultural as well as mobility aspects, with varying boundaries, trajectories and flows of people. These human factors impact local environments and resource management.

Implications for research and practice/policy | Importance and originality of the contribution

Peoplesheds are linked to biophysical spatial entities such as landscape characteristics and to social relations including ownership, stewardship and neighbourhood bonds. The combined biophysical and social spatial scales that delineate a peopleshed do not align with administrative or ecological boundaries. Regarding opportunities for urban-rural resilience it is important to consider when attempting to introduce landscape-scale change for the benefit of regional ecosystems.

IC - (20912) - COASTAL RISKS REPRESENTATIONS AND SENSE OF PLACE – LESSONS FROM CASE STUDIES IN FRANCE AND CANADA

André Mocaer[1]; Elisabeth Guillou[1]
1 - University of Western Brittany

Background and objectives

This research focuses on the study of the social representation of coastal risks (marine erosion and flooding) by studying local knowledge and practices that inhabitants have of their living environment. More precisely, our aim is to understand how the representation of settings (uses, meanings…) participates in the construction of individuals' identity, and how these identities (including the living environment or not) contribute to the construction of risks.

Based on an international qualitative study in the West of Brittany (France) and the Maritimes of Quebec (Canada), we explore the representations of the territory in relation to the socio-cultural context. Both countries are good examples of the coastal risk issues faced by Western countries and portray two different national strategies of management.

Process and methods (for empirical research)

This study is based on semi-structured interviews conducted with 32 inhabitants. The interviews addressed the relationship to the living environment, personal trajectory, place transformations, interrelations between actors and coastal risks. The question of coastal risks was discussed at the end of the interview when the subject had not been brought up earlier.

Main results (or main arguments in the case of critical reviews)

The results underline how place representations interact with the social representation of coastal risks, and highlight the role played by sociocultural context. Variability between cases also depends on coastal use, management and national policies in place.

Implications for research and practice/policy | Importance and originality of the contribution

Studying the representation of these territories, that are subject to coastal risks, and the different forms of identification with these spaces is therefore essential in order to understand the positions taken in the face of local issues and to anticipate adaptations to possible changes for the sustainable use of this increasingly populated coastal space.

IC - (20914) - LIVING PLACE APPROPRIATIONS AND IDENTITY PROCESS ON COASTAL TERRITORIES

Anthony Farge[1]; Elisabeth Guillou[1]; Fabrice Buschini[1]; Kimberley Page-Jones[1]
1 - University of Western Brittany

Background and objectives

The objective of this study is to analyze living place appropriation related to coastal territories. These places are not only living spaces; they are also endowed with meaning which is necessary to the process of appropriation. More precisely, we want to understand how these different place appropriations (i.e., place control, practices, attachment) can shape identity (including or not the living place). Depending on the importance given to the living place in the identity process, the individual will be able to project himself in this place and adapt to it.

Our research has a comparative approach, conducted among populations living with two different cultural lifestyles – Brittany (France) and Westfjords (Iceland) – but both having in common close ties to the sea and a rich maritime history.

Process and methods (for empirical research)

To study these different forms of space appropriation, a qualitative survey was led among 25 inhabitants in each country. The information was collected by semi-structured interviews and mind map using four topics: living territory (geographical space), life story, place transformations and interrelations between actors.

Main results (or main arguments in the case of critical reviews)

The different forms of place appropriation (i.e., experienced, conceptualized) as illustrated in the mind maps (i.e, cartographic, landscape) will be presented in this paper.

Implications for research and practice/policy | Importance and originality of the contribution

The maritime space in these two regions is linked to numerous issues (economic, social, environmental and sanitary) involving a variety of individuals and groups. Conflicts occur frequently (e.g., fishing quotas, urban planning issues, restricted sites). Reconciling the needs and interests of fishers, tourists, residents, environmentalists, etc., requires an understanding of the knowledge and practices of these different groups. An understanding of this knowledge may help to comprehend the position of these groups towards local issues, adjust communication and, consequently, anticipate the adaptation of practices to allow a sustainable use of these increasingly populated environments.

IC - (20985) - VIEWING NATURAL VS. URBAN IMAGES AND EMOTIONAL FACIAL EXPRESSIONS

Marek Franěk[1]; Jan Petružálek[1]
1 - University of Hradec Králové

Background and objectives

There is a large body of evidence that exposure to simulated natural scenes has positive effects on emotions and reduces stress. Some studies have used self-reported assessments, and others have used physiological measures or combined self-reports with physiological measures; however, analysis of facial emotional expression has rarely been assessed. The aim of present research was to explore, whether natural images would evoke a higher magnitude of positive emotions in facial expressions and a lower magnitude of negative emotions than urban images.

Process and methods (for empirical research)

Two experiments were conducted. In Experiment 1, participant facial expressions were analyzed while viewing images of forest trees with foliage, forest trees without foliage, and urban images by iMotions' AFFDEX software designed for the recognition of facial emotions. In Experiment 2 images of mundane and attractive nature with various level of visual openness were presented and facial expressions were analyzed. Simultaneously, participants were asked to express their emotions verbally.

Main results (or main arguments in the case of critical reviews)

In Experiment1 the results showed only very low magnitudes of facial emotional responses, and differences between natural and urban images were not significant. In Experiment 2 significant differences in facial emotional expressions were found only as a function of image openness, but not attractiveness. In contrast, in a verbal expression of perceived emotions attractive images scored significantly higher than unattractive images.

Implications for research and practice/policy | Importance and originality of the contribution

The findings of the present study have methodological relevance for future research. Moreover, not all urban dwellers have the possibility to spend time in nature; therefore, knowing more about the effects of some forms of surrogate nature also has some practical relevance.

IC - (21390) - PLACE IDENTITY AROUND THE "GREEN EXTRACTIVIST LANDSCAPES" OF FOREST INDUSTRY IN CHILE.

Cristóbal Bravo Ferretti[1]; José Sandoval Díaz[1]
1 - Universidad del Bío-Bío

Background and objectives

The forest industry in Chile has grown steadily in the last 30 years, becoming one of the pillars of the national economy. The intensive development of this activity under the seal of neoliberal policies has caused a high socio-environmental cost for the rural communities that traditionally occupy these territories and that currently live immersed in "forests" of monoculture of exotic species destined to the export. Some of the the costs widely recognized by academia, environmental institutions and the residents themselves are water scarcity, forest fires, soil degradation and loss of native forest, among others.

This presentation discusses around the question of how communities living in environments drastically intervened by forestry, develop their place identity

Process and methods (for empirical research)

We analyse some preliminary data from an ongoing investigation contextualized in the Ñuble region in central-southern Chile. This region has a high percentage of rural population (31%) and more than 20% of its land area is covered with forest plantations. The research is based on a study of multiple cases, from an ethnographic design that selected various territorial units based on their socio-environmental vulnerability, to subsequently apply a series of interviews to local residents and key informants, as well as a review of documentary sources and image analysis.

Main results (or main arguments in the case of critical reviews)

Results points to the recognition of the progressive socio-environmental deterioration in terms of vulnerability and loss of peasant culture. Likewise, a feeling of lack of protection and institutional support is appreciated.

Implications for research and practice/policy | Importance and originality of the contribution

We adopt the environmental psychology approach to understand the complex experience of inhabiting environments highly precarized by the forest industry. Results are valuable to know the territorial projection, as well as to identify personal and social resources to engage local communities in actions of sustainability and social debates regarding to territorial development.

Hour: 13:30:00
Session: S27 - Education & Nature Interventions
Room: Room 4

Theme: Sustainability (5)

IC - (20815) - THE IMPACT OF NATURE INTERVENTIONS ON FAMILY LIFE IN DUTCH WOMEN'S SHELTERS AND SHELTERS FOR HOMELESS FAMILIES: OVERVIEW OF FOUR STUDIES AS UN UPBEAT TO DISCUSSING NEW AVENUES OF INVESTIGATION

Elise Peters[1]
1 - Leiden University of Applied Sciences

Background and objectives

Visiting a natural environment such as a garden or park can help people to restore from stressful circumstances. Women's shelters and shelters for homeless families have started to integrate nature interventions in their work with the aim to support parents' functioning and resilience. For my dissertation I conducted four studies that explored and tested the impact of these nature interventions on parents. I will briefly present the results as an upbeat to discussing new avenues of investigation.

Process and methods (for empirical research)

Study 1 was an inductive exploration of the benefits of nature according to shelter professionals, conducted with an action research design. Professionals suggested that nature supported parents by improving feelings of relatedness between parents and child, parental feelings of competence, and autonomy in parenting. This formed the hypothesis for Study 2 and 3. Study 2 was a quasi-experiment, designed to test if experiencing nature was associated with improvements parental basic psychological needs (N=160). Study 3 was a single case experiment (N=3), with repeated and randomized exposure to the indoor environment of the shelter and exposure to a natural environment while assessing parental wellbeing. Both studies showed that a change from indoors to a natural environment was associated with enhanced parental need fulfilment. Study 4 was a qualitative examination of 149 case narratives that professionals wrote about the nature activities they conducted for the support of parents. It showed that professionals opted for specific types of nature activities for the support of parents.

Main results (or main arguments in the case of critical reviews)

These studies gave room to question the impact of place on parenting experiences. I will present potential directions for future research in that domain and hope to open a discussion on the relevance of this topic on the research agenda.

Implications for research and practice/policy | Importance and originality of the contribution

IC - (20842) - "PLANETARY HEALTH" AS CONCEPTUAL FRAMEWORK FOR HEAT-RESILIENT NEIGHBOURHOODS

Daniel Hertel[1]; Sigrun Kabisch[1]; Uwe Schlink[1]; Janine Pößneck[1]

1 - Helmholtz Centre for Environmental Research - UFZ, Department of Urban and Environmental Sociology, Permoserstraße 15, 04318 Leipzig, Germany

Background and objectives

In health research, a paradigm shift is evolving, leading to a stronger focus on individual health risks in the context of natural systems ("Planetary Health"). In particular, cities are focal points of health risks. Due to varying building structures, environmental stressors are heterogeneously distributed. Thus, critical intervention points and respective adaptation measures need to be identified.

Climate change has a global dimension, but resulting health risks have local impacts. Consequently, our ongoing project focuses on heat stress at neighbourhood scale. Starting from the entire city scale, we aim for a "Neighbourhood-Planetary-Health" concept by combining micrometeorological simulations and sociological analyses considering the individual perceptions of different socio-demographic groups of residents. We derive recommendations for adaptation options at neighbourhood scale for heat stress reduction.

Process and methods (for empirical research)

Simulations with PALM-4U and ENVI-met are combined with sociological survey results as well as municipal data (e. g. air quality, map of climate functions). Interviews with representatives from the municipality (departments of health, planning, environment, social affairs) and housing companies as well as common workshops guarantee practice oriented results.

Main results (or main arguments in the case of critical reviews)

The synthesis of health, environmental and social aspects allows for a multifactorial view of urban health and will improve urban resilience. In close collaboration with practice partners, appropriate target group products will be developed (tool kit supporting prioritisation measures against heat stress, maps of perceived temperature, design concept for green infrastructure, 3D-visualisations of the results).

Implications for research and practice/policy | Importance and originality of the contribution

Our approach to a "Neighbourhood-Planetary-Health" is innovative, especially since many Planetary Health studies miss original empirical evidence.

At IAPS2022 we will present and discuss our methodological approach and first insights.

IC - (20869) - IMPACTS OF EXPOSURE TO 360° VIDEOS OF NATURE IN THE CITY ON EMOTIONS, HEART RATE VARIABILITY AND ATTENTION RESTORATION.

Manuel Hefti[1]; Ghozlane Fleury-Bahi[1]; Oscar Navarro[2]

1 - Nantes Université, Univ Angers, Laboratoire de psychologie des Pays de la Loire, LPPL, UR 4638, F-44000 Nantes, France; 2 - Université de Nîmes, Chrome

Background and objectives

The introduction of nature in the city can be a response to mitigate the deleterious consequences of climate change in urban contexts. Furthermore, positive links have been demonstrated between experience with nature and positive emotions (e.g. McMahan and Estes, 2015), heart rate variability (e.g. Farrow & Washburn, 2019), and attention restoration (e.g. Stevenson et al., 2018).

The objective of this study, is to measure the impact of nature in the city on emotions, parasympathetic nervous system and attention restoration in a controlled experimental study with a head-mounted display.

Process and methods (for empirical research)

A pre-registration of the hypotheses was carried out (https://osf.io/jg8ry).

We manipulated the level of naturalness of 4 urban environments to be projected in a head-mounted display. These environments were filmed with a 360° camera.

Each participant is randomly exposed to one of the 4 recordings and performs a pre and post test measurement of heart and respiratory rate, of self-reported positive and negative affects (Congard et al., 2011), and of a Sustained Attention to Response Task (SART; Robertson et al., 1997).

Main results (or main arguments in the case of critical reviews)

The end of data collection is scheduled for February 2022.

The following results are expected:

Compared to the control group, the participants in the virtual urban natural groups would demonstrate

1. a significant increase from pre-test to post-test in self-reported positive affects and significant decreases in self-reported negative affects, number of SART errors and mean SART response time.

2. a significant increase from baseline to exposure in Heart Rate Variability (assessed by RMSSD and pNN50).

3. significantly less number of fixations and more fixation time.

Implications for research and practice/policy | Importance and originality of the contribution

This study focuses on the impact of nature on psychological well-being in a specifically urban setting. By its experimental design, it will provide a significant level of evidence if the hypotheses are verified.

Global Challenges, Local Impacts
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IC - (20880) - STUDENTS' PERCEPTIONS OF THE PHYSICAL AND SOCIO-PHYSICAL ENVIRONMENT IN UNIVERSITY LIBRARY LEARNING SPACES: ASSOCIATIONS WITH EDUCATIONAL AND PSYCHOLOGICAL OUTCOMES

Daniel Raymond Mckay[1]; Edward Edgerton[2]; Jim Mckechnie[2]; Amanda Simpson[2]; Ehsan Mesbahi[3]
1 - University of St. Andrews; 2 - University of the West of Scotland; 3 - Victoria University of Wellington

Background and objectives

In recent years there has been a substantial investment in the Scottish university estate. This investment has been accompanied by an increased use of 'co-design' approaches to learning space development. Such 'user-centred' approaches consider students as 'experts' who should be consulted in learning space design and evaluation. However, quantitative research on students' perceptions of the physical and socio-physical environment in their campus learning spaces has focused predominantly on classroom spaces and is methodologically flawed. The present study aimed to (i) develop a new, theoretically sound, and psychometrically tested measure of university students' library learning environment perceptions and (ii) explore associations between students' perceptions of their learning environment, educational outcomes, and psychological outcomes.

Process and methods (for empirical research)

A new and bespoke academic library learning space questionnaire was developed based on focus groups with students and instructors, established people-environment transaction theories, two literature reviews, and pilot feedback from students. The questionnaire subscales measured how often the learning environment matched students' Spatial, Acoustical/Privacy, Ambient, and Decisional Control (choice of congruent spaces) needs for both individual and collaborative learning. The questionnaire was distributed to students across three academic library spaces at a Scottish, multi-campus and multi-geographic, university.

Main results (or main arguments in the case of critical reviews)

Measurement model analyses using structural equation modelling revealed that the questionnaire had good internal consistency reliability and construct validity for both individual (N=418) and collaborative learning (N=307). Structural model analyses found that students' perceptions of the environment were associated with a range of educational and psychological outcomes when using academic library learning spaces for individual and collaborative learning, including, academic stress, learning task engagement, and performance/productivity.

Implications for research and practice/policy | Importance and originality of the contribution

The significant associations suggest that positive perceptions of the library environment were associated with better outcomes. To enhance sustainability through future-proofing library learning spaces, designers should aim to involve students in the design and evaluation process and increase flexibility/choice of learning activity congruent spaces.

IC - (21136) - A HISTORICAL AND TYPOMORPHOLOGICAL PERSPECTIVE ON SCHOOL BUILDINGS IN QUEBEC: INSIGHTS INTO THE RELATIONSHIP BETWEEN USER HEALTH AND WELL-BEING AND BUILT FORM.

Sarahlou Wagner-Lapierre[1]
1 - Schola, Université Laval, Québec, Canada

Background and objectives

In Quebec (Canada), a large-scale renovation project of school buildings has been undertaken, the majority of which were built before 1980. In the hope that the spaces created would be better suited to the academic success, well-being and health of the users, the government commissioned researchers (Schola) to guide the renovation process based on scientific data. This Schola research identifies the main historical forces that have shaped the school building regarding the well-being and health of users.

Process and methods (for empirical research)

The motives of the architects or actors involved in the design of schools were highlighted through the analysis of 349 archival documents (legal texts, professional journals, school reforms). The discourses were cross-referenced with the typomorphological analysis of a sample of 308 schools.

Main results (or main arguments in the case of critical reviews)

It was found that school buildings in Quebec were originally built according to hygiene rules. These ensured healthy spaces, including natural ventilation and lighting. They ceased to apply after the educational reform (1964), and the adaptation of school architecture to new pedagogical ideals took precedence over design intentions. Thanks to artificial ventilation and lighting, classrooms could now be planned without windows. The reform also led to the construction of schools for up to 3,000 pupils, which made architects question the wisdom of the reform, as it forced them to build spaces that they considered inhumane and deleterious.

Implications for research and practice/policy | Importance and originality of the contribution

Quebec's school buildings have recently received bad press: mould has been discovered in some schools, and many others have allegedly had ventilation problems that make them unsafe for Covid-19. This research allows us to look at this legacy in a different light, as its history reveals that many of its older school buildings are better equipped than newer ones to deal with the challenges posed by the pandemic, provided that users learn to use them effectively and faithfully to how they were designed.

Hour: 13:30:00
Session: S28 - Mobility in Chidren
Room: Room 5

Theme: Sustainability (4)

IC - (20870) - EXPOSURE OF YOUNG CHILDREN TO SETTLED DUST: AN ANALYSIS OF PARENTAL KNOWLEDGE AND RISK PERCEPTION

Raquel Bertoldo[2]; Laure Malleret[1]
1 - Aix Marseille Univ, CNRS, LCE, Marseille, France; 2 - Aix Marseille Univ, LPS, Aix-en-Provence, France

Background and objectives

The exposure of young children to fine aerial or settled dust potentially has serious consequences to their health. Because of the behaviour typically observed among young children - floor play and hand-to-mouth contact – this group is particularly exposed to settled dust in the household, where their parents are most often responsible for managing children's exposure to these particles: they are the ones who know about the dangers presented by these particles; perceive this danger as important and, consequently, take actions. Still, these actions are related to household chores that are also part of the household management styles.

Process and methods (for empirical research)

This research proposed to explore parents of young children perception about this domestic risk exposure through two waves of online questionnaires. Parents were mostly contacted through parent-school associations in the Aix-Marseille perimeter, located South-East of France. Participants were inquired about (1) what they knew about settled dust and household air quality (knowledge); (2) how did they estimate their children's exposure to settled dust in a variety of environments (risk perception); and (3) what type of parenting style they adopted.

Main results (or main arguments in the case of critical reviews)

Results show an 'optimism bias': they estimate their children to be less exposed to dust than children in general. Perceived risk of exposure is seen to be higher in open air situations than indoor at school or at home. Finally, dust cleaning behaviours are mainly explained by parental style – other predictive variables seem to play a minor role.

Implications for research and practice/policy | Importance and originality of the contribution

In conclusion, home cleaning practices in densely populated or industrialized areas could play a role in preventing young children exposure to dust. Still the prevention of young children exposure to dust is deeply rooted in household practices and habits – highly dependent on family organisation. Experimental studies could shed light in how information about risks presented by dust could reinforce cleaning habits in the household.

IC - (20876) - THROUGH LIGHT AND DARKNESS: A LITERATURE REVIEW OF CHILDREN'S INDEPENDENT MOBILITY AFTER DARK

Anna Litsmark[1]; Maria Johansson[2]; Pimkamol Mattsson[3]; Johan Rahm[3]
1 - Doctoral student; 2 - Professor; 3 - Associate senior lecturer

Background and objectives

Darkness is a significant barrier to children's independent mobility (Shaw et al., 2015) affecting the perception and use of outdoor environments, making them less attractive, and increasing social fears (Cele, 2019). This literature review addresses the question of *how* artificial outdoor lighting may serve to provide children independent mobility after dark.

Process and methods (for empirical research)

The review procedure was based on Booth, Papaioannou, and Sutton (2012) and the PRISMA statement (Page et al., 2021). A Boolean search string was developed, including terms related to children, independent mobility, lighting, and outdoor environments considering both light and dark conditions. The search was conducted through several databases: Scopus, ISI, PsycInfo, Eric and Engineering Village.

Main results (or main arguments in the case of critical reviews)

The 60 identified articles were divided into two major groups: *Children, natural light and darkness* and *Children and artificial outdoor lighting.* Results show that both natural and artificial lighting conditions can support or hinder children's independent mobility by influencing perceived safety and security, notions of what is seasonally appropriate, travel and route choices, physical activity and the relationship to a place. The existence of lighting as well as lighting quality were discussed in relation to children's use and experiences of the outdoor environment. However, only few studies focused on the implication for children's independent mobility.

Implications for research and practice/policy | Importance and originality of the contribution

The results strengthen the perspective that darkness constitutes a major obstacle for children's independent mobility. Research-based strategies are needed for outdoor lighting to support both children's and parents' perspectives in urban design.

The review provides valuable knowledge about the role of outdoor lighting for children's independent mobility, that may support decision-makers in adopting strategies for more sustainable modes of transport, such as walking and cycling.

IC - (20943) - CHILDREN'S INDEPENDENT MOBILITY AND PSYCHOLOGICAL DEVELOPMENT AND WELL-BEING: A SYSTEMATIC LITERATURE REVIEW

Inês A. Ferreira[1]; Ferdinando Fornara[1]; Marco Guicciardi[1]; Vanessa Pinna[1]; Andrea Manca[1]
1 - Department of Pedagogy, Psychological Sciences and Philosophy, University of Cagliari

Background and objectives

Previous literature on children's independent mobility (CIM), i.e. the freedom to travel and/or play in outdoor spaces without adult supervision, has predominantly focused on its predictors. Less studies have analyzed its outcomes, with most of them focusing on the physical (Schoeppe et al., 2013) rather than the psychological (Waygood et al, 2017) consequences. The aim of this systematic literature review is to describe and analyse available literature on CIM and school-aged children's psychological development and well-being in urban neighbourhoods.

Process and methods (for empirical research)

A literature search was run between May and July 2021 using nine electronic databases. From 320 hits, 109 were selected for full-text analysis after abstract screening (excluding those not written in English, or not including a psychological variable in relation to CIM, or not empirical). After the exclusion of articles focusing solely on CIM's psychological predictors (n=74), 40 were submitted to an inter-rater full-text analysis, done by three judges. A final sample of 20 studies were selected for a thematic analysis.

Main results (or main arguments in the case of critical reviews)

Reviewed studies were conducted between 2001 and 2020, mainly in Europe. Most were quantitative studies, focusing on consequences of CIM in school-aged children up to 15 years old. Preliminary results suggest a prevalence of studies analyzing child psychological outcomes in terms of benefits for children's socio-emotional development (n= 12; e.g., reduced fear of crime, increased sociability and/or sense of community) and for their cognitive development (n= 8; e.g., increased spatial knowledge). Outcomes of the ongoing thematic analysis will be discussed.

Implications for research and practice/policy | Importance and originality of the contribution

Empirical studies on psychosocial consequences of CIM are lacking, perhaps partly due to the recent decline of CIM (Shaw et al., 2015). Moreover, physical activity benefits of CIM for children have been overlooked in relation to its psychological advantages. This review highlights CIM's contribute to children's cognitive and socio-emotional growth, emphasizing the need for more research on this topic.

IC - (21096) - CHILDREN'S RECREATIONAL MOBILITIES IN A DENSIFYING COMMUNITY

Märit Jansson[1]; Anna Sunding[1]
1 - Swedish University of Agricultural Sciences (SLU)

Background and objectives

Access to urban open space is of large importance for the recreation of children in built environments, and might also play an important role in their sustainable recreational mobilities. Yet, little is known about how children's everyday recreation and associated mobilities are affected by planning projects and densification processes, where ideas of sustainable mobilities often focus on a transit-oriented development (TOD) based on densification in areas around transport nodes.

Process and methods (for empirical research)

In this project, we examine the current rapid development of a south-Swedish community, highly affected by TOD ideals. The case is studied through the perspectives of local children, their recreational mobilities and views on the current development of the community, using walking interviews with groups of children aged 10-11.

Main results (or main arguments in the case of critical reviews)

The children described the current projects as happening fast, diminishing their spaces and increasing car traffic without their perspectives being included. Compared to a study conducted in the community five years earlier, the children appeared to find less places to use. A number of factors that limit or support their sustainable recreational mobilities were identified.

Implications for research and practice/policy | Importance and originality of the contribution

The study shows that there are reasons to criticise the realisation of TOD for sustainable recreational mobilities and point at the importance in having close access to sufficient and varied spaces to allow children's recreational use. It also shows the importance of including children in both research and practice in order to strive for sustainability.

Hour: 15:00:00
Session: C8 - Policies & Lifestyles
Room: Room 3

Theme: Sustainability (1); Consumption (4)

IC - (20893) - PUBLIC SUPPORT FOR 'NET ZERO' BEHAVIOUR CHANGE POLICIES

Lorrraine Whitmarsh[1]; Katharine Steentjes[2]; Wouter Poortinga[2]; Sophie Thompson[3]; Emily Gray[3]; Gideon Skinner[3]; Kelly Beaver[3]
1 - University of Bath; 2 - Cardiff University; 3 - Ipsos MORI

Background and objectives

Public concern about climate change has grown significantly in recent years, and is now at record high levels in many countries. Yet, behaviour change is lagging this concern. Barriers to climate mitigation and 'net-zero' lifestyles, such as cost and availability of low-carbon alternatives, could be reduced through government policies such as taxes and regulation. Public support for such policies is essential to ensure they are workable and effective. While multiple surveys have examined public support for certain climate policies, few explore public engagement with *a range of* push and pull net-zero policies involving behaviour change. Moreover, understanding what predicts support for one or several climate policies is essential for developing more acceptable and effective policies.

Process and methods (for empirical research)

Using a representative survey of the UK public (N=5,665), we examine perceived fairness and costliness, as well as socio-demographic factors and values, as predictors of policy support. We also include an experimental design to test different (e.g., economic, environmental, health) framings for each policy.

Main results (or main arguments in the case of critical reviews)

Our findings reveal high levels of public support for most policies, with highest support for frequent flyer levies, changing product prices to reflect environmental impacts, phasing out gas boilers, and electric vehicle subsidies. However, support drops when participants are asked to consider potential financial or lifestyle costs of the policies. Framing the benefits in different ways changes support only minimally, however. Policy support is predicted by several socio-demographic factors, notably political affiliation. Perceived fairness also significantly influences support for most policies.

Implications for research and practice/policy | Importance and originality of the contribution

The findings reinforce previous findings that fairness, cost, and values shape policy support. Implications for policy design and public engagement with climate change are discussed. The current study provides one of the most detailed analyses undertaken of public support for net-zero policies, spanning transport, finance, diet, energy, and material consumption measures.

IC - (20936) - FREE TO FLY AFTER THE COVID-19 PANDEMIC?

Thea Gregersen[1,2]; Nina Marie Larsen[1]; Gisela Böhm[1,3]

1 - Department of Psychosocial Science, Faculty of Psychology, University of Bergen, Bergen, Norway; 2 - Centre for Climate and Energy Transformation, Faculty of Social Sciences, University of Bergen, Bergen, Norway; 3 - Department of Psychology, Inland Norway University of Applied Sciences, Lillehammer, Norway

Background and objectives

Air travel is among the individual-level behaviors with the largest impact on climate change. A relatively small amount of the world's population is responsible for all emissions from personal air travel, and Norwegians are among the most frequent flyers. Due to the arrival of the Covid-19 pandemic air travel was heavily restricted, and the number of vacation-related flights decreased starkly. Following the habit literature, context changes that disrupt repeated behaviors can initiate behavior change.

Process and methods (for empirical research)

Based on the answers from a cross-sectional survey of a representative sample of the Norwegian public (N = 2057), we ask whether the pandemic might function as a 'moment of change' for vacation air travel. Further, we use multiple regression to investigate how self-reported willingness to change is related to past flying frequency, social norms, efficacy beliefs, age, and gender.

Main results (or main arguments in the case of critical reviews)

Our findings show that 26% of Norwegians intend to reduce vacation air travel after the pandemic. Willingness to change was more likely among younger age groups and among those who were flying less frequently before the pandemic, believe that experiences we have gained during the pandemic can make it easier to reduce flights in the future, and believe that reducing personal flights can help mitigate climate change. Notably, 32% think reducing their own flights would help limit climate change only 'to a small extent', while 26% think it would have no effect at all.

Implications for research and practice/policy | Importance and originality of the contribution

The results contribute to our understanding of how the Covid-19 pandemic and its restriction might influence climate change mitigation. The findings especially highlight the important role of efficacy beliefs when facing a global challenge such as climate change, where many doubt that their efforts have an effect.

IC - (21022) - ON THE ROAD TO SUSTAINABILITY: APPLICATION OF THE BETTER LIFE INDEX IN ORGANIZATIONAL CONTEXT

Susana Dias[2]; Sílvia Luís[1]
1 - Universidade Lusofona, Hei-Lab; 2 - Iscte

Background and objectives

The motivation of this study is to explore whether organizations, in a Portuguese context, value using composite and comparable measures of well-being, that go beyond the traditional economic indicators, such as the Better Life Index (BLI, OECD measure), particularly when considering public opinion. This is of relevance as currently there is a lack of studies on the use of composite measures of well-being in organizations.

Process and methods (for empirical research)

The study consisted of an pre-posttest questionnaire measuring attitudes and intentions towards the use of well-being composite measures, such as BLI. Management and Human Resources representatives of Portuguese organizations participated in the study and were randomly assigned to the research conditions (N=61): experimental condition, in which were presented the public's attitudes to well-being in the company and asked to reflect about wellbeing in organizations; and control condition, in which organization's representatives were only asked to reflect about wellbeing. The information presented was collected in a previous study. Public attitudes were extremely positive so we expected that presenting this information would promote attitudes towards the BLI and their intention to use it.

Main results (or main arguments in the case of critical reviews)

Only a minority of the companies produced some type of well-being indicator (35%), with the indicators used being a poor reflection of the concept of well-being (e.g. satisfaction report). The main reasons given for not using indicators were the lack of sufficient data (29%) and of guidelines for producing indicators (21%).

Attitudes and intentions towards the use of indicators such as the BLI were measured before and immediately after the presentation of the public's attitudes towards well-being in organizations. A mixed analysis of variance with 2 factors, inter-participant (condition: experimental vs. control) and intra-participant (before the presentation of attitudes vs. after) showed there was a significant main effect of time, $F(1, 60) = 8.80$, $p = .004$, $\eta p2 = .128$, and an interaction effect between time and condition, $F(1, 60) = 5.98$, $p = .017$, $\eta p2 = .09$. In the experimental condition there was a greater increase in attitude after the presentation of the public's attitudes towards well-being in organizations. However, on intention no effects were found.

Implications for research and practice/policy | Importance and originality of the contribution

Promoting BLI may lead to its use, thereby promoting sustainability in organizations.

IC - (21095) - LEADING BY EXAMPLE: POLITICIANS AND CELEBRITIES WHO ADOPT LOW-CARBON LIFESTYLES INSPIRE OTHERS AND ARE BETTER CLIMATE LEADERS

Steve Westlake[1]; Christina Demski[1]; Nick Pidgeon[1]
1 - Cardiff University

Background and objectives

Lower-carbon lifestyles will be essential for mitigating climate change, but have proved elusive so far. This research explores whether leading by example at a personal level spurs others to follow suit and increases leader effectiveness. Findings are presented from a novel survey experiment with a nationally representative UK sample (n=1267).

Process and methods (for empirical research)

Respondents were placed in one of five experimental conditions. In the first condition respondents read information about necessary climate mitigation measures including behaviour change. In the other conditions respondents read about a politician or celebrity ("leader") advocating for the same climate mitigation measures. The leader had either made substantial low-carbon lifestyle changes themselves (reducing flying; reducing meat consumption; improving home efficiency; downsizing to a small electric car), or had not made these personal lifestyle changes. Respondents then answered questions about their own willingness to make lifestyle changes, and their opinions of the leader.

Main results (or main arguments in the case of critical reviews)

Leaders who exhibited low-carbon lifestyles resulted in a statistically significant increase in survey respondents' willingness to change their own lifestyles. Furthermore, low-carbon leaders were perceived to: care more about climate change; be more knowledgeable; believe climate change is more serious; be more personally committed to tackling it; and, be better at persuading others. There was little evidence of negative "reactance" to low-carbon leaders, who were not perceived as "virtue signalling" or as morally threatening. Respondents from across the political spectrum indicated higher approval of low-carbon leaders. Leaders who did not exhibit low-carbon lifestyles resulted in significantly lower willingness among respondents to change their own lifestyles compared with respondents who had been provided with basic information about the need for lifestyle change.

Implications for research and practice/policy | Importance and originality of the contribution

The novel research provides evidence of the efficacy of low-carbon leading by example. It adds weight to arguments that individual action on climate change, including from leaders, feeds into systemic change via social influence.

IC - (21132) - THE ROLE OF INDIVIDUALS AND HOUSEHOLDS IN THE TRANSITION TO A CIRCULAR ECONOMY: A SOCIAL SIMULATION APPROACH

Kathryn Colley[1]; Tony Craig[1]; Geeske Scholz[1]; Alice Hague[1]; Ruth Wilson[1]; Gary Polhill[1]; Doug Salt[1]; Phoebe Somervail[1]; Nazli Koseoglu[1]; Tami Stevenson[1]
1 - The James Hutton Institute

Background and objectives

Moving from a linear 'take, make and dispose' model of consumption to a Circular Economy (CE) model places greater emphasis on material flows, recovery of resources and valorisation of waste products. Consumption behaviour at the individual- and household-level will play a central role in the success of CE policy, yet CE research has tended to focus on industrial and technical production-side problems (Georgantzis Garcia et al., 2021). In this presentation we outline the role of individual and household-level behaviours in the CE transition and explore the value of social simulation methods to better understand behaviour in the CE context.

Process and methods (for empirical research)

We present our approach to investigating behaviour within the complex circular economy system, drawing on an example of previous research to illustrate the strengths of social simulation. Circular approaches to heating buildings prioritise the use of waste heat via heat networks (North & Jentsch, 2021). Using an empirically-grounded agent-based model (ABM) we went beyond the question of the technical feasibility of retrofitting heat networks, to simulate household uptake of district heating technology in the expansion of a city-scale district heating project in Aberdeen, Scotland.

Main results (or main arguments in the case of critical reviews)

We argue that developing the understanding of the role of individuals and households in the CE transition requires the adoption of a systems perspective, with corresponding methodological approaches. Our example of how ABMs have been used to explore consumer behaviour in a circular economy-relevant context highlights their value in developing frameworks for formalising and integrating theory from across disciplines, exploring the dynamic emergent outcomes associated with changing behaviours, and as an engagement tool for transdisciplinary research.

Implications for research and practice/policy | Importance and originality of the contribution

ABMs can provide a virtual testing ground to model the impact of policies over time. Our approach will involve working with policy-makers and practitioners to co-produce and test interventions and policy scenarios to aid prioritisation and intervention design.

Hour: 15:00:00
Session: G15 - Symposia - People and forests: fostering public involvement in wildfire prevention and forest conservation
Room: Room 2

Theme: Governance (5); Governance (1)

(21141) - PEOPLE AND FORESTS: FOSTERING PUBLIC INVOLVEMENT IN WILDFIRE PREVENTION AND FOREST CONSERVATION

Lígia Pinto[1]; Cristina Ribeiro[2]
1 - NIPE and Universidade do Minho; 2 - Universidade de Aveiro

Background and objectives

The megafires of 2017 in Portugal sparked intense debate and research aimed at better understanding the wildfire phenomenon in Portugal. One essential pillar of forest fire prevention relates to individual behaviors, societal actors involvement and collaboration in prevention and land management. However, research in Portugal has focused less on the socio-economic dimension of forest fire prevention, and more on perspectives anchored in natural sciences and technology.

Significance for the advancement of People-Environment relations

This symposium will bring together multidisciplinary research using qualitative and quantitative methods from a socio-economic perspective, drawing from the results of two research projects. It explores the relation between individuals and wildfires in terms of involvement in prevention and forest conservation. It expands the issue of governance in terms of management of natural resources and community-based approaches to the topic of wildfire prevention and the role and scope of individual and community involvement.

Pinto et al. use an economic valuation method to elicit the support of individuals for direct involvement in forest prevention

Fernandes and Figureiredo apply participatory methodology to study public and stakeholder engagement to support forest planning and management, while Ferreira et al. focus on differing perspectives from stakeholders and local actors about wildfire risks. Montelatto and Pinto engage ordinary citizens and firefights in focus group discussion to propose guidelines for a fire prevention policy in Portugal.

Simões and Fernandes focus on cooperative solutions amongst forest owners to overcome problems of fragmented land management in Portugal.

Papers to be presented:

Exploring the willingness to help prevent forest fires: your time or your money? – Marieta Valente, Maria Eduarda Fernandes, Ema Pedrosa

The ShareFOREST project – participatory methodology for public and stakeholder engagement in the protection and valorisation of forests in Portugal - Maria Eduarda Fernandes, Elisabete Figueiredo

Portuguese private forest owners' organizations (PFOO) and regulatory mechanisms - Paula Simões, Maria Eduarda Fernandes.

Participatory integrated assessment of wildfire risk: a qualitative approach to the case of Portugal – Carla Ferreira, Lígia Maria Costa Pinto, Marieta Valente

Social perceptions regarding wildfire prevention in northern Portugal - Mariana Bonacelli Montelatto, Lígia Maria Costa Pinto

Discussant: Cristina Ribeiro, Universidade de Aveiro, cristinaribeiro@ua.pt

IC - (21063) - PORTUGUESE PRIVATE FOREST OWNERS' ORGANIZATIONS (PFOO) AND REGULATORY MECHANISMS

Paula Simões[1]; Eduarda Fernandes[2]

1 - Escola Superior de Tecnologia e Gestão, Politécnico de Leiria e CeBER, Universidade de Coimbra; 2 - Escola Superior de Tecnologia e Gestão, CARME, Politécnico de Leiria

Background and objectives

When the forest holdings belong to many private forest owners and are very fragmented, concerted actions are essential to achieve the necessary scale and to promote sustainable forest management. Portugal is an excellent example of the need for owners' cooperation, for several reasons: private forest owners hold about 90% of the forest; many rural and inland regions are under risk of depopulation; the property is very fragmented; traditional agriculture-forest related activities declined significantly over time; due to the recent severe forest fires, post fire recovery actions are needed; aspects related to sustainability, such as ecosystem services and forest management certification are gaining relevance.

The main aim of this research is to understand whether private forest owners' organizations (PFOO) consider the regulatory mechanisms created by Portuguese authorities to promote cooperation appealing. The set of mechanisms analysed include forest intervention zones (ZIF), entities of forest management (EGF), unities of forest management (UGF) and integrated areas of environmental management (AIGP) and coexist with prior PFOO which are often part of their management structure.

Process and methods (for empirical research)

The officially registered PFOO were contacted by email between April and July 2021 and invited to answer an online questionnaire. Response rate corresponds to 47%.

Main results (or main arguments in the case of critical reviews)

More than 50% of the responding PFOO's are part of ZIF's management structure, while this value is only 7% to EGF, 5% to UGF and 3% to AIGP. However, 36% of the PFOO intend to create at least one AIGP in the next 5 years.

The three main reasons pointed by PFOO to adhere to these mechanisms were the need to create scale in forest management, owners' interest, and the priority or greater facility to public funding. Simultaneously, the main justifications not to use any of those mechanisms are the lack of owners' interest and their unawareness of advantages, and insufficient central government financial support.

IC - (21072) - THE SHAREFOREST PROJECT – PARTICIPATORY METHODOLOGY FOR PUBLIC AND STAKEHOLDER ENGAGEMENT IN THE PROTECTION AND VALORISATION OF FORESTS IN PORTUGAL

Maria Eduarda Fernandes[1]; Elisabete Figueiredo[2]; Sandra Valente[3]

1 - Escola Superior de Tecnologia e Gestão, CARME, Politécnico de Leiria; 2 - Departamento de Ciências Sociais, Políticas e do Território, GOVCOPP e CESAM, Universidade de Aveiro; 3 - Centro de Estudos do Ambiente e do Mar, Departamento de Ambiente e Ordenamento, Universidade de Aveiro

Background and objectives

The catastrophic wildfires of 2017 in Portugal have triggered a wide debate within civil society about future decisions and actions towards the rehabilitation and valorisation of forests. Although sustainable forest management is essential for public policies in Portugal, decision-making processes are still traditional and centralized, highlighting limitations both in the inclusion of society needs and the promotion of the full value of forests. Consequently, to develop models for forest governance the promotion of public and stakeholders' engagement in the decision-making processes is essential, together with the reinforcement of territorial governance and stimulation of changes in values, attitudes and behaviours' regarding the protection and valorisation of forests. ShareFOREST project main hypothesis is that citizens and stakeholders' participation in decisions concerning forests can contribute to reduce conflicts, build trust and facilitate learning. In the Portuguese context, where wildfires have reached dramatic proportions, participation and engagement assume special relevance, namely regarding the rehabilitation of the public forestlands located in the Central region (Matas do Litoral) and the prevention of future wildfires. Those processes represent excellent opportunities to re-connect local communities with forests, that demand changes in decision-making processes, an enhancement of public participation's culture, and an evaluation of its impacts. In this vein, the main aim (and outcome) of ShareFOREST is to develop and operationalize a participatory methodology to support co-decision in forest planning and management, reinforcing the principles behind territorial governance and, as ultimate goal, preventing and mitigating the impacts of future wildfires.

Process and methods (for empirical research)

To this end, a systematic analysis of the interests, needs and relationships of the social actors and stakeholders will be performed, together with the analysis of social and media narratives regarding forests and their valorisation. Workshops and close interaction between ShareFOREST team members, citizens and stakeholders will help to promote learning and trust during and beyond the project duration.

IC - (21122) - EXPLORING THE WILLINGNESS TO HELP PREVENT FOREST FIRES: YOUR TIME OR YOUR MONEY?

Marieta Valente[1]; Maria Eduarda Fernandes[2]; Ema Pedrosa[3]

1 - NIPE and Universidade do Minho; 2 - School of Technology and Management, and CARME, Polytechnic Institute of Leiria; 3 - School of Technology and Management, Polytechnic Institute of Leiria

Background and objectives

Wildfires are a major issue in different countries throughout the world. In Europe, southern countries like Portugal lose forest area to wildfires every year. In recent years, at least 45% of burnt area has been due to a megafire (more than 500 hectares). While natural causes can play an important role in the duration of wildfires, other factors related to land management are more relevant in explaining the cause of ignition and how long and where wildfires spread.

Process and methods (for empirical research)

In this study, we aim to analyze to what extent the Portuguese population is willing to help in the prevention of wildfires. We design a questionnaire to elicit perceptions and attitudes about wildfires, while at the same time applying economic methods of eliciting preferences. We posit that individuals who value forests and forest fire prevention may be willing to contribute directly. Individuals' involvement may take the form of payments for others to monitor the state of forests, in terms of cleanliness and conditions favorable for forest fires, or time to do them directly. The latter is a form of crowdsourcing, such as beach cleaning or biodiversity observation.

A sample of 301 Portuguese residents filled the questionnaire in July 2021.

Main results (or main arguments in the case of critical reviews)

In terms of monetary involvement, we observe that about 10% of respondents are not willing to contribute financially, whereas the average contribution for the other respondents is about €32 per year. In terms of direct involvement with time, respondents indicate that they are willing to spend on average 5 days helping. Additionally, we observe that respondents are more generous financially if they are first asked to dedicate time and then about a financial alternative, than if the financial alternative is presented first.

Implications for research and practice/policy | Importance and originality of the contribution

The preliminary results indicate that respondents value forest fire prevention and are equally motivated to sacrifice time or money

IC - (21400) - PARTICIPATORY INTEGRATED ASSESSMENT OF WILDFIRE RISK: A QUALITATIVE APPROACH TO THE CASE OF PORTUGAL

Carla Ferreira[1]; Lígia Maria Costa Pinto[1]; Marieta Valente[1]
1 - Universidade do Minho

Background and objectives

Forest fires are an important element of the forest ecosystem. However, during the 20 century, the increase in the number of fires and burnt areas surpassed the capacity of these ecosystems to recover after the fire. There is a large volume of literature on factors related to wildfire occurrence: human activities, vegetation dynamics, changing climate, and forest management. Wildland fire prevention is a complex issue, subject to different perceptions and even diverse paradigms among the population.

This study intends to understand the main causes and prevention strategies of wildfire, in order to purpose an Integrated Fire Management framework that can be used to support communities and managers in finding effective and efficient approaches to prevent damaging fires.

Process and methods (for empirical research)

To accomplish the goals proposed, participatory techniques were employed in different regions of Portugal. Focus groups method were held with key stakeholders and actors. Furthermore, a questionnaire was employed in each focus group. A content analysis was applied to the data collected.

Main results (or main arguments in the case of critical reviews)

Identified causes can be divided in two groups: external drives and human activities. As prevention strategies, producers highlighted the role of citizens, while the population argues the need for sustainable forest management promotion, authorities mentioned the need for better awareness and education of citizens.

Implications for research and practice/policy | Importance and originality of the contribution

Based on these results an Integrated Fire Management framework was proposed, according to active participation, formulation, and implantation of activities by main stakeholders' groups. This framework intends to help in the design and implementation of cost-effective strategies to prevent damaging wildfires and maintain desirable wildfire regimes in Portugal.

IC - (21401) - SOCIAL PERCEPTIONS REGARDING WILDFIRE PREVENTION IN NORTHERN PORTUGAL

Mariana Bonacelli Montelatto[1]; Lígia Pinto[2]
1 - .; 2 - Universidade do Minho

Background and objectives

Portugal is in the top ranking of wildfires in Europe, which can be considered the biggest environmental issue in Continental Portugal. The aim of this study was to analyze wildfire perceptions from Portuguese ordinary citizens and firefighters on four topics: the causes, risk, preventive factors and losses suffered in case of forest fires.

Process and methods (for empirical research)

Data was gathered through focus groups conducted online. The sessions were audio and video recorded and later transcribed and analyzed using Nvivo software.

Main results (or main arguments in the case of critical reviews)

Results showed that besides gender, different age, education level or place of living, the perception between focus groups interviewed was not significantly different. Firefighters were more consistent in their responses, while ordinary citizens differed in their perceptions.

Implications for research and practice/policy | Importance and originality of the contribution

As a conclusion, it was possible to provide four guidelines, encouraged by participants' perception, that can help identify some guidelines a wildfire prevention plan should include. The guidelines that emerge from the analysis of the group discussions are: 1) Increased government involvement with wildfire issues; 2) To educate children in a continuous way, namely by providing personal experiences with the environment; 3) To propose and put in practice strategies to mitigate wildfires; 4) To create new incentives to forest activities such as creation of new forest tracks or any program to bring the stakeholders back to forest.

Hour: 15:00:00
Session: S29 - Social Innovation
Room: Room 4

Theme: Sustainability (3)

IC - (21018) - RUSSIAN SCALE OF PRO-ENVIRONMENTAL BEHAVIOR: DEVELOPMENT AND PSYCHOMETRIC ASSESSMENT.

Alexandra Ivanova[1]; Fatikha Agisova[1]; Elena Sautkina[1]
1 - National Research University Higher School of Economics (HSE)

Background and objectives

Pro-environmental behavior largely depends on the socio-cultural context and the availability of specific infrastructure. Thus the use of Western scales for measuring this behavior in Russia does not allow for in-depth analysis of both the variability of pro-environmental behavior and of the effects of its determinants.

Process and methods (for empirical research)

Current study aims to develop a scale of pro-environmental behavior using qualitative and quantitative methods: literature analysis (n = 61), semi-structured interviews (n = 65), as well as socio-psychological surveys (n_1 = 542; n_2 = 56; n_3 = 462).

Main results (or main arguments in the case of critical reviews)

Based on the obtained data, a five-factor scale of pro-environmental behavior was developed. The scale includes the categories: household waste management, social actions, resource conservation, sustainable consumption and climate (transport) actions. The full and short versions of the scale demonstrated high reliability and internal consistency. The full version consists of 23 questions included in 5 subscales, and the short version includes 13 questions, the average of which can serve as an indicator of pro-environmental behavior.

Implications for research and practice/policy | Importance and originality of the contribution

As a result of this project, the first culturally-specific scale of pro-environmental behavior in Russia was created. It is an important step to improve the quality of Russian research in this area, ensure the relevance and validity of measurements. This methodological tool can also be used for monitoring the pro-environmental behavior of the population, at the level of organizations, universities, cities, etc. Thus, these results can have a positive impact on the environment and climate through the implementation of eco-friendly daily actions, which can be applied in policy, practice, education, and the activities of organizations.

IC - (21195) - ENERGY CITIZENSHIP IN THE SOUTH OF EUROPE: CONCEPTUALIZATIONS AND EMPIRICAL MANIFESTATIONS

Adina Dumitru[1]; Luisa Losada[1]; Nuria Rebollo[1]; Manuel Peralbo[1]; Manuel García Fernández[1]; Juan Carlos Brenlla Blanco[1]

1 - University of A Coruña

Background and objectives

The ongoing energy transition towards an environmentally-sustainable model requires both technological transformations as well as social and cultural changes. Within the latter, the concept of energy citizenship (ENCI) has been proposed, a construct that refers to people´s active engagement in the shaping of the energy system (Devine-Wright, 2007).

The H2020 project EnergyPROSPECTS aims to identify the societal conditions conducive to the thriving of engaged, sustainability-oriented, and democratic forms of energy citizenship. In an effort to unpack the concept, the project started from a conceptualization of energy citizenship across seven theoretical dimensions. These dimensions were then used to define a typology of energy citizenship, a series of ideal-types that could be used to guide the empirical and practical manifestations of the concept.

Process and methods (for empirical research)

To ground the concept further, an extensive mapping exercise of conceptualizations and empirical manifestations of energy citizenship has been carried out across European Union countries. A case of ENCI has been defined as a constellation of actors that enables/supports citizens to become active participants in energy debates and system in either the private or the public domain, or that acts as a collective energy citizen contributing to change (Vadovics et al., 2021).

Main results (or main arguments in the case of critical reviews)

In this paper, we use data from a regional workshop, as well as the mapping exercise of manifestations in Spain and Portugal, to: analyze the meanings of ENCI in the south of Europe; the types of energy citizenship manifestations most commonly identified; and a first analysis of these manifestations, especially in terms of their underlying assumptions of ENCI as active or passive, the depth of environmental commitments they encourage, and the extent to which they foster citizen empowerment.

Implications for research and practice/policy | Importance and originality of the contribution

We will show how ENCI is used in the south of Europe, as well as suggest practical ways in which it might be encouraged in different European contexts.

IC - (21391) - INNOVATION DISTRICTS AND ECO-INDUSTRIAL PARKS: A CRITICAL READING OF URBAN FORM AND SOCIAL ACCEPTABILITY OF NEW MODELS OF COMPREHENSIVE URBAN PLANNING POLICIES

Priscilla Ananian Priscilla Ananian[1]; Ariane Perras[1]; Adriana Huerta Núñez[1]
1 - University of Quebec in Montreal

Background and objectives

Ecological transition and sustainable development have fostered the emergence of new models of comprehensive urban planning policies. Based on the Industrial Ecology, the Quadruple Helix Model of innovation and the Industry 4.0, these concepts propose new ways for industrial activities to coexist within the city and to innovate, especially considering the economic and environmental aspects. This communication aims at questioning the social and urbanistic aspects, which have scarcely been studied in comprehensive urban planning policies, through the concepts of Innovation Districts (ID) and Eco-Industrial Parks (EIP). Definitions, limitations, and specificities of these concepts will be discussed based on empirical research.

Process and methods (for empirical research)

Methods are qualitative and based on an extensive international literature review on the concepts of Innovation Districts (ID) and Eco-Industrial Parks (EIP), non-participant observations and semi-structured interviews with stakeholders conducted from 2016 and 2022 in two case studies located in Montreal (Griffintown and Assomption Sud-Longue Pointe). We adopted a pragmatic approach in parternship with the City council of Montreal and other five institutional and community actors.

Main results (or main arguments in the case of critical reviews)

Our results show a certain discrepancy with the theory. In the cases analyzed in Montreal, public policies have used these models mainly to reinforce social acceptability, in order to create new urban planning references disassociated from former visions. While this approach seems innovative from a social and urban planning perspective, it struggles to gain the support of the industrial stakeholders and to optimize urban design interventions on the territory.

Implications for research and practice/policy | Importance and originality of the contribution

Our critical approach could help public decision-makers and economic actors to better understand these issues and to take into account social and urbanistic considerations for the implementation of comprehensive urban planning policies. The originality of this contribution relies on the people-environment centered approaches used to study ID and EIP.

Hour: 15:00:00
Session: S30 - Public/ Green Spaces
Room: Room 5

Theme: Sustainability (5)

IC - (20877) - SUSTAINABLE LIGHTING IN PUBLIC SPACE: A PROPOSAL OF A SOCIO-PHYSICAL CONCEPTUAL MODEL OF THE LIGHTING - BEHAVIOUR RELATIONSHIP

Vivi Katarina R. Hennig[1]; Steve Fotios[2]; Niko Gentile[1]; Catharina Sternudd[1]; Maria Johansson[1]
1 - Department of Architecture and Built environment, LTH, Lund University, Lund, Sweden; 2 - School of Architecture, The University of Sheffield, Sheffield, UK

Background and objectives

UN Sustainable Development Goal 11 envisages sustainable cities and communities, which are inclusive, participatory, promote civic engagement and engender a sense of belonging. The provision of safe, accessible and inclusive public spaces contributes to the achievement of this goal.

The literature suggests that outdoor lighting may support movements, accessibility, provide reassurance and comfort, therefore it may facilitate walking, enable stationary activities and social interaction in public spaces after dark.

The objective of this study is to propose a conceptual model of the relationship between lighting and behaviour in public squares, addressing the transactional relationship between three entities; the user, the lit environment of a public space and the behavioural outcome.

Process and methods (for empirical research)

The conceptual socio-physical model is based upon literature in the fields of public space studies, environmental psychology and applied lighting research. It incorporates cognitive and behavioural processes by adopting Stokols' modes of human environment transactions; interpretive, evaluative, responsive and operative mode[1].

The behavioural outcome element of this model was applied in an empirical field-study of two local public squares, investigating the types and frequencies of movements, stationary occupancy and social interactions in daylight compared to after dark with electric lighting. 5296 events were recorded in the weeks before and after daylight savings clock change, giving a natural change in ambient light. Odds ratio analysis was performed to investigate the effect of ambient light level.

Main results (or main arguments in the case of critical reviews)

Results showed insignificant differences in movements between daylight and darkness. Stationary activities and social interaction were increased in one of the squares.

Implications for research and practice/policy | Importance and originality of the contribution

The proposed conceptual model may be applicable to various environmental settings in the outdoor built environment. It forms a baseline for design of empirical studies and may be used for the stipulation of hypothesis as an analytic tool to investigate the lighting-behaviour relationship. Operationalization however, requires moving from the general to a specific level.

IC - (20969) - WALKING SPACES AND PERCEPTION OF THE QUALITY OF THE PLACE: AN INVESTIGATION ON THE EDGE OF LAGOA DOS PATOS / RS / BRAZIL DURING THE COVID-19 PANDEMIC

Andréia Schneid[1]; Lígia Maria Chiarelli[1]
1 - Federal University of Pelotas

Background and objectives

Providing quality of life in cities requires the maintenance of free areas, promoting the necessary contact between people and nature that gives tranquility and well-being, such as spaces for walking (HALL, 1977; KAPLAN; KAPLAN, 1989; VERSIANI, 2019). Supported by Environmental Psychology and Environment-Behavior Relations, this study approaches the physical space built in the beach environment, appreciated for its natural characteristics, and aims to investigate how it influences the perception of the quality of the place, through legibility: understanding that can give it meaning (KAPLAN, 1988; CARR et al., 1992).

Process and methods (for empirical research)

Of an exploratory character, with a qualitative methodological approach, a single case study is carried out on the edge of Lagoa dos Patos in São Lourenço do Sul, Brazil, a non-maritime beach environment restructured after a flood that caused damage to its infrastructure in 2011. To achieve the objective proposed, 28 interviews were done in mid-2020, Post-Occupancy Evaluation method that, due to the COVID-19 pandemic, was applied remotely.

Main results (or main arguments in the case of critical reviews)

The spaces for walking predominate in the legibility of the evaluated environment, due to the practice of this activity that provides well-being and relaxation, in addition to representing quality of life. Relevant by the memory of childhood and the flood, a perception conditioned to activities and to infrastructure, its insertion in the beach environment brings users and nature closer, promoting tranquility and well-being. The highlight to the walk in the COVID-19 pandemic reinforces the relevance of these spaces, revealing behavioral changes, such as its interruption or the use of a mask.

Implications for research and practice/policy | Importance and originality of the contribution

In the evaluated environment, spaces for walking provide the perception of the quality of the place, especially by the activity close to nature that arouses pleasant sensations. This study supports interventions in beach environments, exposing the importance of urban planning that contemplates these spaces and that considers the memory of the place.

IC - (21071) - CITY AND LOCK-DOWN: DAILY LIFE EXPERIENCE IN PANDEMIC AND POST PANDEMIC ERA

Hulya Turgut[1]; Nagehan Acımuz İsbakan[1]
1 - Ozyegin University, Faculty of Archıtecture and Design,

Background and objectives

This paper aims to examine and interpret the changing lifestyles with the Covid_19 pandemic and lockdown from the perspective of architecture students. *XXX* University-*City and Architecture* Master Program participated in Istanbul Architecture Festival with a Workshop title ***the Lock_down / Quarantine*** with the students of the program.In the program, which is carried out under the title of 'New' City and 'New' Architecture, investigate the reflections of the new and unexpected situations faced by the city in architecture

Process and methods (for empirical research)

With the workshop, It was aimed to create a common *"lockdown dictionary"* with the establishment of new relations with *heterotopeia-utopia-dystopian* imagines by mapping of daily individual routines in phased *"lockdown"* and restricted freedom practices in pandemic processes and also by expressing them with concepts, redefining concepts, redefining *"lockdown"* for possible future applications, producing, deriving and discussing all these mappings and concepts. The workshop was also an exercise that will help to express the conceptual infrastructures of projects produced at different levels and processes in the context of trying different tools *(text, diagrams, ideograms, graphics, maps, writing...)* when expressing produced, derived, discussed, redefined concepts.

Main results (or main arguments in the case of critical reviews)

Discussion of LOCKdown processes, which have been experienced in the very recent past, are now experienced with individual initiatives and are likely to be re-experienced by changing shape in the near future, through situations and stages such as LOCKdown, SEMI LOCKdown, RE-LOCKdown (names are also open to discussion), the identification of the past, today and the future are the first objectives.

Implications for research and practice/policy | Importance and originality of the contribution

Discussion of LOCKdown processes, which have been experienced in the very recent past, are now experienced with individual initiatives and are likely to be re-experienced by changing shape in the near future, through situations and stages such as LOCKdown, SEMI LOCKdown, RE-LOCKdown (names are also open to discussion), the identification of the past, today and the future are the first objectives.

IC - (21199) - GROWING NEW ROOTS: A SOCIAL-ECOLOGICAL APPROACH TO GREEN TRANSFORMATIONS IN FUNERAL PRACTICES

Elena Slominski[1]
1 - University of California, Irvine

Background and objectives

Despite growing awareness of our environmental footprint in life, we rarely consider the impact we will have in death. Yet in the Anthropocene, the environmental burden of funerals requires urgent concern. Embalming, cremation, and casketed burial remain the dominant post-mortem customs in the U.S. today, imposing a substantial strain on the environment through soil degradation, air pollution, hazardous toxins, and increasing demand for permanent cemetery space. While these unsustainable rituals have become 'traditions' over the past century, funeral practices can also shift and evolve alongside sociocultural trends and developments. Indeed, recent years have seen an upswing in environmentally friendly options, including green burials, conservation burials, aquamation, and human composting. However, these 'eco-funerals' have not yet been adopted into the mainstream culture. Examining both local community and macro-societal levels, the aim of this research is to illustrate how and under what circumstances funeral practices develop, spread, and evolve, potentially creating fertile ground for eco-funerals to flourish.

Process and methods (for empirical research)

This research involved participatory site observations as well as semi-structured interviews with various funeral professionals to get an in-depth understanding of post-mortem practices in the United States. Combining social practice theory with a multilevel framework enabled an analysis of both micro- and macro-level dynamics shaping the American death system.

Main results (or main arguments in the case of critical reviews)

This study reveals the dynamic human-environment interactions that continuously shape funeral practices. Key societal events (or "tipping points") that have shifted the norms around funeral rituals include the proliferation of embalming following the Civil War, the establishment of the funeral industry, the turn towards cremation, and, more recently, the incremental adoption of eco-funerals.

Implications for research and practice/policy | Importance and originality of the contribution

This project expands prior research by examining the multilevel influences that shape the trajectory of the American death system. The research contributes to the discussion on funeral reform as well as the wider theoretical discourse on the human-environment interactions underpinning sustainable systems change.

IC - (21397) - UNDERSTANDING RESIDENTIAL CHOICES IN TIMES OF PANDEMIC: A LITERATURE REVIEW

Andréane Moreau[1]; Marie-Hélène Vandersmissen[2]; Carole Després[3]

1 - Master's Student, M. Arch. and M. Sc. in Architecture, Laval University; 2 - Professor of Geography, Laval University; 3 - Ph.D., Professor of architecture, Laval University (Canada)

Background and objectives

The COVID-19 pandemic has transformed many households' relationship to space and time, redefining their experience of housing and neighborhoods as well. In some cases, the health crisis became a reason to move to a larger dwelling and/or to a less dense area with better connection to nature. As the climate crisis worsens and urban sprawl continues to grow, it appears critical to further understand how COVID-19 affects households' residential choices. This literature review aims to provide a state-of-the-art report on residential choices in times of COVID-19.

Process and methods (for empirical research)

A total of seven databases were searched to identify studies regarding residential mobility, aspirations and perceptions during the pandemic. Of the 699 texts found, 25 were included in the review following the selection process. All were published between 2020 and 2022, and most originate from Europe.

Main results (or main arguments in the case of critical reviews)

The analysis reveals an increase in real estate transactions in peripheral areas, a desire for comfort to better respond to new needs, and an aversion to dense and/or busy areas, generally perceived as places of high virus transmission. The identified trends confirm the interest of households for less dense areas, but also the appeal of second homes as a compromise between urban dynamism and idyllic isolation in the countryside or suburbs. Nevertheless, the picture remains partial, with underrepresentation of several key sociodemographic groups and a limited time perspective. Further research will be needed to objectively assess whether these residential trends exacerbate urban sprawl.

Implications for research and practice/policy | Importance and originality of the contribution

This review provides a better understanding of actual issues, particularly those related to household behaviors during the pandemic.

While the pandemic is still ongoing, it is difficult to grasp the magnitude of its impacts on urban dynamics, let alone on natural environments. It does, however, provide an unprecedented opportunity to study the reorganization of everyday life in times of crisis to inform decision-making on a larger scale.

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