2013 iaps international network symposium

A Coruña, Spain
June 25-28, 2013

Sustainable Environments in a Changing Global Context

Identifying Opportunities for Innovative Spaces and Practices in Contexts of Crisis

Photo: Consorcio de Turismo de A Coruña

BOOK OF PROCEEDINGS · ABSTRACTS

Edited by Ricardo García Mira and Adina Dumitru
On behalf of the Sustainability, Housing, and Culture & Space IAPS networks

2013 iaps international network symposium

A Coruña, Spain
June 25-28, 2013

Sustainable Environments in a Changing Global Context

Identifying Opportunities for Innovative Spaces and Practices in Contexts of Crisis

Table of Contents

Introduction 17

Steering Committee 20

Scientific Committee 21

Organizing Committee 23

Invited Sessions 24

IS-1 THE ADDED VALUE OF PEOPLE-ENVIRONMENT STUDIES FOR HOUSING RESEARCH AND PRACTICES **25**
Chair: Roderick J. Lawrence

Health consequences of green building practices: Issues of an aging population 25
Sherry Ahrentzen

Let's speak out! How people-environment researchers can make a difference in housing-related policies 27
Carole Després

IS-2 SUSTAINABILITY – STILL A SPARKLING AND FUZZY CHALLENGE IN TRANSDISCIPLINARY PROJECTS **28**
Chair: Petra Schweizer-Ries
Renate Cervinka & Jennifer Senick

Sustainability Science and its contribution to the IAPS: seeking for strong sustainability? 29
Petra Schweizer-Ries

How to communicate options carved out under a wrong headline? Lessons learned from restoration research 30
Renate Cervinka

Nested Sustainability Efforts: Saving Jobs and Energy in a Changing Region 31
Jennifer Senick

IS-3 SOCIO-CULTURAL SUSTAINABILITY: HISTORICAL AND TRADITIONAL ENVIRONMENTS IN CITIES OF THE GLOBALIZING WORLD **33**
Chair: Hülya Turgut
Dina K. Shehayeb & Derya Oktay

Socio-Cultural Sustainability: A Conceptual Overview and the Case of Istanbul in a globalizing world 33
Hülya Turgut

Cultural Sustainability: Towards divergence or convergence? 34
Dina Shehayeb, Ahmad Borham & Aleya Abdel-Hadi

Towards Human Sustainable Urbanism: Interrogating the Contemporary Approaches and the traditional Turkish (Ottoman) City 36
Derya Oktay

Specific Sessions 37

SS-1 LOW CARBON AT WORK: BRIDGING THE GAP BETWEEN QUALITATIVE AND QUANTITATIVE METHODS IN SUSTAINABILITY RESEARCH IN ORGANIZATIONS **38**
Conveners: Ricardo García Mira, Giuseppe Carrus & David Uzzell
Chair: Ricardo García Mira

Qualitative and quantitative methods in sustainability research: An introduction to the multi-method approach in LOCAW 39
Ricardo García Mira & Adina Dumitru

Modelling low carbon behaviours at work: Integrating findings from different case studies using agent based modelling and decision trees 41
Tony Craig, Gary Polhill, Amparo Alonso Betanzos, Óscar Fontenla Romero, Noelia Sánchez Maroño, Miguel Rodríguez García & Ricardo García Mira

Structural and individual factors influencing recycling behaviour at work. An integrative approach regarding a Romanian water company 42
Corina Ilin, Daniela Moza & Alexandra Stancu

Participatory tools for future mapping: the use of back-casting scenarios in transitions to sustainable organizations 44
Adina Dumitru & Ricardo García Mira

Users' behaviours, management and technical solutions: A fundamental integration for low carbon builings. The case of Roma Tre University 45
Lucia Martincigh, Paola Marrone, Judit Kimpian & Marina Di Guida

SS-2 PARTICIPATORY TRANSITORIES TO A LOW CARBON EUROPE: LESSONS FOR POLICY **47**
Convener: Walter Wehrmeyer
Chair: Walter Wehrmeyer

Getting to radical sustainability: are we radical enough for changes? 47
W. Wehrmeyer, S. Fudge, Z. Stasiskiene, A. Staskevicius, A. Farsang, L. Venhoeven & G. Perlaviciute

Teenage Envisions to a Sustainable Europe in 2030; how to get there? 49
W.J. Luiten & S.B. Emmert

New Futures and News ways to get there: Examining School Pupils' and Experts' Transition Pathways across 6 EU countries[1] 50
W. Wehrmeyer, S. Emmert, A. Farsang, E. Kondili, Z. Stasiskiene, L. Venhoeven & G. Vitterso

Identifying key drivers, barriers and change agents: policy and practice-relevant lessons from six countries across the EU 51
A. Farsang, Alan Watt, W. Wehrmeyer & Shane Fudge

SS-3 PERSON, URBAN SUSTAINABILITY AND PUBLIC SPACE **53**
Convener: Bernardo Jiménez Domínguez
Chair: Mario Noriega

Person, urban sustainability and public space 53
Bernardo Jiménez, Mario Noriega, Miguel Ángel Aguilar & Ana Rosa Oliveira

The sensorial and urban experience of walking in Mexico City 53
Miguel Ángel Aguilar Díaz

The construction of sustainable cities through the practice of 'Open Urban Design' 55
Mario Augusto Noriega Toledo

Puerto Vallarta, practices and imaginary of its inhabitants and tourists 57
Ana Rosa Olivera Bonilla

SS-4 THE ROLE OF SUSTAINABLE URBAN GREEN SPACES FOR PROVIDING ECOSYSTEM SERVICE AND MAINTAINING HUMAN WELL-BEING IN THE CONTEXT OF A GLOBAL URBANIZATION **58**
Conveners: Nadja Kabisch, Dagmar Haase & Sigrun Kabisch
Chair: Nadja Kabisch

The role of sustainable urban green spaces for providing ecosystem service and maintaining human well-being in the context of a global urbanization 58
Nadja Kabisch, Dagmar Haase & Sigrun Kabisch

Links between urban vulnerabilty and green infrastructure: an evaluation of urban agriculture practices by women farmers in Addis Ababa 59
Nathalie Jean-Baptiste & Sigrun Kabisch

Affordances for senior-appropriate urban green spaces in shrinking cities 60
Merten Nefs, Susana Alves, Ingo Zasada & Dagmar Haase

Paper Sessions 61

PS-1 HOUSING AND SPACE: SOCIAL PERCEPTION, EMOTION AND BEHAVIOUR **62**
Chair: Seung Kwang Shon

A comparative study of professional and laypersons perceptions of social housing design 62
Grant Gray, Edward Edgerton & Duncan Sim

Urban thermal comfort of public spaces: The case of Bilbao city 63
M. Karmele Herranz-Pascual

Developing a multidimensional measure for evaluating perception and behavior in open spaces on the periphery of the residences; case study of open spaces between the buildings in Japanese neighborhoods 65
Amir Shojai & Suguru Mori

Architectural mechanisms for emotion in Moratiel house by J.M. Sostres 66
Sonia Vázquez-Díaz

The role of traditional building materials in influencing the place identity and the perceived restorativeness of the inhabitants 68
Pierluigi Caddeo, Renato Troffa & Giulia Sardo

PS-2 CONCEPTUAL DIMENSIONS OF ARCHITECTURE AND DESIGN **70**
Chair: Carole Després

Environmental architectural design and the bio psycho anthropological matter 70
Héctor García Olvera & Adrián Baltierra Magaña

Rediscovering the verbs of architecture 71
Roger Tyrrell

Development of hybrid space from vernacular to contemporary architecture to achieve sustainability (staircase housing) 72
Özgür Dinçyürek & Ehsan Reza

Constant crisis? Opportunities for innovative approaches in old industsrialised regions in central Europe 74
Jörn Harfst

International prize for sustainable architecture. The 10th anniversary 75
Marcello Balzani, Lea Calabrese & Luca Rossato

PS-3 INTERACTIONS AND EXPERIENCES IN EDUCATIONAL CONTEXTS **77**
Chair: Dennis Kerkman

The education of the architect in the twenty-one century B.C.: Psychosocial new findings and environmental sustainability challenges 77
Magda Saura Carulla & Josep Muntañola Thomberg

The children art center for public schools 78
Lee Nayoung, Paik Jinkyung, Park Yubin & Kim Hwasil

A study on outdoor spaces near classrooms of elementary and junior high schools 80
Hitomi Ogura & Kaname Yanagisawa

A study of the housing supply by a community for continued existence of a local school 82
Yumiko Fukuda, Fumika Kobayashi, Aya Ishigaki, Sachiko Yamamo & Reiko Shimokura

Indigenous educational practices – Keys to promote interations between children and natural environments 84
Christiana C. Profice Léa Tiriba

PS-4 SUSTAINABILITY POLICY AND ASSESSMENT INDICATORS **86**
Chair: Dennis Kerkman

LCA approach todefine environmental indicators for building 86
Alessia Meloni

Interrogating sustainability: Urban transition of a mining town 87
Ram Sateesh Pasupuleti & Kristina L. Nilsson

Galicia wind sustainability: Key policy and socio-environmental implications 88
Rosa María Regueiro Ferreira & Juan José Varela Tembra

A fair market chains (case study, smallholder producers wood batik krebet sendangsary village, Yogyakarta) 89
Laili Fuji Widyawati

The analysis of survey response data 90
Mark Del Aguila

PS-5 SUSTAINABLE HOUSING: CHANGE AND ADAPTATION 91
Chair: Edward Edgerton

Sustainable long time housing system: CSI housing in a changing global context 91
Quing Miao & Jingmin Zhou

Sustainable housing: The changing role of the domestic ocupant 92
Jane E. McCullough, Sarah Lappin, Carolyn Hayles & Moira Dean

Densification as main strategy for the urban renewal 93
Barbara del Brocco & Mariella Annese

Housing preferences and sustainability: The Polish case 94
John Dee & Ewa Stachura

Passive houses as social practice 95
Michael Ornetzeder

PS-6 MAPPING URBAN SPACE 96
Chair: Pablo Páramo

Constructing alternative spatialities in Kampala city: Two cases 96
Lilian Namuganyi & Rolf Johansson

Study of the appropriation of squares in Florianópolis, Brazil 97
Gabriela Yoshitani da Luz, Larissa Miranda Heinish, Vanessa Goulart Dorneles, Fábio Lúcio Lopes Zampieri & Vera Helena Moro Bins Ely

Affective maps: Validating a dialogue between qualitative and quantitative methods 99
Z.A.C. Cruz Bomfim, H. Fonseca de Alencar, T.L. Moraes Ferreira, B.A. Lemos Nobre, A.K. Silva Martins, M.Z. Souza, T. Freire Monteiro & C. Carneiro Rocha

The (informal) economy of cities. Configurational and metric properties of street markets in Santiago, Chile 100
Rodrigo Mora, Francisco Bosch, Carlos Rothmann & Genaro Cuadros

PS-7 ENVIRONMENTAL PERCEPTION AND BEHAVIOUR: PSYCHOSOCIAL ASPECTS 103
Chair: María Pilar García

Users environmental perception and behaviour in two infusion medication units: Infectology and Chemotherapy 103
Patricia Biasi Cavalcanti

The influence of urban and natural environment on user's perceptions 105
Taís Feijó Viana

People' mood and architecture style: A study of human behaviour and place preference 106
Adriana Portella, Inês Quintanilha, Andressa Mativi Rocha, Ellen Scott Hood & Sinval Cantarelli Xavier

Perceived walkability of different neighborhood types: A case study in Izmir Turkey 107
Ebru Cubukcu & Burcin Hepguzel

Comparative analysis on employee's perception and possible purchasers in commercial environments – Case study in two Florianápolis stores 108
P.B. Cavalcanti, V.H.M. Bins Ely, C.C. Nunes, L.G. Anghinoni& J.M.A de Santana

PS-8 SUSTAINABILITY IN ORGANIZATIONS **112**
Chair: Isabel Lema Blanco

Becoming a more sustainable society: An approach to tracking the culture of sustainability in organizations and cities 112
Robert W. Marans & John Callewaert

From the University campus: Strategic opportunities to influence day-to-day sustainable practices in the city of Santiago 113
Beatriz C. Maturana & Walter Imilan

Daylit intelligent sustainable ofices: Results of daylight simulation study 114
Dariusz Masly

Psychosocial evaluation in organizational environments to achieve healthy workplaces 115
Amelia Fraga Mosquera & Ricardo García Mira

Complex determinants of sustainable behavior in the workplace: the case of universities 117
Adina Dumitru, Ricardo García Mira & Miguel Muñoz

PS-9 SOCIAL HOUSING: EVALUATION, ANALYSIS AND INNOVATION **118**
Chair: M. Karmele Herranz-Pascual

Social housing in consolidated urban centres: Comparative analysis of recent solutions in the contemporary cities of Sao Paulo (Brazil) and Madrid (Spain) 118
Cássía Bartsch Nagle & Leandro Silva Medrano

Innovative living space in a new century: CSI housing of urban small-sized dwellings 119
Jingmin Zhou & Qing Miao

An analysis of an housing settlement in Istanbul 121
Roberta Camaggio

New alternatives for social housing in contemporary Brazil 122
Leandro Medrano, Carolina Celete, Eliane Roberto & Giovana Feres

PS-10 SUSTAINABLE URBANISM: CHALLENGES AND STRATEGIES FOR INNOVATION **124**
Chair: Andrew Seidel

Challenges of sustainable urbanism in the emerging city of Doha 124
Ashraf M. Salama & Florian Wiedmann

A study of the modernization and sustainability of traditional Hanok in 20th century modernization period 125
Seung Kwang Shon

Citizen strategies for times of crisis – Proposals for the city of Carballo, Coruña (Spain) 126
Felipe Peña, Cristóbal Crespo, Mónica Mesejo, Sandra González, Juan I. Prieto, Emilio Rodríguez & Óscar Pedrós

PS-11 SUSTAINABLE BEHAVIOUR **128**
Chair: Bernardo Hernández

The role of the socio-environmental interdependence in the explanation of frugal behaviors 128
Gabriel Muiños, Ernesto Suárez, Víctor Corral-Verdugo & Bernardo Hernández

Sustainability communication and sensitisation 129
Petra Schweizer-Ries, Alex Metternich, Eva Wessela & Manuel Riemer

Environmental orientation in a Brazilian city 130
Ariane Kuhnen, Luana dos Santos Raymundo, Maira Longhinotti Felippe & Patricia María Schubert Peres

IAPS sustainability 131
Chris Watson

Environmental concern and sustainable consumption among Malaysian urban consumers 131
Ahmad Hariza Hashim

PS-12 GOVERNANCE AND PARTICIPATION FOR SUSTAINABILITY **133**
Chair: Ferdinando Fornara

Attitude an perception of Kuala Lumpur population on Klang river rehabilitation project 133
Asnarulkhadi Abu Samah & Ahmad Hariza Hashim

Policy in the making: The governance of darkness and urban light pollution 134
Katharina Krause & Josiane Meier

Public participation in sustainability policies: The role of narrative and reflexive representations in the reception of new biodiversity conservation laws 135
Carla Mouro, Paula Castro & Ana Sofia Jacinto

Public participation in water management. The implementation of the water framework directive in the basin river basin management plans Galicia 136
Isabel Lema Blanco & Ricardo García Mira

PS-13 SOCIAL HOUSING AND PUBLIC POLICIES **139**
Chair: Aleya Abdel-Hadi

Social housing and public policies: Similarities and differences between the Brazilian and the Spanish case 139
Katrin Rappl & Leandro Medrano

Public housing policy in Brazilian informal settlemments: Consolidation of a fragmented model and partial service 140
Eliane Roberto & Leandro Medrano

Taking advantage of the economic crisis : Re-approaching regional planning for sustainability 142
Abdul Hadi Harman Shah, Abdul Samad Hadi, Shaharudin Idrus & Ahmad Fariz Mohamed

Proximity. Noteson Cairo agrarian urbanism 143
Antonia M. A. Chiesa

A theoretical background for understanding the transformation of low-rise appartment housing units' plans in Istambul: An interpretation model on the changing semantics of housing space organizations 144
Mehmet Emin Salgamcioglu & Alper Unlu

PS-14 CULTURE AND SPATIAL ANALYSIS **146**
Chair: Rolf Johansson

Tessin's urban landscape – A cultural-spatial analysis of Tessin's plan for the surroundings of the Royal Palace in Stockholm 146
Rolf Johansson

Maps as landscape 147
Jesús Conde García

A comparative study on the role of courtyard in the traditional Cypriot and Iranian houses 148
Ozgur Dincyurek & Halleh Nejadriahi

The effects of traditional and global architecture related with nature and culture for the case of Izmir Institute of Technology in Turkey 149
Ayşen Cevriye Benli

PS-15 SOCIAL ENVIRONMENTS AND PERCEPTION **151**
Chair: Giuseppe Carrus

Ecological implications of children and youth understandings and social needs in the transformation of the Amazon rainforest 151
Maria Inês Gasparetto Higuchi, Daniele Cunha Rosa, Sylvia Souza Forsberg & Isolda Gunther

The influence of urban neighborhood environment on residents' place attachment – Tain an city as an example 152
Heng Zhang & Hsiu Kai Chang

The impact of sound on environmental experience: Do multimodalities improve spatiotemporal landscape understanding? 154
Mark Lindquist, Eckart Lange & Jian Kang

From ego-depletion to psychological restoration: A study of the cognitive, behavioural, and social benefits of contact with nature in early educational settings 155
Giuseppe Carrus, Massimiliano Scopelliti, Sabine Pirchio & Ylenia Passatore

Design principles of local center with perceptional approach for participation 156
Neda Sadat Sahragard Monfared, Hashem Hashem Nejad & Seyed Abbas Yazdanfar

PS-16 PUBLIC FACILITIES IN HEALTH AND EDUCATION **158**
Chair: Claudia Andrade

Public facilities as elements of territorial cohesion. Case study University and Hospital Networks in Galicia 158
Cristina García Fontán

Planning characteristics of nursing homes in Japan. The relationship between space and management 159
Mori Shiho, Taniguchi Gen, Inoue Yukiko, Kato Akikazu & Chan Seng Kee

Environmental options, hospital rooms, and patients' well-being 160
Cláudia Campos Andrade & Ann Sloan Devlin

The relationship between kindergarten yard and playing from the viewpoint of the difference in age 162
Hiromi Nakagawa

A study on teacher's work area of junior high schools with department system 163
Megumi Yano & Kaname Yanagisawa

A study on the planning of University libraries. A case study of the new Chiba University Library 165
Yuko Ishizuka & Kaname Yanagisawa

PS-17 URBAN PLANNING AND DESIGN IN EDUCATIONAL CONTEXTS **167**
Chair: Jesús Miguel Muñoz

A study on the classroom design and planning of international schools 167
Juri Yamada & Kaname Yanagisawa

How to promote multicultural urban planning and strategically prevent segregation? Case study in Helsinki, Urban Laboratory Course Autumn 2012 168
Helena Teräväinen

The relationship between nursery schoolyard and playing behavior 170
Hiromi Nakagawa & Kaname Yanagisawa

Outdoor as learning environment for children at a primary school of Bangladesh 172
Matluba Khan & M Zakiul Islam

PS-18 PERCEPTION OF URBAN SPACE AND PLACE ATTACHMENT **174**
Chair: Derya Oktay

Personality and behaviour inferences based in the place of residence 174
Jose Palma Oliveira & Fátima Bernardo

Place-space and place-making. An integrative agenda to investigate place-identity 175
Eman El Nachar & Aleya Abdel-Hadi

The barbican estate: Representation and attachment 176
Clara Weber

The fear to the city: An exploratory analysis 176
Pablo Páramo

PS-19 ENGAGING COMMUNITY IN RISK AND VULNERABILITY MANAGEMENT **178**
Chair: Tony Craig

Opportunities for security governance in the face of local safety crisis 178
Abdul Samad Hadi, Abdul Hadi Harman Shah, Shaharudin Idrus & Ahmad Fariz Mohamed

Achieving safety through governing risks ? Urban crime prevention strategies in Sweden 179
Rolf Lidskog

Orkcemp: Exploring ideas about community in Orkney 180
Carlos Galán-Díaz & Liz Dinnie

Psychological costs of poverty 181
María Montero-López Lena & Gary W. Evans

Community development model of Kedung Cowek subdistrict as coastal community based on subdisstrict profile as social capital data 183
Akhmad Fauzie

PS-20 URBAN PLANNING: CULTURE AND REGULATIONS **184**
Chair: Paula Castro

Urban-rural interface: Living environments in a changing world 184
Ronit Davidovich-Marton

The impact of planning regulations versus livelihood activities of residents in Tanzania and South Africa 185
Wolfgang Scholz, Sabine Baumgart, Susanna Godehart, Peter Robinson & Tanya Dayaram

Culture, behavior, and urban development in Cairo informal areas 186
Hassan El Mouelhi

Making city, building citizenship. The Coruña's Civic Agreement. Dissemination and projection in its local active policies 188
Héctor M. Pose

PS-21 HOUSING AND SUSTAINABLE ARCHITECTURE **190**
Chair: José M. Palma Oliveira

Greening the neighbourhood for livability: The case of Seremban, Malaysia 190
Shaharudin Idrus, Abdul Samad Hadi, Abdul Hadi Harma Shah, Mohd Raffi Othman & Ahmad Fariz Mohamed

Time preference and risk aversion among development and construction professionals and managers 191
Ian Ellingham, William Fawcett & Peter Wallström

Mapping human factors for sustainable living 193
Pernilla Hagbert & Olga Bannova

Reevaluating micro scale urban voids: Strategies for creating landscape value 194
H. Serdar Kaya & Meltem Erdem

Celebrating buildings of glass in the tropical regions. A flaw in Architecture 196
Crispino C. Ochieng

PS-22 SUSTAINABILITY IN URBAN SPACE: PARTICIPATORY APPROACHES AND HUMAN BEHAVIOUR **197**
Chair: Hülya Turgut

Participatory design of 'Pedestrian-focused' streets through the application of universal design principles 197
Anli Ataöv Demirkan & Soghra Rashidi

Sustainable project for constructing the Pocket Park in the collaboration with inhabitants, students and local professionals in Sanjo, Japan 198
Shin-ya Nishimura, Satoshi Boda & Noriko Sakurai

Major urban design qualities supportive of stationary social activities in central urban open spaces within large cities 200
Paula Barros

Inclusive housing strategies to age in place: From empirical research to collaborative design studios 201
Carole Després, Denise Piché & Laurence Jodoin-Nicole

PS-23 VULNERABILITY, RESILIENCE AND RESTORATION **202**
Chair: Adina Dumitru

Unintended consequences of natural resources-based developments. The case of As Pontes in Coruña (Galicia, Spain) 202
Xaquin S. Pérez Sindín López

The possible impacts of climate change in the city of Recife, Brazil 204
Luiz Priori Jr

Vulnerabilities and resilience of communities living in circumstances of risk 205
Edinéa Alcântara de Barros e Silva & Rosinha Barbosa Fátima Furtado

Risky driving behaviour analysis using the theory of planned behaviour. The role of attitudinal and normative beliefs 207
Cristina Adelaide Pimentão Marcelino & Ricardo García Mira

Art museums as restorative environments? 208
Stefano Mastandrea, Fridanna Maricchiolo, Massimiliano Scopelliti & Giuseppe Carrus

PS-24 GREEN SPACES AND BIODIVERSITY CONSERVATION **210**
Chair: Ashraf Salama

Design with nature in sustainable cities 210
Ensiyeh Ghavampour, Brenda Vale & Mark del Aguila

Components of sustaining public space in a changing global context 211
Ensiyeh Ghavampour & Brenda Vale

Urban gardening in Prague, Czechia: Reinventing sustainability 212
Jana Spilková

The role of norms and ambivalence in biodiversity protection 213
Paula Castro & Carla Mouro

Optimizing the blue carbon potention by develope mangrove land in Indonesia to reduce the global warming effect 214
Alfi Irfan

Stress reducing effects of different urban green areas: An experimental study 216
Liisa Tyrväinen, Ann Ojala & Kalevi Korpela

PS-25 HEALTHY HOUSING AND VULNERABILITY **218**
Chair: Sherry Ahrentzen

Supportive homes for uprooted lives. A cross-disciplinary action research on the refugees centers in Milan 218
Rainisio Nicola, Giunta Elena & Rebaglio Agnese

A social network in the posts-conflictual residential settings 219
Beril Ozmen Mayer & Elinwa Ugochukwu Kenechi

Unexpected changes as a principal factor of urban disorganization 220
Myriam Goluboff Scheps, Amparo Casares & Cristina García Fontán

PS-26 DETERMINANTS OF SUSTAINABLE ENERGY CONSUMPTION **223**
Chair: Patrick Devine-Wright

Psychosocial antecedents of intentions to use renewable energy devices at household level 223
Ferdinando Fornara, Marina Mura, Piermario Pattitoni, & Elisabetta Strazzera

Attitudes and acceptance towards wind farms in an area of economic crisis 224
Renato Troffa & Pierluigi Caddeo

A critical and empirical analysis of the national-local 'gap' in public responses towards large-scale energy infrastructures 225
Susana Batel & Patrick Devine-Wright

Sustainable energy and sustainable communities. Social representations and rhetoric construction of energy issues in Italy 226
Mauro Sarrica, Sonia Brondi, Paolo Cottone, Chiara Piccolo & Bruno Mazzara

Low carbon energy technologies and the meaning of home: The enduring significance of the hearth for older adults 227
Patrick Devine-Wright, Wendy Wrapson, Nicholas Hume, Sam Brown, & Alan Lewis

PS-27 HEALTHY ENVIRONMENTS **228**
Chair: Xavier Alcalá

Urban environmental stressors: Extend of annoyance, sleep disturbance, and impact on residential satisfaction in The Netherlands 228
Ric Van Poll, Oscar Breugelmans & Jeroen Devilee

A conscientious approach to the design of sustainable therapeutic environments for vulnerable populations 229
Angela Bourne & Kristi Gaines

Revitalizing the linkage between nature and health: The study on green infrastructure for active travel in the compact cities 230
Mei-Lin Su

The social sustainability of public spaces in hospitals. Remarks on some case studies from Tuscany 232
Sabrina Borgianni, Caterina Di Costanzo, Nicoletta Setola & Maria Chiara Torricelli

PS-28 ENGAGING COMMUNITY IN URBAN PLANNING **235**
Chair: Sigrun Kabisch
Streetbook community park – Networking community engagement 235
Salsabeel Amin & Nagwa Sherif
Space to assemble. From Agora to Twitter 236
Ryan Locke & María Beltrán
Minor urban transformations toward enhancing participatory qualities of urban spaces 238
Aynaz Lotfata
User participation in the building process of social and cultural facilities. Examples from Germany and Japan 239
Pilyong Chong
Affordances in childrern's play at nature: One study oin Florianópolis, Brazil 241
Ariane Kuhnen & Patricia Maria Schubert Peres

Poster Sessions 243

PST-1 SUPPORTIVE DESIGN AND THE BUILT ENVIRONMENT **244**
Chair: Alberto Díaz
Recovery in Handmade Customization -Practical Approach to Temporary Housing for Disaster Victims 244
Akihiko Iwasa
The Collaboration of Virtual and Physical Architecture: A Comparative Study of Digital and Physical Design Processes 245
Aaron Kadoch
A Study on the Sign Design and City Identity in Busan and Fukuoka 246
Hansok Seo
Research Study of Emotional Words on Environmentally Friendly Spaces 247
Jisun Youn, Jiyoung Oh & Heykyung Park
A Study on the Tendency of Environment Color of Hospital Lobby for Remodeling 248
Wang Zhi Hao & Heykyung Park
Perceived safety, comfort and satisfaction related to the stadium experience 249
Sara Manca & Ferdinando Fornara
The relation between the physical environment, the social climate and burnout in the work environment 250
Alejandra García Saisó & Jesús Felipe Uribe
Historical and Cultural Heritage, Environmental Psychology and Affectivity 251
Z.A.C Cruz Bomfim, T. Moraes Ferreira, B.A. Lemos Nobre, T. Freire Monteiro, V.L. Batista & L.M. Gonçalves Siebra
Peri-urban open spaces and the configuration of the everyday landscape in metropolitan areas 252
Marta Benages-Albert & Pere Vall-Casas

Eco-Friendly Image in Korean Ecological Museums 254
Jisun Youn, Jiyoung Oh & Heykyung Park

PST-2 COGNITIVE AND EMOTIONAL ASPECTS OF HUMAN-ENVIRONMENT RELATIONSHIPS **255**
Chair: Amelia Fraga

Do the levels of life affect the sense of community, residential and vital satisfaction? 255
Pilar Moreno-Jiménez, Macarena Vallejo, M. Luisa Ríos & M. Carmen Hidalgo

Validation and predictive capacity of the New Human Interdependence Paradigm Scale 255
Ernesto Suárez, Víctor Corral-Verdugo, Bernardo Hernández & Gabriel Muiños

Emotions and individual and organizational coping strategies during the emergence of the submarine volcano 1803-02 in the island of El Hierro 257
Cristina Ruiz, Carmen Tabernero & Bernardo Hernández

Validation of emotions towards water consumption scale in a Mexican sample 257
Juan Carlos Manríquez Betanzos & María Montero-López Lena

U.S. University students' concern for environmental sustainability in the context of economic crisis 258
Dennis D. Kerkman & Brian J. Cowley

Attentional bias toward typical shops in Japan revealed by a dot-probe task: it depends when you look for it 260
H. Shirayanagi, K. Hirano & Y. Wada

Urban-Rural differences and the beliefs on interdependence between nature and humans 261
Gabriel Muiños, Fátima Negrín, Ernesto Suárez & Bernardo Hernández

A theoretical-prescriptive approach to sustainable development promotion 262
Joel Martínez Soto, Rubén Martínez Miranda & Liliana Velázquez Ugalde

Psychosocial intervention and socio-physical environment: Pro-environmental behaviour as a curricular subject in social educators training 263
Ángel Fernández González

Using scenarios to support resilient community-based natural resource management 266
Carlos Galán-Díaz, Julia Martín-Ortega, Kerry Waylen, Kirsty Blackstock & Alain Brown

Parents as potential mediators of children's relationship with nature: a case study in Florianópolis, Brazil 268
Patricia Maria Schubert Peres

introduction

The organizing committee of the International Symposium on 'Sustainable Environments in a Changing Global Context: Identifying Opportunities for Innovative Spaces and Practices in Contexts of Crisis 'is pleased to welcome you to the beautiful city of A Coruña. The symposium is organized by IAPS (International Association for People-Environment Studies), through the collaboration of three of its networks: "Culture and Space in the Built Environment", "Housing", and "Sustainability", and it aims at providing an open, creative and rich space for the sharing of knowledge in these areas and the debate of potential solutions to acute problems in times of crisis. These network events are part of an established tradition of the IAPS community, a tradition that combines presentations of research studies with discussions of theory and applications for the practice of architects, urban designers and planners, psychologists, but also for all those interested in the analysis of rapidly changing environments from a human perspective. It will be the primary aim of the organizers of this symposium to build on and enhance this tradition.

Why identify opportunities in contexts of crisis?

Recent years in our economic, social and ecological global context have raised the necessity for change in the geopolitical, built and social environment. While Europe and North America have gone through a deep economic crisis, which has affected all aspects of life – especially housing and working conditions -, other areas of the world have continued to grow and develop. The changing global context has important implications on the ways human beings organize their settings for everyday life – their residential environments and community services, in particular - and on the relevance of the objectives related to sustainability in our societies.

The symposium will seek to analyze the complex challenges posed by the structural changes in our global context and to explore new policy measures, alternative ways and instruments to transform existing urban and rural environments according to the ecological, social and economic principles of sustainability, including poverty alleviation and the promotion of equity. Furthermore, it will analyze and compare lessons learned from diverse cases of transformations in built environments in different parts of the world and it will aim at developing innovative synergies between solutions and adaptations encountered in multiple cultural contexts.

Questions to be addressed

- How have the unequal changes in different parts of the world affected human life and built environments?
- What effects do changes in economic priorities have on climate change mitigation objectives in different countries?
- What are the growing trends in housing and what opportunities and threats do they pose for achieving sustainability?
- How do residential and work environments adapt to new global contexts?
- How is our space-related culture influenced by these new trends in our economic and political contexts?
- How do relevant social and political agents face new challenges for the built environments? How about the experts and scientists?
- What are some of the new technological and human solutions to the problem of reconciling the logic of economic profit and consumption with the logic of sustainability?
- What new policy instruments can be developed to integrate sustainability principlesin the design of everyday residential and work environments and in daily human practices?
- What are the opportunities for a culture of sustainable architecture and design in both rural and urban locations?
- How can social science research contribute to promoting sustainable lifestyles and create supportive conditions for them?

The introduction of a roundtable format aims to promote further discussion and make the sessions more interactive than they usually are when we use a keynote lecture format. The development of the paper presentations will also limit presentations to key points, encouraging scientific discussion on the essential aspects, beyond the mere exposure of a communication after another against time. We hope that all of them are productive and fruitful sessions and foster the advancement of knowledge, both in its theoretical and methodological perspective. We hope this event will provide the necessary answers to many questions and challenges, and guide the research towards the integration of sustainability principles into the logic and practice governing the development and functioning of society.

Ricardo García Mira & Adina Dumitru

Steering committee

Ricardo García Mira (University of A Coruña, Spain)
Chair

Rolf Johansson (Swedish University of Agricultural Sciences, Sweden)
IAPS-Housing Network, coordinator

Peter Kellett (University of Newcasttle upon Tyne, UK)
IAPS-Culture & Space Network, coordinator

Roderick Lawrence (University of Geneva, Switzerland)
IAPS-Housing Network, coordinator

Petra Schweizer-Ries (University of Applied Science/Bochum & Saarland University /Saarbrücken, Germany)
IAPS-Sustainability Network, coordinator

Hülya Turgut (Istanbul Technical University, Turkey)
IAPS-Culture & Space Network, coordinator

Scientific committee

Aleya Abdel-Hadi (MSA - October University for Modern Sciences and Arts, Egypt)
María Carmen Aguilar-Luzón (University of Granada, Spain)
Gleice Azambuja Elali (Universidade Federal de Rio Grande do Norte, Brazil)
Marlise A. Bassani (Pontifical Catholic University of Sao Paulo, Brazil)
Domingo Bello Janeiro (University of A Coruña, Spain)
Zulmira Bomfim (Federal University of Ceará, Brazil)
Marino Bonaiuto (Universitá di Roma Sapienza, Italy)
Mirilia Bonnes (Universitá di Roma Sapienza, Italy)
Maria Carreiro Otero (University of A Coruña, Spain)
Giuseppe Carrus (Universitá Roma Tre, Italy)
Amparo Casares Gallego (University of A Coruña, Spain)
Arza Churchman (Technion University, Israel Institute of Technology, Israel)
José Antonio Corraliza (Autonomous University of Madrid, Spain)
Tony Craig (James Hutton Institute, Aberdeen, UK)
Juan Creus (University of A Coruña, Spain)
Ricardo de Castro (Government of Andalucia, Spain)
Ana Claudia Delgado (Lysimaque, France)
Carol Després (Université Laval, Canadá)
Álvaro Domingues (University of Porto, Portugal)
Adina Dumitru (West University of Timisoara, Romania)
Edward Edgerton (University of the West of Scotland-Paisley, UK)
Baltasar Fernández-González (University of Almería, Spain)
Luis Fernández Ríos (University of Santiago de Compostela,, Spain)
Ferdinando Fornara (University of Cagliari, Italy)
Arturo Franco Taboada (University of A Coruña, Spain)
Pablo Gallego Picard (University of A Coruña, Spain)
Pilar García de la Torre (University of A Coruña, Spain)
Miguel Angel García-Martínez (University of Granada, Spain)
Ricardo García Mira (University of A Coruña, Spain)

Myriam Goluboff (University of A Coruña, Spain)
Bernardo Hernández-Ruiz (University of La Laguna, Spain)
Karmele Herranz Pascual (TECNALIA-Energy and Environment, Spain)
Maria Carmen Hidalgo (University of Malaga, Spain)
Liisa Horelli (Aalto University, Finland)
Bernardo Jiménez-Domínguez (University of Guadalajara, Mexico)
Rolf Johansson (Swedish University of Agricultural Sciences, Sweden)
Sigrun Kabisch (Helmholtz-Zentrum für Umweltforschung GmbH, Germany)
Peter Kellett (University of Newcasttle upon Tyne, UK)
Dennis Kerkman (Park University, USA)
Roderick Lawrence (University of Geneva, Switzerland)
Cándido López González (University of A Coruña, Spain)
Daniel López López (University of A Coruña, Spain)
Marta Losa Iglesias (University Rey Juan Carlos, Spain)
Robert Marans (University of Michigan, USA)
Federico Martín Palmero (University of A Coruña, Spain)
Patricia Ortega-Andeane (UNAM, Mexico)
José Manuel Palma-Oliveira (University of Lisbon, Portugal)
Claudia Pato (University of Brasilia, Brazil)
Cristina Pimentão (University Fernando Pessoa, Portugal)
Enric Pol (University of Barcelona, Spain)
Héctor Pose Porto (University of A Coruña, Spain)
Julia W. Robinson (University of Minnesota, USA)
Ombretta Romice (University of Strathclyde, UK)
Ashraf Salama (Qatar University, Qatar)
César San Juan (University of the Basque Country, Spain)
Euclides Sánchez (University of Caracas, Venezuela)
Elena Sautkina (London School of Hygiene and Tropical Medicine, UK)
Petra Schweizer-Ries (University of Applied Science/Bochum & Saarland University /Saarbrücken, Germany)
Araceli Serantes (University of A Coruña, Spain)
Dina Shehayeb (Housing and Building National Research Center, Egypt)
David Stea (Emeritus Texas State University, USA)
Ernesto Suárez (University of La Laguna, Spain)
Hülya Turgut (Istanbul Technical University, Turkey)
Javier Urbina-Soria (UNAM, Mexico)
David Uzzell (University of Surrey, UK)
Sergi Valera Pertegás (University of Barcelona, Spain)
Esther Wiesenfeld (University of Caracas, Venezuela)
Zerrin Yılmaz (Istanbul Technical University, Turkey)

Organizing committee

Coordination

Ricardo García Mira (University of A Coruña, Spain)

Adina Dumitru (University of A Coruña, Spain / West University of Timisoara, Romania)

Alberto Díaz Ayude (University of A Coruña, Spain)

Eva Mª Espiñeira Bellón (University of A Coruña, Spain)

Ángel Fernández (University of Vigo, Spain)

Amelia Fraga Mosquera (University of A Coruña, Spain)

Isabel Lema Blanco (University of A Coruña, Spain)

Marcia Moreno (University of A Coruña, Spain)

Jesús Miguel Muñoz Cantero (University of A Coruña, Spain)

Nuria Rebollo Quintela (University of A Coruña, Spain)

invited sessions

12:00 – 13:30

THE ADDED VALUE OF PEOPLE-ENVIRONMENT STUDIES FOR HOUSING RESEARCH AND PRACTICES

Chair: Roderick J. Lawrence
University of Geneva, Switzerland
Sherry Ahrentzen
University of Florida, USA
Carole Després
Laval University, Canada

During the last 40 years the field of People-Environment Studies has made a substantial contribution to housing research from both theoretical and methodological perspectives. Members of the IAPS Housing Network have assumed an active role in the compilation of research since that network was founded in 1986. A number of conferences and symposia have been organized, and peer reviewed books and journals have been published under the auspices of the network.

In this Symposium, the IAPS Housing Network is organizing a session that will illustrate the added value of the contributions of People-Environment Studies to the broad field of housing research. Sherry Ahrentzen and Carole Després are two eminent scholars who have been active in housing research. They will focus their presentations on housing for the elderly, a specific population group that is growing in size in all countries that have experienced the demographic transition. Their presentations will show how a range of policies and practices stemming from empirical studies can be applied to address the housing requirements of this specific group. The added value of these kinds of contributions is that the interdisciplinary and transdisciplinary approaches of People-Environment Studies are not repeated by other research in disciplinary fields such as housing finance, housing markets, or ownership and tenure. Therefore the kind of research presented by the two speakers is complementary to the contributions of housing economists, political scientists and others.

Health consequences of green building practices: Issues of an aging population

Sherry Ahrentzen
University of Florida, USA

Two major challenges facing the US – and many other countries – in moving towards a sustainable future are (1) climate change and diminishing reserves of natural resources; and (2) exponential growth of an aging population, with its concomitant health and healthcare demands. According to the Centers for Disease Control, the aging of the population is one of the major public health challenges facing the nation in the 21st century. Yet with rare exceptions, these two tsunamis – the impacts of climate change, the impacts of the health needs of an aging population – are rarely linked in environmental,

health and residential practices and scholarship. Ironically though, scientists assembled by the Institute of Medicine warn that health impacts of residential air/environmental quality will further intensify with climate change.

This presentation interweaves these key exigencies by examining older adults' health consequences of green building practices. The first segment of the presentation illustrates how senior health concerns are particularly susceptible to impacts of climate change, particularly of their residential environments. Older adults not only have greater exposure to their residential settings – spending more of their time and activities there as they age – but they are also likely to suffer from vulnerabilities that reduce their capacity to cope with residential hazards, risks and threats. The extent to which green building and community development practices contribute to eradicating, mitigating or exacerbating potentially harmful environmental conditions is still a viable, and under-examined, research question. Yet with increasing public investment in green and energy-efficient residential improvements, it is important to know how best to advance the collateral benefit such improvements may have in enhancing health conditions of residents and, as a result, indirectly deterring healthcare costs.

The second segment of the presentation describes emerging results of a panel research study that examined the health impacts of a renovation of a housing complex for low-income seniors in Phoenix, Arizona. The renovation was part of the federal government's Green Retrofit program that provided funds to housing authorities to retrofit older, federally-assisted multi-family developments in a manner that would result in reduced energy efficiency costs. While energy cost reductions were analyzed in a separate study, a multi-disciplinary team of researchers assessed the impacts of the renovation on environmental health (i.e. indoor environmental quality) and residents' health, perceptions and behaviors. The team included professionals and faculty in architecture, energy efficiency, indoor air quality, nursing, health economics and environmental gerontology. Environmental sampling of residents' homes involved assessments of a variety of environmental quality (EQ) factors: temperature, relative humidity, ventilation, particulate matter, and aldehydes. Residents were interviewed about health conditions, prominent ones being respiratory, cardiovascular, joint related and pain, mental health, sleep, functional limitations, and overall health status. Data was gathered on resident behaviors related to EQ of their homes (e.g. household cleaning; cleaning products; smoking). Residents also were asked about their perceptions of environmental comfort, satisfaction and hazards. Data was gathered over a two-year period from the same residents, once before the renovation and twice after re-occupying the renovated units. Sixty-five residents participated over the duration of the research study. The presentation describes major findings on: improved levels of aldehydes and more stable indoor temperature conditions, and reasons for these improvements; association of EQ improvements with resident perceptions of these improvements over time; self-report health conditions that reflect the stress of the renovation and moving process; and comparison of perceptions and EQ outcomes based on resourcefulness of elderly resident. The presentation concludes with arguments to advance a more prominent role to health consequences and behaviors within sustainability research and policy.

Let's speak out! How people-environment researchers can make a difference in housing-related policies

Carole Després
Laval University, Canada

Green gas emission, climatic change, sedentary lifestyles, these are just a few wicked problems that most developed countries are facing. In Quebec, Canada, agencies at all levels of governance are in the process of written down policies or revising existing ones to reduce associated economic, social and environmental risks or costs. It is my conviction that researchers trained in people-environment studies have the potential to influence these ongoing exercises. Their main contribution lies in their capacity to speak out for the individuals, besides the common use of aggregated statistics from census or else origins-destination or epidemiological studies. People-environment knowledge, of which they are the main carriers, witnesses the complexity of people's behaviors in everyday life in terms of territorial attitudes, uses, and representations and allows for contesting policies built on an understanding of people as strictly functional beings. To play that role, however, researchers have to be prepared to defend their positions with sound multidisciplinary evidences. This calls minimally for the three following prerequisites. First, P-E researchers must work with their colleagues trained in several fields from social and human sciences, from psychology to geography, but also from health and natural sciences as well. Second, P-E researchers need to generate sets of data that converge on a common geographical area instead of always aiming at generalizable knowledge. Finally, building interdisciplinary and geographically focused knowledge is not enough, P-E researchers need to test it in its capacity to inform design solutions with architects, planners and major stakeholders. With the inclusion of aesthetic and ethical dimensions, the realm of research extends from inter to transdisciplinarity.

In this presentation, I will illustrate how my cumulative experience in conducting housing research and design from an environment-behavior perspective led me as an academic to contribute to collaborative taskforces at different level of governance. I will show how the combination of my professional training in architecture (an undisciplined discipline!), my research training in Environment-Behavior studies, and my academic experience coordinating a transdisciplinary research program, empowers me to speak out for human needs in all their complexity. I will discuss how this heritage left me with a curiosity and interest for understanding housing-related problems from the angle of multiple disciplines, and a diversified conceptual and methodological toolbox accounting for individual and collective needs, both pragmatic and emotional. Finally, I will argue that it is mostly the cumulative research and design work in and on Quebec City for the last 15 years produced within the Interdisciplinary Research Group on Suburbs that empowered me to contribute to collaborative work with government agencies on sustainable mobility, child and youth obesity, as well as public health prevention.

REFERENCES

DESPRÉS, C. (2012) Transdisciplinarity at work in housing research : The case of GIRBa in Quebec City, Canada. In S. Ahrentzen, C. Després & B. Schermer (eds) Building bridges, blurring boundaries: The Milwaukee School in Environment-Behavior Studies. University of Wisconsin-Milwaukee and VRM.ca.

DESPRES, C., VACHON, G., FORTIN, A. (2011) Implementing Transdisciplinarity: Architecture and Urban Planning At Work. In I Doucet & N. Janssens (Eds) Trandisciplinary Knowledge Production in Architecture and Urbanism. Towards hybrid modes of inquiry. Heidelberg: Springer.

12:30 – 14:00

SUSTAINABILITY - STILL A SPARKLING AND FUZZY CHALLENGE IN TRANSDISCIPLINARY PROJECTS

Chair: Petra Schweizer-Ries
Bochum University of Applied Sciences, Germany

Renate Cervinka
Medical University of Vienna, Austria

Jennifer Senick
The State University of New Jersey, USA

Latest since 1992 the idea of sustainable development impacts politics and science. Although sustainability resounded throughout the world and formed sustainability sciences in Friibergh, Sweden in 2000. The underlying concept still remains fuzzy and needs further clarification. On the other hand sustainability science needs to develop as scientifically grounded but open to the new approaches (non-linearity, complexity, and long time lags between actions and their consequences) and work on the challenges with "social learning, actions, adaptive management and policy as experiment"[1] .

The round table first is aimed at exploring the different sustainability concepts (according to Martens & Schilder, 2011[2]), orientations of sustainability science (according to Kates, Clark, Corell et al., 2011[3]) and its relevance for applied scientific projects from the perspective of environmental psychology and from planners.

Second, it should break new ground for interchange within the IAPS community, especially for members of the sustainability network. It is aiming to find a way of how we are introducing sustainability science interchange and current developments into IAPS.

We would like to discuss with the audience (1) theoretical work on sustainability science and different sustainability approaches as well apply it on two field of expertise with political relevance (2) restorative environments, and (3) community resilience.

We will argue that we need a strong sustainability approach and will consider how to foster sustainability science within IAPS.

---

[1] Friibergh Workshop on Sustainability Science. 2000. Sustainability science: Statement of the Friibergh Workshop on Sustainability Science. 11-14 October, Friibergh Manor, Örsundsbro, Sweden.

[2] Martens, J. & Schinder, K. (2011). Sustainable Development. In J. Krieger (Ed.). The Oxford Companion to Politics of the World (page 81-83). Oxford: Oxford University Press.

[3] Kates, R., Clark, W., Corell, J., Hall, M., Jaeger, C., Lowe, I, McCarthy, J., Schellnhuber, H., Bert Bolin, B., Dickson, N., Faucheux, S., Gallopín, G., Gruebler, A., Huntley, B., Jäger, J., Jodha, N., Kasperson, R., Mabogunje, A., Matson, P., Mooney, H., Moore, B., O'Riordan, T. & Svedin, U. (2001). Sustainability Science. Science, 292, 641-662.

Sustainability Science and its contribution to the IAPS: seeking for strong sustainability?

Petra Schweizer-Ries
Bochum University of Applied Sciences, (Germany)

This contribution will explore and present the different sustainability modes (according to Martens & Schilder, 2011):

Pseudo sustainability is not targeting to protect the natural resources primarily, but building up on and understanding of the exchangeability of natural and artificially created resources and demands. All are regulated by the market. When natural resources are depleted, other solutions are to be developed like e.g. solar-based production of electricity, as solar power is theoretically unlimited. A response to rising sea level (as a result of global warming), could be building e.g floating homes and islands, where to maintain our living standard even better than at present.

Weak Sustainability also has a traditional, western market approach and supposes that the market will rule and regulate the value of nature. Besides economical values the protection of natural resources that are near depletion and cannot be supplemented have to be protected. All species have an economic value and therefore their distinction can be calculated. The Weak Sustainability relies on the Efficiency Revolution. With technical means resources can be saved. The market has to be regulated to internalize the external costs, which means that resource use has to be economized to be valued and taken care of.

Strong Sustainability includes all the three principles of consistency (e.g. using clean energy), efficiency (e.g. bringing the same energy service with less energy demand) and sufficiency (e.g. rethinking the energy demand and thinking about what is really needed), and it is clear that only with all these three strategies can stop the huge resource depletion and get global warming under control. This approach involves social justice and peace in the centre of all human activities and not economy. Needs should be fulfilled equally and technology, policy and economy are there to support the two main targets: 1) conservation of the natural environment for human use and 2) equal distribution of these resources. Approaches are known like the 2000 Watt-Society or the target to reach 2t CO2/person/year.

Ultra Sustainability or how we call it now, *Super Sustainability*, builds up on the recreational power of nature as an alternative to the anthropocentric view. The basic idea is, that if we are living with the cycles of nature and are not making irreversible changes so that nature can recover again, we will increase resilience and protect us against the destruction of our ecological system. It is also oriented to the "bien vivir" or "good life" and creates the impression that there are enough resource on the planet to fulfil all our basic needs and live in happiness and peace.

Also orientations of sustainability science (according to Kates, Clark, Corell et al., 2011) and its relevance for applied scientific projects are prepared to be discussed in the sense that it is value laden, inter- and transdisciplinary and taking over responsibility on sustainable development in science.

The contribution will prepare the discussion of how the sustainability science network could contribute to IAPS as an horizontal network, supporting the work of the other networks. We will argue that we need a strong sustainability approach and will consider how to foster sustainability science within IAPS.

How to communicate options carved out under a wrong headline? Lessons learned from restoration research

Renate Cervinka
Medical University of Vienna, Austria

The contribution is aimed at presenting options for sustainability on the basis of a research project on open and green spaces at hospitals (Cervinka et al., accepted for publication). Background, purpose, method, results and discussion, as well as further developments and lessions learned, can be downloaded from the IAPS2012 homepage (http://www.iaps2012.org.uk/CaseStudies/CaseStudy_Cervankia.aspx).

The first aim of the project was to evaluate open and green spaces at hospitals with respect to their appearance and perceived restorative qualities. The second aim was to develop guidelines for the (re)design of hospital gardens. Based on the results, we detected several options for fostering sustainable development.

Options for enhancing sustainability on four levels were:

Health-related sustainability
- Reducing physiological stress, balancing physiological parameters
- Reducing mental stress, preventing burn-out
- Use for specific therapy and treatment
- Space for fostering lifestyle medicine

Social sustainability
- Fulfilling the need for restoration of patients, employees, visitors
- Fostering job satisfaction
- Promoting the hospital image
- Strengthening social cohesion and implementing processes of self-help

Environmental sustainability
- Improving microclimate by natural hospital gardens
- Habitat in accordance with the location
- Cross linking of different ecological spaces
- Conservation of natural resources by a design in accordance with the location
- Role-model for sustainable development in public space

Economic sustainability
- Proactive involvement of employees
- Identification of problems at an early stage – quality intensification in planning and construction
- Integration of therapy concept in the planning process
- Human resources management: beneficial effects of nature on hospital employees
- Supporting of a positive image of the hospital.

Repeated discussions with the general management of hospitals and responsible politicians during the project showed these representatives mainly being interested in the economic aspects of the findings. In this connection avoidance of problems during planning and at an early stage of construction dominated their questions.

These experience rises the question how a research project could contribute to sustainability in practice. Especially how researchers should communicate with practitioners an addi-

tional advantage with respect to sustainability from a project which was not primarily performed under the sustainability label.

REFERENCE
Cervinka, R., Röderer, K. & Hämmerle, I. (accepted for publication). Evaluation of hospital gardens and implications for design – Benefits from environmental psychology for architecture and landscape planning. Journal of Architectural and Planning Research (JAPR).

Nested Sustainability Efforts: Saving Jobs and Energy in a Changing Region

Jennifer Senick
The State University of New Jersey, USA

Sustainable development is a multi-level problem. Sustainability efforts at different levels may be complements or substitutes, independent or interdependent, opportunistic or coordinated, effectuated in a top-down or bottom-up manner (Andrews, 2004). Sustainable solutions need to embrace this operational reality, finding ways to create leverage at the nexus of resource and information flows. This session uses a case study to illustrate a multi-level transdisciplinary – nested sustainability - effort to simultaneously save jobs and energy in an economically stressed region of the United States. Nested sustainability provides a useful framework for discussion of sustainability science and for furthering the agenda of the IAPS and EDRA sustainability networks to enhance community resilience to the world's economic, environmental and social challenges.

The Energy Efficient Buildings Hub

A very interesting energy policy experiment is now underway in Greater Philadelphia. The U.S. Department of Energy has created the nation's Energy Efficient Buildings Hub, which is a five-year, $129 million effort to improve the energy performance of commercial buildings. It treats the ten-county Philadelphia metro area as a living laboratory and gives a consortium of researchers the resources to improve the energy performance of the region's commercial buildings 20% by the year 2020, with corresponding environmental benefits. A unique aspect of this experiment is that its sustainability (success) is being measured partly on the basis of its employment impacts.

The Rutgers University Center for Green Building leads two important subtasks. The first of these relates to the impact of building and zoning codes and standards at the federal, state and local levels on building owners' decisions to invest in building energy efficiency. The second task concerns developing better data and approaches to the energy and decision-making behavior of building occupants and operators. The Center has been conducting action research over the last 2-3 years to demonstrate the deployment of resource and information based strategies that are strategically aligned across jurisdictions to enhance market uptake of energy efficiency measures.

The following interpretive questions, adapted from Andrews, op cit, are useful for evaluating the EEB Hub experiment and also in deconstructing the various definitions and programmatic guidelines of sustainable development. Arguably all formulations of sustainability set their sights on communities that are ecologically balanced and resilient; however, economic and social outcomes will vary based on political-market context and other factors. For example, Agenda 21 with its social-economic-environmental triple bottom line adopts a

bottoms-up grass roots approach to sustainability, which may render intentional coordination of multi-level efforts more difficult. Convesely, the Natural Step, which is more science-based and top-down in orientation, may fail to recognize or be unable to exploit spontaneous opportuities. As well, market-based versus need-based approaches to sustainability (Weak to Strong Sustainability, Martens & Schilder, 2011) can be contrasted employing the following interpretative questions as a guide.

Interpretive Questions

Are sustainability efforts at different levels complements or substitutes? Is there such a thing as a "right" decision-making level and how do various decision allocations relate to one another? In a non market based economy who decides? Complementary efforts will be synergistic and will reinforce one another. Substitutive efforts at best will be additive, and at worst will cancel one another.

Are sustainability efforts at different levels independent or interdependent? Independent efforts have no connection with other efforts. Interdependent efforts have linkages across levels. How are interdependent efforts most effectively maintained and what opportunity exists for independent efforts to merge?

Are sustainability efforts at different levels opportunistic or coordinated? Opportunistic efforts respond to unique windows of opportunity. Coordinated efforts are jointly planned. In a non market based context, where does the coordination come from?

Are the most effective sustainability efforts in nested hierarchies? To what extent are these efforts those that are driven by formal top-down relationships or those that have developed more spontaneously? Top-down efforts follow a hierarchy. Bottom-up efforts exploit the hierarchy.

REFERENCES

Clinton J. Andrews, Rutgers University, Nested Sustainability Efforts:From Green Buildings to a Sustainable State . Presented at the American Collegiate Schools of Planning 2004 Annual Conference, Portland, Oregon.

James, Sarah, and Torbjorn Lahti (2004) The Natural Step for Communities. Gabriola Island, BC: New Society Publishers.

Martens, J. & Schinder, K. (2011). Sustainable Development. In J. Krieger (Ed.). The Oxford Companion to Politics of the World (page 81-83). Oxford: Oxford University Press.

UNCED (United Nations Conference for Environment and Development) (1992) Agenda 21, Rio de Janeiro, available online at http://www.un.org/esa/sustdev/documents/agenda21/.

SOCIO-CULTURAL SUSTAINABILITY: HISTORICAL AND TRADITIONAL ENVIRONMENTS IN CITIES OF THE GLOBALIZING WORLD

Chair: Hülya Turgut
Istanbul Technical University, Turkey

Dina K. Shehayeb
Housing and Building National Research Centre, Egypt

Derya Oktay
Eastern Mediterranean University Famaugusta, North Cyprus, Turkey

Sustainable development has traditionally focused on an environmentalism framework that gives priority to overcoming the problem of ecological degradation. Although environmental concerns are the cornerstone of sustainable development, until recently sustainable development was viewed solely through the lens of the environmentalist. However as the concept has matured, increasing emphasis has been placed on its interconnection to cultural, social and economic dimensions of development.

This session specifically discusses the concepts of social and cultural sustainability and then situates them within the urban context. It will identify the areas of concern of these two strands of sustainability, arguing that they converge where the use of environmental resources and the ecological impacts of city activities are influenced and determined by socio-cultural factors. A key question when integrating culture in the sustainable development framework is to understand the ambiguous relationship between culture, development and sustainability in a globalizing world. When discussing cultural sustainable development it is critical to move beyond talking about preservation of "heritage", 'cultural identities' and 'whole ways of life'.

In line with these, this session will focus on elaborating the socio-cultural issues as key dimensions of sustainable development along with economic and environmental dimensions. Presenters of the session will focus on culture, city and sustainable development in a traditional and global context by introducing various cases from their countries.

Socio-Cultural Sustainability: A Conceptual Overview and the Case of Istanbul in a globalizing world

Hülya Turgut
Istanbul Technical University, Turkey

Contemporary mainstream notions of sustainable development portray it as a fourdimensional concept featuring the interface between environmental, economic, social and cultural sustainability. Despite a few attempts, the theoretical and conceptual understanding of culture within the general frames of sustainability has remained vague,

and the role of culture in the political framework of sustainable development is poorly considered. The construct of sustainable development therefore needs to be interrogated because particular conceptions of the global social order are commonly prioritized in its various interpretations.

Starting from this point, the main aim of this paper is to discuss the concepts of social and cultural sustainability and then situates them within the urban context. The paper will identify the areas of concern of these two strands of sustainability by integrating cultural considerations within sustainable city/communities planning processes and related initiatives.When discussing cultural sustainable development it is critical to move beyond talking about preservation of "heritage", "cultural identities" and 'whole ways of life'.

In the paper, after conceptual overview, Istanbul as a globalizing city will be reviewed in both cultural and social sustainable development in terms of how they have evolved as a global agenda and how the cultural arena can be facilitated by the construct of sustainable development. Although traditional and historical environments as important components of the built environment have a crucial role to play in the sustainable development of cities, these issues are ignored in a number of projects implemented under the name of "urban transformation" in Istanbul. Spatial reflections of globalization, new development based interactions are creating fragmented spaces and societies in the city. In this manner this paper will briefly be focusing into the development of the urban transformation process in the city and will focus into urban transformation practices within the different traditional and historical neighborhoods in relation with social and cultural sustainability. At the end, the paper will try to call for opening up the discourse on socio - cultural sustainable development to facilitate greater policy and practice options in globalizing cities.

KEYWORDS
Social sustainability, cultural sustainability, globalizing cities, Istanbul, urban transformation.

Cultural Sustainability: Towards divergence or convergence?

Dina Shehayeb, Ahmad Borham & Aleya Abdel-Hadi
Housing and Building National Research Center, Egypt

The term "sustainable" can be found in both science and practice. It was accepted as a global concept of development in 1992 as a way of dealing with problems connected to the development of contemporary civilization. Three dimensions of sustainable development are addressed: economic, social and ecological dimensions. The presentation discusses yet another dimension; the cultural dimension, paving the way to the discourse of whether it is a fourth dimension, or an over-arching dimension that influences all others. It has been argued that the cultural dimension is not only significant to attain development, but that it also represents the basis for the development of local communities. The cultural dimension of development respects the particularities of local communities and emphasizes the maintenance of the cultural and national variety. In that sense it tackles the controversial relation between global and local; the association of modernity, development and universality to global, versus the association of tradition, underdevelopment, and particularity to local. The cultural dimension addresses the adoption of new ethics and behavior, yet at the same time it grounds it in the existing systems of values and rules respecting their religious and cultural variety.

Some claim that for sustainable development not to be something alien to the majority of people, it is necessary to plan development through the cultural dimension at the level of local communities. Others have argued that introducing the cultural dimension of sustainable development is especially significant while planning the development in a multicultural and multinational environment, because only when we accept cultural particularities of the local community can we harmonize the aims of development with them, and fully realize development.

On the one hand, there is the view where cultural groups that are clearly delineated and identifiable coexist like pieces of a mosaic; the rationale being that even norms of universal respect and egalitarian reciprocity are subject to discursive argumentation. What kind of practice is considered cultural, religious, moral or legal; which norms should apply to judging that? What if their meaning shifts and changes with social and cultural interactions, across time and within different spaces; all these are questions hardly tackled outside the cultural sustainability dimension. On the other hand, the universalists proceed from a certain definition of human agency and rationality where the subject matter of practical discourses is restricted to what each can will or choose, yet this determinacy of content is attained at the cost of restricting the conversation, as well as abstracting away from, the identity of the individuals involved.

As an important component of the built environment, traditional and historical environments have a crucial role to play in the sustainable development of cities. Traditional built form responded effectively to change in culture.

The case of the traditional Arab/Islamic built environments are presented, as a case where laws that governed the community manifest themselves through the transformation rules of *'fiqh'* into the surface structure of the urban fabric. The traditional environments embraced diversity and variability rather than attempt to control and reduce it. *'Fiqh'* has been able to balance between the diversity in Muslim societies as a result of its open, discursive nature, which bridges the gap between divine abstract source and variety of human behaviors and contexts. Unity was mainly due to the application of consistent *'Šarīah'* principles all over the Islamic nations, while diversity was achieved by the recognition of the local customs *'urf'* by the Islamic law. Acknowledging *'urf'* made it possible to cope with the diversity on the micro level while maintaining unity on the macro level. This interface between the broad concepts of *'Šarīah'* and local attitudes rooted in various Islamic societies *'urf'* demonstrated the flexible nature of the rules system based on Islamic *'fiqh'*. It showed that it is a system of law that is performance-based and proscriptive in nature.

Transferring this lense to other traditional urban forms raises questions about the universality of these deep underlying principles and their abstract source, raising even more questions for debate about whether the cultural dimension of sustainability can move to the global rather than the local arenas of discourse; of whether it would lead to more convergence than divergence among humans.

Towards Human Sustainable Urbanism: Interrogating the Contemporary Approaches and the traditional Turkish (Ottoman) City

Derya Oktay
Eastern Mediterranean University Famaugusta, North Cyprus, Turkey

At a time of uncontrolled globalization in which serious environmental problems are threatening cities and their inhabitants, as cultural integrity is constantly under attack and many cities lack socially inclusive and responsive environments, there is an urgent need for a radical shift towards a holistic strategy for sustainable urbanism combining ecological sustainability and social-cultural sustainability. This calls for sensitivity to the traditional urbanism and impact of global ideas, practices and technologies on local social and cultural practices. In line with these, this paper aims to establish an environmentally sound and human friendly framework for sustainable urbanism. What is questioned in the paper is that, given our knowledge that environmental sustanability is a crucial need, are the contemporary approaches adequate for all settings? At a time of uncontrolled globalization in which sense of place, history and cultural distinctiveness is constantly under attack and many cities lack socially inclusive and responsive environments, do these approaches also integrate social-cultural dimensions? These call for a new understanding of traditional settlements as they represent good uses of local environmental and social values in their times.

The paper first provides a theoretical underpinning of sustainable urbanism and a critical review of its philosophical and practical framework; second, assessing contemporary approaches to sustainable urbanism and analysing the traditional Turkish (Ottoman) City, proposes a holistic framework for 'human' sustainable urbanism that integrates environmental considerations with social-cultural sustainability.

specific sessions

16:45 – 18:15

LOW CARBON AT WORK: BRIDGING THE GAP BETWEEN QUALITATIVE AND QUANTITATIVE METHODS IN SUSTAINABILITY RESEARCH IN ORGANIZATIONS

Conveners: Ricardo García Mira, Giuseppe Carrus & David Uzzell
Chair: Ricardo García Mira

The rise of qualitative methods in environmental research, which questioned the principles of quantitative-positivist methodology, favoured the development of new methodological paradigms. The qualitative paradigm was initially put forward as conceiving knowledge as a social and historical product, highlighting the importance of the subjective, the phenomenological and the construction of meaning as being central to social life. The discovery of meanings, difficult to deal with properly from the standpoint of quantitative methodology, was one of the main characteristics of the qualitative methodology that has permeated social and environmental research in recent decades.

The relationship between people and the environment in organizations and society have peculiarities that make it difficult to understand how it works. We find institutions, structures, practices and customs that are assumed and processed by individuals, and it is precisely within these structures that meaning is created. Social and organizational phenomena such as language, decisions, conflicts and hierarchies exist objectively within the organizational world, as do agreements, leadership and social interaction processes, which have a significant influence on environmental practices commonly found in organizations. Methodological practice aims to explain how the various structures come to produce what we observe, whilst the goal of research in organizations is to explain what is happening, rather than simply documenting the sequence of events, by searching for a process (organizational or individual), a mechanism, or a structure in the occurrence of things that can provide a causal account of the forces that promote or hamper paths towards sustainability.

We are currently witnessing a growing trend towards the integration of research strategies based on multi-method approaches. These combine, on the one hand, quantitative and qualitative techniques, and on the other modelling techniques based on the role of the agents involved in a process. Together, they all reinforce the scientific empiricist logic in the study of organizations and the role they play in the transition towards sustainability.

Despite the increasing sophistication of statistical tools, the variance explained by quantitative techniques remains low. This not only poses problems in terms of validating a prediction, but also requires further efforts to increase the reliability and validity of data analysis tools. Operational mathematical sophistication should not reach such a level of complexity that it hinders any attempt to orient results towards the taking of decisions or the practical evaluation of specific situations.

In this context, some ongoing projects have set out to obtain an integrated and holistic vision of the context within an organisation, its logic and its rules in order to explain the ways in which individuals, within their workplace, understand, explain or participate in environ-

mental action and manage their everyday situations of working life and their relationships with other domains of community life.

Descriptions and narratives, modelling behaviours, and discussion about different types of modelling, which in the case of MA models enable certain workplace behaviours to be predicted, or in that agent modelling (AGM), to be simulated. Together, these make it possible to study behaviour patterns related to energy use in organizations, waste management and organization-related mobility.

Despite these methodological distinctions, some authors propose a greater convergence and the building of bridges between paradigms (i.e. Shah & Corley, 2006), indicating the convenience of paying attention to different forms of modelling. Cook and Reichardt (1979) noted advantages in the use of combined multi-method procedures, which make it possible to attend to the multiple objectives that can coexist within a single research project. In conclusion, the use of either method, with its corresponding analytical techniques, does not necessarily imply the wholesale acceptance of all the theoretical and epistemological assumptions on which it is based, which explains why sometimes we find the same methodological approach being used for different epistemological assumptions, whilst at others two different methodologies are used for the same theoretical approach (Alvaro, 1995).

REFERENCES

Álvaro, J.L. (1995). Psicología social: perspectivas teóricas y metodológicas [Social Psychology: theoretical and methodological perspectives]. Madrid: Siglo XXI.

Cook, T.D. & Reichardt, C.S. (1979). Qualitative and quantitative methods in evaluation research. London: Sage Publications.

Shah, SK & Corley, KG (2006). Building better theory by bridging the quantitative-qualitative divide. Journal of Management Studies, 43:8, 1821-1835.

Qualitative and quantitative methods in sustainability research: An introduction to the multi-method approach in LOCAW

Ricardo García Mira, University of A Coruña, Spain
Adina Dumitru, University of A Coruña, Spain. West University of Timisoara, Romania

Sustainability research and models predicting sustainable behavior have, to this date, shown that these topics are highly complex and multi-faceted and they require a variety of methodologies depending on the nature of the variables of interest in any particular study. Understanding the complex determinants of sustainable behavior, behavior change, and transitions to sustainable everyday practices in different life contexts of an individual requires multidimensional conceptualizations and the study of individual and contextual factors affecting behavior. Contextual factors refer to the influence of the structures within which the individual exists and of the organizational dimensions that frame people´s behavior, such as elements of organizational culture, processes of organizational communication, assignments of roles and responsibilities and institutional relationships among workers. The interaction between individual factors and these organizational webs in which the individual exists and acts as an agent determine individual and group behavior in areas relevant to the issue of sustainability. Even more complex is the fact that individuals are

agents which are both influenced by their environment and, in turn, influence and transform it through their actions.

In order to map this complexity in a meaningful manner, and contribute new insights to the study of transforming everyday behavior in a sustainable direction, the LOCAW project has undertaken the study of large scale organizations across Europe, both public and private, in order to understand the barriers and drivers to achieving transitions to a low-carbon Europe. Large-scale organizations are responsible for a large amount of greenhouse gas emissions in the European Union (GHG) and they are also the settings in which an important life domain is played out and developed. As workers, people spend a large amount of time in workplaces, in a community that holds the potential to influence behavior and to become a site for learning new practices. People also bring their values, identities, motivations and outside habits to work, thus also potentially transforming workplaces.

Given the intricate complexity of the topic, LOCAW has adopted a multi-method approach, mixing quantitative and qualitative methodologies, individual and group/participatory modes of inquiry and reflection, drawing insights from both purely positivist research frameworks framing psychological phenomena as an external object of study and constructivist approaches such as grounded theory, which consider individuals as active subjects and research as a participatory endeavor subjected to the principle of uncertainty. Thus LOCAW uses participatory qualitative approaches such as focus groups and backcasting scenario development workshops, qualitative in-depth methods of inquiry into the causes of behaviors and the logic of it through semi-structured interviews and life-history interviews, and quantitative methodologies such as questionnaires to explore subjectivities and the interactions between context and individuals.

Focus groups have brought workers into the research in order to map out the main determinants, as well as barriers and drivers, of practices in the areas of consumption of materials and energy, waste generation and management, and work-related mobility. This first approach is complemented by in-depth interviews and life-history interviews, which delve into the subjectivity of individuals, understood in their multiple roles as workers, homemakers and members of different social groups, and as constant crossers of the borders between life domains. A vivid and complex picture of determinants of everyday practices and of potential causalities results from this second part of the analysis. Computer-assisted qualitative data analysis software as used to map the relationships among different factors. Life-history interviews go even further, and consider the longer-term causes of present habitual practices, as well as the iterative processes of construction of identity and meaning in workers´ lives. Finally, an innovative participatory future-mapping tool was introduced in order to design long-term strategies for transition to sustainability.

Besides the qualitative approaches, quantitative survey methods were also introduced, in order to gather information on larger samples on the individual and group factors affecting everyday practices. Data gathered through surveying was then analyzed using both qualitative methods such as multidimensional scaling, and quantitative ones such as structural equation modeling. We will show some of the results obtained from these different methodologies in order to illustrate their contribution to the whole picture, their strengths and limitations. We will also discuss the possibilities for integration of these methodologies and results, and their relevance for informing smart, context-sensitive and participatory policy.

KEYWORDS
Large-scale organizations, uncertainty principle, positivism, qualitative and quantitative methods, sustainability.

Modelling low carbon behaviours at work: Integrating findings from different case studies using agent based modelling and decision trees

Tony Craig, Gary Polhill, Amparo Alonso Betanzos, Óscar Fontenla Romero, Noelia Sánchez Maroño, Miguel Rodríguez García & Ricardo García Mira
The James Hutton Institute, UK & University of A Coruña, Spain

In researching the transition to a low-carbon society, it is important to understand the occurrence of everyday (un)sustainable practices and behaviours both now and in the future. The LOCAW (Low Carbon at Work) FP7 project has focussed on large organisations as they are not only significant emitters of Greenhouse gases (GHG's), but also provide an important influence shaping individual everyday (un)sustainable behaviour. There are six case study organisations researched in the project: two state organisations, two heavy industry case studies, and two private service providers in the field of natural resources/energy. For each of these case studies, the project is examining the structural, organisational and individual factors that shape (un)sustainable practices. The everyday practices examined with the LOCAW project relate to three domains: transport, waste and energy.

The integration of structural, organisational and individual factors across the six case studies is carried out in the LOCAW project through the development of agent-based models of organisations. Agent-based modelling (ABM) is a computer simulation technique that entails the explicit representation of heterogeneous individuals and their interactions (Bonabeau, 2002). ABM allows the logical implications or conclusions of research findings to be explored in a way static techniques like (for example) structural equation modelling do not allow. The ability to simulate interactions between many individual agents over time is a key component of multi-agent models, and is one of the main features distinguishing the technique from some of the standard tools in the psychologists' toolkit. The behaviour of the whole model (in this case 'an organisation') is observed as something that emerges from the interactions among agents (in this case 'workers'). In addition, the relationship between different contexts (e.g. home and work) can also be represented within agent-based models, arguably allowing for a fuller description of life-as-lived.

One of the difficulties in constructing empirical agent-based models is that they require large amounts of data in order to ensure that the simulation is a realistic representation of the case study in question. For example, in an organisation, it is not only important to represent the social and hierarchical structure of the workplace to be realistic (ideally we would also include the spatial layout), but it is also important to try and represent the heterogeneity of individuals in a descriptively meaningful manner.

In the LOCAW project, we have taken two approaches to the initial empirical grounding of the agents' heterogeneity in the models. The first approach uses data from questionnaires and uses classification and regression tree (CART) analysis (Breiman et al., 1984) to construct a rule-based system, represented in the form of a decision tree for each behaviour of interest (e.g. taking the bus instead of the car). These decision trees are then used to set the parameters of the agents in the model. The second approach involves the construction of top-down decision trees, based on a combination of documentary evidence and expert interviews. The reason for using this combined approach is simply that it is not possible to ask all the questions one might want to know about the world in a questionnaire, but this approach allows us to represent those aspects not covered by the questionnaire data as decision trees, as part of the wider rule-based system which forms the 'logic' of the

model. A further reason for using our top-down decision tree construction method is that the bottom-up (questionnaire-based) approach is very sensitive to low sample sizes. In a sense our complementary top-down approach circumvents the statistical requirement for large sample sizes.

The future state of the model for each organisation is taking the results of back-casting workshops that have taken place in each organisation. These workshops have created scenarios for the future of each organisation, and these scenarios will form the state-of-the-world we will try and approximate using the agent-based models.

The challenge of integrating findings from different case studies will be discussed, along with some methodological reflections on the potential use of new methods such as agent-based modelling to act as a bridge between qualitative and quantitative methods in social scientific studies of sustainability.

REFERENCES

Bonabeau, E. (2002) Agent-based modeling: Methods and techniques for simulating human systems. Proceedings of the National Academy of Sciences of the United States of America 99 (suppl. 3), 7280-7287.

Breiman, L., Friedman, J., Olshen, R.A., Stone, C.J. (1984) Classification and Regression Trees. Chapman & Hall/CRC, Boca Raton, Florida.

KEYWORDS
Integration; Pro-environmental behaviour; Agent-based-models; Decision-Trees

Structural and individual factors influencing recycling behaviour at work. An integrative approach regarding a Romanian water company

Corina Ilin, Daniela Moza & Alexandra Stancu
West University of Timisoara, Romania

This study was conducted as a part of work package 3 (WP3) and work package 4 (WP4) within the FP7 European funded project LOCAW (Low Carbon at Work), in order to explore the way in which structural factors like EU regulations, social context, and organizational culture and climate, and individual factors like values, norms, self-efficacy, self-environmental identity, and worldviews, influence the pro-environmental behaviour at work. We try to explain these behaviours looking at both structural and individual factors.

We analyse three types of pro-environmental behaviour: energy consumption, waste management and travel related practices, but within this presentation we will focus only on recycling behaviour at work.

The data regarding structural factors were collected through 10 interviews with key informants from Aquatim, and the data regarding individual factors were collected through 122 questionnaires. From the content analysis of interviews, we can see that Aquatim has a strong hierarchical culture, based on EU regulations and local laws, where the independent actions toward sustainable behaviour are not so much encouraged. Employees comply with organisational rules, don't have much space for exposing their pro-environmental attitudes,

and don't feel complete volitional control over pro-environmental behavior. Ajzen (1985) stated that perceived behavioral control can be affected by both internal and external factors. Internal factors can include characteristics of the individual, their skills and abilities, their willpower and their emotions in a situation. External factors have to do first with time and opportunity and second with dependence on others. Both internal and external factors that are not under the individuals' control might impede the performance of a behavior. Structural and organizational factors are such external factors in the work context that can be analysed in terms of time and opportunity and dependence on others. The impact that these factors may have on individual's ability to carry out pro-environmental behavior may affect their intention to perform the behavior (Ajzen, 1991). Ajzen argued that perceived behavioral control improves predictive accuracy when behaviors that are not under volitional control are studied (preventing the influence of an optimistic perception of ability or intention to perform a behavior). People in the organizations have varying degrees ofcontrol and they often do not have complete volitional control over their (pro-environmental) behaviors at work. We reflect at this point on the importance of an organization's climate that define "the way things are" in the organization in terms of time and opportunities allocated to an employee and his/her dependence on others (i.e. co-workers, supervisors) and also the importance of an organization's culture that indicate what the members in the organization think and believe and what expectations they have from an individual in these respects.

For example, in the Romanian case study, the results of the analysis done in WP3 revealed a hierarchical type of culture based on observing the procedures and rules in a climate of stability and control.The employees consider that the environmental problems only concern them to the extent in which they are asked to act by the persons institutionally "responsible" for such matters. They know they are dependent on the authorities, they have to comply with the rules, doing what they have to do and do not waste time with looking for innovative ways of acting pro-environmentally. They collect the waste separately because the organization provides them with convenient facilities, in the proximity of their workspaces. Other previous studies revealed also the importance of the facilities in the workplace like placing the recycling containers in close proximity to workspaces (Austin, Hatfield, Grindle and Baily, 1993;Brothers, Krantz and McClannahan, 1994).

Also, the cultural context is hindering the openness for sustainable practices, because of the Romanian communism background, with absolutely no regard toward sustainable practices.

So within this context which doesn't facilitate much the development of sustainable practices, we ask ourselves, what factors do influence sustainable behavior? Which individual factors matter the most in implementing sustainable practices? And what structural factors facilitate this type of behaviors?

REFERENCES

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), Action control: From cognition to behavior (pp. 11–39). Heidelberg, Germany: Springer-Verlag.

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50, 179–211.

Austin, J., Hatfield, D.B., Grindle, A.C., Baily, J.S. (1993). Increasing recycling in office environments: The effects of specific, informative cues. Journal of Applied Behavior Analysis, 26, 247–253.

Brothers, K. J., Krantz, I. J., & McClannahan, L. E.(1994). Office paper recycling: A function of contamer proximity. Journal ofApplied Behavior Analysis, 27, 153- 160.

Participatory tools for future mapping: the use of back-casting scenarios in transitions to sustainable organizations

Adina Dumitru, University of A Coruña, Spain/West University of Timisoara, Romania
Ricardo García Mira, University of A Coruña, Spain

Back-casting scenarios constitute a relatively new methodology in the field of sustainability and climate change. Despite its appearance and theorization in the decade of the ´70s, it is only recently that it has become widely used as an instrument in helping decision-making processes in policy-making. The back-casting scenarios methodology appeared in response to the discontent with the traditional methods of trend extrapolation in energy forecasting, where it was assumed that energy demand would increase gradually and renewable energy technologies and energy conservation efforts were ignored (Vergragt& Quist, 2011).

In future and sustainability studies, back-casting scenarios are defined as a methodology that allows us to envision and analyze different types of sustainable futuresand develop agendas, strategies and pathways to reach them (Vergragt& Quist, 2011). It has a strong normative component, as it starts from desirable future states or set of objectives and then analyzes the steps and policies that are needed to get there, in order to be able to design agendas that can be implemented and that normally requirecooperation and communication among different types of actors in complex socio-economic and political environments. It is considered a useful qualitative tool in going toward alternative futures in issues of climate change (Giddens, 2009).

The present paper will present the advantages and drawbacks of the use of back-casting scenarios as a participatory methodology in mapping change in organizations. It will show how different methodological options within back-casting can create a common awareness of problems, engagement in solving them and feelings of empowerment. Also, back-casting scenarios can be used as part of more complex methodological designs and can be a very useful tool for modeling approaches, as the results of back-casting include commonly-agreed policy pathways for an organization or a community.

The results obtained from applying the methodology of back-casting scenarios within the LOCAW project will be presented. The research within LOCAW has used a process-oriented scenario-development method which combined stakeholder and researcher input to generate images of the future and desired end-states. We will discuss the pros and cons of the method of back-casting scenarios, its uses in studying (un)sustainable practices in large scale organizations and the implications for future research and policy development in organizations and communities.

REFERENCES

Giddens, A. (2009) The Politics of Climate Change, Polity Press, Cambridge UK.

Vergragt, P.J., Quist, J. (2011) Backcasting for sustainability: Introduction to the special issue. Technological Forecasting & Social Change, 747-755.

KEYWORDS

Back-casting scenarios, large-scale organizations, sustainable practices, qualitative tools.

Users' behaviours, management and technical solutions: A fundamental integration for low carbon builings. The case of Roma Tre University

Lucia Martincigh, Paola Marrone, Judit Kimpian & Marina Di Guida
Universitá degli Study Roma Tre, Italy

INTRODUCTION

Considering that buildings are responsible for more than 40% of energy consumption, energy situation is critical and European legislative framework is more and more restrictive, a good way to reconcile economy logics with sustainability ones seems to be the "bearable" management of the existing building estate. This is possible by monitoring building performances and energy consumptions, and by evaluating management strategies and users' behaviours. This paper presents a web platform apt to operate such procedures. This tool started from the English CarbonBuzz, elaborated by Aedas and University College of London, and evolved into a new version apt to meet the Italian situation and detect "proofs" of the actual effectiveness of design solutions.

THEORETICAL BACKGROUND

The environmental degradation and life quality low standards signal that the well-balanced relation between building and dwelling is jeopardized. If dwelling represents the aim (according to Heidegger, literally the way men live), building is the artificial action men take to transform natural environment in relation to life demands (Losasso, 2005). The actions men take to shape their habitat are ruled and steered by technological processes that, processing matter, energy and information give back products and "organisms" in which incoming and outgoing matter and energy flows act. A new operational approach considers that reliable data are combined with the attention paid to the evaluations given by users (Gupta e Chandiwala, 2010). The study of users' perceptions and behaviours supplies designers, and then producers, with meaningful feedback that enable them to detect solutions meeting users' requirements better and reducing the gap between expected and actual building performances. The users' participation to the process takes them to build a stronger link with the premises, a sense of belonging and consequently to feel responsible and keep congruent behaviours (Risser et al., 2006). Italy, compared to other countries such as the UK, lacks a suitable benchmarking, aimed at monitoring comparative performances, and Post Occupancy Evaluation protocols, apt to evaluate building performances after a time from their occupancy. The real transition to a green building economy can become effective only overcoming the mere sustainable design (a necessary but not sufficient condition) and aiming for a sustainable dwelling (Dall'O', 2011).

METHODS

Starting from the English platform, the Italian version modified and implemented some aspects that were different. Though they both respected the general principles in accordance with European directives, some peculiarities regarding: national rules, climatic and geographic conditions, building and equipment systems, management and way of living buildings took to elaborate specific parameters for the design and in use phase (towards a specific year of reference). A methodology for collecting the data was devised and applied to some buildings of Roma Tre University, in order to test the first version of the platform. A technical classification, based on some building aspects and on the energy certifications at design stage, was made. These data were confronted with effective energy consumptions bills, surveys and enquiries involving managers and users.

RESULTS

An early database of the case studies was created; morphology, technology, system and management variety allowed to carry out a double control: on the one hand to compare parameters of consumption with CO2 emissions in a sample of buildings with the same end use; on the other hand to compare design and in use data, concerning the monitoring of effective bills for the single building. By these analyses, in a more in -depth phase, it is possible to distinguish the energy end uses and to understand where and how to take action in order to improve buildings efficiency, as well as to involve actively users by crowd sourcing procedures, complementary to other interview methods.

CONCLUSIONS

The research enables both teams, English and Italian, to draw conclusions regarding the methodology to detect energy consumptions systematically, the implementation of environmental mitigation measures, the consideration of needs and behaviours of users, just for their being at the core of the design and evaluation process.

REFERENCES

Gupta R. e Chandiwala S., Understanding occupants: feedback techniques for large-scale low carbon domestic refurbishments, in "Building Research & Information", 38:5, 530-548,2010

Losasso M., "La dimensione sostenibile nel progetto architettonico", in M.Losasso, a cura di, Progetto e innovazione, CLEAN 2005,p.30

Risser R., Schmeidler K., Steg L., Forward S., Martincigh L., Assessment of the quality of life in cities. Environmental conditions and mobility, in: Urbani Izziv, vol. 17,No. 1-2/06,The forgotten modernism of cities.

KEYWORDS

Energy performance, sustainable dwelling, occupant feedback, web platform, post-occupancy evaluation

17:00 – 18:30

PARTICIPATORY TRANSITORIES TO A LOW CARBON EUROPE: LESSONS FOR POLICY

Convener: Walter Wehrmeyer
Chair: Walter Wehrmeyer

Getting to radical sustainability: are we radical enough for changes?

W. Wehrmeyer, University of Surrey, UK
S. Fudge, University of Exeter, UK
Z. Stasiskiene, A. Staskevicius, Kaunas University, Lithuania
A. Farsang, Central European University, Hungary
L. Venhoeven & G. Perlaviciute, University of Groningen, The Netherlands

In recent years, the EU has mainstreamed sustainable development into a broad range of its policies. In particular, the EU has taken the lead in the fight against climate change and the promotion of a low-carbon economy. It was one of the key promoters of the Montreal Protocol that addressed ozone depletion from 1987 onwards, and is still the key driver behind the Kyoto Protocol and Post-Kyoto negotiations with the aim to mitigate climate change. Already in 1997, SD became a fundamental objective of the EU when it was included in the Treaty of Amsterdam as an overarching objective of the EU policies, followed by the adoption of the European Sustainable Development Strategy (EU SDS) in 2001. From a distance it may appear that the EU is a very strong united body fighting for SD promotion on the international level. However, unsustainable trends persist in many areas.

The 'jump' to a more sustainable world demands a structural and societal change. For this reason, the EU-funded project Creating Innovative Sustainability Pathways (CRISP) aims to identify potential paths to engaging on an integrated effort to support the transition, to a sustainable, low carbon Europe. The project places much emphasis on using a future-scenarios-building (getting a common vision of a future that is desired and sustainable) and back-casting (defining what has to be done in order to reach this future vision given the current situation) approach that explicitly discerns individuals, organisations and the collective (societal and economic organisation), addresses the interaction of agency and structure, and analyses from there how individuals and collectives can be engaged on sustainable paths, and how new policy mixes and co-operation mechanisms can overcome barriers to change. However, before shaping future visions and trying to implement them, it is necessary to analyse the current situation in order to get insight in why things happen the way they happen; what are the barriers and drivers to overcome the gap between awareness and concrete engagement in sustainability driven action.

For this reason, within the framework of CRISP, the state-of-the-art review of the most important EU and national SD policies and strategies has been performed. The article aims to find out whether the EU does speak with one voice concerning the SD issues, since the internal position of EU member countries usually tends to be left behind although the division of Europe into the North-South and West-East sides regarding environmental poli-

cy-making is still obvious and different welfare-state models representing socio-economic development of the European countries still exist. The results were validated by the case study represen-ting the attitudes towards different SD aspects of four EU member countries which were selected to reflect both different European welfare-state models and a division between Eastern and Western Europe.

REFERENCES

1. Baker, S. (2009) *In Pursuit of Sustainable Development: A Governance Perspective*, Paper presented at the 8th International Conference of the European Society for Ecological Economics (ESEE), Ljubljana, Slovenia, 29 June – 2 July 2009, http://www.esee2009.si/papers/Baker%20-%20In%20Pursuit%20of%20Sustainable.pdf

2. Berger, G. & Steurer, R. (2009) *Horizontal Policy Integration and Sustainable Development: Conceptual remarks and governance examples*, ESDN Quarterly Report, June 2009, http://www.sd-network.eu/?k=quarterly%20reports&report_id=13

3. Berger, G. & Zwirner, W. (2008) *The Interfaces between the EU SDS and the Lisbon Strategy: Objectives, governance provisions, coordination and future developments,* ESDN Quarterly Report, December 2008, http://www.sd-network.eu/?k=quarterly%20reports&report_id=11

4. Berger, G. (2009) *Governance for Sustainable Development: Concepts, principles and challenges,* Paper presented at the Eurofound Expert Meeting: Industrial Relations and Sustainability, Brussels, December 3, 2009

5. Eurostat (2009) *Sustainable Development in the European Union - 2009 monitoring report of the EU sustainable development strategy,* http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-78-09-865/EN/KS-78-09-865-EN.PDF

6. Gjoksi, N., Sedlacko, M. & Berger G. (2010) *National Sustainable Development Strategies in Europe: Status quo and recent developments,* ESDN Quarterly Report, September 2010, http://www.sd-network.eu/?k=quarterly%20reports&report_id=18

7. Meadowcroft, J. (2007a) *National Sustainable Development Strategies: Features, Challenges and Reflexivity, European Environment*, 17, 2007, pp. 152-163.

8. Meadowcroft, J. (2007b) *Who is in Charge here? Governance for Sustainable Development in a Complex World, Journal of Environmental Policy and Planning,* 9/3-4, pp. 299-314.

9. Steurer R, Berger G, Hametner M. 2010. The vertical integration of Lisbon and sustainable development strategies across the EU: how different governance architectures shape the European coherence of policy documents. *Natural Resources Forum* 34(1): 71–84.

10. Steurer, R. (2008) "Strategies for Sustainable Development", in: Jordan, A. & Lenschow, A. (eds.), *Innovation in Environmental Policy? Integrating the Environment for Sustainability,* London: Edward Elgar, pp. 93 -113.

11. Steurer, R. (2009) *Sustainable Development as a Governance Reform Agenda: An Aggregation of Distinguished Challenges for Policy-Making.* InFER Discussion Paper 1/2009. Vienna: BOKU.

12. Strandenaes, J.-G., *Sustainable Development Governance towards Rio+20: Framing the Debate,* Stakeholder Forum, http://www.uncsd2012.org/rio20/content/documents/JGS-SDC-final.pdf

13. Zwirner, W. et al (2008) *Participatory Mechanisms in the Development, Implementation and Review of National Sustainable Development,* ESDN Quarterly Report September 2008, http://www.sd-network.eu/?k=quarterly%20reports&report_id=10

KEYWORDS
Sustainable development, innovative pathways, radical changes, strategy, transition.

Teenage Envisions to a Sustainable Europe in 2030; how to get there?

W.J. Luiten & S.B. Emmert
TNO Built Environment and Geosciences, The Netherlands

How to overcome the gap between knowing what needs to be done for sustainability and acting in a sustainable way? As part of the EU FP7 project Creating Innovative Sustainability Pathways across Europe (CRISP), we asked teenage pupils from six European countries about their ideas of a sustainable society in 2030.During inspiring workshops with groups of pupils in the age of 16 to 18, we learned more about what they see as opportunities to live their future adult life in a more sustainable way. The workshops resulted in three different envisions, in which technology, community life or ethical principles were the main drivers behind their sustainable society. In a participative process, both lay men and experts got the opportunity to reflect on these envisions and to discuss possible transition pathways to realize these envisions.

This paper we will focus on the so called 'Local Community' vision in which social cohesion, local cultural identity, family and decentralization are key characteristics. We will elaborate on this vision, paying attention to current societal trends and signals that may feed and explain the development of a local and decentralized oriented society. Based on the results of stakeholder workshops with citizens who are frontrunner in setting up local sustainable energy initiatives, and experts in the field of local sustainable energy production, we will work out specific transition pathways to local communities producing 100% of their energy need in a sustainable way. We will discuss what should be broken down in the current situation and what should be build up to realize this low carbon future vision and sketching a timeline till 2030 for most promising built up elements.

This paper is supported by the European Commission under the Environment (including climate change) Theme of the 7th Framework Programme for Research and Technological Development, Project Number 265310.

New Futures and News ways to get there: Examining School Pupils' and Experts' Transition Pathways across 6 EU countries[1]

W. Wehrmeyer, University of Surrey, UK
S. Emmert, TNO Built Environment and Geosciences, The Netherlands
A. Farsang, Central European University (CEU), Hungary
E. Kondili, TEI Piraeus, Greece
Z. Stasiskiene, Kaunas University of Technology; Lithuania
L. Venhoeven, University of Groningen, The Netherlands
G. Vitterso, National Institute for Consumer Research (SIFO), Norway

There is an a priori argument that those who are affected by a decision should have a say in that decision. In terms of intergenerational equity, as well as the need to implement whatever Transition Management (pathways, trajectories) implementation is to happen, this must include young people, be this for ethical or operational reasons. Several studies have shown that participatory workshops with young people can be designed effectively, and in the context of long-term futures and their respective sustainability, this is very necessary and good news.

In addition, given the socio-cultural context, approach to technology etc, Generation Z is likely to have very different notions of their specific future, and the way sustainability and low-carbon lifestyles are evolving within this. This opens up the distinct possibility that (older) experts devise and shape transition pathways that hopefully deliver greater sustainability and less carbon-intensive lifestyles, but do so in a governance void and in a direction that those who are destined to live (in) these futures find difficult to accept, let alone actively pursue. In short, not involving young people in the Transition Pathways and Management agenda risk a governance deficit as well as an implementation challenge.

To understand how young people conceptualise of their future in low-carbon sustainability terms, and how they conceive suitable visions of their futures, 24 visioning workshops were held in Greece, Hungary, Lithuania, Norway, The Netherlands and the UK. The resulting workshop-level visions, which produced over 1500 ideas and suggestions across the workshops, were then condensed into 3 pan-European Visions yielded three archetypical visions, namely Local Community, I-Tech, and One Ethical World.

Following this, a new methodology was developed and applied with young people and experts to in turn develop suitable pathways towards the attainment of the above visions. The paper outlines the visions, the pupils' perception of the future and evaluates the adopted pathway methodology in detail. Particular attention will be paid to contrast the process as well as outputs from the workshops between experts and young people.

[1] This paper is supported by the European Commission under the Environment (including climate change) Theme of the 7th Framework Programme for Research and Technological Development, Project Number 265310.

Identifying key drivers, barriers and change agents: policy and practice-relevant lessons from six countries across the EU

A. Farsang, Central European University (CEU), Hungary
Alan Watt, Central European University (CEU), Hungary
W. Wehrmeyer, University of Surrey, UK
Shane Fudge, University of Exeter, UK

INTRODUCTION AND THEORETICAL FRAMEWORK

Contemporary social and environmental problems call for systemic, structural changes toward global sustainability in different sectors, particularly in energy, transport\mobility and the food sector. As problems in these domains are highly complex and uncertain, we need complex and long-term processes of transition in order to sustain the way we fulfill societal needs. Such transitions require changes at different levels and also need to incorporate the involvement of multiple stakeholders. One of the key observations made in transition management theory, is that the existing regime is stabilized through lock-ins, resulting in path-dependencies. Transitions occur if there is a shift from one regime to another, therefore the regime level is of key interest. According the principles of transition management, the niche level (micro level), is an important incubating space through which radical innovations might emerge, with the aim of solving or addressing persistent, societal problems. This is felt to be an important catalyst for transitions to occur.

In the first phase of the CRISP (CReating Innovative Sustainability Pathways across Europe) research project, we provided a review of barriers, drivers and synergies towards sustainable development from a policy and conceptual perspective as well as of initiatives towards sustainable development. We included key concepts linking individual agency and structure, from innovation system theories and transition theory in order to examine the role of structure and agency, as well as drivers and barriers for change. We studied to what extent barriers, drivers, change agents differ across different countries, types, levels and domains of initiatives. Relevant policies have been studied in Hungary, Lithuania, the Netherlands, the UK and on EU level. After completing the policy review, 30 (past) initiatives from six countries (Norway and Greece additionally) of transition have been analysed through an assessment framework. In our report we addressed the following questions: What factors influence the success of initiatives? What are the key characteristics of these initiatives? What shape the development of the initiatives and what relationship exist between policy development and the cases? What are the main barriers, drivers and change agents? The results of this research will be presented at this conference.

METHODS

Based on the review of policies and the assessment of past initiatives through desk research and interviews, the following headings served the main elements of our analytical framework: guiding principles, drivers, actors and change agents, policies, dominant culture, institutionalisation, regime and policy – niche/initiative tensions. Based on the analyses of the above listed elements, we will both highlight and provide insights into the issues shaping and translating initiatives towards sustainability transition on a systemic level.

RESULTS AND CONCLUSIONS

The CRISP project has identified a variety of cases which promise social innovation across Europe. Moreover, many of these cases show the potential to offer answers to persistent problems in the domains of food, mobility and housing. In some cases, niche innovations

seem to remain marginal and unable to offer a stable alternative to the regime, especially in case when general trends are in contradiction with their particular agenda. In all cases, organisational and economic factors are essential for the success of initiatives and the public sector plays a key role as well.

When analysing the policy framework both on the EU and national level, we also recognise that a strong focus of policies on technology, industry and the commercial sector, has often been to the detriment of important areas such as social innovation and social entrepreneurship. The prevalence and tendency towards pursuing economic growth first is present in all countries studied on the national level, as well as at the European level. In the main, this agenda does not consider the failure of the current development path of focusing on economic growth and does not take into account its social and environmental impacts. An important landscape pressure for all innovations offer the current financial crises calling for new ways of provision, solution and even values, behaviour and lifestyles.

Acknowledgement: We thank all members of the CRISP project for their invaluable contribution. This presentation/paper is supported by the European Commission under the Environment (including climate change) Theme of the 7th Framework Programme for Research and Technological Development, Project Number 265310.

KEYWORDS
Barriers and drivers for change, policy review, bottom-up initiatives, assessment framework, change agents

17:00 – 18:30

PERSON, URBAN SUSTAINABILITY AND PUBLIC SPACE

Convener: Bernardo Jiménez Domínguez
Chair: Mario Noriega

Person, urban sustainability and public space

Bernardo Jiménez, University of Guadalajara, Mexico
Mario Noriega, Javeeriana University, Colombia
Miguel Ángel Aguilar, Metropolitan Autonomous University – Iztapalapa, Mexico
Ana Rosa Oliveira, P20 Arquitectos, Mexico

Our proposal starting points are that, first, the compact city is a dense and socially diverse city in which social and economical activities superimpose, and communities are organized as neighborhoods. Compact city is defined in opposition to urban sprawl, zoning and suburbia and is a condition for urban sustainability. Second, in the practice of open urban design an egalitarian environment has been mentioned and considered as one of the conditions for a sustainable city. Spatial qualities, such as: the absence of barriers that restrict the movement of people; the possibility of direct access to most urban facilities; and permeability or connectedness trough the components of the city such as streets, plazas and neighborhoods. Third, in the central and consolidated areas of the city walking is associated with freedom of movement and discovery. The experience of walking is not only a social practice that has to do with urban mobility, it is also a practice that relates with the experience of the body, the street and the other passers that surround the walker. We will present three different research experiences related with public space, from the perspective of open urban design of a campus, the regeneration of a central area around a park under the concept of compact city, and the psychosocial experience of persons walking in the city.

The sensorial and urban experience of walking in Mexico City

Miguel Ángel Aguilar Díaz
Metropolitan Autonomous University – Iztapalapa, Mexico

INTRODUCTION

The goal of the presentation is to analyze the experience of walking in the city taking in account different dimensions: sensory, meaning of the street, the sense of a place and memory. Walking is not only a social practice that has to do with urban mobility, it is also a practice that relates with the experience of the body, the street and the other passers that sourround the walker. In a metropolis the experience of walking is diverse and fragmented, as the city itself.

THEORETICAL BACKGROUND

There are some milestones approaches to the relation of city and body, such as the works of J.F. Augoyard (2007), Michel De Certeau (1996), and Richard Sennet (1996). In this works the accent is put on the rethoric of street made possible by the inhabitant, or the social dy-

namic of difference and indifference in the everyday encounters. In other approaches (Middleton, 2011) walking is seen as a performative practice which leads to particular engagements with the city.

METHODS

Different techniques in recollecting data have been employed: a) interviews in-depth about the meaning of walking in the city and how it relates to places and different moments in a personal biography , b) mobile interviews, describing the street and body sensations while walking in everyday places, c) visual documentation, taking photographs, of this everyday trajectories.

People from different social backgrounds were interviewed following a quota sample based on: age, place of residence, social class and gender.

RESULTS

In a first exploratory analysis of the data gathered until now certain trends can be asserted:

• There is a great heterogeneity in the experience of walking. There is no mainstream discourse about walking in the city. Even it could be said that is has no discourse at all: in many cases it was very difficult to talk not about what is seen, but what is experienced while walking.

• There are different level of fragmentation within walking in the city: a) while a certain rhythm of walking is acquired the street corners impose a stop in this rhythm because of the traffic lights, or the vehicles, that are seen as threatening, b) the urban mobility requires walking from one mean of transportation to another (for example: going from home to the bus stop, and then to the subway), so walking is experienced as instrumental and not as a source of urban sensations and knowledge.

• The experience of fear is one of the ways in which the street is embodied. Walking in certain places at certain time of the day arise the sensation of fear, and the body "reacts" to dark and lonely atmospheres, mostly in the female perspective.

• In the central and consolidated areas of the city walking is associated with freedom of movement and discovery; in the poor outskirts of the city, walking is evaluated as something that has to be done, but as the physical setting is unattractive, the experience is rough and not pleasant.

CONCLUSIONS

To walk in the city is a social practice which implies various relevant social dimensions: senses, body, sense of place and knowing the urban social codes. In this first approach to empirical data about walking in Mexico City is possible to conclude that walking is embedded in the rhythms of the everyday life but, at the same time, it highlights some relevant biographical and place based experiences. From the instrumental mobility to the sense of freedom, walking provides means of inserting the inhabitant within the city through shared and individual meanings of the street.

REFERENCES

Augoyard, Jean-Francoise (2007), Step by step, Minneapolis, University of Minnesota Press
De Certeau, Michel (1996), La invención de lo cotidiano. I. Artes del hacer, Mexico, Universidad Iberoamericana.

Middleton, Jennie (2011) Walking in the city: The Geographies of Everyday Pedestrian Practices, Geography Compass, 5/ 2, p.p. 90-105.

Sennet, Richard (1996) Flesh and Stone. The body and the city in the western civilization, New York, Norton.

The construction of sustainable cities through the practice of 'Open Urban Design'

Mario Augusto Noriega Toledo
Javeriana University, Colombia

An egalitarian environment has been mentioned and considered as one of the conditions for a sustainable city. The question this paper wants to explore is how the practice of 'open urban design' can help to build such an environment.

For the purposes of this paper, some conditions for the construction of an egalitarian environment are certain spatial qualities, such as: the absence of barriers that restrict the movement of people; the possibility of direct access to most urban facilities; and permeability or connectedness trough the components of the city such as streets, plazas and neighborhoods.

A big threat to the construction of egalitarian environments is the trend in contemporary cities to privatize space and build residential, working and institutional enclaves, all these under the illusion of fighting the crime, poverty and disorder of the outside spaces. The results are restricted areas and gated territories: generators of social polarization trough segregation, marginality and fragmentation.

The question I want to address is how 'open urban design' can reconcile the apparently unstoppable trends of privatizing city spaces and the goal of building a more egalitarian environment and as a result a more sustainable city.

I understand 'open urban design' as a professional practice based on developing urban projects applying the following principles:

• Ensuring the continuity of the urban fabric based on connecting public spaces like streets and plazas.

• Superimposition of layers that recreate the complexity of urban structures. These layers work as complementary grids and systems based on: streets and open spaces, natural elements and landscape; land uses (commercial, housing, institutional facilities, spaces for work); and the infrastructure of public utilities.

• The strategic placement of facilities with functional and symbolic value such as public buildings, community services, and monuments.

• Growth and change as a natural feature of the urban process, with the ultimate goal being to promote participation, appropriation and transformation of space by users.

• Awareness of global issues trough the creation of linkages between each project and broader regional contexts.

These principles are the product of my 35 years of professional practice following and combining a body of contemporary theory oriented towards the creation of 'open cities' with three outstanding references:

• Jane Jacobs and her conditions for making a city livable, diverse, active and safe

• Oscar Newman and the use of territoriality, natural surveillance, image and milieu for developing the concept of Defensible Space

• Bill Hillier and his principles of Space Syntax for configuring grids, axes and nodes to generate encounters and interactions.

CASE STUDY

Master plan for a university for 22.000 students located in a strategic site in down town Bogotá (7 million inhabitants). Three objectives of the project related to the creation of an egalitarian environment were:

1. To preserve the paths (circulation) trough the campus that neighboring communities use.

2. To maintain open facades to the street and if possible increase porosity of the campus so there is continuity and integration of the University spaces and activities with the surrounding neighborhoods.

3. To maintain and if possible to improve existing standards of control and security without sacrificing the sense and character of an open campus.

The big challenge and the point we wanted to prove with our project was that an open environment with appropriate urban design can be as safe as an enclave, and probably safer and better in terms of activity and quality of public spaces

To prove the point this open campus is compared with a completely controlled and closed campus of another university with a similar location in downtown Bogotá. The comparative study uses data between 2007 and 2011tracking robberies, lost property and number of security guards needed to control the campus.

CONCLUSIONS

1. It is possible to support with evidence that urban open facilities with appropriate design can be as safe for users as enclaves. The evidence even suggests such facilities can improve safety for surrounding communities.

2. The evidence is still preliminary and under construction but it is tempting to explore and support the advantages of expanding open spaces and reducing enclaves as a way to make cities safer and therefore more sustainable and egalitarian.

3. So far the design principles used for creating open environments are optional for designers and do not correspond to requirements for the approval of projects by city authorities. It would be worth exploring how proved design tools for making cities more sustainable could become public policies.

KEYWORDS

Urban-design, Sustainability, Enclaves, Public-space, Master-plan.

Puerto Vallarta, practices and imaginary of its inhabitants and tourists

Ana Rosa Olivera Bonilla
P20 Arquitectos, Mexico

We present some results obtained in a study for a doctoral dissertation at the University of Guadalajara, the second tourist destination of sun and beach in Mexico: the tourist resort of Puerto Vallarta.

However, Puerto Vallarta was not always tourist destination or a city. As a result of the last three decades of rapid growth of tourism, society, culture and territory, experience a period of physical construction and social reconstruction in which residents and tourists mean the city and its spaces from a duality of practice and imaginary.

Today, just over half of its inhabitants, was born in this city, the rest immigrated in search of jobs generated by the tourism sector itself, or are foreign nationals and international who found in this city an ideal space for daily living or as a second residence.

Living in Puerto Vallarta or visit Puerto Vallarta, involves an imaginary -instituted- which is reaffirmed in the collective practices carried out by each other in this place. There are clearly defined spaces for some and others in which rarely succeed inhabitants and tourist mingle in time and space.

We will talk about the urban and tourist growth that has taken the city and the natural and cultural symbols that the imagination of residents and tourists work with to define practices and institute collective imaginary representing the tourist town of Puerto Vallarta.

THE ROLE OF SUSTAINABLE URBAN GREEN SPACES FOR PROVIDING ECOSYSTEM SERVICE AND MAINTAINING HUMAN WELL-BEING IN THE CONTEXT OF A GLOBAL URBANIZATION

Conveners: Nadja Kabisch, Dagmar Haase & Sigrun Kabisch
Chair: Nadja Kabisch

The role of sustainable urban green spaces for providing ecosystem service and maintaining human well-being in the context of a global urbanization

Nadja Kabisch, HU Berlin, Germany
Dagmar Haase & Sigrun Kabisch, UFZ Leipzig, Germany

Since 2008, urban landscapes are the everyday environment for the majority of the global population (United Nations, 2012). The continuous increase in population density, share of urban residents, and other urban land uses and land cover changes on different scales pose great challenges for maintaining ecosystem services and ensuring human well-being particularly in urban areas (Niemelä et al., 2010). Urban ecosystem services are the be-nefits residents obtain from ecosystems in cities or city regions to improve and sustain their quality of life (Bolund & Hunhammar, 1999). They include the reductions in air pollution and noise, mitigation of the urban heat island effect, provision of food, or direct recreational and health benefits. These services are predominantly generated by differently structured urban green spaces including parks, cemeteries, watercourses, green roofs and facades, sports fields, urban gardens but also rather unmanaged vacant lots and industrial sites.

The sustainable management of these urban green spaces must, however, be connected to the social-ecological dynamics of the built-up areas as they can change fast according to institutional or economic developments. Especially in developing countries where human populations are assumed to continue to become more urbanized, there will be increasing demand and pressure on urban green spaces. These urban green spaces not only offer recreational and health benefits, they are also used for self-sustained food production by increasing shares of the local population. An in-depth assessment on the role of a range of divers structured urban green spaces for the quality of life of urban residents (including their perception and health outcomes but also residents interest in urban agriculture) combined with sustained ecosystem service provision (including several environmental effects) against the background of urbanisation are rare (Bastian, Haase & Grunewald, 2012).

In addition a link between broader fields of environmental and social science including ecological or planning might develop more effective approaches for operationalizing and integrating urban green spaces into the ecosystem service framework than discipline-specific research can do (Daniel et al., 2012).In this session, new knowledge on the

role, dynamics and opportunities of urban green spaces as innovative spaces for ecosystem service provisioning and human well-being is presented and discussed. Against the context of global urbanization including population growth in the western World and in develo-ping countries, detailed research from case studies are invited to present their results. Especially appreciated are approaches which combine social and environmental sciences and might also include local stakeholders and governance structure in possible tool developments.

REFERENCES

Bastian, O., Haase, D., & Grunewald, K. (2012). Ecosystem properties, potentials and services – The EPPS conceptual framework and an urban application example. Ecological Indicators, 21, 7–16. doi:10.1016/j.ecolind.2011.03.014.Bolund, P., & Hunhammar, S. (1999). Ecosystem Services in urban areas. Ecological Economics, 29, 293–301.Daniel, T. C., Muhar, A., Arnberger, A., Aznar, O., Boyd, J. W., Chan, K. M. a, Costanza, R., et al. (2012). Contributions of cultural services to the ecosystem services agenda. Proceedings of the National Academy of Sciences of the United States of America, 1–8. doi:10.1073/pnas.1114773109. Niemelä, J., Saarela, S.-R., Söderman, T., Kopperoinen, L., Yli-Pelkonen, V., Väre, S., & Kotze, D. J. (2010). Using the ecosystem services approach for better planning and conservation of urban green spaces: a Finland case study. Biodiversity Conservation, 19, 3225–3243. United Nations. (2012). World Urbanization Prospects The 2011 Revision. World Urbanization Prospects, Department of Economic and Social Affairs.

Links between urban vulnerabilty and green infrastructure: an evaluation of urban agriculture practices by women farmers in Addis Ababa

Nathalie Jean-Baptiste & Sigrun Kabisch
UFZ Leipzig, Germany

As the population increases in sub-Saharan Africa, the region faces urban transformations that often exceed its economic and structural developments. Several growing cities continue to experience urban challenges such as poverty, inequality, lack of basic urban services and food insecurity, which amplify the urban vulnerability of local communities and weaken the integrity of urban ecosystems. The existing green infrastructure of large sub-Saharan cities can counterbalance the negative effect of urban growth as well as the exposure of identified vulnerable groups. Urban agriculture in particular, may serve functions of nourishment and income generation and thus can contribute to the development of a framework for landscape management that comprises economic and social benefits.

In Ethiopia, agriculture continues to be the backbone of the local economy. Addis Ababa local authorities have traditionally negatively perceived urban agriculture until the time that it became clear that it remains an important source of revenue for the urban poor. It is estimated that 50% of the food and vegetable consumed in Addis comes from local farmers who are mostly women. Thus preserving green spaces not only ensures food safety but also plays a part in the economic self-reliance of a group that urgently needs to obtain access to and control over their economic resources. Moreover, recent climate change discussions have fostered the attention on urban agriculture and its role in improving the micro-climate of local areas and reducing the negative effects of increasing

flooding events. This paper points out the urban vulnerability of individuals and groups in selected locations and the role of urban agriculture in strengthening the capacities of local communities. Indeed women farming associations in Addis play a role in the management of land and the implementation of passive techniques against landslide and increasing flooding. Through a mixed methodology, the relevance of urban agriculture for Addis Ababa is put forward and a SWOT-Analysis confirms its differentiated impacts. Our preliminary findings show that urban agriculture is both challenged by the demand of urban space, land tenure issues, political and investment interests, as well as increasing climate variability but remains central in the livelihood of a particular vulnerable group.

Affordances for senior-appropriate urban green spaces in shrinking cities

Merten Nefs, Okan Üniversitesi, Turkey
Susana Alves, Deltametropolis Association, The Negerlands
Ingo Zasada, Leibniz Centre for Agricultural Landscape Research, Institute of socio-Economics, Germany
Dagmar Haase Humboldt University Berlin, and Helmholtz Centre for Environmental Research – UFZ, Germany

This paper examines whether urban green spaces can be used to promote quality of life of older residents in shrinking cities. It uses the notion of "affordances" to describe the relative qualities of open spaces and to identify ways of promoting quality of life of older individuals in shrinking cities. Quality of life requirements of older individuals and urban conditions in shrinking cities are analysed in two case studies, Walcheren and Leipzig. Leipzig illustrates a compact (historic core) and perforated (vacancy and demolition) urbanisation model whereas Walcheren represents a fragmented urban region, where the larger compact cores continue to grow and the peripheral cores shrink. The cases were selected for their distinct land-use characteristics and strategies in urban green space development. The affordances of green spaces in these two case studies are analysed according to a matrix developed for this paper. The matrix consists of a cross-tabulation involving Schöbel'sgreen space classification of green spaces which are open green; directing green; texture green; product green; and latent green versus a classification of senior-appropriate criteria classified into: accessibility, design and equipment, safety and orientation and community-building.

The analysis provided in this matrix shows different urban green spaces types and their strengths and opportunities for an age-friendly urban development. Guidelines for policy and planning intervention include the adoption of latent green for recreation and gardening; use of care farming as a means to provide care services, rehabilitation, therapy and sheltered work and the use of inexpensive latent green areas as a way to link existing texture green, product green and open green areas in an integrated network. Moreover, temporary use strategies and the transformation of vacant land into a community resource may wield socio-economic and cultural benefits.

The paper concludes by setting directions for further research.

paper sessions

HOUSING AND SPACE: SOCIAL PERCEPTION, EMOTION AND BEHAVIOUR

Chair: Seung Kwang Shon

A comparative study of professional and laypersons perceptions of social housing design

Grant Gray, Edward Edgerton & Duncan Sim
University of the West of Scotland, UK

Social housing provision is not merely the case of providing sufficient numbers of dwellings but involves the understanding of the complex and symbolic interaction of tenants living in social housing throughout their life cycle. There are inbuilt design affordances that allow the tenant an element of control and ability to create their personal version of an environment that reflects their personality. Matching tenants' needs to the structure is therefore particularly important in creating feelings of satisfaction, well-being and attachment. The research question that evolves from this notion is

"Does current social housing design in Scotland meet the needs of tenants?"

Environmental Psychology is deeply entwined in trying to understand the mechanics of everyday life, from using the spaces we inhabit to interpreting the objects we observe, handle, sit upon and generally use (Brebner, 1982). Examining how tenants judge the built spaces they inhabit and whether their needs are being met can be based on a number of variables, such as: preferences of room size and shape, affordances that radiator, door and window position provide for personalising rooms, aesthetic judgments of style, colour and materials, emotional links, identity and place attachment and feelings of control (Vestbro, Hurol, & Wilkinson, 2005). This research focuses on the relationship between three main stakeholders in social housing: the housing associations, the tenants and architects.

The Parker Morris Report (1961), ' Homes for Today and Tomorrow', suggests the way to design rooms within social dwellings is dependent on the architect having some form of knowledge relating to, the pattern of room use, the activities that go on in them and the furniture which will be kept in it. Edwards (1974) and Darke (1984 a,b & c) found architects expressed difficulty in designing for people living in social housing and suggested the only way to design was to design from their own experiences and to their own preferences as the primary guide to user needs.

There has been little research exploring how Housing Associations (HA) (the main provider of social housing in Scotland) determine the needs of end users. As non-profit making organisations, some 247 HA's are the primary vehicle the Scottish Government employ to devolve control of housing decisions down to a local level. In the current economic climate HA's are increasingly collaborating in an attempt to reduce costs through design initiatives. There is however a danger that social housing becomes homogenised, providing smaller accommodation with little or no opportunity for tenant personalisation that engenders feelings of attachment.

This study uses a phenomenological approach to triangulate grounded data via focus groups and individual interviews to compare tenants, architects, and housing association professional's perceptions on social housing designs. Preliminary results suggested that architects in general expressed a keenness to interact with tenants but did not show any clear practical application of it. They also had feelings of being disenfranchised from the design process to a certain extent in their interactions with HA's. In contrast tenants viewed any consultation processes they had with architects as superfluous as architects tended, in their view to "do what they wanted anyway". Housing associations seemed not to engage tenants in meaningful design issues, citing they (tenants) dont understand the complexities of housing design. Furthermore HA's had rigid views on how much design involvement architects should have or indeed need, as they are increasingly using standardised designs. There is therefore a potential for an applicability gap between these three key stakeholders that could manifests itself in social housing designs that does not meet the tenants needs. This research explores the common areas and indeed gaps that exist between each of these key stakeholders and the implications for social housing provision, design and use.

REFERENCES

Brebner, J. (1982) Environmental Psychology in Building Design. London: Applied Science

Darke J, 1984, Architects and user requirements in public-sector housing: 1. Architects assumptions about the users Environment and Planning B: Planning and Design 11(4) 389 – 404

Darke J, 1984, Architects and user requirements in public-sector housing: 2. The sources for architects assumptions Environment and Planning B: Planning and Design 11(4) 405 – 416

Darke J, 1984, Architects and user requirements in public-sector housing: 3. Towards an adequate understanding of user requirements in housing Environment and Planning B: Planning and Design 11(4) 417 – 433

Edwards, M. (1974) Comparison of Some Expectations of a Sample of Housing Architects with Known Data. In Canter, D., & Lee, T. (1974) Psychology and the Built Environment. England: The Architectural Press.

Parker Morris Committee (1961). Homes for Today and Tomorrow. London: Her Majestys Stationery Office. ISBN 0117501263

Vestbro, D. U., Hurol, Y., & Wilkinson, N (Eds) (2005) Methodologies in Housing Research, Tyne & Wear: Urban International

Urban thermal comfort of public spaces: The case of Bilbao city

M. Karmele Herranz-Pascual
Tecnalia Research and Innovation, Spain

Accelerated economic and urban development occurred during the last decades has generated significant changes in our environment, being the clearest example the climate change. One of the major impacts of the climate change on urban areas is the increase of frequency, duration, and intensity of the urban heat islands (UHI) in the next years.

Alterations of urban climate like these not only influence thermal comfort but also affect health and wellbeing problems in population.

This work examines the thermal comfort in two public squares of a medium-sized city in northern Spain (Bilbao, Basque Country) from the point of view of their users.

To evaluate the social perception of the thermal environment there, a questionnaire on Urban Thermal Comfort (UTC) was elaborated, based on the one developed in the KLIMES project. The adaptation of this questionnaire was guided by the general conceptual model about environmental experience (Herranz-Pascual, Aspuru & Garcia, 2010). The UTC-Questionnaire allows picking up reliable information about thermal perception in situ, as well as their valuation and effect on psychosocial health and wellbeing (perceived stress level…). In the social survey participated 247 people and it was developed in parallel with the thermal assessment campaign.

The campaigns were done in the second week of August. The weather was not too hot, there was only one sunny day, and atmospheric conditions changed little during the day. Because that, the percentage of people uncomfortable due to atmospheric weather or stress due to heat was really low.

The descriptive results indicate that interviewed people considered that temperature and humidity in the days and places were the study was carried out were okay, and that it was windless or with little wind (perception). Sun, wind and temperature was valuated as pleasant, while humidity was considered okay. This causes that interviewed people felt very comfortable with the atmospheric weather in the exact places and moments of the interviews. They did not desire, generally, neither more heat nor more cool. In the Basque Country, characterized by a mild climatology, the hottest days, generally, occur on July. This is the reason why it should have been convenient to carry out the campaign during these days.

With respect to differential results, it is observed that the two public places are similar (despite the fact that they have different architectural nature), and are considered as pleasant, nice, wide but noisy.

In relation to day and hour, it is detected that the third day was perceived as hotter, a bit more humid, and with a bit more wind than the days before. And people were more pleasant with sun, wind and temperature and a bit less with humidity. Results are logical because Bilbao in August has smooth temperatures, so their residents and visitors use to prefer a bit more heat.

Humidity (perception or valuation) is a relevant atmospheric aspect in Bilbao, considering the relation with other variables and the percentage of variance of UTC (stress, (dis) comfort) explained by humidity.

Finally, we claim that (dis)comfort index is a better assessment to perception of UTC than stress. This is because thermal stress is a concept that is difficult to understand by people, while the evaluation in terms of (dis)comfort is clearer and easier to understand. Also, (dis) comfort with atmospheric weather is influenced directly by the four variables that consider pleasantness, and inversely by the perception of humidity and temperature, while Thermal Stress is only influenced by two of these (humidity perception and sun pleasantness), and its variance is scarcely explained.

As conclusion, the relevant variables of this study about UTC refer to the different aspects of the model considered: place and person characteristics, perception of the place, and activities carried out in the place, as well as the ones intrinsically related to UTC. The results validate the theoretical model that supports UTC-Questionnaire used in this study. Nevertheless, it is necessary to continue working in this study line in order to increase our understanding of this area. The quality of open spaces should be a priority because its effects on the physiological, psychological and social health, and because it can improve the quality of life and the social wellbeing within cities.

Developing a multidimensional measure for evaluating perception and behavior in open spaces on the periphery of the residences; case study of open spaces between the buildings in Japanese neighborhoods

Amir Shojai & Suguru Mori
Hokkaido University, Japan

INTRODUCTION

This paper is part of a developing research on defining a multidimensional measure for studying micro scale residential open spaces, that is, open spaces between the buildings, by evaluating residents' perception and behavior. Architectural features as physical mediums of interaction are attempted to be incorporated into the existing models on neighborhood behavior and satisfaction by presenting a unique case study, the Japanese neighborhood, where buildings have setbacks from their boundaries, a requirement in case of certain categories of residential zones, and on which many building have visual and/or physical access to.

The significance of this research can be explained in its approach focusing on open, or one might say, non-built-up spaces between individual houses and blocks in the neighborhoods and to examine their contribution to the indoor and outdoor living environment of the inhabitants. In other words, these spaces are to be evaluated for their affordance, as Gibson explains in his theory in 1977, in accommodating or being capable of supporting any likely or desired activity, as well as the idea of whether these spaces contribute to the formation of social ties between the neighbors mutually connected to them.

THEORETICAL BACKGROUND

Neighborhood studies have mainly focused on sense of community, neighboring interaction and neighborhood satisfaction. Social contacts between neighbors have been investigated to enhance by the presence of three variables in the neighborhood: the opportunity for passive social contact, proximity to others, and appropriate space to interact (Festinger et al., 1950; Fleming et al, 1985).Taylor developed his idea of face-to-face neighborhood groups as best to claim and use the space (Taylor, 1988).

Amerigo proposes a systematic model in which objective attributes of the residential environment being evaluated by the individuals due to their personal characteristics have influence on the residential satisfaction (Amerigo, 1990, 1992). Later she summarizes her and works of others in which residential satisfaction is influenced by four groups of predictors; objective, subjective, physical and social (Amerigo 1997). In in physical and objective predictors section of this chart, issues such as single family vs. multi family, electricity and noise level has been indicated.

Physical features of the neighborhood, such as proximity of buildings and placement of doors of homes have been studies before for their relation with neighboring as they may facilitate interaction between the residents by decreasing the distance between them (Appleyard & Lintell, 1972, Caplow & Forman, 1950, Schancter and Back, 1950). Skjaeveland et al. brought physical dimensions to their study about environment effects on neighboring by focusing on interactional spaces such as semiprivate spaces, seating environment, and size of private open spaces (Skjaeveland et al. 1997). Bonaiuto et al. use four measures; architectural and town-planning measures, social relations, network services, and context features in predicting neighborhood satisfaction. In architectural and town-planning spaces he focuses

on aesthetics, harmony and contrast between the buildings (Bonaiuto, 1999) later they use aesthetics, density and volume scale to predict neighborhood satisfaction. Kaplan also presents her finding on studying residents' satisfaction and wellbeing by measuring the link between their view to natural and built environment from their home and their activities in the nature.

HYPOTHESIS AND METHODOLOGY

This research follows the concept of previous studies; however, focusing on the behavioral aspect of the micro scale open spaces surrounding residences by administering extensive questionnaire which is being drafted and is to be presented to residents in different urban areas in Japan. Later possible associations between the physical and environmental dimensions of these micro environments, and the residents' perception and behavior are to be investigated as its hypothesis.

There are three scale for measurement: 1) Open spaces as spaces between the residential buildings and setbacks from the streets; 2) the Edges, as the facades of the next-door buildings including the open or semi open spaces i.e. terraces and balconies; and 3) Mediums for resident's perception, and visual or physical interaction with these spaces are doors and windows.

The result of this research is to suggest the likely benefits, micro scale open spaces surrounding buildings bring to the residents as well as the neighborhood based on their spatial use, access and arrangement, against those examples of cramped apartment atmospheres in urban; or else, reorganizing front yards and backyards in a conscious manner as opposed to examples with unused spaces resulting in suburban sprawl.

AIM FOR PRESENTING AT IAPS

The idea is to present and discuss the hypothesis and methodology of this research, as it develops, with the scholars in IAPS for their kind insight.

KEYWORDS

Residential perception and behavior, multidimensional measure, open spaces, urban neighborhood, Japan.

Architectural mechanisms for emotion in Moratiel house by J.M. Sostres

Sonia Vázquez-Díaz
University of A Coruña, Spain

Debates about sustainability in built environment focus on ecological, economical and social issues, but usually architectural quality is not taken into consideration.

However, when assessing architecture, we can't separate social and environmental suitability from impact caused by spatial perception on life quality or people's mood, even unconsciously. Architectural quality and sustainability criteria not only can be integrated; emotions produced by architectural quality can even promote deeper environmental commitment. In current crisis context, architecture must give up pretentious formalism and seek existential depth in spatial experience. It will entail deeper respect and sensitivity to the environment.

THEORETICAL BACKGROUND

Zumthor (2009) links architectural quality to emotional impact of space. Although several authors had reflected on emotion provoked by spatial perception (Holl, 2011; Pallasmaa, 2006), it hadn't been developed a conceptual system that shows how aesthetic emotions are produced by entirely architectural means. Research concern is identifying and defining architectural mechanisms to provoke emotions, and describing how they crystallize on architectural elements.

METHODS

Research is approached through qualitative methodology, specifically through a case study. Analytical unit is a detached house built in Barcelona by J. M. Sostres, in 1955: Moratiel House. Reason for this choice was its courtyard for contemplation. Visual analysis (Rose, 2007) was applied on photographs and plans.

Architectural mechanisms are defined as deliberated configurations of architectural elements to introduce meaningful connotations. They go beyond prosaic functionality, and provoke emotions when perceived. They can affect materiality, morphology, syntax and perception, and five categories were established: Reiteration, Similarity, Contrast, Ambiguity and Unusuality.

From an inductive approach, content analysis (Charmaz, 2000) was applied to data, using a coding paradigm (Strauss, 1987) that includes a priori defined mechanisms and architectural elements in the house, such as a pond, gravel, slats or glass panels. By coding, evidences of architectural mechanisms were sought. Through later conceptualization (Rosch, 1978) diffe-rent types were described, while links between them and specific features of architectural elements were shown.

RESULTS

Graphical evidences of 66 different types of architectural mechanisms had been found. Mechanisms of bigger impact on the perception of this house, and architectural elements involved in them, are the next:

· Perceptual Similarity: allusion to time passing by. Slats cover the courtyard. Sunlight goes through them, and a pattern of light strips moves over the interior surfaces. The pattern changes permanently both configuration and intensity, depending on surfaces and light quality.

· Perceptual Unusuality: movement on the stillness. Light strips throw on a water surface placed on the courtyard floor; they reflect on the ceiling, flickering as the water oscillates.

· Perceptual Similarity: rhythm. Several architectural elements, like slats, are composed of linear pieces placed at a constant distance. They establish a rhythm on the sequence amplified by shadows and reflection on glass.

CONCLUSIONS

In this case study, more relevant architectural mechanisms provoke emotion because they crystallize constant change, the perception of time as a cycle, and the unique character of each instant. This has been achieved using linear repeated elements and a water surface.

Critics consider Moratiel House as a high architectural quality example. Knowing and syste-matizing the reasons why a space like this moves to emotion may improve emotional impact and architectural quality of new designs. Besides, it may increase understanding

between architects and users, who would appreciate, on everyday spaces, perceptual implications and meaningful values more easily, and not only its usefulness. This would encourage stronger commitment to the built environment as a cultural value.

Architectural mechanisms for emotion don't seem to conflict with usual sustainability indicators, but they complement each other. Further investigation needs to be addressed to analyse the compatibility of both criteria.

REFERENCES

Charmaz, K. (2000). Grounded Theory. Objectivist and Constructivist Methods. In N. Denzin & Y. Lincoln (Eds.), The Handbook of Qualitative Research. Thousand Oaks, CA: Sage.
Holl, S. (2011). Cuestiones de percepción. Barcelona: GG.

Pallasmaa, J. (2006). Los ojos de la piel. Barcelona: GG.

Rosch, E. (1978). Principles of Categorization. In E. Rosch & B. Lloyd (Eds.), Cognition and Categorization. Hilldale: Laurence Erlbaum.

Rose, G. (2007). Visual Methodologies. London: Sage.

Strauss, A. (1987). Qualitative Analysis for Social Scientists. NY: Cambridge University Press.
Zumthor, P. (2009). Atmósferas. Barcelona: GG.

KEYWORDS

Architectural quality; spatial perception; emotion.

The role of traditional building materials in influencing the place identity and the perceived restorativeness of the inhabitants

Pierluigi Caddeo, Renato Troffa & Giulia Sardo
University of Cagliari, Italy

INTRODUCTION

The present contribution focuses on the role of the building materials in affecting the relationship between the inhabitants and their own house. In particular, it focuses on the role of sustainable and traditional building materials. An empirical study is presented, in which the interaction between people and their home-place is approached, investigating the effects of the variable represented by the main building material of the house: traditional (adobe) vs. non-traditional. Such a variable was supposed to influence not only the issues related to the personal and place identity but, even, the capability of the home place to represent a possible restorative environment.

THEORETICAL BACKGROUND

The different ways through which people define their emotional bonds with their living places (e.g. place attachment, place identity, sense of place; Lewicka 2008), can support the stability and the personal identity by affecting their processes (distinctiveness, continuity, self-esteem, self-efficacy; Breakwell, 1986; Twigger-Ross & Uzzell, 1996). Furthermore, these bonds are strongly related with people's well-being.

The role of historical places in influencing the perceived restorativeness has been investigated by several works (e.g. Galindo & Hidalgo, 2005, Nenci, Troffa & Perriccioli, 2005, Fornara

& Troffa, 2009). In particular, studies stressed how the use of traditional and/or identitarian building materials can influence the perceived restorative of the built environment (Nenci & Troffa, 2008).

THE STUDY

Starting from these assumptions, a first, preliminary, empirical study was realized. The target city was represented by a small town (Samassi, in the interior of Sardinia Island, +/- 5000 inhabitants,), strongly connoted from the identitarian, cultural and architectural point of view.

A qualitative preliminary phase of the study was carried out, in order to identify the typical building material of the small town. Such a material was identified as the so called "terra-cruda" (adobe), a fundamental material of the vernacular architecture of the zone.

Thus, a correlational pilot study was carried out, in order to explore the possible relationship among the building technique of the house, identity and restorativeness.

METHOD

N=66 inhabitants of the city (age: 19)
The tool was represented by an ad hoc self-report questionnaire measuring: a) the degree of the identification with the home place; b) the degree of place-attachment with the home; c) the perceived restorative capability of their home-place; d) the level of expressed preference.

Furthermore, a section was included in order to control the perceived traditional or identitarian nature of the chosen building material.

RESULTS

Results show significant differences among the inhabitants which live in a house built with the traditional material in respect with those who live in a house built with other non-traditional materials.

In particular, differences were shown in the sense of a higher degree of identification for people who lives in adobe houses regarding the place identity dimensions of distinctivity ($F(1,60)=8.21$; $p<.001$)

It appears to be important that the chosen traditional material is really perceived by the inhabitants as a highly representative symbol of identity and regional belongingness.

CONCLUSIONS

The outputs of the presented study confirm the interest of the investigated topic. Since it is a preliminary study, the most important conclusion which has to be done is that the emerged differences stress a possible important role of the building materials in influencing the quality of life of the inhabitants and their relationship with their living places.

Since the used tools have shown an adequate degree of reliability, the present work can land the bases for further studies, not only from the theoretical, but also from the methodological point of view. Further materials will deserve to be investigated, in different geographical contests and with a larger and more differentiated sample.

KEYWORDS

Architectural quality; spatial perception; emotion.

CONCEPTUAL DIMENSIONS OF ARCHITECTURE AND DESIGN

Chair: Carole Després

Environmental architectural design and the bio psycho anthropological matter

Héctor García Olvera & Adrián Baltierra Magaña
National Autonomous University of Mexico, Mexico

INTRODUCTION

A brief statement on a theory about the necessary interdisciplinary relationship between Architecture, Social Psychology and Bio-Anthropology.

Theoretical Framework: Located around the influence of advances in the human sciences regarding contemporary Architecture conceptualization.

METHOD

The proposal is the product of a documentary research, interdisciplinary forged, based on the historiography of progress in the human sciences and its relationship with the Architecture.

RESULTS

Architecture has already been multidisciplinary. In 27 B.C., Marco L. Vitruvius said: Architecture is a science next to other disciplines and he defines formal spaces delineation and its psycho-anthropological effects in humans who have to inhabit as the skillful architect. Architecture and the human sciences are crispy old, was known about the influence of the environmental matter in character, psychological shaping and intelligence of the inhabitants.

The architecture is interdisciplinary, by its method and its assembly with the way of understanding the environment and hominization, in which new cognitive schemes are open. It is a co-participant discipline of the biological, the psychological and socio anthropological habitat production. Architecture has to be not only plastically beauty, composed, original, useful, well built and durable but widely addressing of the presence of human being, in it, of his perceptive, spatial and cultural diversity. In the architectural deisgn process, the existence of that living human being should be considered and also in its inhabitant transcendental characterization towards the formality of spatiality to be built.

Architectural design has to be openly interdisciplinary, not only subject to self-discipline cognitive categories nor exclusive attributes of the architectural, aliens to the complexity of the social production of the human and the spatial habitability, but a fully willing posture on his intense discipline symbiosis, within Social Psychology and Bio-Anthropology knowledge area.

The interdisciplinary character arises from its conceptualization phase and is linked to advances in the understanding of inhabitant human production and should be included some issues in it, such as spatial ethology, habituality, sensory and emotional perception,

proxemics, somatokinesis and culture, the ways of living and the ways of use, survival and sense of place; identity, appropriation, territoriality, dominance and leadership: closeness and remoteness, intimacy, privacy and power relationships with habitable shape of the spatiality.

Architectural design interdisciplinary link with anthropology is in the sense of understanding the human production and culture. Amos Rapoport (1972) proposes it anchored to the ethnological approach regarding the relationship between the social and communal determination of the very shape of housing and habitat, integrated to the naturality of the environmental. Relationship that includes the collective production of spatial objects shape and of those who have to live in it. This has to forge a new vision of architectural design, on that recognizes the influence of advances on interdisciplinary human sciencies and especially the socio-environmental psychologies and of the human being environment. Enric Pol (1988) suggests that different disciplinary fields has converged for this matter, linking human vitality to sociability and to the environment. That now there is a new relationship with the physical environment, that human being have adapted and himself has adapted to it.

CONCLUSIONS

That interdisciplinarity between Social and Environmental Psychology, Bio Anthropology and production of the architectural, refers to the problem of human beings and their environment, the Eco-Biology and Gestalt perspective, the socio-envorinmental, vital space concept, socio-emotional perception, the Ethno-physic environment, British cognitivism, phenomenological collective perception, Marxist sociology and the impact of this in the socio-spatial behavioral structure.

KEYWORDS

Architecture, Psycology, Anthropology, Human being, Environment.

Rediscovering the verbs of architecture

Roger Tyrrell
University of Portsmouth, UK

INTRODUCTION

Our zeitgeist is crisis ridden. We are subject to crisis in economy, politics, social function and ethics. Nowhere is crisis more evident than in the theories and practice of architecture. This Paper seeks to encourage a rediscovery of the acts of architecture: the verbs, in order to rebalance the concepts and actuality of making place, in our contemporary crisis-laden world.

THEORETICAL BACKGROUND

Architecture has for two hundred and fifty years, laboured under a dichotomous theoretical structure. Either it is regarded as a science: subject to post-Enlightenment scientific method in analysis and synthesis, or it is regarded as an art form. Either construct focuses upon the object of architecture: the noun. This in turn, leads to an ´objectivisation´ of the artefact, releasing it from the requirements of the acts that architecture simultaneously contains and might encourage. Objectivisation encourages design responses often devoid of context, whether physical, cultural, climatic or economic. Objectivisation releases architecture from the acts of architecture: the verb ´to dwell´ (verb) transmutes to ´dwelling´ (noun) and the poetic opportunity that the verb supplies is largely lost.

This Paper engages with two theoretical constructs. The philosophy of Phenomenology provides the lens through which architecture is interrogated providing an experiential perspective. The second construct is paradigmatic methodology, in counterpoint to rigid and bounded theoretic constructs of either the arts or sciences. The paradigmatic method acknowledges the potential held by diverse influences and experiences unfettered by apparently 'pure' theoretical constructs.

METHODS

The Paper will examine the paradigm of Jørn Utzon, most famously architect of the Sydney Opera House, but also the architect of a diverse range of projects across all scales of architectural endeavour. The Jørn Utzon Research Network (JURN) has described his methodology using a paradigmatic frame of reference, as Utzon never subscribed to a singular theoretical position. This paradigmatic frame facilitates the capture of the diverse range of Utzon's influences within a coherent theoretical position.

Through the interrogation of Utzon's paradigm seen through the philosophical lens of phenomenology, the paper will identify the key elements of the paradigm and project those forward into contemporary architectural discourse.

CONCLUSIONS

The historic dichotomous theoretical and critical frames have clearly failed. What is required is a response that strives to heal the divisions, and nowhere is that more evident than in architecture. This ´other´ paradigm strives to encourage that healing through a focus upon the acts of architecture rather than its objectified artefacts.

Development of hybrid space from vernacular to contemporary architecture to achieve sustainability (staircase housing)

Özgür Dinçyürek & Ehsan Reza
Eastern Mediterranean University, North Cyprus

In the modern era, most of the cities were planned and built with separated functions due to the rapid development of urbanization and globalization. This fact has a direct effect on formation of today's architecture. Regarding to this realm, boundaries between indoor and outdoor spaces that correspond to private and public were clearly defined.

According to this isolation and lack of Multi used spaces, people may have various kinds of communication problems. This description has the quality of all known spaces that have experienced by humans, during their lives and collects them together as a single spatial entity.

Moreover, due to the limitation of land use in cities and extension of housing towards the border of cities, natural forces guide human beings to obey those rules. In some cases such as Tehran, which has a topographical situation, natural and environmental constraints are not consider efficiently during the design and construction processes.

This paper takes a look at vernacular architecture of Iran, which defined as craftsman born, and it is based on knowledge accumulated over generations according to the socio-cultural and environmental requirements and respects. Also, it is focused on the understanding the nature of these transformations. So two important staircase settlements of

Iran are going to be identified. It explores the general overview of vernacular architecture and house form followed by focusing on Iranian vernacular architecture is examined. In sequence, it is looking at the terms such as physical, environmental and socio-cultural factors of chosen villages of Iran as case studies, which are named as Masouleh and Abyaneh. Identification of these villages is processed due to some theoretical factors such as housing typology; plan organization and urban form, typology of forms and elevation and construction and material in Iranian staircase settlements. It is also discussed by comparing of analysis, case studies and findings to draw the final conclusion.

Therefore, it aims at identifying and analyzing the local vernacular architecture of the Iranian steepy land so–called staircase housing and to extract useful principles for application to contemporary design. It is also hoped that, by such research, a body of knowledge will be built up on the structural heritage of the vernacular architecture of Iran, which is about to demolish specially in these ages. Architects and designers in Iran in particular, need to be aware of the existing traditional construction methods and existing vernacular housing stock in order to be able to develop an appropriate method and solve the contemporary housing design problems.

It should be noted that there are many type of staircase housing in the whole world like Bahrain, Afghanistan, Pakistan, Greece, and Japan, which were built in response to human's needs according to topographical land situation. However, the design achievements and principles are different, according to the variation of cultures and traditions. In this respect, Iranian staircase housing remains distinctive with its local richness and variation on this geography.

The research will be carried out through survey and comparison of two different villages in different geographic and climatic parts of Iran.

Multifunctionality is a purpose of one of the solutions for solving in steeped regions, is staircase housing, which has roots in vernacular architecture. Usage of public spaces such as; balconies, roofs and courtyards as architectural elements define the boundaries between inside and outside. Therefore, representing public spaces within private buildings is an ideal way to generate multifunctional hybrid spaces. (i.e. courtyard of a residential complex is used as a public plaza, or roof of a house is used as a courtyard of the house above).

Characteristics of recent house development could be rooted form gaps in resident's cultural needs. These needs are met by reducing the amount of isolation people fell from society. Staircase housing is providing appropriate social and cultural facilities for residential engagement of occupants with the community.

Data collection method in this research is based on observations from local areas, which are located on steep lands; the cases are taken specially (Iran). And also, other results are coming from existing resources such as books magazines, periodicals and websites.

Thus, fundamental theoretical information (including qualitative and quantitative data) is applied in this study. In the following, some kinds of analytic are going to be presented in order to clarify the topic and a series of suggestions.

KEYWORDS
Hybrid Space, Vernacular architecture, sustainable development, Housing problems, Contemporary Architecture, Staircase housing.

Constant crisis? Opportunities for innovative approaches in old industsrialised regions in central Europe

Jörn Harfst
Karl-Frazens-Universität Graz, Austria

Uneven development in late capitalist society has various spatial consequences. Probably one of the most analysed and researched in regional sciences, but nevertheless persistent forms, has been the appearance of regions whose former growth paths have been interrupted and now face an uncertain future regarding their economic and social development. For long such "old industrialised regions" in Europe and worldwide have been at the fore-front of processes of crisis and the search for innovative spaces and practices in order to overcome the economic, social and environmental outcomes of structural changes. This paper wants to look deeper at some European examples, highlighting problems and successes on the way to find innovative approaches for more sustainable futures in such places.

In recent decades, many traditional European centres of the old industries, i.e. mining and steel production have been rendered unprofitable, through various processes. These changes have had a profound impact: the complete closure or substantial down-sizing of mining and related industries have triggered difficult processes of de-industrialisation, high unemployment and out-migration. Owing to the lack of economic alternatives, the organisational, financial and conceptual capacities of such regions are generally regarded as extremely sparse and overtax local and regional decision makers.

In most of such regions issues of brown field rehabilitation and development issues are playing a key role. While in the past, the European Union in combination with national governments has tackled specific structural problems of coal and steel regions through programmes like RECHAR and RESIDER, now such regions often face severe competition from other regions (e.g. rural areas) for support from European funds, like ERDF. In this context, such regions are relying increasingly on their own capacities and potentials to master structural adjustment.

This paper discusses approaches and challenges to overcome the difficult transformation processes of old-industrialised regions in central Europe. The paper asks specifically about approaches that include potentials related to the industrial past, which can be reutilised in different, sometimes innovative ways. These can include revitalisation of old-buildings and production sites and new local products-chains based on old industrial production. Additionally the management ("governance") of these processes is another field of analysis. The focus of the research is on regions predominantly characterised by small and medium-sized towns, as here the problems of change and the opportunities for new development are especially difficult due to the limited capacities (human, financial resources) such territorial units posses.

The background for this abstract is formed by research carried out in both the ReSource (www.resource-ce.eu) and SHIFT-X project, two Objective 3 Territorial cooperation projects (Central Europe), that have been co-founded by ERDF. While the former project had a run-time from 2009 to 2012, the latter is currently running until 2014. Both projects deal with transformation processes in old industrial regions in central Europe, providing a unique insight into processes of regional development across various European countries.

KEYWORDS
Structural change, old industrial regions, Central Europe, territorial potentials, governance

REFERENCES
Harfst, J. & Wirth, P., 2011. Structural change in former mining regions: problems, potentials and capacities in multi-level-governance systems. Procedia - Social and Behavioral Sciences, 14, pp.167–176

Müller, B., Finka, M. & Lintz, G. eds., 2005. Rise and Decline of Industry in Central and Eastern Europe, Berlin: Springer

Wirth, P., Cernic-Mali, B. & Fischer, W. eds., 2012. Post-Mining Regions in Central Europe – Problems, Potentials, Possibilities, München: OEKOM

International prize for sustainable architecture. The 10th anniversary

Marcello Balzani, Lea Calabrese & Luca Rossato
Ferrara University, Italy

INTRODUCTION

The International Prize for Sustainable Architecture, now in its tenth edition, arose from the important manifestation of the tenth anniversary of the Ferrara School of Architecture foundation, held in 2003. Conceived and promoted by the School itself and Fassa Bortolo company, its spirit and goal are to contribute to the research of a system of development in the building sector that is more sustainable than our current model, which has lead to a state of deterioration and pollution, bringing us to the verge of a global crisis of the Earth's entire ecological system. Receiving every edition more of one hundred submitted projects, the Prize during the past years has become one of the most important European events for sustainable architecture.

BACKGROUND

The growth of the initiative has been exponential: year after year the Prize involved a growing number of international participants.

Such an initiative has collected the interest and participation of world famous professionals, like Dominique Parrault, Baumschlager & Eberle, Sauerbruch Hutton, Eduardo Souto de Moura, Kengo Kuma, Shigeru Ban, Christoph Ingenhoven, Georg Reinberg, Alejandro Aravena, Philippe Samyn, Diener & Diener, just to mention a few. Also the board and the jury has followed such a growth in fame and today past participants form a community which is close to the initiative and supports it with various contribution and inspires new ideas in the field of sustainable architecture. Thomas Herzog, Glenn Murcutt, Francisco Mangado, Francine Houben, Françoise Hélène Jourda, Sir Michael Hopkins, Juhani Pallasmaa, Alexandros Tombazis, Wilfried Wang, Hermann Kaufmann, Matteo Thun, Luigi Prestinenza Puglisi, Brian Ford, Mario Cucinella are just few names of the afore-mentioned supporters. The strength of the initiative also lies in the board´s full independence from the official sponsor, which has always maintained a neutral attitude focusing on decision´s objectivity. Board´s members are different every year in order to make sure that decisions are neutral and to avoid any influence: it is composed by professionals with very different cultural backgrounds, they come from diverse places and from different climatic areas to grant

the widest range of views and experiences and to promote an informed and balanced evaluation of the projects.

METHODS

The Award is a testament to the outstanding growth of the sustainable approach toward architecture in Europe. Slowly, but constantly during the past years, the Award became internationally renowned even within the academic world and this has shown, through the submitted entries, an ongoing change inside university departments. The Prize consists in a Golden Medal which is awarded every year to the project designed by single professionals or by architecture and engineering studios that better embodies and represents the concepts of sustainability. Two Silver Medals are then given to deserving projects worth a mention. For what concerns the universities a special section is dedicated to those projects which have been developed in master or doctoral thesis focusing on the topics and values promoted in this contest.

ACHIEVEMENTS

The Award contributed to the implementation of an ecological conscience through the prizes given to young professional that nowadays are among the best European architects in the sustainability field. The number of very different entries that in the past few years came from every part of the world proves an important fact: the solutions and the submitted projects reflect new goals, an individual approach that mirrors the local realities, an approach which is far from the ´international style´ in its expressions and that needs to be widely disseminated. In terms of achievement, in more than ten years, the Award was able to spread to a large public the knowledge and new concepts in sustainable architecture field through international conferences, publications and exhibitions (the last one took place in Munich in 2012 at Oscar Von Miller Forum). It´s worth taking into account the importance of the network which stemmed from this initiative: small studios mingled with large design companies and started new projects together, awarded students had the opportunity to join important design teams and thanks to a special mention to professors and supervisors of thesis under development the initiative also increased the academic interest towards sustainability in architecture and engineering.

Last but not least, an important contribution to sustainable architecture concepts dissemination comes every three years from the publication of a book (Skira publisher) the which contains the selection of the best entries of those competitions in order to reach university students and professionals all over the world.

INTERACTIONS AND EXPERIENCES IN EDUCATIONAL CONTEXTS

Chair: Dennis Kerkman

The education of the architect in the twenty-one century B.C.: Psycho-social new findings and environmental sustainability challenges

Magda Saura Carulla & Josep Muntañola Thomberg
Polytechnic University of Catalonia, Spain

The relationships between architecture and education have been analyzed in recent years with increasing interest. (Pollack M., 1997; Rapoport A., 2010; Hejduk J., 1992; Muntañola J., 2009.)

Environmental challenges such as climate changes, environmental impacts upon children health (UNICEF World Report New York, 2012) or the use of computers in urban planning (Hillier B, 2005) are some of the reasons for this increasing interest on education.

This paper starts with a "State of the Art " of this field from a dialogical and psychosocial view point,(Muntañola J., 2010.a).The interdisciplinary conditions of this topic are, both, a good sign for architectural design research, because open architectural education to cognitive sciences, eco-sociology and environmental behavioural sciences and, they are a difficulty too, because of the theoretical complexity of the situation, where the physical impact of architecture and urban planning upon the users can disappear bellow meta-physical and/or very reductionist theoretical views .This is the case in relation to the recent multiplication of studies about neurology and architectural creativity, this could be a very promising field, but it is now a danger for a mechanistic neurological theory of design, without social dialogical answerability.

In a second part, the paper will analyze the interactive and fundamental link between physical forms and social behaviour ,thanks to the study of the dialogical models of cities built by children.(Muntañola et alt 2012.a)These dialogical and socio-physical models of cities allow a progressive better evaluation of the specific feed-back between the physical environmental transformations and the social inter-subjective interactions among users of these physical new forms, that exist in each place. This measure implies the description of the specific kind of inter-subjective social interaction inside each architectural and urban physical form, that is, the specific kind of social dialogical life related to each city built by children. This description is made thanks the computer analyses of the videos with the soft-ware ELAN, of the building process of the cities by groups of six children, three boys and three girls, in different schools of the city of Barcelona.

This analysis affects different architectural and urban design research settings, such as settings for education, settings for professional studios or scenarios for historical studies of urban forms and city planning interventions. (Muntañola J .et alt., 2010.b)

These findings go far beyond children education, and involve urban planning (Magnaghi A., 2011) and the physical, mental and social health of children too. (Muntañola J. et alt.; 2012.b).

Finally, the paper will present two examples of architectural education at the university level, that point to a new ethical and dialogical responsibility in front of the environmental global sustainability challenges of today. One of these examples involves the school of architecture in Valparaiso in Chile and others, the school of Architecture of Barcelona.

REFERENCES

Hejduk J. The Education of the Architect Rizzoli. New York, 1992.

Hillier B, 2005. The art of place and the science of space: WORLD ARCHITECTURE, 2005.
Magnaghi A., 2011. El Proyecto local. ARQUITECTONICS No. 23, Iniciativa Digital Politècnica UPC, Barcelona (English text: The Urban Village)

Muntañola J., Architectural design on the threshold of the digital age. Changes of Paradigms. Copenhagen EAAE / ARCC Conference 2008. Edited by the Royal Danish Academy of Fine Arts, 2009.

Muntañola J., 2010.a.The relationships between architectural practices and architectural theories. EAAE TRANSACTIONS ON ARCHITECTURAL EDUCATION No.43.

Muntañola J .et alt., 2010.b The Genesis of Architecture and Planning. BILDIRILER PAPERS. The chamber of architects of Turkey. Ankara. Turkey.
Muntañola et alt 2012.a. Architecture on the wild. ARQUITECTONICS No.24, Iniciativa Digital Politècnica UPC Barcelona.

Muntañola J. et alt., 2012.b. Child Friendly Cities and the Integrative Healthy Childhood Wellbeing. THE CHILD IN THE CITY, International Conference Zagreb, 2012.

UNICEF World Report New York, 2012: The Urban Child.

Pollack M. The Education of the Architect. Cambridge MIT Press, 1997.

Rapoport A. Designing for People. TRIALOG 106, 2010.

The children art center for public schools

Lee Nayoung, Paik Jinkyung, Park Yubin & Kim Hwasil
Inje University, Korea

INTRODUCTION

In general, people have memories of drawing things in sketchbooks at an art studio and their art works were hung on the wall when they were students. However, they did not realize why they needed to learn art and the meaning of their art works. As well, their art works usually were not regarded after class. It seems to be similar situation in worldwide. According to a New York Department of Education statement, "New York City's public schools are home to a collection of over1, 500 artworks, which reflect New York City's social and political history through the diverse Art program. However, the art works are thrown away after classes because the programs do not have a dedicated exhibition space. In this

regard, the purpose of this study is to suggest the design elements for providing good art educational space and exhibition environment according to connecting between existing external art facilities and exhibition spaces funded by states or corporations and public schools' art curriculums. Using 230 Madison as my site which is located on the Lower East Side of New York City, where one of the immigrated location, I will prove that an art center helps students' own creative selves from their own backgrounds and varieties, and meet the demand of art activities. What is more, Art gallery and exhibition space is the best tool to encourage the accomplishment and achievement of their art works and community can use the spaces to promote the good educational restrict as advertising.

THEORETICAL BACKGROUND

Learning art process resembles the kind of being socialization such as talking, discussing, imitating, and sharing in a classroom which makes classroom vivacious. These things are the prominent differences and interesting point whereas regular classroom are more monotonous than art classes. Most students tend to wait for art class for enjoying the open and confident mood because students do not need to get pressure from art teacher and from any right answers: an art class is the time teachers allow students to do what they want and express themselves. Throughout a lot of researches and studies, students who received a good art education during childhood have better relationships with other classmates who have different opinions and personalities, and even more excellent leadership to lead people. These tendencies do not develop coincidentally, but are also acquired suddenly. Most children need the first express themselves through art in which children draw their own feelings and emotions from deep inside and then they build up the skill: creative thinking and doing, individual awareness, and understanding of the ideas presented. Therefore, once students use the better art environment, they take on the role of worthy and enlightened citizens.

METHOD

1) Precedents

The precedents as below are equipped with the good design elements and the concept. As well, they are appropriate references for reusing and building Art Center for public schools in term of programs which represent the finishes, graphics and color of both interior and exterior is the most important method with plans.

(1)Delftes Montessori School Herman _Hertzberger
(2)Crown Hall at I.I.T. _Mis van der Rohe
(3)NYU Department of Philosophy _Steven Holl
(4)The McCormick Tribune Campus Centre at I.I.T. _Rem Koolhaas / OMA

2) Site Analysis and Design Concept

My site is at 230 Madison on the Lower East Side of New York City. One of the oldest neighborhoods of the city, the Lower East Side has long been known as a lower-class worker neighborhood and often as a poor and ethnically diverse art of New York. As well as Italians, Jewish, Chinese, Poles, Ukrainians, and other ethnic groups, it once had a size able German population. The Lower East side is bordered in the south and west by Chinatown, in the west by NoLIta and in the north by the East Village. People moved here from other nations starting in 1609. This neighborhood needs to bring different countries in artistic union. Students, neighbors, and even passersby can use a creative environment, and take on the role of worthy or enlightened citizens that is the goal of art education. Art exhibition and open art classroom is my avenue to bring all people together and to link up with all races. I designed the building with the concept Connect and Extend which represents a union of the way people interact in multinational societies along with conceptional ideas.

3) Case Study

Founded in October 1988 by Kathleen Schneider, the Children's Museum of the Arts is one of the oldest children's art museums in the world. The Museum has been located in the Manhattan neighborhood of SoHo since its inception. The Museum employs an artist-in-residence format whereby teaching artists work directly with children and their families. The mission of the Children's Museum of the Arts (CMA) is to extend the benefits of the arts to all children and their communities and to secure the future of the arts by inspiring and championing the next generation of artists. CMA is committed to celebrating the artist in every child and promoting access to the arts for all children regardless of ability or socio-economic status because we believe the arts are critical to child and youth development and to strong and vibrant communities.

CONCLUSIONS

The Children Art Center for public schools serves to encourage the creation of artworks expressing the interaction be¬tween people and their environments; to convene students, passersby, and communities, and to increase public knowledge of these creative endeavors. When the Art Center and Environment work together, the goal is to be a leader in supporting the practice, studying, and pro¬moting awareness of creative interactions between people and their communities along with virtual and actual environments.

A study on outdoor spaces near classrooms of elementary and junior high schools

Hitomi Ogura & Kaname Yanagisawa
Chiba University, Japan

BACKGROUND AND PURPOSE

Since the mid of the 1980s, open-planned schools with open spaces has been spread over the country for promoting diversification and individualization in education. Besides open-planned schools, other unique schools have been designed and planned. Some of such new typed schools after 1980´s have unique outdoor spaces for learning and play such as courtyard, terrace and garden as well as open space and other indoor learning spaces. Many schools tend not to use these outdoor spaces for learning, however they might have a lot of possibility to use for various learning activities as well as play activities. Designing appropriate outdoor space is very important for effective learning in schools.

This study aims to clarify the effective use of outdoor spaces from the viewpoint of effective learning. We focused especially on the outdoor spaces next to or near classrooms for understanding the relationship between classroom and outdoor spaces. We would like to propose the way of designing and planning outdoor spaces for effective learning.

METHODS

We conducted the following surveys, which are 1) literature survey, 2) questionnaire survey, 3) observation and interview survey. Through the literature survey including reviewing architectural books and magazines published after 2000, we collected and categorized the outdoor spaces of 200 elementary and junior high schools, and clarified the features of them. Through the questionnaire survey on 104 elementary and junior high schools, we found the conditions and problems in using their outdoor spaces for learning.

Through the observation and interview survey, we recorded and analyzed the use of outdoor spaces at the eight case studied schools with unique outdoor spaces. The observa-

tion study was based on our observing and recording the children's behavior in the outdoor spaces by photos. We did interviews besides observation to teachers for asking how to use the outdoor spaces and also asking for their ideas.

RESULTS

As a result of the literature survey, we found some important findings including followings.

1. The type of outdoor spaces near classrooms can be divided into two types, which are open space type, and observation space type.

2. In many elementary schools, we could see private outdoor spaces next to lower grade classrooms.

3. The number of schools with outdoor space near classroom increases in recent years.

As a result of the questionnaire survey, we found some important findings including followings.

1. In many schools, terraces made of concrete or wood deck near the classrooms were used effectively and frequently because children could use indoor shoes to access from their classrooms.

2. We found many elementary school teachers have desire to use outdoor spaces near classroom for play, craft making, observation and experiment related with class activities.

3. We found many junior high school teachers have desire to use outdoor space near classroom as social space. They like outdoor spaces with benches, and ones with grass or wood deck.

As a result of observation and interview survey, we found some important findings including followings.

1. The activities at outdoor space was related to the area of space. More motor activities were observed at larger outdoor space.

2. The accessibility to outdoor space was related to the number of activities. More children used the outdoor spaces closer to their classrooms rather than ones far away from them.

3. The material used at outdoor space was related to the use and preference of it. More children used and preferred wooden or grass outdoor space rather than one made of concrete.

4. We observed more children using outdoor space in elementary schools rather than junior high schools. Elementary school children tend to use outdoor spaces more for learning activities during classes however junior high school children tend to use outdoor spaces more for social activities during recess time.

CONSIDERATIONS AND DISCUSSIONS

Through this study, we concluded the following three considerations.

1. We found the use of outdoor spaces was different according to age or type of school. Therefore, we should design outdoor spaces carefully corresponding to the needs for using them.

2. We found the outdoor spaces closer to classrooms were more used for learning and play. It is very important for children to access to outdoor space with their indoor shoes. Therefore, we should design the outdoor spaces with easy accessibility from classrooms without changing shoes, and also consider the effective connection between classroom and outdoor space.

3. We found wood decked terraces were used and preferred more than concrete terrace. Wood deck might give soft and comfortable image to children and teachers. It is important to consider the appropriate material used at outdoor spaces as living environment for children. We should design comfortable and useful outdoor spaces.

A study of the housing supply by a community for continued existence of a local school

Yumiko Fukuda, Hiroshima Institute of Technology, Japan
Fumika Kobayashi, Hiroshima Jogakuin University, Japan
Aya Ishigaki, Hiroshima University, Japan
Sachiko Yamamo, University of Tsukuba, Japan
Reiko Shimokura, Kure National College of Technology, Japan

Japan is the world´s fastest-ageing country, its birthrate among the lowest. By 2060 Japan's Health and Welfare Ministry estimates a population of 128 million will shrink by a third with 40% over 60.

Many villages are facing population decline and ageing, which has a severe impact on educational and other local government services. With the number of vacant houses increasing, the residential environment will also decline in quality. Schools forced to close, ageing of the community accelerates and the village ultimately dies. Villages are therefore are taking steps to attract new residents.

In Hiroshima prefecture, islands and mountainous areas struggle most from depopulation. Statistics provided by the prefectural government have the number of elementary schools in 2011 dropping by 73% since 1995, 7 cities or towns out of 23 in the prefecture have seen at least a 40% decrease in the number of elementary schools which have had to be amalgamated and reorganized.

All local governments in the prefecture except for Hiroshima City have programs to attract new residents, programs include subsidized new and refurbished houses plus child care support. 14 local governments are running a cooperative between landlords with vacant houses and people who want to rent them, called 'The Bank of Vacant Houses'. These involve not only local governments but also residents' groups.

We hypothesized that a community cannot sustainably exist without an elementary school.

We have studied residents' groups in Hiroshima which have residential support approaches developed specifically for the continued existence of local elementary schools. The main objectives of the study are to describe and consider residential systems for sustainable communities, and the reported study aims to form an overview of residents' groups and their activities, to explore the living conditions of new residents and their impact on schools and communities.

The survey methodology is based on field research and structured interviews with members of residents' groups and semi-structured interviews with incoming residents and school staff about elementary and junior high schools, kindergarten, day nurseries and children's centers The investigation contents dwell on the establishment of residents' groups, operation systems, activities and impact. The survey was conducted in 2009 and 2010.

Our case studies focus on the following three groups:

1. A residents' group in Hirose operating a 'Bank of Vacant Houses' and providing fare subsidies to children who travel from outside the catchment area.
There are 9 new families, their children along with commuting pupils account for 80% of the total number of pupils in the elementary and junior high schools.

2. A residents' group in Aoga set up a limited company constructing new and providing refurbished vacant houses. By 2010, 9 families had moved in. 11 out of 29 elementary school pupils are newcomers.

3. A residents' group in Kamitono finds vacant houses and recommends landlords to register in ´the bank of vacant houses´ scheme operated by local government. There are 5 new families with 2 new schoolchildren.

The studies' main findings are as follows:

1. The housing supply system and residential support systems are organized and working well in these three cases, although there are reluctant landlords using vacant houses for storage or second homes. If the system (the bank of vacant houses) is independent from local government, it can be a condition that only families with children move into vacant houses registered in the 'Bank'.

2. The residents' groups look after new residents daily and help them settle in. However jobs are scarce so assistance must be improved and organized to attract more people from urban areas. In these three cases, one is located near a big city, and other two are situated on arterial roads, this allows new residents to travel to work to the city and makes life more convenient.

3. The schools are thriving because the residents' groups have managed to boost pupil numbers. However, how to secure the number of new or vacant homes in order to take in new families with children is something that is going to have to be solved in the near future.

4. Collaboration between residents' groups, local governments and elementary schools is important to improve the support network, the neighborliness for newcomers, child-raising assistance and support to find jobs.

Indigenous educational practices – Keys to promote interations between children and natural environments

Christiana C. Profice Léa Tiriba
Universidade Estadual de Santa Cruz - UESC, UNI-RIO, Brazil

The observations presented in this paper came from our exploratory study about indigenous schooling of boys and girls 1-6 years from Tupinambá people. Our prime research issue was to observe how school daily activities interact with cultural traditional ways of children rearing and education.

At depart we work with the idea that traditional cultures, as the indigenous, have more informal than formal educational opportunities. We also bring from precedent studies the conception that indigenous children are not age classed, they compose little multiage groups in collectives activities (Fernandes, 1975).

Our primary incursions in the the Tupinambás's schools consisted in closely observations during daily school activities and practices with a multimethod approach children centered (Profice & Pinheiro, 2009; Tiriba, 2010). The Tupinambás are an indiginous group from South Atlantic coast and they were the first people to come into contact with Europeans from the sixteenth century during Portuguese colonization of Brazil. Since these firsts' contacts the Tupinambás from southern Bahia were massacred, catechized by Jesuit Catholic, no longer speak their original language Tupi and worked in sugar, manioc and cacao plantations. In order to protect and rescue the culture of pre-colonial native groups, Brazilian legislation sets and regulates the indigenous education by requiring that it be necessarily intercultural, bilingual, interdisciplinary and community based. However, the real practice of these guidelines is overwhelmed by the lack of teaching materials, unpredictability of food, low remuneration and poor teacher training. The physical features of the school reproduce the urban model, but in poor conditions: kitchen and bathrooms are inadequate, there is sometimes a lack of water, and classrooms are smalls, unventilated with tables and desks not adapted for children. In the classroom's walls we can read words in Portuguese and Tupi but also the characteristic alphabet of non-indigenous educational models. Students have a mixed phenotype, characteristic of this zone, fostered by the mixture between whites, blacks and Indians in a rural context of exploitation of labor-work and high illiteracy rates.

The observed school is located in the Olivença village, where originally stood the hole community, today moved from the coast to the inside of the land, due the advance of regional tourism. It is located in an zone with easy access to natural environments and some teachers conduct their children out-doors places such as the beach, a small drop with an water pool, a garden and grassy area outside the cultural space of the village. These free activities in out-doors environments were observed and recorded in photographs and videos. Adopting a child-centered exploratory approach allowed us to access important issues concerning this experience of indigenous education. During these opportunities girls and boys together organize themselves in small groups, multiage, that dissolves and reconfigure continuously. Without any adult guidance children interact with the environment and the available natural elements, identifying and collecting shellfish to eat and seeds to produce necklaces. In the grassed area they use the slopes as slides, going up and down continuously.

So if on one hand the local political-economic issues do not favor the implementation of a full indigenous education, in the other hand school practices that promote interaction between children and natural environments are very close to the indigenous no formal edu-

cation, guided by the collective play, observation and direct experience with available environmental resources (Fernandes, 1975). In the same sense, we observed that all interactions establish emotional proximity between teachers and students; everybody is a part of the same community. We did not observe the exclusive bonds between a child and his/her teacher, the continuous turnover of teachers between classes, which in principle is a result of ´´disorganization´´ of the school, expands interactive opportunities.

The daily activities in outdoors and natural environments points us a way to promote the change in a global context where the challenge lies in producing educational concepts and practices that respect cultural diversity and biodiversity, and encourage environmental concerns (Chawla, 2006). These lessons from Tupinambá people can help us to think about indigenous education and also to enhance more ecocentric interactions among children and the natural environment in any school.

REFERENCES

Chawla, L. (2006). Learning to love the natural world enough to protect it. Barn, 2, 57-78.

Fernandes F. (1975). Investigação Etnológica no Brasil e Outros Ensaios. Petrópolis: Vozes.

Profice, C.; Pinheiro, J.(2009). Explorar com crianças - reflexões teóricas e metodológicas para os pesquisadores. Arquivos Brasileiros de Psicologia, v. 61, n. 3, p. 11-22.

Tiriba, Léa (2010). Educação infantil entre os povos Tupinambá de Olivença. Projeto tendências de políticas de transição em comunidades rurais, indígenas e de fronteira. Estudo de caso. Brasil. Brasília, OEA/MEC/COEDI/Fundação Bernard van Leer.

KEYWORDS

Natural environments, children, exploratory research, indigenous education, environmental concern

SUSTAINABILITY POLICY AND ASSESSMENT INDICATORS

Chair: Dennis Kerkman

LCA approach to define environmental indicators for building

Alessia Meloni
University of Engineering and Architecture of Cagliari, Italy

Three big sectors, transportation, buildings and industry, are the main culprits of environmental damaging impacts by consuming more resources and by generating more emissions than all the other human activities put together. At the same time, they play a prominent role in the economic recovery. Globalisation and actual deep financial crisis have put a strain on local economies and accelerated small villages depopulation to the detriment of historical and social identity.

The research delves into the main environmental issues related to anthropization and industrialization effects (such as ground consumption and depletion) and looks at problems linked to the crisis of local economies.

The main expectation of the project is to define development hypothesis according to the ecological, social and economic principles of sustainability, starting from technical considerations applied in architecture sector recovering.

The specific purposes of the research are the following:

- to sensitize public awareness of eco-responsible and sustainable design,

- to start a regional normative path to environmental standards,

- to preserve urban historical centres,

- and to revitalize local economy supposing new occupational opportunities.

The study is based on a bottom-up approach that, starting from qualitative and quantitative environmental analysis on a small scale, could reach practical conclusions that can be translated into ecological building guidelines and extended from the local to a global scale.

We have adopted as a reference area an Italian small village that presents some of the most typical problems common to the rural areas of the Sardinian island.

Qualitative analysis examines climatic and cultural aspects, construction technologies, stylistic and formal strategies of that context and suggests possible interventions aimed at (focused on) passive exploitation of solar energy, reuse of rain water for common residential use, use of building dry-technical solutions as it was in the past with dry-basaltic stones.

Quantitative analysis is based on the Life Cycle Assessment (LCA) technique applied to a compared study of a new building and a conservation intervention of an existing building. This procedure, supported by SimaPro 7.3 software, compares the life cycle (including production, manufacturing, transportation, distribution, use, re-use, maintenance, recycling, and final disposal phases) of the main building components (foundation, masonry, partitions, floor, roof) for the same function and performance and allows us to quantify environmental footprint of both case studies. Starting from the assumption that every existing building must be considered as a natural resource belonging to local architectural historical heritage, restoration is less energy-gobbling and carbon-belching than to construct anew from the beginnings. At same time, the Life Cycle analysis shows how the concept, the embodiment, the detail and the choice of materials and manufacturing process all play a role of primary importance. Even if this procedure requires great detail, lots of time, well-stocked databases and the open cooperation of manufacturing companies, it offers certainly the most complete and exhaustive analysis of building environmental impacts and allows to identify an eco-responsible approach to plan and design.

This research defines the following relevant results:

- LCA's efficiency as eco-design method and tool for designers, architects, engineers and planners;

- some technical building solutions' suggestion by simple eco-responsible choices;

- the drafting of guidelines that could become part of technical standards of implementation of local revitalisation plans: it can be considered a first step to the regional and national normalisation of environmental standards according to a bottom-up approach;

- the promotion of building heritage restore as example of eco-efficient housing and as a way to revitalize now-deserted historical centres;

- the trigger of policy measures in favour of the exploitation of local resources (referred to human resources, knowledge, know-how, natural material, manufacturing, commerce) and the enhancement of innovative synergies (such as the creation of environmental service districts).

Interrogating sustainability: Urban transition of a mining town

Ram Sateesh Pasupuleti & Kristina L. Nilsson
Luleå University of Technology, Luleå, Sweden

Currently in Sweden, there is a growing concern from the built environment professions to develop innovative methods and approaches for achieving urban sustainable development. One example is the relocating process of a mining town, Kiruna located in north of Sweden. Very recently, Kiruna Kommun has launched an architectural competition and the competitive entries are yet to be evaluated by following certain sustainability criteria.

This paper has been developed to interrogate how the concept of Sustainable Development has been thought and addressed by the development approaches implemented in new urban areas in Sweden. The case studies are the relocation process of some mining towns in North Sweden. It elaborates on the development processes that are currently

taking place in the relocation of Kiruna. This study critically questions the concept of Sustainability that has been addressed by the efforts of different built environment professionals who have developed their design ideas and alternatives as a part of Kiruna Architectural Competition.

Based on a critical review over existing tools, models, and methods that are used to assess the Sustainability component, a new innovative Sustainability assessment tool is developed for analyzing the design ideas that were submitted in the Architectural competition. Therefore, this paper discusses about the approach for developing new Sustainability assessment tool that is developed for assessing the Sustainability component addressed in the design alternatives proposed for relocating Kiruna town. This paper concludes by explaining the relevance of this tool with regard to its wider applicability and universal nature.

Galicia wind sustainability: Key policy and socio-environmental implications

Rosa María Regueiro Ferreira & Juan José Varela Tembra
University of A Coruña, Spain

During the past two decades, renewable energy has played an important role in the global energy system, outstanding the development of wind energy. United States, China and the European Union have achieved leading positions in terms of installed wind capacity, with Spain being a leading country, especially through the contribution made by the region of Galicia.

However, in some countries, this expansion was not accepted without controversy due to the fact that social acceptance of this kind of energy and performance depended on, to a certain extent, how well and how fairly was done the administrative process for the implementation of a wind farm, the potential benefits in turn to the citizenship or the valuation of forest lands where they were to be located. In short, it was about the creation of a sustainable model of support for renewable energy, with different kind of implications at certain levels; social, economical, environmental, and urban energy. Although the wind sector in Spain was developed under a production-pattern dial, which has turned out in a halt in the sector, by failing to define a comprehensive policy framework that allows participation and contribution of all actors involved, as it had happened in countries like Denmark, Holland and Germany. The situation worsened when there were different regulatory frameworks at a regional level which have not done nothing more than foster existing differences.

In this paper, we will study the support to the development of the wind model in Galicia, within the current framework in Spain, based on the four standards created in the 1995-2012 period, in order to determine the key factors of the same ruling policies, and see if they contributed to a sustainable model, especially regarding its social and environmental implications. The methodology taken consists of a comparative analysis of three decrees and bills passed, its contribution to the development of this renewable energy from the environmental and social perspective, in order to try to figure out whether it has been and/or it is a sustainable action per se.The descriptive and comparative analysis of Decree 225/1995, Decree 302/2001, Decree 246/2007 and Law 1/2009, has not been done before, and there are no previous references to this kind of work in this particular field.

The results of this analysis may help us to see an evolution in current rules, while addressing to more general and industrial aspects of the wind energy sector in Galicia, although leaving aside environmental, social, urban and regional planning actions. In addition, there was only an attempt to "approach" such actions to the public, as in Decree 246/2007, even though its short life allowed implementing them. Finally, Law 1/2009 is an ambitious and modern law, which addresses the environmental problem from a tax perspective, based on the premise "who pollutes, pays" but without establishing preventive measures or citizen participation.

The general conclusion of this analysis is the close observation of the development of a sector from a "productivist" basic law which only defends the purely mercantilist interests, without considering the mentioned aspects inherent to the development of this type of action.

KEYWORDS
Sustainability, renewable energy, wind energy, sustainable development, environmental impact.

A fair market chains (case study, smallholder producers wood batik krebet sendangsary village, Yogyakarta)

Laili Fuji Widyawati
Multi Raya & Ministry of Industry, Indonesia

SME is one of the backbones that drives the nations economy, its contribution to GDP and labor absorption indicates that the development of SMEs is a form of local economic development (LED). Despite having potentials for local economic growth, smallholder producers have various constraints. The implications are a lower bargaining power of producers and an unfair distribution of profits. Lower level of welfare, urban rural inequality, and threats of unsustainability, are thus common.

Based on issues, this study proposes a theoretical framework for combining market chains in local economic development with equity based development. The first step is by identifying buyers and determining what ranges of benefit. Next, step is by understanding the role of each actor and their power. Last step is by identifying factors influenced bargaining power of producers. Therefore, the important role of public policy is to establish fairness of competition.

Case study already takes Smallholder Producers Wood Batik Krebet in Sendangsari Village, Pajangan Sub-District, Bantul District by using mix method for the analysis tool. The findings of the study state that form of the marketing Krebet wooden batik is indirect, a huge of marketing margin with a gap between producer prices and consumer purchase price up to 50 times, intransparancy, dependent producers, weak capacity of individuals and local organizations. These indicate a lower bargaining power of producers with a common root of cause, namely inequity.

The research findings propose inputs to answer the research question, that is a fair market chain. It applies the concept of equity on three elements: (1) government support, (2) transparency, and (3) local capabilities improvement. It is an effort to improve the bargaining power of producers through the recommendations of the policy framework such as: credit policy, certification, technology, infrastructure service, premium price, education service,

social security service, collectivities, and partnership. These are to resolve urban rural inequality and unsustainability.

KEYWORDS
Equity based development, local economic development, market chains.

The analysis of survey response data

Mark Del Aguila
USA

In architecture, education and social sciences in general, the estimation of bivariate and multivariate relationships from survey response data is frequent. Commonly used survey response formats include likert scales (eg, strongly disagree to strongly agree with a neither/nor midpoint), forced choice scales (a likert scale without a midpoint) or unipolar response scales (eg, not at all to all the time). Given that the results of this type of research drives theory, policy and decision making, it is essential to obtain valid indicators of inter-item relationships, and in particular, ones which serve as the basis of multivariate measurement. Correlation coefficients are often used to summarise the bivariate and multivariate patterns of data, either stand alone or in conjunction with more advanced data analytic techniques. However, existing computations of correlation coefficients using ordinal data can lead to seemingly anomalous results when the distributions are skewed or the range of response is concentrated in a subsection of the scale's response range. The origin of these challenges emerged with the Theory of Scales of Measurement (Stevens, 1946) which focused data analyses on the distribution of linearity to the exclusion of structural information about the fixed range of response and presence of a meaningful midpoint or zero endpoint. The statistical anomalies are addressed by utilizing structural information in the computation of ordinal correlation coefficients. This paper presents this new method for the analysis of survey response data using examples from environmental psychology.

KEYWORDS
Ordinal data, discrete data, skewed data, euclidean distance, likert scales, measurement theory.

SUSTAINABLE HOUSING: CHANGE AND ADAPTATION

Chair: Edward Edgerton

Sustainable long time housing system: CSI housing in a changing global context

Quing Miao & Jingmin Zhou
Tongji University, China

In the changing global context, many fields, such as technology, economy and design have changed greatly. Housing Construction is entering a stage of sustainable. In general, the best houses are those provide most capacities of changing functions and standards of use. The most important question is: How to design houses to support both stability - in respect to long term community interests - and change - in respect to individual preferences?

In order to make houses accessible and adaptable to meet the changing circumstance of the occupants, we develop CSI Housing in China, which separates skeleton from infill and best conforms to Chinese realities. This system is based on open building theory and KSI Housing in Japan. It provides stable structure which cannot be transformed by occupants and flexible partitions which can be arbitrarily modified.

In 2010, the first CSI project, Yashi Hejin, was built in Beijing, China. With the analyses of this project, this paper is trying to find out how CSI Housing can achieve to the idea of sustainable in various aspects:

Firstly, the out walls and party walls are made of marked reinforced concrete so that the interior space can be set free. The project uses light wood frame partitions and steel frame partitions, which can be easily removed and the thickness can be changed according to the function. Secondly, the living rooms and bedrooms are organized together compactly to adapt to the different requirements of different families. Through space reconstruction, the living space can be divided into three bedrooms at most. Besides, dwelling plans are designed to be suitable for both able-bodied people and frail or physically disabled people. Thirdly, to realize the purpose of structural long life, high reliability and low maintenance costs, the equipments and pipelines are fixed separated from structure. Raised flooring, inside insulation walls and ceiling systems are used. There are no pipelines in the rooms, and the interior space is free, therefore living can be more comfortable. At last, neighbors will not be disturbed during maintenance and reconstruction. For this reason, the project descends the same-floor drainage system, and combines CSI residential internal decoration and the integral bathroom. There is no floor drain or no broken seal or unpleasant smell. All of the vertical drainage pipes are gathered on the same export of conduit well. The public tube well is located in the outside public area and indoor maintenance is no longer necessary.

To achieve the aim of low-energy, high quality and high flexibility, designers and implementers have to pay attention to not only the technology and material, but also the life style and the culture of China. With the developments and innovations in aspects of structure system, equipments and space, this project is groundbreaking.

Houses are not static artifacts even during the most stable times, and in this changing word, houses need adjustments in some measures to remain attractive, safe and useful. Sustainability is a big challenge and needs careful planning. A change is needed to develop the house from the clients' brief to the architects' design, and from the building site itself to later management and maintenance. CSI Housing is very young and the housing development industry is struggling to master the new language. There are still other problems, for example the limited supported products and the high cost. It is also important to guide people to use their houses properly.

However, the most important thing is that a good home is a key to the well-being of the society. A lot more research needs to be done to this kind of housing.

KEYWORDS
Changing global context, CSI Housing, Sustainability, Yashi Hejin.

Sustainable housing: The changing role of the domestic occupant

Jane E. McCullough, Sarah Lappin, Carolyn Hayles & Moira Dean
Queens University, UK

In many developed nations one third of all carbon emissions are created by the domestic sector (DEFRA, 2007a) therefore housing is a key area within plans to address climate change. Studies have shown that even if occupants are living in identical homes, some households can use up to three-times as much energy as their neighbours (Stevenson et al., 2010). The behaviours of the occupant therefore have a significant impact on energy consumption and the energy efficiency of a home. Consequently, the role of the occupant is key in tackling climate change.

In response to domestic emissions new-build housing assessment tools have been developed to guide design teams in the creation of dwellings that achieve reduced in-use carbon emissions. With this aim, the UK has implemented the Code for Sustainable Homes (CSH) as a six level voluntary national standard, mandatory for all new social housing, which indicates CO2 in-use reduction. More often than not such assessment tools encourage increased integration of 'sustainable strategies' into the home such as renewable energy generation, increased air tightness and mechanical ventilation strategies. Consequently, the integration of such technologies is a growing trend in both new build and retrofit dwellings. The use of such systems has further increased the impact of the occupant on dwelling carbon emissions due to increased responsibility to 'manage' and 'adapt-to' the rising number of technological strategies in the home.

This study considered the viability of the level of adaptation required by the occupant in such housing schemes, and the role of handover processes in potential adaptation. The following aspects were considered: the adaptations required for occupants to successfully manage homes designed to meet the CSH, the suitability of the adaptations expected of the occupant, and drivers and barriers to the successful uptake of this role among occupants, and the flexibility in such homes for the occupant to express agency.

Three case studies were selected to represent differing construction approaches to achieving CSH level four: masonry construction, timber frame and natural materials and, Passivhaus approach (an energy based assessment tool which does not consider the wider environmental and social sustainability issues). The study was limited to CSH level 4 to

allow for comparability across cases. 13 households were investigated in total. Two semistructured face-to-face interviews were completed with each household to investigate the cool and warm seasons, comprising of 26 interviews in total. Data was transcribed and analysed using thematic analysis. All data was collected during 2012.

Results indicate that there are many barriers to the uptake of the management role required of occupants in CSH level four homes. Key issues outlined were: complex explanations during the handover process, complex interfaces, lack of information, misinformation, limited occupant understanding of the home, occupant confusion and, lack of a clear path to further support and information after handover.

The handover process is therefore key in the success of new build 'sustainable housing'. If such new build housing is to achieve the aimed reductions in in-use carbon emissions many issues must be addressed including: consideration of a suitable level of occupant adaptation, consideration and development of handover processes from initial design stage, and improvement of interfaces between the home and the occupant. Essentially, development of a process whereby the occupant is facilitated to discover, engage with and reflect on the sustainable strategies integrated in their homes is required, with opportunities for further assistance inbuilt.

DEFRA (2007a) UK Climate change programme, Annual Report to parliament, July.
STEVENSON F, LEAMAN A. 2010 Evaluating housing performance in relation to human behaviour: new challenges Building Research and Information. Vol 38 (5) pp237-441.

KEYWORDS: Sustainable, housing, handover, end-user, adaptation.

Densification as main strategy for the urban renewal

Barbara del Brocco & Mariella Annese
Universitá degli Study Roma Tre, Italy

In Italy, especially in large urban centers, the public building stock represents a large portion of the consolidated city that is in a state of disrepair due to the aging and to the processes of degradation and marginalization.

In addition to the well-known difficulties derived from residential prevalent use in these residential complexes, however, there is a considerable number of spaces at ground floor raised on pilotis, places designed for the community but nowadays spaces of transit, without a specific destination use and without specific qualities, residual or abandoned in most cases and therefore perceived as dangerous by the inhabitants.

A departmental research conducted on the case of Rome and developed at DIPSA of the University of Roma Tre has highlighted the problems common to Piani di Zona made accordingly to Law n.167/1962 but also the potential for transformation of space porches free. From this research, the international design competition PASS- Plan for Social and Sustainable Homes - has identified the project themes from which to increase, and specify, the number of flats, to achieve a sustainable energy behavior of existing buildings, with the overall goal of initiating a process of wider redevelopment, as well as the procedural steps through which the institution ATER Roma in an exemplary manner is beginning the process of upgrading the complex Tiburtino III.

The contribution of the report is to present and share the issues identified, the specific competition procedure used and the results obtained, such as references to a possible and practical method of intervention in the consolidated city.

Housing preferences and sustainability: The Polish case

John Dee, International University of Sarajevo, Bosnia and Herzegovina
Ewa Stachura, University of Economics in Katowice, Poland

INTRODUCTION

This paper explores housing preferences in Poland. Housing is important to the quality of life in the contemporary society. It satisfies personal and social needs. In an age of globalization urban living space is becoming a standardised commodity of consumption in many countries throughout the world. This has led to urban designs solutions that are at often at variance with earlier urban designs that incorporated vernacular solutions to social need and climatic conditions.

THEORETICAL BACKGROUND

It is imperative that research is undertaken on the contemporary housing environment and particularly in respect of user satisfaction in various estate type categories. Situated in Central Europe, Poland has experienced strong political, economic and social ties with its border countries. The systemic economic transformation that began 20 years ago has brought rapid change and a significant increase in housing development. Hence Poland represents a macro-case-study for researches into architecture, planning and urban design. The most critical issue to confront the twenty first century concerns the global economic and environmental crisis. For this reason there is a need to understand sustainable consumption in an urban environmental context because of its fundamental importance for the developing appropriate policy responses. This paper, therefore, will seek to answer the following questions: What are the preference trends in local housing markets and what opportunities and threats do they pose for achieving sustainability? Can sustainable environment solutions be reconciled with the logic of economic profit and individual consumption costs? These questions will be explored by addressing theories such as new urbanism, transport land use integration, urban consolidation and the sustainable urban form.

METHODS

The research draws on rich data derived from a survey (n = 900) of user housing preferences: namely – location, single and multi unit dwellings, occupation, maintenance costs, neighbourhood aesthetics, community building, recreation, accessibility, housing quality and design and many others.

RESULTS AND CONCLUSIONS

The results are then brought to bear on answering the questions set out above with a particular emphasis on the implications of housing preferences in terms of delivering more sustainable housing and its contribution to an environmentally sustainable urban form. The final conclusions will put forward insights on housing and sustainability including the development of robust housing policy that better reflects both the needs of people and the environment. It is envisaged that this paper will make a substantive contribution to understanding urbanism and sustainability in a time of environmental and economic global crises.

KEYWORDS

Housing, Housing needs, Residential preferences, Global crisis, Sustainability

Passive houses as social practice

Michael Ornetzeder
Austrian Academy of Sciences, Austria

A 'passive house' is a building designed to meet extremely low energy standards. The overall energy demand for heating and cooling in such a building is lower by at least a factor of 4 compared to the consumption levels of residential buildings designed to construction standards presently used across Europe. In Austria, a first building according to the passive house standard was constructed in 1996. Since then the market for passive houses has rapidly increased. Statistics show that there were more than 7,000 residential units at the end of 2009. Per capita, this is more than in any other country of the world. Most of these buildings are newly constructed private single-family houses. Although the passive house standard has mainly been adopted in this sector, a broad variety of other types of buildings were realised in the last decade. Today, approximately 20 per cent of all newly made buildings meet ultra-low or even passive house standard.

Against the background of practice theory I will discuss how and why different visions of ultra-low energy buildings resulted in stable sociotechnical arrangements of ventilation systems, air-tight building envelopes, new heating devices, changed but also retained use patterns and new comfort requirements. Empirically, the paper draws on interviews with passive house users, representatives of relevant organisations as well as the analysis of various documentary sources.

The paper shows that the passive house and accompanying every day practices followed from long-term incremental as well as from some more radical changes of competences, material elements and meaning. Using a historical perspective four stable configurations are specified: the fossil house, the energy saving house, the active solar house, and the passive house. In the 1990s the passive house concept appeared as a radical technological concept. However, during the early years of dissemination it has been actively domesticated and co-designed by end-users. Early users were able to articulate deficits and propose alternative design options that successfully were translated to passive house producers. In use contexts tensions within existing practices (e.g. useless competences) or even within elements (conflicts between e.g. try air in winter and human body) became evident and had to be answered productively. Over a period of 15 years social learning processes resulted in stable practices including a set of new material elements (PH technology, modern architecture, etc.), renewed local traditions, regional stiles and bodily-inscribed expectations.

MAPPING URBAN SPACE

Chair: Pablo Páramo

Constructing alternative spatialities in Kampala city: Two cases

Lilian Namuganyi, Makerere University, Uganda
Rolf Johansson, Swedish University of Agricultural Sciences, Sweden

INTRODUCTION

The present day city of Kampala was founded by the British colonialists at the start of the 20th century adjacent to the old city, the Kibuga (the pre-colonial/traditional administrative city of the Buganda Kingdom). The Kibuga was semi-rural, traditional in its nature, and was initially populated mainly by indigenes (the Baganda people). Over time immigrants from other regions of the country settled mainly at the edge of the Kibuga to take advantage of opportunities in the Kampala Township (present Central Kampala) on the other side of the boundary in the process creating informal settlements. One of these informal settlements was Kisenyi. The two parts of the city, the Kibuga where Kisenyi is located and the Kampala Township developed separately, but have recently begun to merge. Many of the people in Kisenyi had little or no formal education and were also informal in their outlook.

Central Kampala, like many colonial cities, was modelled on modernist planning ideals of functionalism and visual aesthetics of science, logic, order, and reason, reflected firstly in its physical form, secondly in its functioning and life that was lived in it, and thirdly in the human being that was to live and work in such a city. These ideals pre-supposed a formal, educated, elite, and un-emotive, being, with a European/Western outlook, as opposed to cultural man that assigned meaning to place.

THEORETICAL BACKGROUND

A city constructed by its practices and meaning can be many things depending on the experiencing person, but when it is seen as physical, it can only be one thing to all people since its physicality in its wholeness, does not change in the moment. The modernist city being abstractly conceived and concrete, assumed to be one thing to all people and resisted alternative spatialities that establishment considered to be lacking in logic and order. The modernist city resisted alternative spatialities by enforcing strict planning and zoning laws -which assigned functions and people to specific areas in the city, rules and regulations -governing the design of buildings, and instruments of law that directed public life and excluded people who did not fit the definition of modernist citizenry. But by subverting these laws in countless ways, the previously fringe city, the traditional Kibuga, in all its diversity embedded itself in the space of modernist Kampala, increasingly becoming ever more central, and making of the modernist city something other than its surface presentation.

METHODS

This paper is based on two case studies in an ethnographic research that explores how people from alternative poles in the spectrum of Kampala's citizenry encounter the city, negotiate its rules, and construct different cities/spatialities out of diverse but interconnected practices and narratives in the space of the one physical city. The first case is that of a

hawker who buys his wares in one part of the city and sells them along the streets in another part of the city. His work is informal. He must therefore be invisible to the law but visible to his customers. The second case is that of a banker. Her work is formal. Compared to the hawker she is less mobile in the public space of the city, and when she does move, she does so by car. Using participant observation, mental maps, and photo interviews the study maps out the fragments, which make up the habitual cities of the cases, the mental and physical structuring of these fragments, and their assigned meanings.

RESULTS

The study shows that different people practice the city and assign meaning to it in diverse ways, which may often be invisible and fluid, and which often leave little or no trace of their passing. The study refutes the assumption that there is no logic and order in such practices.

CONCLUSIONS

It emerges indeed, that there is a more complex logic and order in such practices in Kampala City than has previously been acknowledged and that this is different from that of the physical, functionalist, modernist city which is now revealed to be but only a medium for the practice of the city.

KEYWORDS

City, Kampala, Diversity, Duality, Spatialities, Pratices, Meaning.

Study of the appropriation of squares in Florianópolis, Brazil

Gabriela Yoshitani da Luz, Larissa Miranda Heinish, Vanessa Goulart Dorneles, Fábio Lúcio Lopes Zampieri & Vera Helena Moro Bins Ely
Federal University of Santa Catarina, Brazil

This research intended to analyze the appropriation of three squares in the city of Florianópolis (Santa Catarina - Brazil): Praça Getúlio Vargas, Praça Santos Dumont and Praça Bento Silverio. Therefore, Post Occupancy Evaluations (POE) were conducted in these three areas, that were chosen because they are located in different urban contexts and have different spatial configurations.

The importance of this study is justified by the fact of the squares being important urban elements that constitute, together with parks, gardens and streets, open spaces of a city. These places provide leisure and welfare to the population, allowing for the practice of sports, contact with nature, resting and socializing. Since they are spaces for public use and provide the various activities mentioned, thereby bringing benefits for people and their life quality, they must be projected taking into account the environmental conditions that allow the effective permanence and appropriation of the inidividuals.

Currently, open spaces in Brazil have many problems due to factors such as lack of maintenance and vandalism. Given these and other issues, these places end up having low use or completely abandoned by the population, becoming residual spaces, generating insecurity and devaluation.

Thus, this research was conducted to analyze and compare the conditions of these open spaces in relation to their appropriation and thereby aimed to assess the factors to their greater or lesser use and, therefore, support the development of more qualified projects.

Thereby, the methods that were applied, Visual Mapping and Behavioral Mapping, are both used for observation in Post Occupancy Evaluations (POE). The visual mapping, according Reinghantz et al (2008), proposes: checking aspects of territoriality and appropriation, assessment of the adequacy of the space and its equipment, plus find negatives and positives points, all that records accomplished through plants and graphic schemes.

For the evaluation, it was elaborated a table mapping to the auxiliary with pre-established criteria by the researchers and separated in the categories: Physical, Sensorial and Social. The physical characteristics are linked to the suitability of equipmentby assessing lighting, flooring, furniture and vegetation. The sensory assess odors, sounds and visual aspects that influence the wellbeing of the user. The social category is linked to the sense of security at the site and the presence of people. A graphic score was assigned to each item with scale of 0 to 10.

The second method, the behavioral mapping, aims to assess the appropriation and territoriality of the users in the environment (Moore, COSCO, 2010). To observe whether there are changes in appropriation according to schedule, maps were made on weekdays and weekends, at mornings and afternoons shifts, and at three different times for each period. Each user was registered by gender, age and activity.

The final results of each method were registered as georeferenced thematic maps, using the program gvSIG. This program allows crossing the information of the two methods for pre-defined areas of the three squares.

From intersection of the data, relevant aspects about the appropriation of spaces assessed could be analyzed, since the physical environments influence peoples behavior in space, as well as establish associations between the relationship of the different users with different activities exerted on the environment. It was noticed, for example, that most of the activities of permanence is made by male users, and that the areas that had a greater number of female users in activities of permanence were those were the physical characteristics were positive.

Regarding the application of the methods, it was noticed that the behavioral mapping could be recorded in a more dynamic way, indicating the displacement of people, for example, could include visual mapping and configurational aspects of the squares.

REFERENCES

RHEINGANTZ, Paulo Afonso [et al]. Observando a qualidade do lugar: procedimentos para a avaliação pós-ocupação. Rio de Janeiro: Universidade Federal do Rio de Janeiro, Faculdade de Arquitetura e Urbanismo, Pós Graduação e Arquitetura, 2008

MOORE, Robin C. ; COSCO, Nilda G. . Using behaviour mapping to investigate healthy outdoor environments for children and families: conceptual framework, procedures and applications. In: Catharine Ward Thompson, Peter Aspinall, et al (Ed.). Innovative

Affective maps: Validating a dialogue between qualitative and quantitative methods

Z.A.C. Cruz Bomfim, H. Fonseca de Alencar, T.L. Moraes Ferreira, B.A. Lemos Nobre, A.K. Silva Martins, M.Z. Souza Feitosa, T. Freire Monteiro & C. Carneiro Rocha
Federal University of Ceará, Brazil

This research aims to validate an instrument developed at a doctoral degree in 2003: City and Affectivity, Esteem and Construction of Affective Maps from Barcelona and São Paulo. Data was obtained from researches that were done between 2003 and 2012 in the Program of Post-graduation from the Federal University of Ceará in Fortaleza - the 5th largest city in Brazil. During the last nine years, these studies made references to different kinds of environment like cities, urban and rural communities, neighborhoods and institutional spaces. Affective Map is the graphic expression, artistic and metaphoric from images and representations that people have from a place. These images are generated from an instrument that enables access affections of the persons in relation to the environment, through which they articulate feelings, evaluations and identification of the person in respect to a particular place. Affective maps are representations of space and are related to any environment as emotional territory. They intend to be a tool that show affectivity and indicate the esteem and the inhabitant's involvement with the city (BOMFIM, 2003).

The theoretical basis of the instrument comes from the affectivity category, understood as feelings and emotions and derived from two epistemological lines: Latin American social psychology and transactional environmental psychology that emphasize, respectively, affective mediation and symbolism of space in the construction of subjectivity. This category is related to the concept of place identity traditionally studied by environmental psychology (PROSHANSKY, 1978) which concerns to idea that what which one of us is include the places we have been and the places we are. Thus, the instrument of Affective Maps is a method that seeks to reveal the affections considering the subtext, the sense and meaning (VYGOTSKY, 1995) present in the responses of the subjects. It comprises a qualitative part composed of a drawing and questions which aims to provide an answer and express a feeling. A Likert scale constitutes a complementary statistical analysis, so that sentences converge for affective indicators and images of the place: Pleasantness, Attachment, Insecurity, Destruction and Contrast.

The Pleasantness image reveals feelings and qualifications perceived as pleasant by residents of neighborhoods, cities or communities. The Attachment is an image in which the resident feels and describes his neighborhood or city, considering their social ties of friendship or kinship, besides presenting a deeper identification with the place. The image of Destruction is the reverse of Pleasantness. The residents feel uncomfortable with the presence of destroyed, degraded and abandoned spaces. Insecurity is based on the feelings of fear, instability and inconstancy that are opposite of attachment and can impact directly on urban violence. The Contrast is an image that shows mixed feelings and contradictory qualities. These affective indicators assessed by Likert scale build an affective category called Esteem of the Place (BOMFIM, 2003) that can be more positive, when potencialize the action of the subject, or more negative when does not provide its implication. The habitants involved and who have a positive esteem of the place have high scores in the categories of Pleasantness and Attachment, and the ones who participate less in group activities have high scores in Insecurity and Destruction. Contrast can indicate

positive or negative esteem of the place. The validation aims to give high consistency to the quantitative part of the instrument, and consists of a study of all the categories found in surveys of the affective maps in order to construct sentences that can be generalized to different types of environment. The sentences selected will be applied in a representative sample of adults and teenagers in the neighborhood Regional I, Fortaleza, Ceará, Brazil. The statistical validation tests will be a descriptive statistics carried out beside Student T Test to evaluate the discriminative power of items comparing mean scores in relation with internal criterion groups, and total item correlations, to evaluate the homogeneity of the items. To establish the number of factors to be retained will be considered the criteria of Kaiser, Cattel and Horn (Parallel Analysis). Then, Cronbachs alpha will be calculated to know the accuracy of the instrument. We hope that the results achieved in the validation can extend the range of the instrument that has been used in the last nine years.

REFERENCES

Bomfim, Z.A.C. (2003). Cidade e Afetividade: Estima e Construção dos Mapas Afetivos de Barcelona e de São Paulo. São Paulo: Pontifícia Universidade Católica de São Paulo. Tese de doutorado.

Proshansky, H.M.; Fabian, A. K. & Kaminoff, R. (1983). Place-Identity:
Physical World Socialization of The Self; Journal of Environmental Psychology) 3, 57-83.
Vygotsky, L. S. (1995). El problema del desarollo de las funciones psíquicas superiores. Obras Escogidas, Problemas

The (informal) economy of cities. Configurational and metric properties of street markets in Santiago, Chile

Rodrigo Mora, Francisco Bosch, Carlos Rothmann & Genaro Cuadros
University Diego Portales, Chile

INTRODUCTION

Street markets are one of the most attractive urban elements. In addition to their economic role (they provide food, mainly vegetables, to urban population, and especially to the urban poor), they are considered fundamental in the formation and reinforcement of local identities. In the case of Santiago, the capital of Chile, the 393 authorized street markets employ about 160,000 people, and these operations provide 70% of all fruits and vegetables consumed by households, as well as 50% of eggs and seafood.

THEORETICAL BACKGROUND

The functioning of street markets is not without controversy. To some commentators, coming primarily from the right-wing, street markets reflect an entrepreneurial spirit of individuals willing to take commercial risks in order to create their own business. According to this view, street vendors have an individualist ethos, a deep-rooted ambition and a self-help attitude, which can be enhanced and transformed by the operation of external agencies or the central government (De Soto). For scholars from the progressive side of the political spectrum, however, organized street vendors embody an anti-capitalist attitude in the sense of not obeying the logic of capital accumulation and subverting the notion of public order of capitalist countries. Salazar (2000), for instance, said that street markets have historically been a space of resistance, where political and social norms have been continuously subverted, discussed and transformed.

In spite of these differences, a more consensual approach seems to exist in relation to how street markets operate. Bromley (1998) says that the main characteristic of street markets is their flexibility, which means that they can change their location according to the time of the day in order to reach their customers. In other words, street markets continuously follow demand, meaning that they can locate on a certain street one day of the week and on another street the following day. To this author, the main factors affecting the location of street vendors are vehicular and pedestrian flow. ´´Street vendors gravitate towards the congestion because there is where available demand is concentrated´´ (Bromley 2000:7). Along the same line, Salazar (2000) contends that street markets are highly adaptable and dynamic, for they change their location following changes in people´s flows. In attempting to explain how this phenomenon occurs, Budiarto (2005) declares that street markets tend to be nested on a secondary layer of movement, one that serves residents to easily and quickly access a city´s supergrid structure; one that corresponds to the main corridors of vehicles in a city, like highways, and main avenues where most public transport operates.

None of these approaches, however, have yet to fully understand how streets occupy the urban grid, and how this occupation permits the vendor to reach the different groups that these streets accommodate. Thus far, little is known about the configurational characteristics of street markets, that is, how central and strategic to their local contexts are the streets they occupy.

METHODS

This paper examines the spatial distribution of all authorized street markets of Santiago (a city of six million people and composed of 34 municipalities) and their metric influence on the different districts that constitute the city. Using a center road GIS map of Santiago (composed of nearly 265,000 segments), a grid-based area of influence of 600 m (8 to 10 minute walk approximately) was calculated for each market, which allowed us to determine the percentage of the urban grid of each municipality reachable by the street markets. In addition to this, each market was analyzed in terms of its configurational characteristics, using space syntax´s segment analysis.

RESULTS

The results show that considering the whole city, 58% of street segments are at 600 m or less from a street market. However, important differences exist between poor and wealthy districts. In the depressed districts of Lo Prado and San Ramón, in the South of Santiago, 91% and 87% of all street segments (respectively) are located 600m or less from a street market. However, in the affluent municipality of Vitacura, on the East side of the capital, just 6% of street segments are at this distance. In order to understand this phenomenon, an association between socioeconomic data and grid-based street market occupation was undertaken. This compared the percentage of Groups D and E in each district (the ones with the lowest wages) with the grid-based catchment area of street markets, resulting in a remarkable r2= 0.71.

The next step consisted in calculating the percentage of street segments located at a distance up to 600 m from more than one street markets. The results showed that 19% of the 265,000 street segments of Santiago could reach at least two street markets within the distance of 600 m.

In relation with the configurational characteristics of street markets, the analysis compared the percentage of street markets that belonged to the highest 10% and 25% of street segments on each of the 34 districts of the capital. It was shown that in the vast majority of

cases, street markets were highly salient street segments, for about 40% of them belonged to the top 10% segments of highest choice on each district.

CONCLUSIONS

The results showed that street markets seem to locate in the urban grid following a well-articulated and highly effective spatial logic that tends to maximize the catchment areas of the districts in which they are located, while, at the same time, avoiding overlapping to a certain degree. This creates well-defined areas for each street market. Here it is argued that what makes this possible is the fact that street markets tend to locate in streets with high choice value; that is, places where locals need to pass in order to reach their houses.

ENVIRONMENTAL PERCEPTION AND BEHAVIOUR: PSYCHOSOCIAL ASPECTS

Chair: María Pilar García

Users environmental perception and behaviour in two infusion medication units: Infectology and Chemotherapy

Patricia Biasi Cavalcanti
Federal University of Santa Catarina, Brazil

The final results of a doctoring dissertation are presented here. In such study, the infusion medication units, named in Brazil as Day-Hospital clinic units, were investigated and the environment perception and behavior of users observed. The research aimed to comprehend which environmental attributes are expected in a way to provide positive distractions for patients and companion. The present article focuses on the comparative analysis of two case studies in different units, investigating the relation between the users´ profile, activities and environment setting. The research has exploratory and qualitative nature and has its theoretical basis in the area of Environmental Perception, Pos-Occupancy Evaluation and Healthcare Architecture.

The positive distractions (Ulrich, 1984; Ulrich, 1995; Ulrich; Zimring, 2007; Ulrich, 2009) are a main concept in this work, understood as situations that divert patient's thought away from the disease, presenting proven benefits for their physiological and psychological well-being. For Ulrich (1995), the relations with nature, pets and friendly faces – social support – are three of the main situations which configure positive distractions. For this study, a large range of activities are considered, which are of patient´s and companion´s interest and that can be realized in parallel to treatment. The following examples can be mentioned: organizing snacks; listening to music; watching a movie; walking on the garden; being on happy and friendly environments; contemplating art; developing art therapy; making small moves and practicing some kind of physical education (Carpman; Grant, 1993; Kopec, 2006; Redman, 2008; Sternberg, 2009; Ulrich, 2009; Del Nord, 2010).

Taking into account its representativeness among Day-Hospital varieties, one of the case studies was conducted in an Infectology Unit in Brazil, destined to HIV patients, and the other, in an Infusion Center in the USA, directed to chemotherapy. Although they refer to different contexts, the study does not mention cultural aspects, focusing on each unit peculiarities and in possible contributions for future projects. The following methods were applied: walkthrough analysis, direct and systematic behavior observation, visual mapping, wish poems, questionnaire and visual cues.

One of the main differences between both case studies was regarding the privacy. It has been stated that chemotherapy patients are more willing to give up on privacy on behalf of healthcare professional's easy access. Therefore, among the options presented on visual cues method, most patients from the Infusion Center decided on collective attending rooms, without compartmentalization, while the Infectology patients decided on a

collective environment, compartmentalized into individual boxes. It has possibly happened due to the fear that HIV patients have on being identified and stigmatized.

It has also been observed that, most commonly, Chemotherapy patients come for treatment with companion, rather than the Infectology patients, what makes the special accommodations necessary for the Chemotherapy units. It possibly happens because of the fear that HIV patients have on suffering discrimination, communicating their disease to a smaller number of people. Other possible explanation is that Chemotherapy commonly has effects such as nausea and dizziness, demanding a higher attention from friends and family.

During Wish Poems application, the positive distractions were one of the aspects most frequently suggested by North American users. The emphasis given to the topic is surprising, considering that the method does not direct the results. Although this is the research focus, these results did not happen because of patient´s profile, but possibly, because of the majority of Unit positive evaluations made by patients and their companion in Visual Cue. It is believed that it has allowed users to focus on meanful questions, less comprising than those suggested for the Infectology unit.

Other problem that has been pointed on both units is the insufficient dimensioning of some environments considering the use demand. As a consequence, there are restrictions for stretchers and wheelchairs movement and it is difficult to place companions with the patients under treatment.

Users´ perception and behavior study indicated that many aspects that determine the environment quality can give support to a large variety of positive distractions. Furthermore, it is possible to comprehend that some users´ specificities have to be considered when planning future units, in order to have them better adjusted and responsive.

REFERENCES

Carpman JR, Grant M. Design That Cares: Planning Health Facilities for Patients and Visitors. Baskerville: American Hospital Publishing; 1993.

Del Nord R. New Dimensions for Future Healthcare Facilities; 2010. Disponível em: http://www.designandhealth.com/.

Kopec D. Environmental Psychology for Design. New York: Fairchild Publications Inc.; 2006.

Redman, M et al. Environments for Cancer – a point of view. [S.l.]: Steelcase; 2008.

Sternberg EM. Healing Spaces: The Science of Place and Well-Being. Cambridge: Harvard University Press; 2009.

Ulrich R. View Through a Window May Influence Recovery. Science. 1984 abr.;224:420-1.

Ulrich R. Effects of Healthcare Interior Design on Wellness: Theory and Recent Scientific Research. In: Marberry SO. Innovations in Healthcare Design. Nova York: Van Nostrand Reinhold; 1995.

Ulrich R. Effects of Gardens on Health Outcomes: Theory and Research. In: Rubin H R, Owens AJ. Status Report: an Investigation to Determine Wether the Built Environment Affects Patients Medical Outcomes; 2009. Disponível em: http://www.healthdesign.org.

Ulrich R, Zimring C. The Role of the Physical Environment in the Hospital of the 21 st century: a once-in-alife-time opportunity; 2007. Disponível em: http://www.healthdesign.org.

KEYWORDS
Infusion Center. Day hospital. Health care environment. Environmental Perception. Positive Distractions.

The influence of urban and natural environment on user's perceptions

Taís Feijó Viana
Federal University of Pelotas, Brazil

This study seeks to understand what level of influence of landscape, urban and natural, on the evaluations of users about the visual quality of the streets in the coast city. The research problem is established because there are gaps in studies on the influence of the formal, symbolic and natural on the perception of users in an environment composed of natural landscape and built environment. This is because most evaluations regarding user perception are performed taking into account the influence of formal and symbolic aspects (STAMPS, 2000; NASAR, 1988; WEBER, 1995; LANG, 1987; ARNHEIM, 1977) and the influence of natural aspects (LYNCH, 2006; CARR ET AL. 1992; HERZOG, 1988; LANG, 1987; RAPOPORT, 1978) separately, leaving voids in respect to the influence of the aspects of the natural environment on built environment in user perception.

The research establishes the general objective of producing theoretical and scientific guidelines that help and justify design guidelines in a city where urban and natural environment make the cityscape, with the parameter for this analysis the influence of formal and symbolic aspects of the environment on perception of residents and non residents in the city. The study addresses perceptions of user groups that have different relationships with the city, the first group percept the landscape steeped in symbolism and familiarity with the urban context, and the second with interest and discovery.

As an object of study was chosen the city of São José do Norte, located in the state of Rio Grande do Sul, Brazil, characterized by: (i) to be inserted in a geographically contiguous area of natural landscape and the built environment, this consists of buildings historical and cultural interest, and (ii) possess a landscape degraded due to urban interventions and individual (for residents), which does not consider the preservation of the natural and built environment so together.

To collect the data we used the following methods to answer the research question and test the hypotheses: field observations, physical survey, topoceptive exercise, mental map, behavioral map and questionnaire.

The choice of methods of data analysis depends on the nature of the data and the type of expected information. Thus, qualitative data, products of field observations, the survey topoceptive, the behavioral and mental maps were analyzed qualitatively. Quantitative data, products of the questionnaires were analyzed by statistical tests. Accordingly, the analyzes can be performed using statistical parametric or non parametric, in this study we adopted the non parametric tests, performed by the computer program SPSS / PC (Statistical Package for Social Sciences).

This summary discusses the findings from the investigation of the following hypothesis: a landscape composed of buildings and natural environment positively influence the users perception, resident and non resident, in relation to the visual quality of the streets, as well as for non resident contributes to the streets interest. From the analysis of the data, it was concluded that the hypothesis is partially supported. This is why, despite the landscape that brings together aspects of the built and natural environments positively influence the assessment of the respondents in relation to the appearance of the streets, we note that the natural landscape has a more significant influence that the buildings in the ratings. The interest of users in relation to non residents visited streets can be considered that the proximity to the natural landscape contributes significantly to the interest of this group in relation to streets, as well as the historic buildings and the buildings in good repair.

Therefore, it is expected that the results of this study serve as input for developing guidelines for the city case study, aiming at the preservation of historical heritage and natural landscape and to encourage the application of this methodology in other coast towns. The data obtained in this study serve as arguments and scientific foundations that would assist in making decisions by municipal policies in order to qualify the area for residents and for promoting tourism in the city.

People' mood and architecture style: A study of human behaviour and place preference

Adriana Portella, Inês Quintanilha, Andressa Mativi Rocha, Ellen Scott Hood & Sinval Cantarelli Xavier
Federal University of Pelotas, Brazil

This paper searches to identify whether there is a correlation between user evaluation of the built environment and user behaviour in order to identify whether different types of architecture influence on people´s quality of life. Quality of life here is related to mood and emotional states. The behaviour of residents from three different parts of a city, characterized by distinct architecture, is investigated in terms of user´s positive and negative mood. Some studies (Korpela, 2003; Kerr & Tacon, 1999; Staats et all, 1997) already indicated that, in terms of emotional states, users are sensitive to particular locations and that entering or moving through a place can induce changes in people´mood. This work takes into account the Environment Behaviour theoretical background. The process of user evaluation of the built environment involves two principles: perception and cognition. The first one is related to the process by which users get visual information of places through stimuli. The latter principle does not need to be related directly to visual stimuli linked to physical characteristics of places. The cognition process concerns symbolic meanings associated with places, and can be influenced by user urban context, values, culture and individual experiences. This definition agrees with what Meader et all (2006, p.61) say: "people do not perceive the environment through clear eyes, but through perceptual lenses coloured by their world view". This study takes into account that physical and symbolic factors of the city can promote positive and negative user´s moods.

The hypothesis tested in this study is: "There is a correlation between user´s mood and architecture style. As more ordered the built environment, as more positive the user mood". Weber (1995, p.109) and Arnheim (1977, p.162) argue that order is an indispensable aspect in all kinds of configuration (physical and mental). According to these authors, although

user evaluation can be influenced by particular experiences, preferences and feelings, the perception of order is evaluated as positive by almost all people. Portella (2007) and Nasar (1998, p.260) defends that an ordered built environment will always be evaluated positively by people who live in different cultures and physical environments. On the other hand, disordered public spaces will always be evaluated negatively because, when people are exposed to a series of disconnected aesthetic elements (such as commercial signs, buildings and urban furniture); it provokes user saturation. This saturation experience means that people lose the enjoyment of variety, and their senses become insensitive to the succession of visual stimulus without order.

The methodological framework applies a multiple method survey design in order to combine methods which compensate for the faults and limitations of each one. A city in Brazil was selected as the case study due to its historic importance and different architectural styles of its districts; this city is Pelotas in the South of Brazil, border with Argentina and Uruguay. The objective here was to compare responses of residents who live or work in three completely different architecture sets: a district comprised of (i) industrial architecture, (ii) contemporary architecture, and (iii) vernacular architecture. Three methods of data collection were selected to gather the necessary information to test the hypothesis: documentation review and archival record, systematic observation of physical characteristics of street facades on-site and through photographs, and questionnaires. To be part of this study, respondents need to be residents in the districts selected to the study. Questionnaire was delivered in person and collected on the following day. Nonparametric tests and mean values were adopted to analysed questionnaire data. The software package adopted for the statistical analysis was SPSS. The main results prove that architecture style influences on person's mood as residents in areas more ordered in terms of physical features are happier and more positive in relation to life than residents who live in areas where disorder is the main aspect of the street scenes. The outcomes confirm what is defended by literature which says that the built environment influences human behavior, and also identify aesthetic compositions of buildings evaluated positively and negatively by users. In this way, this study indicates urban design principles that can help to improve people´s quality of life in order to promote positive mood. As already mentioned by Sherlock (1991) two decades ago, cities need to have "decent environments", without which people and their activities will eventually melt away. The expression "decent environment" does not mean simply pleasant buildings. This term has to mean that users feel pleased and interested with the appearance of streetscapes; and this is what the findings of this article emphasize.

KEYWORDS
Person´s mood; architectural style; quality of life.

Perceived walkability of different neighborhood types: A case study in Izmir Turkey

Ebru Cubukcu & Burcin Hepguzel
Dokuz Eylul University - Izmir, Turkey

General knowledge suggests that walkable communities are sustainable places. Residents of such communities use safe transportation choices which improves their quality of life. However, some communities are more walkable than others. This study aims to (1) uncover the parameters (related to personal characteristics of the resident, social conditions in the neighborhood, economical situation of the household, and perceived physical environ-

mental conditions) that makes a community more walkable (2) investigate whether residents of one type of neighborhood walk more than residents of other types of neighborhoods.

1064 household interviews were conducted in 2012 summer. The survey included "International Physical Activity Questionnaire- Long Form" to measure residents' physical activity level in addition to specific questions related to (1) how much they walk in a week in their neighborhood for transportation and recreation, (2) their personal attitude towards walking, (3) perceived social support for active living, (4) household income and socio-economic situation, (4) perceived neighborhood characteristics. Interviews were held in planned areas and squatted settlements, in mass housing areas for low and high income families. Results showed that; (1) walking for transportation and for recreation were unrelated, (2) neighborhood walkability was influenced by residents personal attitude towards walking, perceived social support for active living, and perceived neighborhood characteristics. Residents' perception of neighborhood walkability varied in different neighborhoods (eg. planned versus unplanned neighborhoods, and low income versus high income neighborhoods) as well as their walking for transportation and recreation. Using Geographic Information Systems, cluster analyses were done to investigate whether residents who reported to walk more lived close to each other. Applied value of results will be discussed. The research is funded by The Scientific and Technological Research Council of Turkey.

Comparative analysis on employee's perception and possible purchasers in commercial environments – Case study in two Florianápolis stores

P.B. Cavalcanti, V.H.M. Bins Ely, C.C. Nunes, L.G. Anghinoni & J.M.A de Santana
Federal Unversity of Santa Catarina, Brazil

The present work results from a research regarding user's perception and behavior in commercial environments. The research has exploratory, qualitative and multi method character and it focuses on the relation between the users and the environment, integrating knowledge from Environmental Psychology, Architecture and Marketing. Parts of the results are presented here, and refer to employees´ and possible purchasers´ perception and come from the administration of a specific method: Wish Poems.

The research is based on the concept of "atmospherics", coined by Kotler (1973), comprehending it as everything that will affect the users´ experience and will potentiate the purchase. At this view, the store atmosphere involves variables related to the physical environment such as layout (Bitner, 1992; Underhill, 2009; Augustin, 2009; Kopec, 2010), lighting (Custer, Kort, Ijsselsteijn et al, 2010; Russell, Mehrabian, 1976; Areni, Kim, 1994; Fleischer, 2001; Summers, Hebert, 2001; Ginthner, 2004; Kopec, 2010; Van Erp, 2008; Quartier, Van Cleempoel, 2008; Quartier, Christiaans, Van Cleempoel, 2008; Augustin, 2009; Custer, Kort, Ijsselsteijn et al, 2010) and colors (Goldstein, 1939; Nakshian, 1964; Bellizzi, Crowley, Hasty, 1983; Bellizzi, Hite, 1992; Knez, 2001; Babin, Hardesty, Suter, 2003; Chebat, Morrin, 2007), however, it is not limited to these aspects, and it also includes some other characteristics as the provided service quality (Baker, Levy, Grewal, 2002; Underhill, 2009).

It has also been observed that a great range of the literature available focuses on the purchaser point of view, showing smaller study availability that evidences the employees´ perspective. In this sense, this study investigated which would be the seller´s expectations regarding the retail environment, and if there is a correspondence between the seller´s and the purchasers´ expectations.

Therefore, two case studies have been conducted in two points of sale of a large store branch in Brazil, placed in two different malls. Developed by Henry Sanoff, the Wish Poems was one of the methods applied, stimulating the respondents to express their needs and yearnings in relation to what would be expected for a retail environment. This method was applied to 38 possible purchasers and 11 sellers from the two stores. Analysis of Content was used when dealing with the results, creating 8 alike results categories. The two stores results were analyzed together, taking into account that the study focused on the comprehension of user's expectations in relation to an ideal situation and not in relation to the current space. The answers categories are also common both for the sellers and the consumers, in a way to make possible the comparative analysis of their perception.

It has been observed that the category most mentioned by the groups of respondents was the relation between "layout and dimensioning". Both employees and consumers understand that it would be desirable that a commercial environment had a wide and spacious circulation with no obstacles. The employees have also mentioned issues such as: the need to plan the cashier counter in a way to accommodate at least two attendants and to organize the products in stands to facilitate the display.

The second category most mentioned by the possible purchasers was "entertainment". It is important to mention that these stores brands are structured in values such as originality, irreverence and fun, and they are easily observed in their products. Therefore, possibly, the possible customers identify with the values and expect that the atmosphere of a future point of sale also expresses them.

Now, the second category most frequently mentioned by employees was "comfort". In their point of view, it would be expected that the commercial environment could provide areas to relax, with armchairs, refrigerator, microwave oven, bathroom and fitting room. As the studied stores have small dimensions, there are few elements to support the employees´ comfort. Also, there are not fitting rooms for trying clothing pieces, which are commercialized, although they are not prevailing in the store.

It was observed that the employees´ desires are focused in aspects related to the place convenience and functionality, what is justified considering that they remain in the area for long periods in labor activity. The descriptions of what would be desirable can be materialized in very simple solutions, contributing to everyone´s experience in the environment and possibly impacting in employees' satisfaction and in the quality of customer service.

REFERENCES

Areni C, Kim D. The Influence of In-store Lighting on Consumers' Examination of Merchandise in a Wine Store. International Journal of Research in Marketing, 1994;11:117-25.

Augustin S. Place Advantage – applied psychology for interior architecture. New Jersey: Vohn Willey S. Sons; 2009.

Babin BJ, Harddesty DM, Suter TA. Color and shopping intentions: The intervening effect of price fairness and perceived affect. Journal of Business Research, 2003;53:541-51. Disponível em: http://ideas.repec.org/a/eee/jbrese/v56y2003i7p541-551.html.

Baker J, Levy M, Grewal D. An Experimental Approach to Making Retail Store Enviromnental Decisions. Journal of Retailing. 1992;68(4).

Bellizzi JA, Hite RE. Environmental Color, Consumer feelings, and purchase likelihood. Psychology and marketing. 1992;9:347-63. Disponível em: http://hakonswensonstiftelsen.se/publikationer/CFR102%20Butiksformat/Obligatoriska%20artiklar/F%C3%B6rel.%207/Bellizzi%20&%20Hite%201992.pdf.

Bellizzi JA, Crowley AE, Hasty RW. The effect of color in Store Design. Journal of Retail. 1983;59:21-45. Disponível em: http://www.jjtok.io/3m10p/wp-content/uploads/2010/09/Effect-of-COlor-on-Store-Design.pdf.

Bitner MJ. Servicescapes: The Impact of Physical Surroundings on Customers and Employees. Journal of Marketing. 1992 abr;56,57-71.

Chebat JC, Morrin M. Color and shopping intentions:The intervening effect of price fairness and perceived affect. Journal of Business Research. 2007;60:189-96,. Disponível em: http://ideas.repec.org/a/eee/jbrese/v60y2007i3p189-196.html

Custers PJM, Kort YAW, Ijsselsteijn WA, et al. Lighting in retail environments: Atmosphere perception in the real world. Lighting Research & Technology. 2010;42:331-43. Disponível em: http://www.yvonnedekort.nl/pdfs/LRT377836%20custers%20et%20al%202010.pdf.

Fleischer S, Krueger H, Schierz C. Effects of brightness distribution and light colours on office staff: Results of "Light Harmony" project. The 9th European Lighting Conference "Lux Eurpa 2001". 2001 jun; 18-20. Disponível em: http://e-collection.library.ethz.ch/eserv/eth:25438/eth-25438-01.pdf.

Ginthner D. Lighting: Its Effect on People and Spaces. Implications: A Newsletter by InformeDesign. 2004;2:1-5. Disponível em: http://www.informedesign.org/_news/feb_v02-p.pdf.

Goldstein K. The Organism: A Holistic Approach to Biology Derived from Pathological Data in Man. New York: American Book Company; 1939.

Knez I. Effects of colour of light on nonvisual psychological processes. Journal of Environmental Psychology. 2001;21:201-8. Diposnível em: http://headspacegroup.files.wordpress.com/2008/10/knez-i-2001.pdf.

Kopec D. Environmental psychology of Design. New York: Fairchild Publication; 2010.

Kotler P. Atmospherics as a marketing tool. Journal of Retailing, Evanston, IL. 1973; 49(4):48-64.

Russell JA, Mehrabian A. Environmental variables in consumer research. Journal of Consumer Research. 1976;3:62-3.

Nakshian JS. The effects of red and green surroundings on behavior. Journal of General Psychology. 1964;70:143-61.

Quartier K, Christiaans H. Van Cleempoel K. Retail design: lighting as an atmospheric tool, creating experiences which influence consumers' mood and behaviour in commercial spaces. In: Undisciplined! Design Research Society Conference 2008. 2008;16-19. Disponível em: http://shura.shu.ac.uk/id/eprint/496.

Quartier K, Van Cleempoel K. The influence of lighting in the build environment: a study to analyse human behaviour and perception as measured by mood and observation; 2008. Disponível em: http://www.noldus.com/mb2008/individual_papers/SIG_Theuws/SIG_Theuws_Quartier.pdf.

Summers TA, Hebert PR. Shedding some light on store atmospherics Influence of illumination on consumer behavior. Journal of Business Research. 2001 nov;54:145-50. Disponível em: http://www.sciencedirect.com/science/article/pii/S014829639900082X.

Underhill P. Vamos às Compras! A ciência do consumo nos mercados globais. 6. ed. Rio de Janeiro: Elsevier; 2009.

Van Erp TAM. The effects of lighting characteristics on atmosphere perception. Eindhoven University of Technology - Department of Technology Management. 2008. Disponível em: http://alexandria.tue.nl/extra1/afstversl/tm/Erp%202008.pdf.

KEYWORDS
Environmental Perception, Servicescape, Store atmosphere, Retail design, Users preferences.

SUSTAINABILITY IN ORGANIZATIONS

Chair: Isabel Lema Blanco

Becoming a more sustainable society: An approach to tracking the culture of sustainability in organizations and cities

Robert W. Marans & John Callewaert
University of Michigan, USA

THEORETICAL BACKGROUND

For several years, opinion polls in the United States have been tracking public attitudes about global warming or climate change, and its causes and consequences. Despite irrefutable scientific evidence that climate change is occurring, there are significant numbers of Americans who are "dismissive" or "doubtful" about its existence reflecting different scientific and political philosophies. Evidence from college campuses throughout the U.S. suggest a higher level of concern about climate change than that found among the general population. In large part, this reflects both student-initiated programs aimed at making their universities more sustainable and the initiatives of college administrators designed to reduce energy and other operating costs. While students who are "eco-activists" may represent the culture of sustainability at a particular university, there is speculation that a significant proportion of student bodies may be oblivious to climate change and issues of sustainability. Similarly, it is hypothesized that while climate change may be of concern to urban populations, their willingness to adapt to a more sustainable lifestyle is problematic. To test these hypotheses, surveys that measure the culture of sustainability in organizations such as universities and in cities are needed.

This paper describes an approach to measuring the culture of sustainability in an organization devoted to higher education: the University of Michigan. It also discusses how these measures are intended to inform university administrators about its progress in creating a more sustainable campus.

METHODOLOGY

First, the paper reviews a campus-wide integrative assessment of sustainability activities and the four broad goals emanating from that assessment. The goals cover waste reduction, climate action, healthy environments, and community awareness. It then describes the process of addressing community awareness through a research program involving people-environment interactions. Specifically, the program calls for a multi-year collection of data about the behaviours, levels of understanding (knowledge), and commitments and dispositions, and environments of students, faculty, and staff.

RESULTS AND CONCLUSIONS

Using survey data collected in fall, 2012, selected findings from the initial data collection are presented. Plans for on-going analyses, their uses by the university, and subsequent data collections are then reviewed. Finally, an approach to replicating this effort in other universities, and in other organizations and cities is outlined.

From the University campus: Strategic opportunities to influence day-to-day sustainable practices in the city of Santiago

Beatriz C. Maturana & Walter Imilan
University of Chile, Chile

INTRODUCTION

A reflection on sustainable practices in university campuses is an emergent topic of national significance in Chile. In the last twenty years, the expansion of the tertiary educational system has resulted in the participation of over 350,000 students enrolled in the capital city of Santiago alone. The subsequent construction of new university buildings and the refurbishment of existing facilities (often heritage) and associated infrastructure in the central and metropolitan districts play a significant role in the everyday urban dynamics of the city.

THEORETICAL BACKGROUND

Most recently, the Vice-Chancellor of the University of Chile, Víctor Pérez Vera, signed an agreement with the national government, committing university campuses to a sustainability agenda. This commitment was contextualised with the opportunity that sustainability represents not only for the university as an institution but in its role to address the needs of society. Through a multidisciplinary approach, sustainability becomes a key link between research, education and society. The idea of a sustainable university campus is relatively new in Chile. This research seeks to extend the definition of sustainability from the current focus on energy efficiency within the campus to the broader day-to-day practices.

Thus, this research considers the network of campuses of the University of Chile in Santiago within the idea of sustainable university campuses as a key urban and social element of the larger metropolis. This research encompasses an educational proposal that works within both the student cohort and the broader community. By examining the day-to-day social and spatial practices between the university campus, students and the surrounding infrastructure and communities, the research tracks the direct effect and perception of the concept of the sustainable university campus upon the broader urban condition.

METHODS

This research in progress is supported by a transdisciplinary and multidisciplinary design studio and seminar series, housed in the Faculty of Architecture and Urbanism and directed towards second year students from architecture and related disciplines. The methodologies correspond to those used in design studio and contribute to the competencies in critical analysis of sustainability in both design and social research. The seminar series and design studio focuses on the main and initial case study of the Campus Juan Gómez Millas of the University of Chile within an extension project linking the campus to its immediate neighbourhood and district. The design studio is conceived as a seminal subject with practical results that will be physically implemented. Further, this research aims to develop forums and documents of environmental and sustainable discourse within the university.

The ultimate objective of this research and design studio is the formulation of a set of criteria for sustainability applicable to University of Chile campuses, the strengthening of a communication between university campuses and their surrounding communities and the establishment of an on-going dialogue of day-to-day practices in political and university spheres. The first results will be available by June 2013.

Daylit intelligent sustainable offices: Results of daylight simulation study

Dariusz Masly
The Silesian University of Technology, Poland

INTRODUCTION

Reducing buildings' energy demand and improving their performance are primary goals of the new model of sustainable development. High-performing offices enable users to feel comfortable. While the IB models from the first period of IB development were focused on the provision of automated systems and IT, modern IB should first of all be able to cope with changes in the requirements of its users. It enables its occupants to make appropriate adjustments in the environmental conditions in office interiors.

The study is a part of a larger research project which is devoted to simulation-based design analysis for daylit office spaces in southern Poland. The aim of the project is to develop the scientific principles that lie behind properly daylit office spaces that meet changing users' requirements and needs. This knowledge could lead to the development of design guidelines for office buildings in the southern Poland. Different facades, light shelves and shading devices have been compared in this study. The paper presents how selected architectural solutions influence lighting environment in offices.

THEORETICAL BACKGROUND

In recent years numerous studies have proved that view and daylight is desirable by buildings' users. They can provide many advantages for mental health, learning and productivity of occupants (Fontoynont M., 1999) (IEA, 2000) (Heschong L., et al., 2002) (Choi J., Beltran L. O., 2004) (Keeler M., Burke B., 2009). Daylight has also an important non-visual effect on biological processes, for example synchronising the circadian clock (Altomonte S., 2009).

The light distribution, daylight factors, daylight availability also have recently been investigated (Galasiu A. D., Atif M. R., 1998) (IEA, 2000) (Reinhart C. F., Petinelli G., 2006) (Bulow-Hube H., 2008) (Dubois M. C., Blomsterberg A., Flodberg K., 2011) (Reinhart C. F., Wienold J., 2011) (Masly D., 2012). This study has been based on three main conclusions. They are: 1) daylight has an enormous influence on users´ comfort, health and well-being, 2) the most promising strategy for energy efficiency and visual comfort in Polish offices appears to be the use of exterior automated retractable venetian blinds (Masly D., 2012), 3) 100% glazed offices do not provide significantly more daylight at the height of office desk than offices glazed from table height up to a suspended ceiling (Bulow-Hube H., 2008) (Masly D., 2012).

METHODS

This article demonstrates results of computer simulations of various ways to distribute and redirect daylight in office spaces. The simulations have been achieved with the program for accurate daylight prediction Radiance. As a location Cracow has been selected (latitude: 50°N, longitude: 20°E). Sunny conditions were studied for two days of the year: 21st of June and 21st of March. For winter solstice overcast sky conditions were simulated. Daylight Factor levels analyses, illuminance levels analyses and visual comfort analyses have been done. The architectural solutions have been evaluated with the objective of achieving optimal illuminance levels on the work plane and a glare free environment.

RESULTS AND CONCLUSIONS

Researches analysing human behaviour in office space have shown that daylight is desirable. But there is a risk that uncontrolled direct-sunlight penetration into office can be extremely

uncomfortable for users if it results in glare and thermal discomfort. On the contrary, buildings are more comfortable and use less energy when users have the ability to control daylighting. The study has enabled to identify some of appropriate daylighting systems and the knowledge can be useful in the selection process of daylighting design solutions and to improve automatic control systems.

The results show that fashionable facade solutions very often decrease the daylight levels and do not provide a balanced daylight distribution throughout the room. Moreover proper design choices regarding a selection of sidelighting systems and shading devices have the potential to improve significantly lighting conditions in office spaces. The results also confirm the conclusion from earlier studies that exterior automated retractable venetian blinds are efficient and flexible solution.

Great emphasis should be placed on the significance of multidisciplinary research in the area of daylit sustainable office environments. In this study, quantitative physical measures were assessed through computer simulation, but of course there is need to relate these results with qualitative and behavioural factors like preferences of occupants and psycho-physiological stimulation. This daylight simulation study has been intended to be a way of collecting the fundamental data on quality of daylit office environments in southern Poland. These results are planned to be verified through post-occupancy evaluation of selected actual offices under real sky conditions to assess users' visual performance, comfort and acceptance of innovative daylighting systems.

Psychosocial evaluation in organizational environments to achieve healthy workplaces

Amelia Fraga Mosquera & Ricardo García Mira
University of A Coruña, Spain

The work environment has increasingly been studied as a promoter of health. This paper is part of a broader research aiming to explore the perception of shift-workers about characteristics of work environment that affect their quality of life. The main objective is to locate and analyze the typical organizational stressors present in the shift workers environment through workers´ perceptions. Results obtained through multivariate analysis show relevant dimensions that characterize and promote healthy workplaces. We used a multi-method approach consisting of both qualitative and quantitative analysis. The results entail a guide for future research on the evaluation of intensity of psychosocial risks in organizational environments to promote an optimal adaptation between employee and organization.

BACKGROUND

The study the Quality of Work Life (QWL) of employees inside organizations to promote healthy workers has increased its interest along the last three decades (Martel & Dupuis, 2006). In relation to schedules, there is a particularly type of work schedule that is important to take into consideration: Shift work. It has been studied as one of the work contexts in which several health problems occur. Specifically, rotating night shift work disrupts circadian rhythms and it is related to sleep disturbances (Akerstedt et al, 2002), coronary heart disease (Brown et al, 2009), gastrointestinal disturbance, reproductive dysfunction, as well as decrease in psychological well being (Harrington, 2001). Moreover social, family and marital relationships could be disrupted (Costa, 2003). In Spain, a 22,4% of workers

work by shifts and a 8,5% of them work in the night shift or in rotating schedules (INSHT, 2007). Shift work is a special schedule organization, in which the worker must do his work in 3 different rotating time periods: morning, evening, and night. Shift work has negative consequences and influence, but it is necessary in some institutions. The focus of this paper is to explore the potential stressors within the workplace, from the view of shift worker's perception. The results of this work try to have an application to the mitigation of the impact of such stressors in the quality of workers' life, as well as in their health.

METHOD

A survey was carried out, consisting of a questionnaire which included different groups of items. First, the some items of Standard Shift Work Index (Barton et al, 1995) was used to measure particular characteristics of shift workers schedules, interaction with family life and acceptation of hourly organization. Second, a reduced Spanish version of the scale of Effort- Reward Imbalance model (Fernández-López et al, 2006) was incorporated to evaluate the psychosocial factors at work. Finally, from the information collected by means of the qualitative analysis (focus group) following scales were specifically designed. Moreover, sociodemographic information was collected. The final questionnaire was applied in a number of organizations with shift and non shift workers.

RESULTS

In the first part of the study (Fraga, 2012) 13 dimensions were derived from the analysis conducted on data with the 3 focus groups. Seven of these dimensions were directly related to the work environment, and they are the key elements of this study: 1) Labour Law; 2) Hourly Organization; 3) Commuting; 4) Human relationships; 5) Performance-Productivity; 6) Safety and Labour Health and 7) Environment and Work Space.

The questionnaire is a very effective way of obtaining other different kind of quantitative data, which together with the qualitative data generated by the analysis with the focus group, provide a more complete image of what shift work is and how it structures the life of workers imposing a number of constraints. In the results reported here, a discussion of the more relevant aspects regarding the impact of stressors in the workplace is made, and the more significant results are presented.

DISCUSSION

In the first part of the study (Fraga, 2012) workers said that they perceive their work environment as a strange environment, unconnected with their necessities and preferences. Listening to the shift-workers and their proposals is a way of integrating the workers perspective into the general work planning and into the healthy workplace design. The questionnaire let us know the more relevant aspects regarding the impact of stressors in the workplace from the shift workers point of view. The conclusions will allow us to formulate recommendations to improve work environments and the workers and shift-workers daily life. Moreover it is important to take into account these results in two different ways: to improve the trade union support to get more facilities and helps in the work place contexts; and to keep a balance between the organizational, social and environmental necessities, increasing the corporate social responsibility law application.

KEYWORDS

Shift work, participation, upward communication, quality of life.

Complex determinants of sustainable behavior in the workplace: the case of universities

Adina Dumitru, Ricardo García Mira & Miguel Muñoz
University of A Coruña, Spain

Large organizations in Europe are responsible for a high amount of greenhouse gas emissions in Europe. Estimations have shown that the potential contribution of large organizations to global warming over the next 100 years will be highly significant: 72 % CO2, 18 % Methane, 9 % Nitrous Oxide (Emission Database for Global Atmospheric Research, 2000). Due to this, the European Union, followed by national governments, have passed laws and have formulated policy that aim at reducing the level of emissions of organizations. Nevertheless, the EU Sustainable Development Strategy Review of 2009 shows that these strategies have not been enough to ensure a significant reduction. Furthermore, while there have been achievements in the cleaning of production processes, the reductions derived from changing practices and behaviors in the workplace have not been sufficiently targeted.

As a key practice of everyday life, work is a place and space where the sometimes contradictory demands of economic profit and environmental sustainability meet and are negotiated, with the resulting effects on work practices, energy consumption and greenhouse gas emissions. As people spend an important part of their lives at work, within a community of values, norms and everyday practices, it is also the place where identities are negotiated, where individual values are transformed and where sustainability-related behavior is either promoted and rewarded or hindered and discouraged (Brown, Kirpal & Rauner, 2007).

The LOCAW project (a FP7, European-funded project) has aimed at identifying the barriers and drivers to sustainable changes in everyday practices in the workplace. It has done so through a multi-method research of six large-scale organizations in Europe, both private and public. The research looked into structural and individual factors affecting sustainable behavior in the workplace in the areas of consumption of energy; waste generation and management and work-related mobility, and in the spillover of practices between the areas of work and home, with a view to defining context-sensitive policies that would lead to a fast-paced transition to a low-carbon Europe.

The present paper will present the results of one part of this research, dealing with the structural and organizational determinants of everyday practices in the workplace, taking as a case study the University of A Coruña, in Spain. The research on the structural determinants of everyday practices in the areas mentioned above consisted of two focus groups with workers at the University, and 10 in-depth interviews with key informers among the workers. Interviews and focus groups were analyzed using the computer-assisted analysis technique Atlas.ti. The results show a complex determinism of everyday practices in the workplace and give some clear results on promising policy tracks for transforming universities in sustainable organizations. Several policy tracks will be discussed, as well as the key drivers and barriers in promoting sustainable behavior in the workplace.

KEYWORDS
Workplace, sustainable organizations, structural and organizational determinants, barriers and drivers.

REFERENCES

Brown, A.; Kirpal, S.; Rauner, F. (Eds.) (2007) Identities at Work. Springer, the Netherlands. Emission Database for Global Atmospheric Research (2000). Version 3.2, fast track 2000 project.

Review of the EU Sustainable Development Strategy (EU SDS) - Renewed Strategy. EuropeanCouncil, Brussels, 26 June, 2009.

SOCIAL HOUSING: EVALUATION, ANALYSIS AND INNOVATION

Chair: M. Karmele Herranz-Pascual

Social housing in consolidated urban centres: Comparative analysis of recent solutions in the contemporary cities of Sao Paulo (Brazil) and Madrid (Spain)

Cássia Bartsch Nagle & Leandro Silva Medrano
Federal University of Campinas – UNICAMP, Brazil

The process of urbanization of Brazilian cities has recently followed a horizontal expansion model, directed by market power and processes of social exclusion presented in strategic urbanism (ARANTES et al., 2000), with the construction of new districts far from urban centres, and with housing construction on the outskirts of the cities, leading to the emptying of the urban centres, besides land speculation and gentrification (BORJA, 2001; BIDOU-ZACHARIASEN, 2006).

The necessity of the "return to the centre" has been the object of architectural and city planning proposals. Among the various solutions pointed out for the improvement of the central, densed and consolidated areas, is the renovation of urban centres and urban sustainability. The theme of social housing is common and the potencial of promoting collective life, developing infrastructure and rehabilitate public spaces depends on it. The necessity of reorganization of the cities, using strategies that contemplate the relation between social housing and urban condensation, principally in metropolitan areas, where the uncontrolled growth overlays collective and sustainable practices, is a consensus. In order to reach sustainable development of the cities, the new reurbanization processes should take into account the physical, cultural and social pre-existences of each place, the social mix and should revert the process of frontier expansion (ROLNIK; BOTLER, 2001). Among the sustainable premises related to social housing, the social maps and the concepts of compact city and smart growth should be emphasized.

The Brazilian government has tried to reduce the housing deficit, estimated at 5.546 households (BRASIL, 2011) by means of many governmental programmes, such as the Plano de Aceleração do Crescimento (Acceleration Growth Programm - PAC) and the Programa Minha Casa Minha Vida (My Home, My Life – PMCMV). The PMCMV Programm, established in 2009, after the world crisis in 2008, continues to administer investiments in the construction of thousands of houses far from urban centres, elaborated without the necessary care with the resulting urban and architectonical qualities, social iniquity or the environmental impacts of this growth. The second phase of the programm expects to produce 2 million homes until 2014 (BRASIL, 2010). Due to this fact, the necessity to discuss this theme, in order to guarantee the desired qualities in new projects in the city centre, is unquestionable.

Therefore, the objective of this paper is to analyse the methodological, technical and theorical possibilities in contemporary architecture and city planning for social housing

projects in consolidated urban centres. With this purpose, recent projects of social housing in the central area of the city of São Paulo were analysed. Documents about the theme of social housing in Brazil were collected and organized by bibliographical research and case study, in an effort to contribute to the process of the elaboration of new programm projects and to contribute towards filling the lack that exists in the bibliography. This paper presents the project of Edifício Riachuelo, in the centre of São Paulo.

In addition, the critical analysis and the comparison of these projects with other similar ones, recently elaborated in central areas of Madri, were carried out looking for contributions from the Spanish experiences to contemporary urban and architectonic practices, contributing to the advance of the Brazilian cases. The project elaborated by Espegel-Fisac Architects, in Madri, is analysed in this paper.

Thus, the projects were analised looking for singularities that contribute with the methodological procedures in social housing. The results of the critical analysis contribute to the establishment of new formulations that consider a sustainable reurbanization and the relation between housing and city, fundamental to the development of quality social housing and cities. In the conclusion, the intention herewith is to contribute to the establishment of methodological procedures that in turn contribute to the development of social housing projects in consolidated urban centres.

KEYWORDS
Urban centres; Social housing; Public politics; Project process; São Paulo; Madrid

REFERENCES

ARANTES,Otilia; VAINER, Carlos; MARICATO, Ermínia. A cidade do pensamento único. Desmanchando Consensos. Petrópolis: Vozes, 2000.

BIDOU-ZACHARIASEN, C. De volta à cidade: dos processos de gentrificação às políticas de "revitalização" dos centros urbanos. [S.l.]: Annablume, 2006.

BORJA, J. Urbanização e Centralidade. In: Os Centros das Metrópoles. São Paulo: Terceiro Nome, Viva o Centro, Imprensa Oficial do Estado, 2001.

BRASIL (2010). Como produzir moradia bem localizada com os recursos do Programa Minha Casa, Minha Vida? Brasília: Ministério das Cidades.

BRASIL (2011). Déficit habitacional 2008. Brasília: Ministério das Cidades.

ROLNIK, Raquel; BOTLER, Milton. Por uma Política de Reabilitação de Centros Urbanos. In: Óculum Ensaios, PUCCAMP, 2005.

Innovative living space in a new century: CSI housing of urban small-sized dwellings

Jingmin Zhou & Qing Miao
Tongji University, China

In this paper, we discuss a new housing construction system called CSI (CHINA SKELETON-INFILL) Housing. This system is based on open building theory, separates skeleton from infill. It provides stable structure which cannot be transformed by occupants and flexible parti-

tions which can be arbitrarily modified. It is well known as a result of the industrial civilization development, globalization has brought far-reaching influence on human society. The problems of urbanization, such as the lack of land, the raise of housing prices, and the imbalance of supply structure, have been increasingly serious. Therefore, in China, to develop the urban small-sized dwellings becomes an inevitable choice. However, the current design and construction of urban small-sized dwellings are still rather coarse. In this case, to find and solve these problems has become a key question.

Based on the investigation of urban small-sized dwellings in 23 major cities of China, we had interview with the users of 100 dwellings. We took photos, drew plans, and talked with the residents. As a result, we found many problems on different aspects, such as living space and supporting technologies. For this study, we pointed out the problems of dwellings built by traditional construction method. In the meantime, we did the comparison study between the traditional and CSI housing construction system. In this way, we can see if it is possible for CSI system to make housing accessible and adaptable and meet the changing circumstance of the occupants.

By analyzing our investigation, we found that the dwellings built by traditional construction method had many problems. Firstly, in most dwellings, the inner space is neither comfortable nor compact. The distributions of each functional district are always in confusion. Many dwellings do not have place for the users to change shoes, some even do not have a separated kitchen. Secondly, the fitments are always dated and energy consumption is great. Besides, pipelines can be seen in every room, ugly and dangerous. Thirdly, the unpleasant smell and noise have negative effects on neighbors, and interference among occupants is serious.

On the other hand, corresponding dwellings built by CSI Housing system are more comfortable and leads to a more innovative life. Firstly, the functional layouts are more reasonable. Integral kitchens usually face towards integral bathrooms, with corridors in the middle. Water closets, shower rooms and bathroom sinks are separated in independent rooms, thus improves space quality and use efficiency. Open kitchens introduce innovative live, and communication between family members can be easier. The living rooms and bedrooms are usually organized together compactly to adapt the required reconstruction. Secondly, the equipment and pipelines are fixed separated from structure. Because of the advanced system and fitments, the occupants will have high reliability and low maintenance costs. Thirdly, there are no floor drains or no broken seal or unpleasant smell. All of the vertical drainage pipes are gathered on the same export of conduit well. Occupants can enjoy the reconstruction without worrying about their neighbors.

Besides, during the interviews, the users those live in the dwellings built by traditional construction method expressed the hope of improving the quality of living. They preferred equipment and pipelines to be fixed separated from structure and hidden, even though usable area will be reduced a little consequently. Sustainable space was also mentioned, many users thought it is suitable to transform or maintain the dwellings every 5 years.

Through the case studies, we can see how CSI Housing can solve the problem of small-sized dwellings as well as achieve the idea of sustainability and innovation. It makes progress in the aspects of spatial layout, equipment and independence. It also provides capacity to change functions and replace exchangeable parts over time.

In 2010, the Technical Guideline for Construction of China-Skeleton-Infill (CSI) Housing was issued by The Ministry of Construction of China. CSI provides stable structure and flexible partitions so that occupants can change the functional layout and supporting technologies easily.

With the rapid economic development and the accelerated pace of urbanization, the urban small-sized housing plays a more and more important role in society. CSI Housing, aiming at making effort in improving functional space design and support sustainable technical systems, is a key to solve various problems of small-sized housing, and requires more attention.

KEYWORDS
Urbanization, Urban small-sized dwelling, CSI Housing, Innovative living, Sustainability

An analysis of an housing settlement in Istanbul

Roberta Camaggio
University of Studies of Napoles Federico II, Italy

The real estate market, starting from the 90's, has seen an increase in prices and, at the same time, a lower growth in household incomes, creating housing tensions. The housing market has changed over time and is now characterized by the presence of atypical housing questions (increase of singles, immigrants, temporary workers, students, etc.) and by an enlargement of the housing's emergency to the intermediate sections of the population, until this years not affected by this type of discomfort. In this scenario, there is a growing interest in the Social Housing.

The aim of this study is to inquire Social Housing in Istanbul. Indeed, housing reflects one of the greatest hardship of living in a city and this problem is amplified in the Istanbul reality. The researcher plans to evaluate the role of Social Housing in Europe comparing it with the case of Turkey, to identify an housing case of study in Istanbul, analyzing the territorial and social dynamics in it and to develop an urban renewal project. This research is not only a theoretical study on the topic of Social Housing, rather offers a concrete design solution to the housing problem in a specific urban sector of Istanbul. Therefore the proposal is to provide a new design of the housing settlement, which is adequated to the tenants needs, also pursuing the goal of sustainability, not only in terms of energy savings but also economically.

In literature, it has been stated that Housing Market in Turkey is driven by demand fueled by a combination of population growth, ongoing migration, increasing urbanization, disposable income growth and affordable financing caused demand for new housing to escalate sharply and supply driven market. Is clear the necessity to meet the pent-up need for low-energy consuming, resourceful energy efficient affordable sustainable housing built up.

The area selected as a case study is Halkali. Halkali was created with the government support to be an alternative for the residence crisis. The new urban settlement of Halkali takes place at the west side of Istanbul and it's 20 km. distance from the city center and from the business center. It is a Toki project, which apartments were sold since 2009. Target user group of social quality Halkali mass housing is law economic conditioned, lower-medium income groups who have real housing problems. Halkali associate an order environment with the quality construction and low cost and is an optimal solution for a mass housing

residence but the government didn't spent money to built an environment living with the recreational area and the commercial possibilities. A questionnaire was distributed to a sample of all tenants of Halkali Social Housing, aimed at identifying levels of satisfaction and the views of tenants on the area and the house they live. Were interviewed twenty people, belonging to all age and both genders.

The study tested that tenants, although not fully satisfied with the interior space of their homes, especially with bathroom and kitchen, complain more of the design of the open space, which doesn't exist, and of the lack of resting places or playground areas. These deficiencies do not allow tenants to live the open space. Also complains about a total lack of attention to the disabled and elderly and inadequate distribution of parking facilities. In an intervention of Social Housing public spaces play an important role since they represent the way of interaction between the community. The project is so thought to turn this housing project in a local attractor which offers opportunities for entertainment and the development of social networks.

KEYWORDS
Social housing, planning, reconfiguration, sustainability, Turkey.

New alternatives for social housing in contemporary Brazil

Leandro Medrano, Carolina Celete, Eliane Roberto & Giovana Feres
University of Campinas - Unicamp, Brazil

Between the 1930 and 1950 decades, the most productive period of Brazilian Modern Architecture, some noteworthy experiments were conducted concerning social housing, such as Conjunto Pedregulho (RJ), Edifício Japurá (SP), among others (Bonduki, 1998). In the following decades, funded by the National Housing Bank (BNH), quality and innovation gave way to quantity and lower costs, establishing the ideal of homeownership in Brazil. As a result, thousands of standard housing units were built, following the worst models of rationalist dictates of the modernist movement. These large housing unit sets were erected in cheap land in the outskirts of medium and large cities all across Brazil, corresponding to what some authors call "BNH period".

In the 1980s, Brazil confronted a serious economic crisis and few investments are made toward Social Interest Housing (SIH). At that moment, illegal urbanization presents a significant growth (Rolnik, 2009), taking place mainly in the largest cities. It is estimated that approximately 10% of the Brazilian population is currently living in substandard housing agglomerates, of which close to 80% are concentrated in metropolitan areas (IBGE, 2010).

Even if in the 1990s some specific initiatives resulted in good cases of housing projects for low-income population, it was in the beginning of this century that Brazil has restarted, in an amplified scale, discussions about SIH. Along with the economic growth of this period, three issues were in evidence: (a) architecture contests; (b) slum upgrading projects; (c) homeless people due to natural disasters. Regarding contests, they furnished an opportunity for high-level technical and methodological discussions, where merit prevailed over privilege (Montealegre, 2007), and which led to new answers to old problems. Promotion of these contests was seen as a sign of openness and democracy on the part of the promoting institution (Malmberg, 2006), a fundamental element for the advancement of governance, which is notable in periods of crisis. As for slum upgrading projects, whose aim is to overcome precariousness, it is sought, by means of state intervention and of methodology with more com-

prehensive and sustainable management tools that establish minimal standards of habitability, to promote public policies able to transform the benefited communities in the simultaneous ways: (i) slum dwellers becoming citizens; (ii) slum shacks becoming households; (iii) the slum area becoming a neighborhood (PMSP, 2008). Last, because of increase in (legally or illegally) urbanized area, many dwellings were stricken by natural disasters, or more properly by social disasters created by human actions in vulnerable spaces (Veyret, 2007). This indicated a need for research in emergency shelter, a subject scarcely discussed and explored in Brazil, specially concerning applicability of preventive actions (Onu-Habitat, 2012), as well as provision of shelter adequate to the needs of the homeless (Davis, 2012).

This article has the purpose of critically analyzing those three events related to SIH in contemporary Brazil. Its methodology is based on case studies, which are compared with models built in Period BNH, in order to disclose innovations made ??in the field. The main analyzed feature will be the relationship between these SIH models and urbanization processes of Brazilian cities. In that sense, will be evaluated: (a) distance from the downtown area, (b) access to public transportation, (c) social diversity of the region, (d) access to public services, (e) quality of local trade; (f) places for recreation and green areas.

In its conclusions, it is intended to demonstrate the main features of new alternatives for the SIH problem in contemporary Brazil. The result of our research shows that most of the HIS are not built within the context of the city as well, the mistakes of the Period BNH, seem to repeat.

KEYWORDS
Social Housing; Urban Design; Slums; Natural Disasters; Brazil.

REFERENCES

Bonduki, N.G., 1998. Origens da habitação social no Brasil: arquitetura moderna, lei do inquilinato e difusão da casa própria. Estação Liberdade.

Davis, I., 2011. What have we learned from 40 years experience of Disaster Shelter? Enviromental Hazards.

Rolnik, R., 2009. Confinamiento o conflagración: metrópolis brasileñas al límite, in: Después Del Neoliberalismo: Ciudades y Caos Sistémico. Univ. Autònoma de Barcelona, Barcelona. Instituto Brasileiro de Geografia e Estatística (IBGE). Censo 2010: Aglomerados Subnormais. At low: www.ibge.gov.br – view decembre/2012.

Malmberg, C., 2006. The Politics of Design:Competitions for Public Projects. In: Princeton, NJ.

Montealegre, A., 2007. Derecho, fines y medios: la declinación del concurso de arquitectura. ARQ (Santiago)

ONU-HABITAT, 2012. Estado de las ciudades de América Latina y el Caribe 2012: Rumbo a una nueva transitión urbana. Nairobi, Kenia: Programa de las Naciones Unidas para los Asentamientos Humanos, ONU-Habitat.

Prefeitura do Município de São Paulo, 2008. Habitação de Interesse Social em São Paulo: desafios e novos instrumentos de gestão. Prefeitura do Município de São Paulo, Cities Aliance. São Paulo, Janeiro Projetos Urbanos.

Veyret, Y (ED.), 2007. Os riscos: o homem como agressor e vítima do meio ambiente. São Paulo: Contexto.

SUSTAINABLE URBANISM: CHALLENGES AND STRATEGIES FOR INNOVATION

Chair: Andrew Seidel

Challenges of sustainable urbanism in the emerging city of Doha

Ashraf M. Salama & Florian Wiedmann
Qatar University, Qatar

INTRODUCTION

Sustainability as an approach and practice is a complex phenomenon while the sustainability of cities is an even more intricate subject, requiring knowledge generated from various fields that range from engineering to sociology, environmental psychology and even to ideological discourses relevant to environmentalism. The work of architecture, urban design, and urban planning intersects many disciplines, especially with regard to shaping physical environments on the basis of guidelines and policies for present and future societies and the physical environment of cities that accommodate them. A considerable number of urban qualities are required for the development of sustainable urban growth, these pose a particular challenge in the case of emerging cities such as Qatars capital, Doha. Therefore, the objective of this paper is to identify and clarify the challenges of sustainable urbanism in this rapidly growing city.

THEORETICAL BACKGROUND

Contemporary urban research on sustainability often focuses on environmental concerns by exploring more efficient urban structures as well as technologies to reduce energy waste. However, in addition to ecological balance the planning of urban environments has a direct impact on economic growth and social peace. Holistic urban sustainability can thus only be achieved if social, economic and environmental aspects are understood in context and in relation to each other. Thus, in order to elaborate a more comprehensive model of sustainable urbanism a theory about the production of urban environments must be used as a basis. One of the most influential theories about space production in the case of cities was developed by the French sociologist Henri Lefebvre, who distinguished three main spaces – conceived, perceived and lived space. All three spaces contribute to the production of the urban environment through decision-making (conceived), spatial practice (perceived) and identifying with images (lived). This basic triad can be found in many scientific areas, including psychology, and is thus an ideal starting point for investigating sustainable urbanism as a product of urban qualities.

METHODS

A mixed research methodology is established to investigate challenges of sustainable urbanism in the city. Since urban sustainability can only be achieved if social, economic and environmental aspects are equally developed, the framework was at first elaborated on a theoretical level to establish links to the general scientific discourse. GIS analyses, preliminary space syntax studies, as well as analysis and assessment of documents on urban development of the city are all integrated to form a methodology amenable to elucidate different parameters relevant to the scope of this research.

RESULTS AND CONCLUSIONS

Applying the preceding combined methodology delineates three types of issues that are exemplified under three bands: 1) The challenges of providing an efficient urban structure, 2) the challenges of establishing economic and cultural diversity, and 3) the challenges of creating a genuine urban identity. A concluding outlook emphasizes that while there is an urgent need to identify and decipher local issues, sustainable urbanism in the city must also rely on regional development patterns and the establishment of flexible and vigorous regional alliances that are capable of dealing with economic, environmental, and social challenges. A more cohesive political and economic cooperation of GCC (Gulf Cooperative Council) countries could help establish responsive environments for sustainable urbanism in major cities of the Gulf region including Doha.

A study of the modernization and sustainability of traditional Hanok in 20th century modernization period

Seung Kwang Shon
Dongshin University, South Korea

BACKGROUND AND PURPOSES

As traditional housing, Hanok has a cultural originality and strength but has become discontinued as modern housing because today Korean people have big furniture, big spaces and Hanok is not sufficient to compare to modern detached houses and apartments. If we want to get the traditional values from Hanok, the original form and space of the Hanok are priorities. And if we want convenience in housing, people prefer modern housing to Hanok. For this reason, a traditional Hanok as an ideal model for a modern Hanok has been the subject of endless debate.

The purpose of this research is to understand the relationship between traditional housing, Hanok, and modern housing by considering the evolving processes in design, and to discuss how modern elements in traditional Hanok can influence contemporary Hanok.

APPROACHES

The scope of this study deals with the changing process of modernization from traditional Hanok into a new concept in the early 21st century. Hanok in this article deals with traditional Hanok in urban areas, and the Hanok style in design competitions as a modern style. The Hanok samples in urban areas are located in Seoul, Jeonju and Cheongju.

The scope of research is to examine the Hanok housing owned by the upper-middle class and the changes incorporated through renovation, as well as the processes and relationships involved in a comparison of traditional Hanok and contemporary Hanok. Evaluating the traditional Hanok for the upper-middle class of the early 20th century can provide clues for how to approach future Hanok for contemporary people.

FINDINGS

Value of Hanok and Modern Style House

However, if we seek only the identity and design of Hanok, it may be an uncomfortable house that doesn't meet the owner's expectation of contemporary residential needs. In this respect, a modern Hanok as contemporary housing is embroiled in controversy. Even though housing for people can vary greatly. Today, user's expectations of traditional Hanok are for originality of the space, form and to represent the time t was built rather than to

suit the user's personal life. If Hanok is to be a sustainable house for modern life, it needs to be transformed to a new model, adjusted to modern life's residential needs.

Renovation and Transformation of Hanok

In the 1920s and 1930s the city areas in Korea had a lot of projects to build housing and construct Hanok, depending on the size of the economy which varied from region to region, notably the 'Hanok bomundong scale of 82.5 square meters, Gaehoedong, Yongdu - dong dong, or 115.5 square meters of the Hanok.' Since the '60s and the success of national economic development in South Korea, the economy has improved significantly, and accordingly the quality of life has improved, and in the 1970s and 1980s, renovation work on deteriorating Hanok and configuring changes for the spaces became active.

Relationship between Urban Hanok and Detached Houses(1960s-1970s)

Urban Hanok in a small plot had difficulties in constructing the wide eaves, which was the general appearance in traditional Hanok, requiring them to be narrower. Converting courtyards to indoor space was done for insufficient living areas. "It is interesting that the conversion of courtyards to indoor spaces had a very similar structure to the detached houses and apartments from the 1980s and 1990s." The extension of indoor areas in Hanok still had major challenges, but on the other hand, this new need for housing space was developed within the detached houses and apartments. The plan of Hanok layout had a spatial composition in which the living room was the center of the house, and Daechung in Hanok is similar to living rooms in modern housing.

CONCLUSIONS

While contact with Japanese culture introduced toilets, kitchen spaces, porches and corridors to the Hanok house, the style of the Hanok became a trade-off with a modern type. The Toemaru in Hanok can be compared to a Japanese corridor in a house, its space can act as an access zone which connects to rooms, and the wide plan of the Hanok meant that the layout could accommodate connecting rooms and corridors.

A Hanok built by wealthy people in the 1990s could be a good sample of a big house that shows twin or triple areas of corridors on a large scale. Through the modernization of case studies, this research contributed to find how by bringing together traditional Hanok and modern Hanok could provide clues towards finding a contemporary new Hanok, and this could be the starting point to pursue a contemporary Hanok in a rapidly growing economy and lifestyle.

KEYWORDS

Traditional Haok, New Hanok, Hanok Renovation , Changing Hanok, Sustainability of Hanok

Citizen strategies for times of crisis – Proposals for the city of Carballo, A Coruña (Spain)

Felipe Peña, Cristóbal Crespo, Mónica Mesejo, Sandra González, Juan I. Prieto, Emilio Rodríguez & Óscar Pedrós
University of A Coruña, Spain

In the context of the Summer Course estratexias cidadáns para os tempos da crise (Citizen strategies for times of crisis), held in Carballo in July 2012, a series of reflections on the state and future prospects of the tissues and structures - social, territorial, economic, built - of the middle-sized towns in Galicia were proposed.

Initially thrown through the field of architecture, it was found that the specific vision of this discipline was not enough to seek to address and understand problems of a great complexity. The urban reality, the visible items, the built reality, is seen as a snapshot, but in a deeper analysis, it emerges as the result of a series of hidden circumstances often glimpsed and prosecuted in haste and without spanning its kaleidoscopic nature. And it is not to consider that the architect´s interpretation can be limited at all, quite the contrary, but their visions may usually appear distorted by several factors, such as a great confidence in the pedagogical and regenerative possibilities of architecture. This perception, which is sometimes shared by those responsible for public or private management - and also at times has really worked out - would require the concurrence of a set of circumstances or ´´commandments´´: urban renewal, regenerative power and community happiness, unattainable in the current state of affairs. A second distortion is added to the previous: when thinking that the fundamental tool for the management of urban content and space is made through the planning and, further, that such planning is largely handled by technicians and planners who apply logical and well-intentioned objectives and criteria, we are making a big mistake. The current city emerges as a result of a series of tensions between the territory´s heritage assets within the strict meaning of the term, expectations of wealth, opportunities for action and certain personal wills, those of the economic agents and policy-makers.

The task was, therefore, to find to what extent, from the capacity for action of a group of young students who had recently completed their academic year, could encourage the citizens of Carballo, through bold and ingenious proposals, to resume actions on their habitat, by humanization and intervention on it with a creative aim. The architecture, construction, seemed starting points. Strategies, rather than ´´low-cost´´, should be ´´no-cost´´: making from the mill, recycling, returning to agriculture and handicrafts. Seeking the common ground between urbanism, architecture, urban art, sociology, economics and participation. For all of this, we had contributions of specialists from different disciplines, whose participation revealed invisible realities and opportunities of action.

With all this background, in addition to the issues discussed at symposia and round tables, the Workshop was addressed on a systematic approach to identify places for intervention, establishing routes of approach to the town of Carballo along its main roads. It was discovered and documented an overview of homogeneous conflicts, collisions and nonsense, which were taken as areas of opportunity and substrate of the proposals of the different groups. The answers were very heterogeneous, but almost all had a common trait: optimism. And through them, it was managed to turn Carballo, paradigm of improvisation, unaesthetic and urban disaster in a bright, beautiful, participatory, original and unique town. Transforming places to depression and fatalism in urban gems where to play, criticizing, have fun, get famous, find love ... Desolate and inconclusive streets into large avenues curded of trees and a radiant ´´dividing wall Baroque.´´ We proposed to unemployed shutterers - sublime carpenters of the invisible - to make a pedestrian rollercoaster - low speed and lower cost - with loopings for the boldest youths, brightening the skyline on a unique handwriting. The Carballo Underground was designed, the most modern and cheapest in the world, the only one without annoying works for neighboring.

SUSTAINABLE BEHAVIOUR

Chair: Bernardo Hernández

The role of the socio-environmental interdependence in the explanation of frugal behaviors

Gabriel Muiños, Ernesto Suárez, Víctor Corral-Verdugo & Bernardo Hernández
University of La Laguna, Spain & University of Sonora, Mexico

The current study explores the relationship between austere behaviors and interdependence, conceptualized as beliefs in the interconnection between the human being and nature and as a collectivist social identity. Austere behaviors represent one of the necessary factors in the Sustainable Behavior (Corral-Verdugo and Pinheiro, 2004) to the extent that it determines a socio-communitarian pattern regarding the consumption of resources which can be kept in the long-term, as opposed to a non-austere consumption pattern which brings along the future lack of resources for next generations.

In this research, austerity is conceptualized in its behavioral dimension by means of a measure approach which takes into account two basic elements: the maximization in the use of the resources and the consumption self-control. As a consequence, the austere behavior corresponds to a positive, voluntary life style, so that it differs from views close to usury and selfish meanness in a theoretical and empirical way.

In order to explain frugal behaviors, it is necessary to consider what the role of beliefs related to the interconnection between the human being and the environment is. The New Human Interdependence Paradigm (NHIP) is a worldview in which space and time components of ecosystems and human communities are continually interacting, so that some one's survival and wellbeing influence others' (Corral-Verdugo, Carrus, Bonnes, Moser and Sinha, 2008; Hernández, Suárez, Corral-Verdugo and Hess, 2012).

The underlying principle to these beliefs is sustainability, where the achievement of the current wellbeing cannot jeopardize the satisfaction of future needs. In this way, environmental interdependence beliefs move away from the human being - nature dichotomy to combine them in a single connected system. Previous views such as the New Environmental Paradigm (Dunlap and Van Liere, 1978) and the Ecocentrism - Anthropocentrism (Thompson and Barton, 1994), implied, on the one hand, the choice between the restriction of resources for the human being, or the irrelevance of environmental damage on the other hand, being theoretically dichotomized.

Parallel to the interdependent beliefs about the environment, it is possible to find those related to the interconnection between human beings themselves. This view establishes that the social environment and, especially, the collectivist dimension, exert an influence on the way that each individual characterizes him/herself. Collectivism is understood as the degree of inclusion of the people who surround an individual when creating his/her identity, highlighting common elements as opposed to those which make the individual unique.

This approach is carried out by means of the Relational-Interdependent Self-Construal concept (Cross, Bacon and Morris, 2000), which emphasizes the significance of close, informal, positive social relationships, instead of belonging to general social categories.

The research was carried out with questionnaires answered by a sample of 1133 inhabitants of the Canary Islands (Spain). In the questionnaire the NHIP was measured with a 16 items scale proposed by Hernández et al. (2012), the Relational-Interdependent Self-Construal with an adaptation to Spanish of Cross et al. (2000) scale and the austere behavior from a scale of 11 items divided in the two dimensions previously explained, the maximization in the use of resources and the consumption self-control, where the informed frequency of austere behaviors is measured.

In a Structural Equation Analysis, the results show excellent levels of model fit and predictive capacity. The mediating role which social interdependence exerts in the relationship between the environmental interdependence beliefs and the austere behavior is also explored. It has concluded that interdependence, both as environmental beliefs and as a collectivist identity, plays a relevant role in the explanation of frugal behaviors.

KEYWORDS
Interdependence beliefs, sustainable behavior, collectivism, frugality, austerity.

Sustainability communication and sensitisation

Petra Schweizer-Ries, Alex Metternich, Eva Wessela & Manuel Riemer
Saarland University, Germany

More than environmental communication, sustainability communication (SustCom) targets the sensitisation of people for sustainability challenges and the motivation for taking action for sustainability. SustCom concentrates, beyond the facts that are seen as cognitive input, on the emotional and intentional aspects of communication, targeting participative and transformative education for sustainable development. Systemic understanding of change processes and dialogic forms of building co-operations (the third, and truly participative stage in the participation pyramid) for sustainability actions are the basis of SustCom. These communication processes take into account the mind, heart and hands of people in engaging them to change the internal and external structures of systems to become more sustainable.

A first workshop series was designed to work with SustCom on climate chance and investigate it, scientifically. The Youth Leading Environmental Change project (YLEC), developed by an international team of researchers, aims at allowing youth to participate in a global dialogue on climate change and environmental justice, with the goal of inspiring action (1). The actions to be taken are political, whereas other actions could be to change the personal way of thinking and living. In a series of several different settings, we are testing how SustCom can work to create sustainability actions and how these differ, globally. The first results will be presented in our joint paper.

(1) Project head: Riemer, M. Funding through the Social Sciences and Humanities Research Council (SSHRC) of Canada.

Environmental orientation in a Brazilian city

Ariane Kuhnen, Luana dos Santos Raymundo, Maira Longhinotti Felippe & Patricia María Schubert Peres
Federal University of Santa Catarina, Brazil

The interest in the psychological aspects of the person-environment relationship in various fields of knowledge has grown, as well as the interest in identifying the reasons for the rejection of pro-environmental behaviors and proposals for the sustainability in different contexts. Brazil is a country of continental proportions that, like most developing countries, is undergoing an environmental crisis. Much of the Brazilian society, especially the youth, verbalizes awareness on the importance of environmental conservation. In recent years, the Brazilian government has invested in policies and techniques of environmental conservation and education. Since 1981, the Brazilian governmental educational program integrates environmental education into the curricula at all levels of education, including non-formal education, with the goal of empowering the community to developing the a pro-environmental competence. The pro-environmental competence involves the ability to preserve - that is, knowing the ways of preservation - and the requirements to do it. As requirements, there are personal, social and situational demands that drive the individual to preserve the environment. The beliefs and values about the preservation, as well as the targets and the rules, are examples of personal and social demands. The situational demands, in turn, include occurrences that interrupt or modify the habitual use of environmental resources. As personal demand for pro-environmental competence acquisition is ecological value, This value is understood as a reference system characterized as an individual orientation or preferential attitude, positive and desired, which aims for balance and sustainability of the different ecosystems on the planet. In this sense, values are a construct of interest to Environmental Psychology because they mediate the influence of other relevant variables such as beliefs and attitudes in order to comprehend the pro-environmental behavior. This investment is reflected in the beliefs and values about the environment, identified mainly in the younger population. This study examined the environmental orientation of young people between 10 and 19 years old in a city in Southern Brazil, describing their position regarding ecological values, their behavior towards the environment and the perception they have of environmental problems. With this purpose, 443 students answered a self-administered questionnaire constructed for this study, applied in classrooms. Perceived environmental problems most frequently cited were related to pollution and garbage. Related garbage actions were the most practiced.

The results also indicated a positive orientation towards the environmental preservation in all dimensions investigated: eco-affinity, eco-cognition and ecological values, suggesting a willingness to engage in pro-environmental behaviors. However, results regarding environmental perception and pro-environmental behaviors demonstrated limitations concerning the perception of the city demands. We conclude the participants are potential environmental advocates, even though they know few strategies to preserve the environment, which represents a challenge towards transforming their perception and values into coherent and effective environmental actions.

KEYWORDS
Environmental psychology; environmental perception; youth; pro-environmental competence; pro-environmental behavior.

IAPS sustainability

Chris Watson
C. Watson Consultancy Limited, New Zealand

Discussing people/environment behaviour with IAPS friends and colleagues in a relaxed atmosphere whist the employer pays for pleasant hotels and meals in an interesting place is among the most inspiring and productive aspects of work. Many of our conference papers are about minimising CO2 emissions, so our own emissions from travelling from home to Glasgow for the IAPS conference are worth investigating. Travel limits the number of people who can attend conferences so investigating attendance without travel opens the opportunity to attract more participants and more IAPS members.

As the person who flew the longest distance (18,400km) to the IAPS2012 conference in Glasgow, I was acutely conscious of irony of emitting 8 tonnes of carbon dioxide equivalent to discuss minimising carbon dioxide emissions. This paper documents my assessment of our travel emissions and offers some suggestions about maximising IAPS objectives whilst minimising our pollution.

According to my assumptions and calculations, 376 delegates flew an average 7,147 km to and from Glasgow, each releasing 1,656 Kg of CO_2-e. This is similar to all IAPS conference delegates chartering an Airbus A380 from Istanbul to Glasgow and back, dumping 622 tonnes of CO_2-e into the upper troposphere. Our pollution includes nitrogen oxides, ozone and con trails in the air plus the water pollution affecting the ecosystems downstream from airports and noise affecting people around airports. Travelling to Glasgow consumed far more resources than most people on earth can get, thereby depriving them and future generations from their fair share of resources. Our consumption of jet fuel added to the total demand for oil obtained by wars and conflicts.

IAPS members understand how travel greenhouse emissions affect our climate and have the capability to organise conferences and personal travel solutions while minimising emissions. The second part of this paper considers ways we might have interesting and enjoyable conferences with less damage to the environment. Possibilities include; accounting for conference travel CO_2, linked mini conferences, video conferencing, benefit sharing, travel-efficient venues and travel planning.

Environmental concern and sustainable consumption among Malaysian urban consumers

Ahmad Hariza Hashim
University Putra Malaysia, Malaysia

Sustainable consumption is widely accepted and many are willing to embrace it, however many are findings to translate it into action. Therefore, what is sustainable consumption? Sustainable consumption is defined as the use of goods and services that respond to basic needs and brings a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations (Ofstad, 1994). Sustainable consumption is associated with the consumer's rational value that always gives priority to the welfare of the environment in all their decision making process (Ottman, 1993). The current global trend shows a segment

of the society shows an increasingly concerned about environmental sustainability. This concern and sense of responsibility towards the environment is shown by the society because they believed that, the present and future generation should enjoy living in a good condition and a healthy environment (Hannigan, 2006). According to Dodson (2003), consumer who thinks or concerned about the environment tend to sacrifice personal interests to show their responsibility towards the environment. However, the number of those who believe and act like this is still small, the majority might have a better knowledge and positive attitude towards the environment, but did not translate the knowledge and concerned into practices, in this case sustainable consumption behaviour (Thogerson, 2004).

Therefore, a study was undertaken to identify whether Malaysian consumers concern for what happened to their environment? Are they really concerned about what will happen in the future because of their action and are they willing to participate in sustainable consumption activities? This is an exploratory study adopting the descriptive research design where respondents were asked to fill in a questionnaire. For consumers concern towards the environment , Dunlap, van Liere, Merting and Jones, (2000) instrument known as New Ecological Paradigm (NEP) Scale were adopted. To measure on the concerned for what happened in the future because of their activity, 12 statements related to the time orientation factors in the context of the environmental considerations. The measurement of judgments is measured using Consumer's Consideration on the Present and Future Scale (CFC Scale - Consideration of Future Consequences Scale) pioneered by Strathman, Gleicher, Boninger, and Edwards (1994). CFC reflects "the extent to which people consider the potential distant outcomes of their current behaviours and the extent to which they are influenced by these potential outcomes" (Strathman et. al, 1994). Individuals low in CFC attach a high degree of importance to the immediate consequences of behaviour, while individuals high in CFC attach a high degree of importance to the future consequences of behaviour (Joireman, et. al, 2008). The assumption is that , relative to those who score low in CFC, individual scores high in CFC will show high scores for NEP and are willing to put extra effort for sustainable consumption behaviour.

This study was conducted in the shopping malls selected at random within the area of Klang Valley, and Johor Bahru city. Later, 300 respondents from each area was selected conveniently through mall intercept method and to ensure that all samples in the population have an equal chance to be selected, every five customer going out from the Mall was selected as respondents.

There is a positive significant relationship between environmental concern and consequences for future outcomes. The higher the environmental concern the more concern are with the consequences of their action to the future outcomes. Individual with environmental concerns or ecocentric are more likely to be self control and are more willing to buy environmentally friendly products and are willing to travel to get the product as compare to those who are more antropocentric and very concern on immediate rewards. The study concludes that Malaysian consumer shows a medium level of concerned toward the environment and also a medium level for concerned for future outcomes in their behaviour.

GOVERNANCE AND PARTICIPATION FOR SUSTAINABILITY

Chair: Ferdinando Fornara

Attitude an perception of Kuala Lumpur population on Klang River Rehabilitation Project

Asnarulkhadi Abu Samah & Ahmad Hariza Hashim
University Putra Malaysia, Malaysia

A survey carried out on the Klang River basin in Kuala Lumpur, Malaysia (one of the two main river that flow across Kuala Lumpur, the capital city of Malaysia), shown that up to 50 million liters per day of contaminated drainage water enter the river from surface water drains during dry weather conditions. The pollution is largely derived from septic tank effluents, food outlets, small workshops and illegal domestic water discharges, which contaminated the water in the drainage channels and monsoon drains, and directly into the river. In addition, at the start of each storm, the river receives a further intense load of garbage and polluting organic matter when the surface water flowing from urban areas fills the drainage channels and monsoon drains, and carries the 'initial flush' of urban surface pollution into the river. Therefore, to clean the river by mechanical alone will be very expensive and it might not be able to rehabilitate the river in the long run. An integrated approach, combining both mechanical and human approach that is changes in human behavior need to be adopted in ensuring the success and continuity of having a clean river in Kuala Lumpur. Henry et. al (2002) and Jungwirth et. Al. (2002) point out that a balance between ecological considerations and economic and social considerations is necessary for the legitimacy of the rehabilitation project. The rehabilitation projects have to include all aspects of sustainability which includes environmental aspects (protection of nature), social aspects (flood protection, recreation, etc.) and economic aspects (economic proportion). This study therefore, focuses on the perception of respondents on the condition of the Klang River and the attitude of Kuala Lumpur population on water pollution and Klang River rehabilitation programme.

The study involves general public lives in Kuala Lumpur. Several areas were identified as the location to select respondents for this study. Before identifying the area, site visits were done by researchers and, four highly dense areas were identified, namely Dato' Keramat, Jalan Bonus, Dang Wangi and Masjid Jamek-Sentral Market. . For general public perception, an intercept method was adopted, whereby highly dense areas were chosen and trained enumerators were to intercept respondents at places such as LRT stations, market or food stall to be interviewed using questionnaire. Only those who are above 18 years old and willing to participate were selected as respondents, as they are matured enough to make decisions and know the impact of the environment in their daily lives. The instruments consist of respondents' background, knowledge on water pollution especially on the sources of pollution, perspective on the management and control of the pollution, their attitude on water pollution, the attitude or response towards the project and their perception the benefits or rewards from the project. Six hundred and sixty (666) respondents involve in this study.

Many of the respondents feel that river pollution in Kuala Lumpur is a serious problem and it is high time for the authority to take action and rehabilitate the river. One of the popular measures in controlling pollution is imposing fine to those who litter the environment. The local authority should also have a proper way of handling and disposing the urban wastes. They also stated that the main reason for the river pollution in Kuala Lumpur is due to human behavior could affect their health and social life and they want action to be taken as soon as possible. They also believed that they have to be responsible in maintaining the quality of the river and would report to the authority if there are any suspicious activities with regards to environment pollution. They also realize that polluting the environment and the surface drains would at the end pollute the river. A high percentage stated that they don't know about any river rehabilitation project and they said that they wanted the information on the project to be shared with the public. They believed that if the information is disseminated to the general population, more support will be given to the project and this could also help in creating awareness and inculcating good behavior towards the river.

Policy in the making: The governance of darkness and urban light pollution

Katharina Krause
Leibniz-Institut für Regionalentwicklung und Strukturplanung, Germany
Josiane Meier
Technische Universität Berlin, Germany

The fast-paced increase in artificial outdoor lighting over the past decades has resulted in a growing awareness of the negative impacts of this loss of the night: Brightly lit nights have gained an ambivalent edge. Astronomers were among the first to observe and to publicly address this so-called light pollution, as it became increasingly difficult to observe the night sky from observatories in urbanised areas. Meanwhile, people living in cities can generally no longer see but a few stars and professional observatories have migrated to some of the world's most remote regions, and the topic has become one of broader scientific inquiry. With increasing evidence for the problematic effects of artificial light on ecosystems as well as indications for possible harmful effects on human health coming in addition to the loss of the cultural benefits of an unpolluted night sky, discussions on effective policy responses for the reduction of light pollution are currently emerging.

Two different – and complimentary – approaches can be identified in these debates. On the one hand, efforts are being made to develop instruments that will regulate outdoor lighting in urbanised – and thus generally light polluted – areas. These regulations aim to address a variety of lighting sources, such as public, commercial or architectural light, while nonetheless embracing the societal, spatial or economic functions of these lighting practices. These endeavours are usually connected with questions of energy efficiency or the aesthetic quality of urban cityscapes.

On the other hand, policy responses focus on the designation of "dark sky areas", thereby aiming to protect the night sky in regions still largely unaffected by light pollution. In recent years, organisations such as the Royal Astronomical Society of Canada and the International Dark-Sky Association have certified an increasing number of Dark Sky Preserves, Dark Sky Parks and Dark Sky Reserves. These are frequently nature reserves which receive an additional layer of protection that aims to preserve not only the visibility of starry skies but also naturally dark nights for flora and fauna.

In our paper, we will discuss the difficulties and potentials of both approaches. Drawing on case study research on the governance of darkness in "dark sky areas" in Germany and North America, and on the governance of lighting in urban and suburban areas in Berlin and Brandenburg, the contribution will analyse the existing institutional arrangements, the stakeholders involved and the broad range of interests at play in related policy-making processes. It will seek to identify advocacy coalitions and conflictual aspects in these two approaches to mitigating light pollution. Finally, we will formulate recommendations for the development of further policy.

The paper draws on the final results of social-science projects of the interdisciplinary research project „Loss of the Night", which encompasses various disciplines from the natural and the social sciences to study the impacts of artificial outdoor lighting on ecosystems, human health and society (http://www.verlustdernacht.de/about-us.html).

Public participation in sustainability policies: The role of narrative and reflexive representations in the reception of new biodiversity conservation laws

Carla Mouro, Paula Castro & Ana Sofia Jacinto
ISCTE-IUL & CIS-IUL, Portugal

The mitigation of climate change consequences involves several and multilayered efforts, which include biodiversity conservation measures that directly affect rural communities living in or nearby protected areas. In Europe, new laws proposing protected areas, such as those regulating the Natura 2000 network, are now central in determining the relations between rural communities and policy institutions (Castro & Mouro, 2011). These laws constitute multilevel governance efforts for sustainability, but only recently have the reception of these nature conservation policies started receiving closer attention from psychology (Buijs et al., 2012).

Recent studies have shown that, besides supporting or contesting the adoption of concrete practices, local communities also debate processual aspects of their involvement in decision-making and planning of nature conservation issues. As public participation initiatives are also forms of engagement in environmental matters (Castro & Batel, 2008; Stern, 2000) these debates at the local level provide arguments for communities to contest specific aspects of legal innovation for sustainability (Mouro & Castro, 2012). To fully understand the processes of resistance and contestation to these sustainability laws, we need to consider that public participation allows for different representations, which circulate within and outside the community, to meet (Campbell & Jovchelovitch, 2000), and that specific collective actions can become part of the common history and identity of each community (Drury & Reicher, 2005). This means that engagement and participation in environmental matters have a relational dimension, of encounters between individuals, groups and institutions, which is then integrated in specific representations and used by the communities in shared discourses/narratives (Zimmerman, 2000). Our main objective was to illustrate how local communities mobilize two different formats of representation and discourse – episodic narrative and paradigmatic reflection (Bavel & Gaskell, 2004) - for giving sense to public participation at the local level. For this, nine focus groups were conducted with residents in protected areas were the conservation of three species of steppe birds has led to the implementation of conservation projects by NGOs. Each group was invited to first describe

episodes of public participation, in general and regarding environmental matters; afterwards, the participants were asked to reflect upon statements on difficulties linked to public participation and social change (Jost & Hunyady, 2003). We further explored how relational dimensions of participation (Christens, 2011), at the interpersonal and intergroup levels, contribute as facilitators and barriers to individual and collective action.

The discursive formats were compared for three rural communities with distinct histories of involvement with biodiversity conservation projects, and for local groups with different levels of proximity to the laws and their implementation. The textual material from the focus groups was subjected to content analysis. Public participation actions more often narrated describe formal contact between groups (e.g., between associations and NGOs) and individual forms of protest (e.g., not complying with specific farming procedures). In contrast, the reflexive mode elicited actions including not only formal, but also informal contact between groups, and formal individual and collective protest. Furthermore, participants closer to the laws describe more informal actions, while those who do not directly implement the laws prefer formal and intragroup formats of participation. Regarding the relational dimension of public participation, we found that the region with a longer history of participating in biodiversity conservation projects identified fewer relational obstacles and more facilitators to public participation than the other two regions. Also, the former region identifies as obstacles mainly the lack of collaborative competencies, while in the other regions difficulties of participating were mostly associated to lack of empowerment provided by external entities. Also, participants closer to the laws emphasize the need of external empowerment, while the others underline the importance of collaborative competencies.

A main conclusion for this study is that the relational processes that occur in local communities become part of their narratives and determine concrete expectations towards the integration of the local level in decision-making processes. The development of new competencies becomes more relevant for communities with a longer involvement with conservation projects, while those less exposed to these projects defend less interactional formats of participation. This, in turn, becomes a relevant part of the process of reception of new laws as rural communities narrate episodes and reflexively think of their involvement in policy-development for sustainability.

Public participation in water management. The implementation of the water framework directive in the basin river basin management plans Galicia

Isabel Lema Blanco & Ricardo García Mira
University of A Coruña, Spain

INTRODUCTION

The Water Framework Directive (Directive 2000/60/CE), which establishes a common framework for EU water policy, sets up public participation as one of the basic principles of management of water issues. The Water Framework Directive emphasizes the importance of informing the general public well in order to ensure or rather facilitate their participation in the planning process. According to this, the WFD prescribes three main forms of public participation: (1) active Involvement in all aspects of the implementation of the Directive, especially –but not limited to – the planning process; (2) consultation in three steps of the planning process; (3) access to background information.

In Galicia (a region in the northwest of Spain) there are two different River Basin districts, Galicia-Coast, which includes the inland basins in Galicia and the Minho-Sil River Basin, which integrates the international basins of the rivers Minho and Limia. This article analyzes the active involvement experiences developed in both Galicia-Coast and Miño-Sil River Basin.

THEORETICAL BACKGROUND

Public participation can generally be defined as an open process which allows citizens to influence the outcome of plans and working processes with the purpose of improving decision-making, by ensuring that decisions are soundly based on shared knowledge, experiences and scientific evidence, that decisions are influenced by the views and experience of those affected by them, that innovative and creative options are considered and that new arrangements are workable, and acceptable to the public. Environmental psychology can play a key role in the area of public participation and, more specifically, in the introduction of participative strategies (García Mira et al., 2007).

The implementation process of the Water Framework Directive (WFD) into Spanish water planning has opened the water decision-making arena to other interested parties beyond users. Also, this processes seem to be more transparent and much information is available to the public on Internet, and sometimes, it is growing the role of social networks of individuals and organizations towards common goals in water management (Hernández-Mora, & Ballester, 2010). However, other processes are holding in short periods of time and in the later phases of the process, which not allow a real discussion and common diagnosis about the water issues management or that the public is not actually concerned nor involved in decision making (Espugla & Subirats, 2008).

METHODS

The methodology used consisted of in-depth analysis of the documentation provided by the two water planning offices that had been promoting participatory processes since 2007 to 2012, primarily through its website, as well as the published documentation of the Water Management Plans.

RESULTS

Following the recommendations of the WFD CIS Guidance Document No.8 Public participation in relation to the Water Framework Directive (European Communities, 2003), this paper analyzes the objectives, methods and activities developed in information, consultation and public participation process on Galicia-Coast and Minho-Sil River Basin Management Plans.

It takes in account the information available in both water planning offices and websites and the publicity of consultant process. Secondly, it is reviewed the framework in which the participating stakeholders could express their opinions and positions and how those were considered by the government. Finally, this paper examine the mechanisms for integrating public participation in the review and monitoring processes.

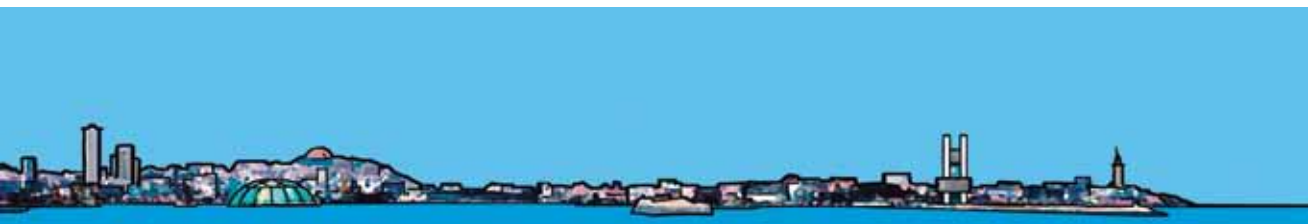
CONCLUSIONS

In Galicia, the WFD implementation process has contributed significantly to the improvement the quality and quantity of information available about water management plans. Secondly, there were several differences between the Galicia-Coast and Minho-Sil River Basin participatory processes. Galicia-Coast River Basin (2012) had driven dissemination workshops aimed at specific sectors (engineering, management companies, public administration). Consequently, the basin organization worked with specific agents whose ac-

tivities or interests were affected by the plan but not with all those individuals and organizations whose participation is truly necessary to achieve the objectives proposed in WFD.

On the other hand, Minho-Sil River Basin (2011) tried to open up participatory process to specific agents whose activities or interests were affected by the plan, but also considered other sectors of society, such as individual citizens, NGOs, local authorities and experts were invited and participated in the meetings. There were developed open conferences and public debates which provided opportunities for improving the general knowledge about water resources management and have open discussion face-to-face between citizens, stakeholders and policy makers.

KEYWORDS
River basin management plans, public participation, water management, Water Framework Directive, participatory process.



SOCIAL HOUSING AND PUBLIC POLICIES

Chair: Aleya Abdel-Hadi

Social housing and public policies: Similarities and differences between the Brazilian and the Spanish case

Katrin Rappl & Leandro Medrano
FEC University of Campinas – UNICAMP, Brazil

Currently in Brazil, it is possible to identify initiatives that are supported by large public investments, which are administered primarily by the programs: Plano de Aceleração do Crescimento (Acceleration Growth Program - PAC) and Programa Minha Casa Minha Vida (My Home, My Life – PMCMV). These programs are responsible for managing billionaires' investments in the construction area and consequently enabling major changes in urban space.

Housing construction in order to reduce the housing deficit in the country is one of the priorities of these programs, which is estimated at 5.5 million households (Ministério das Cidades, 2010). The prospect of accelerated urban growth in Brazil intensifies the need of discussion on this topic and also the application of architectural, economic and urban parameters to ensure quality project in the desired amount.

The objective of this paper is to present the current architectural and urban PMCMV guidelines and the analysis of similarities and differences with housing policies practiced in Spain, a country that has built more than 5 million homes between 2000 and 2008, in particular those linked to Consejería de Medio Ambiente, Vivienda y Ordenación del Territorio, such as: Plan Rehabilita and Plan de Vivienda and that has shaped the formation of territory. Given the diversity of successful experiences in the field of Social Housing there are many examples of great relevance produced in Spain that can indicate alternatives to the typological and urban models used in Brazil.

In 2008, the international economic crisis was crucial for the creation of MCMV program announced in 2009. The government invested in the construction sector aiming to reduce the housing deficit in the country while stimulating the economy and creating jobs. Through the subsidy of 16 billion dollars, the program tends to prioritize families with incomes from zero to three minimum wages (up to 670 dollars), which, until now, have always been out of benefited sectors by housing policies (Arantes, Fix, 2009; Maricato, 2012).

The second phase of the MCMV 2 program expanded the initial goal for 2 million homes until 2014 with an investment of 34.4 billion dollars, in which 60% are for units with incomes from zero to three minimum wages (PMCMV, Ministério das Cidades).

Although there are still doubts about the effectiveness of the program MCMV in relation to attending the low-incoming social class and its articulation with urban policies, until now there has not been such investment in a single housing policy in the country with focus for the low-income population (Bonduki, 2008). Even though most of the constructed units

are so far not for this track, it is still superior to what occurred at National Housing Bank era. The study focused on the data collection and analysis of projects related to PMCMV by the federal Government in the period of 2009 to 2011 in the state of São Paulo in Brazil. Meanwhile, an investigation was conducted on projects of social interest in the city of Madrid. The data collection and projects review supported the analysis with the national projects, in order to identify good practices in terms of contemporary architecture.

A critical analysis of the results pointed out similarities and differences between the Brazilian and Spanish cases and also indicated alternatives to urban typological models used in Brazil:

1 – The use of the ground floor as commercial and service units;
2 – The creation of open spaces linked with the city;

From this research, it is noticed in most of the projects a lack of urban quality, which fragments the city and generates additional costs of infrastructure, transportation and public services to the municipalities.

There is a need to establish theoretical and methodological guidelines, which allows a better match between the current Brazilian public policies and housing projects, as well as the need of linking the projects with the city, through its articulation with urban policies and other instruments not yet applied.

Finally, the study highlights the urgent need, in the national scene, of new formulations in the relation between architecture and city, fundamental for the desired progress in the housing field and the quality of our cities.

REFERENCES

ARANTES, Pedro F., Fix, Mariana. Como o governo Lula pretende resolver o problema da habitação. Alguns comentários sobre o pacote habitacional Minha Casa, Minha Vida, unpublished manuscript, 2009.

BONDUKI, Nabil Georges. Política habitacional e inclusão social no Brasil: revisão histórica e novas perspectivas no governo Lula. ARQ.URB - Revista eletrônica de Arquitetura e urbanismo, 1, 70-104, São Paulo, 2008.

MARICATO, Ermínia. O mercado imobiliário e a mão do Estado. Agência Dinheiro Vivo, 2012.

MINISTÉRIO DAS CIDADES. Política Nacional de Habitação. Brasília: Governo Federal, 2010.

KEYWORDS
Public Policy, Social Housing, Urban Planning, Brazil, Spain.

Public housing policy in Brazilian informal settlemments: Consolidation of a fragmented model and partial service

Eliane Roberto & Leandro Medrano
FEC University of Campinas – UNICAMP, Brazil

The public housing policy in Brazil was not able to put into practice the basics of a political economy of social democracy. Without the guarantee of the right to housing, the national

intervention model characterized by a logic of profit that restricts State action to partial service that favors small subsets of the people drove most of them to alternatives marked by precariousness. (DENALDI, 2003)

Maricato (1995) notes that there is a break between the real city and the legal city real. This overcomes the split society, ignorant of the size of the exclusion problem, and the role of the state, promoter of such a breach, since this does not interfere in the development of illegal occupation until it comes to acquire property market value. That is, market law is more effective than legal standard. These observations denote the evolution of urban marginality of undeveloped countries, beset by modern development in underdevelopment.

With a housing deficit of 7.9 million (Ministry of Cities - Brazil (2009b)), the legal residential market and the state housing construction programs do not meet the Brazilian population. For lack of alternatives to the underprivileged population that earns household incomes of up to three minimum wages, the informal city assumes ever-increasing proportions (PMSP, 2008).

Today in Brazil, the slum population is estimated at around 11 million people occupying more than three million homes. With the spread of slums and consolidation of these as a means of access to housing for the poorest, these, in turn, changed in profile, as wooden shacks began to be rebuilt in masonry, there was an increase in services, infrastructure, and informal housing market. However, the conditions of precariousness suffered no major changes. (DENALDI, 2009)

In turn, State intervention through the National System for Social Housing (SNHIS) established the Local Plans for Social Housing (LPHIS), dealing with slum upgrading projects. These projects seek to integrate urban and territorial inclusion, establishment of minimum standards of habitability, enabling the operation of infrastructure networks and eliminating hazardous conditions. (MCidades, 2009)

This article aims to analyze public housing policies implemented in Brazilian slums in the last decade. Its methodology is based on analysis of census data and public policies, which should be contrasted to the case under consideration. In the results, we intend to expose new guidelines for actions related to slum upgrading in Brazil.

REFERENCES

Denaldi. R., 2003. Políticas de Urbanização de favelas: evolução e impasses. Tese de doutorado. Universidade de São Paulo.

Denaldi. R., 2009. Caracterização das favelas no âmbito dos Planos Locais de Habitação de Interesse Social (PLHIS). In: O que é favela, afinal? Rio de Janeiro. Observatório de Favelas.

Instituto Brasileiro de Geografia e Estatística (IBGE). Censo 2010: Aglomerados Subnormais. At low: www.ibge.gov.br – view December/2012.

Maricato. E., 1995. Metrópole na Periferia do Capitalismo: ilegalidade, desigualdade e violência. São Paulo, Hucitec.

Ministério das Cidades e Secretaria Nacional de Habitação 2009. Plano Nacional de Habitação. Brasília: Ministério das Cidades e Secretaria Nacional de Habitação.

Prefeitura do Município de São Paulo, 2008. Habitação de Interesse Social em São Paulo: desafios e novos instrumentos de gestão. Prefeitura do Município de São Paulo, Cities Aliance. São Paulo, Janeiro Projetos Urbanos.

KEYWORDS
Social exclusion, illegal occupation, slums, public policy, housing, slum upgrading.

Taking advantage of the economic crisis: Re-approaching regional planning for sustainability

Abdul Hadi Harman Shah, Abdul Samad Hadi, Shaharudin Idrus & Ahmad Fariz Mohamed
University Kebangsaan, Malaysia

Often time the institution of planning is set within a long standing structure that is unable to address current problems and newer perspectives on development. While adjustments and ad hoc additions might work in the short term, a structural change is often needed for transformation. However, the status quo in planning, as in many other institutions, need a major reason for change and the paper argues that the economic crisis during the 1997-98 period in Malaysia, has provided the opportunity to implement the changes needed for planning to adopt the sustainability agenda more comprehensively. Malaysia is a country that has applied regional planning in its development agenda since its independence in 1957 through its federal land development schemes. The idea and approach of regional planning have evolved over time but for the most part have focused on the economic growth aspect of development. During the global financial crisis in 1997 the country realized the impacts of failed development projects that go beyond the economic. Environmental degradation and social problems manifested all over the country, forcing the planning institution to have a hard look on its previous approach towards development, questioning what went wrong. While the crisis itself was multifaceted, it gave regional planning in Malaysia the impetus, and support to revamp the development agenda towards sustainability.

This paper presents Malaysia's regional planning efforts in taking advantage of a crisis to make itself more relevant and its efforts more sustainable. This includes the latest attempt at regional development corridors. Since the earth meeting in Rio-1992 Malaysia has also adopted and adapted sustainable development as its development framework. Of late, as posited in the Tenth Malaysia Development Plan (2010) the concept of 'development corridor' was operationalized to spread economic growth, social development and environmental protection initiatives to corridors away from the earlier growth agglomerations in Malaysia, the Klang valley, the Johor Baharu-Pasir Gudang and the Penang- Seberang Prai-Kulim area, to the rest of the country. The overarching idea is to bring people in all five regions into the mainstream development, thus achieving developing inclusivity, towards spatial move to sustainability in the country by 2050. Designing the five development regions for this purpose will expected to eliminate the existing spatial gaps in socio-economic development and environmental problems. Two broad achievement patterns have emerged so far. First, all five regions have shown progress in attracting investments. The fastest achiever is the metropolitan development of Iskandar region close to Johor Baharu and Singapore. The whole of Sabah and the energy development corridor in Sarawak have also attracted good investments from within and foreign investments.

The East Coast Corridor-stretching from Kota Baru in Kelantan to Mersing in Johore have also attracted investments while the Northern corridor, from Perlis to Northern Perak, has also made progress. Apart from discussing the experience of taking the new approach; both pitfalls and potentials, the paper also presents possible future scenarios for regional planning in Malaysia. Information and data from progress reports by the respective agencies, and data from several completed micro studies in various parts of the corridors were analyzed though content analysis. The study also employed interviews with key informants who are instrumental in charting the regional planning agenda in Malaysia.

The paper argues that change from an economic region approach to that of a sustainable region takes after the Giddensian process of structuration while what becomes of the region is due to the path dependency of the particular region. Understanding the local structuration process of change in Malaysia's regional planning as well as the constraints and opportunities given by the development path taken in the past by the specific region allows for more reasonable planning expectations, giving rise to the possibility of evolving objectives rather than static goals.

Proximity. Noteson Cairo agrarian urbanism

Antonia M. A. Chiesa
Politecnico di Milano, Italy

The Laboratorio Misura&Scala – Politecnico di Milano - has been recently challenged by the thorny issues of spontaneous processes of urbanization in the productive landscapes of the western outskirts of Cairo. "Informal" urban activities are increasingly expanding on agricultural terrain up to a concerning pace (Sims, 2003) despite of the fact that, in consideration of economic global dynamics, fertile land for food production is becoming a rare commodity especially in arid-climates (Belanger, Roth, 2007).

Firstly, the appropriate context for the discussion of the problem clearly belongs to a broader scale which implies the overcoming of the traditional urban/rural opposition: as on-field observations have shown, compact built areas, productive landscape, old rural towns, and even military colonization of the desert are strictly interconnected in an exchange network system. Specifically, suburban productive landscapes have developed in highly hybridized territories, which share with urban landscape local and global logics of food distribution, water management, waste disposal, energy supply, and infrastructural development.

Trajectories of people, goods and information shape the land dynamically altering physical distances and temporal processes in various ways: natural and cultural environments merge, as recent theories in the field of urban geography, such as those of landscape urbanism and ecological urbanism (Waldheim, 2006; Mostafavi, 2010), have clearly pointed out.

The issue of land scarcity, as well as the need for a sustainable exploitation of natural resources, may be therefore addressed to such re-articulated field of action, where proximity is both a given condition and an opportunity for a sustainable connectivity improving land porosity and permeability (Viganò, 2008).

On the one hand landscape urbanism seems therefore an appropriate theoretical approach for the investigation of Cairo outskirts, as it states a holistic consideration of pro-

cesses of urbanization in the open space (Waldheim, 2006). On the other hand the agency of design as carried out by the Laboratorio Misura&Scala, by understanding the logics, aims and potentials of spontaneous developments, has represented a contribution to the reconstruction of unattended connections to the land. The idea of rebuilding proximity has been therefore proposed as an intensification of land porosity and an improvement of ongoing process of hybridization: ecological actions of intermediation and remediation were intended as tools of an active caring and cultivating action towards the neighbor territory.

Such ecological approach has implied a description and re-evaluation of the environmental elements defining the local context as, among others, water and soil, whose interconnected management has produced remarkable results in the Arab tradition. As in the case of the Persian "qanats" (Wuttmann et al., 2000), examples of water cultures derive from century-long indigenous technologies improving environmental resilience by landscape-design operations and enriching urban reality (Shannon, 2008).

Moreover, studies on permaculture have provided design proposals with low-tech strategies for the improvement of diversity, stability and resilience of ecological ecosystems (Mollison, 2004; Rosemann et al., 2007) highlighting opportunities for both intensifying and preserving the richness and variety of productive landscapes in Cairo arid climate within the long-term perspective of water and soil scarcity. Such environmental design, suitable for a multi-scale implementation, was intended to heal discrepancies in land use, regain buffer and abandoned zones produced by fast urbanization and reconnect productive landscapes to settlements by flexible, short-time solutions which seem to suit better "informal" processes, traditionally reluctant to any top-down imposition (Tunas, 2007).

Finally, proximity has been developed as a matter of connections, to heal the drastic collisions that hitting-the-ground networks of infrastructure and information produce apparently interfering with productive landscapes. Design solutions were therefore especially meant to revitalize soft and slow speed connections, which may strengthen the public value of a land that may be seen, experienced, shared, wandered about.

The research, by highlighting the sanitary role of landscape design in the production of processes of urbanization, has evaded the strict constraints of the garden, of the agricultural field as well as those of the compact city, and interpreted sustainability as a theoretical and practical matter of the broader urban region.

A theoretical background for understanding the transformation of low-rise appartment housing units' plans in Istambul: An interpretation model on the changing semantics of housing space organizations

Mehmet Emin Salgamcioglu & Alper Unlu
Istanbul Technical University, Turkey

The aim of this study is to discuss the key theoretical factors affecting the development and meaning of low-rise, apartment type urban housing units' space organizations in relation with the policy of housing determined by the authorities. Housing units can emerge and also reflect the structure of space organizations as well as social organizations of various

scales. This structure is mainly related with when and where they are built, as well as in which social and physical structure they exist. The relations with the policy of housing affected by the authorities are also important.

In this study, the issue is the theory and the factors that may affect the change in housing rather than the physical structure of houses. The theory, which is in close relationship with the organization of spaces in urban housing units, apartments and various turning points that can affect the development of apartment houses' plan structure through the history will be discussed.

In this sense, the study involves some of the key factors that the social and structural transformation or revolution of Istanbul's apartments has experienced and the parameters that has affected this process. The laws and regulations, which have changed several times since 1930s in Istanbul, that may reflect the transforming morphology of apartment-housing units' spaces has the potential to discuss the development in housing units' plans in this study. The apartment type housing units in urban areas are always changing with the affect of various variables. This research aims to provide an understanding of the phenomenon of this change and suggest a model, a starting point for the analyses of the semantic and syntactic transformation in housing units.

First, the theory that should be thought with the transforming meaning of housing through time in various turning points will be examined in several groups. Second, the turning points, dynamics that should be investigated in order to understand the traces of transformation in housing units' plans will be discussed. These two discussions will make a model for discussing the changing meaning of housing plan types. Defining such a model is the goal of this study.

The final part of the study is going to make a brief discussion on İstanbul in that context and show some possibilities for further researches through the model that this study will suggest. The aim for the final discussion is to discuss the turning points affecting the development and meaning of low-rise, apartment type urban housing units in İstanbul in the 20th century until 1980's.

The turning points that may affect urban apartment housing development in different periods of time should be examined with:
1- The changes and transformations in laws - regulations of building construction;
2- Technological developments that affect the usage of housing spaces;
3- Cultural and socio-economical changes in the society. In this research, the investigation of the cultural and socio-economical changes affecting the identity of housing plans and identity of people are also key variables through its relations with the development of various indoor technologies.

The final model includes the syntactic (related with space syntax) and semantic reflections of the production and occupation of housing, which may be directly affected by the variables of technology and the law. Changes in housing plans' meaning related with various turning points in building technology affecting the design of building plans, semantic parameters and the behavioral acts of the people living in these houses has to be considered in order to indicate the relations. Changes in the perception of apartments' living spaces by their users with the affect of the technological changes such as the contribution of mechanical heating systems and the TV to the buildings' spaces may be turning points in the transformation of spaces.

CULTURE AND SPATIAL ANALYSIS

Chair: Rolf Johansson

Tessin's urban landscape – A cultural-spatial analysis of Tessin's plan for the surroundings of the Royal Palace in Stockholm

Rolf Johansson
Swedish University of Agricultural Sciences, Sweden

Nicodemus Tessin the Younger (1654–1728) was both architect for the Royal family and for the city of Stockholm. He designed the new Royal Palace that was erected quite soon after the old palace was destroyed by fire in 1797. By the same time Tessin also designed his own residence opposite to the south facade of the Royal Palace. In 1713 he presented a general plan of the surroundings of the Royal Palace, including his own house, the Stockholm Cathedral, and a number of proposed new buildings.

The aim of this paper is to use Tessin's general plan in order to analyse the design of architectural motives and spaces along the two perpendicular axes through the Royal Palace from a spatial and cultural perspective.

The general plan displays two structuring axes through the Royal Palace, one in direction north–south and one in direction east-west. The north-south axis through the north entrance to the palace has a symbolic importance. The Cathedral in Uppsala was used for the coronation of Kings and Queens, and the road from Uppsala comes from the north. Tessin planned a new church close to the palace. This church was intended to replace the Uppsala Cathedral for royal ceremonies, and it was planned to be the starting point for the axis in the north. The north-south axis continues through the Royal Palace and then through the Tessin House.

There is also an east-west axis through the palace. This axis starts at the boat landing east of the Royal Palace, passes through a forecourt, a square courtyard, and courtyard with shielding curved low wings, and ends in a building for the Court of Appeals—that was never built—with a false perspective resembeling the one in Palazzo Spada in Rome. The axis through the Tessin palace passes through a similar sequence of spaces, and it also ends in a false perspective.

A comparison of the relations between the dwelling areas, the library, the theatre and the garden in the Royal Palace and in the Tessin House also reveals structural likenesses, although the difference in scale is very big.

There are similarities in the sequence of spaces, as well as in the facades, between the Royal Palace and Tessin's own house. A likeness that expresses Tessin's own view of a high social position and at the same time, considering the huge difference in scale between the buildings, exposes the social distance between the King and his architect.

REFERENCES
Ragnar Josephson´s many published works on the life and work of Nicodemus Tessin the Younger and The Royal Palace in Stockholm.

Tessin the Younger´s architectural drawings of his own house and of the surroundings of the Royal Palace.

Maps as landscape

Jesús Conde García
University of A Coruña, Spain

The contrast was extraordinary: the satellite photo only showed a soup-like expanse of similar shades of green, with scattered blueish patches, whereas the map presented a fascinating network of picturesque secondary roads, with panoramic views, forests, lakes and mountain passes. Above the two enlargements, in black capital letters, was the title of the exhibition: ´´THE MAP IS MORE INTERESTING THAN THE TERRITORY.´´
(Houellebecq, 2010)

In order to answer significant questions about the interaction of people with different environments and contexts, that is one of the ambitious objectives in this symposium, we should start with a question: how do we, humans, perceive, understand and represent our environment? The answer is not easy but maps have a lot to do with it.

Maps and plans are not just descriptions referring to the present and past of territories and cities, but interpretations that tell us about the concept of space and the relationships that people establish with it. This is why they have more to do with the ´´project´´, i.e. with the future, than we think, and they will influence future developments and changes. In them, the wishes and aspirations of communities appear, and even if they do not in themselves contain any specific proposal, good maps do contain the seeds of what could be, or perhaps what should be.

"Maps are seen through many different eyes. As the historical study of maps has broadened and matured over the past two decades, to extend beyond the idea of maps as ever-improving representations of the geographical world, at least three approaches have been developed and championed: the map as cognitive system, the map as material culture, and the map as social construction. All three are necessary to a full understanding of how maps function in society." (Woodward & Lewis, 1998, p. 1). Thus, maps are not only a valuable description of a geographical area but also a special source of information that includes essential aspects of the culture of a society.

But anyway, it is difficult to find these three qualities in most actual common use maps, normally in the best case just one aspect is present. Is it possible then to find maps where these three approaches emerged? We will look at very different cartographic examples trying to answer this question: first of all, at the Australian "tjuringas", that belong to the not-western traditional cartography; later on, at some historical Galician maps that surprisingly have extraordinary similarities with the Australian ones.

For Aboriginals, man is nature and nature is part of being human (Roberts, 1977). The earth does not exist if it is not perceived its existence is based on a cultural process (Chatwin,

1987, p. 23) which ´´interiorizes´´ the territory, which ´´constructs´´ it from the mythical epics of ancestral beings (Soria y puig; 2000, p. 41) who have left their mark, their traces, over all the Australian continent. These traces weave a web of paths, which are known as ´´songlines´´ because each one is associated with a legendary story about the genesis, about the birth of that land, but also a musical structure. In these early maps of the Australian aborigines the three approaches to the concept of map that we mentioned earlier: "the map as cognitive system, the map as material culture, and the map as social construction" complement and overlay each other with absolute clarity.

Given that ´´the landscape plays a mediating role in the relationship between people and their territory, and appears as an essential element of the affective and aesthetic bond that the inhabitant has with that very territory and participates in its ownership´´ (Domingues, 2008), this concept (the landscape) is not necessary until a distinction is established between resident and territory, between man and nature, i.e. between the ´´I´´ and our environment. However, this distinction is recent in human evolution and Australian Aboriginals do not establish it. In modern terms we could say that for Aboriginals, territory does not exist, there exists only the landscape.

From all this come out the idea of ´´map as landscape". Through parallelism between primitive Australian ´´maps´´ and some historical Galician maps, we shall try to validate this hypothesis: ´´we can distinguish between territory maps and landscape maps.´´

REFERENCES

Chatwin, B. (1987). The Songlines. New York: Viking.

Domingues, C. (2008, May). Paisaje e identidad en Galicia. In Olladas críticas sobre a paisaxe. Santiago: Consello da Cultura Galega.

Houellebecq, M. (2010). Le Carte et le Territoire. Paris: Flammarion

Roberts, S. (1977). Inform for Ranger investigation.

Soria y puig, A. (2000) Ensayo introductorio. In La construcción del territorio. Mapa histórico del noroeste de la península Ibérica. Spain: Lunwerg.

Woodward, D., & Lewis, G. M. (1998). Introduction. In The History of Cartography, vol. 2, book 3. (pp. 1-10). University of Chicago Press.

A comparative study on the role of courtyard in the traditional Cypriot and Iranian houses

Ozgur Dincyurek & Halleh Nejadriahi
Eastern Mediterranean University, North Cyprus

Understanding traditional buildings is a crucial task in every society for future sustainable developments. Traditional buildings are great source of experience and knowledge which are worth being studied in order to achieve valuable clues and ideas. They aid developing sustainable, contextually and culturally responsive design approaches and principles. Housing, as an essential subject in traditional architecture is the focus of this study. The development of space organization and formal configuration of traditional houses is

mainly influenced by environmental, economic and socio-cultural factors. In this respect, courtyard as a key component in the space organization of traditional houses of the Middle Eastern countries is a fundamental issue to be studied. This study is going to examine the traditional Cypriot and Iranian houses by interrogating the role of courtyard in the spatial formation and formal configuration of such houses to reveal the strategies behind it that may be transmitted to the new housing design. The methodology applied will be based on qualitative discussions on historical, environmental, socio-economical, cultural, and architectural analysis of the typical traditional Cypriot and Iranian courtyard houses. It is expected to identify the genuine role of courtyard in two different house forms from two distinctive geographical regions. In brief, the resemblances and differentiations of the selected house forms will be clarified by a thorough comparative analysis. This study could be a guideline for today's architects to be aware of the design principles in such houses and use them beneficially in contemporary courtyard housing design.

KEYWORDS
Courtyard, Traditional Houses, Cyprus, Iran

The effects of traditional and global architecture related with nature and culture for the case of Izmir Institute of Technology in Turkey

Ayşen Cevriye Benli
Izmir Institute of Technology, Turkey

INTRODUCTION

The form world of nature is so wealthy in its form language nuances and adaptations that the expression is 'the essence' in nature. Expressive language in human art and architecture is important as means of communication like the language between human beings. Human, oneself, is an organism who spreads his effects to environment like form. In nature, a correlation exists between forms to make a unity while considering all existences together. The principles of correlation and expression work together and organize the growing process in an unified order. When a human simply occupies with a man-made environment, there has obviously no sensitivity to the correlation with nature.

All forms have to be considered with its idea of occurrence, its means of expression and its accordance of form to environment. This means to get along well with all the structural events for the complexity of nature and man-made environment.

THEORETICAL BACKGROUND

If nowadays we are witnessing an economic crisis along with a cultural crisis in the world, then the architecture and art are expressing the effects of this crisis by symbols. The cultural crisis reflects itself by the effects of history, traditions and contemporary art trends. The traditional architectural examples in history for every country are closer to nature as a cultural essence. In Turkey when traditional architecture was more effective one can see some architectural elements relating with history, nature and Mediterranean architecture. Today, in the world, global architecture is as effective as the economic and cultural crisis effects. In spite of all, some traditional architectural elements still survive for the cause of sustainability in landscape design and in built environments in a changing global context. The new trends affect humans to live in and humans always need a relation to nature, organic life, lively form of life, traditional elements related to basic forms and harmony which brings desire of life.

The effects of nature and climate are so important that the architectural elements reflected by cultural crisis show differences in continents, in countries and in regions. The architecture of cultures contains different contents and differentiates from each other.

METHODS

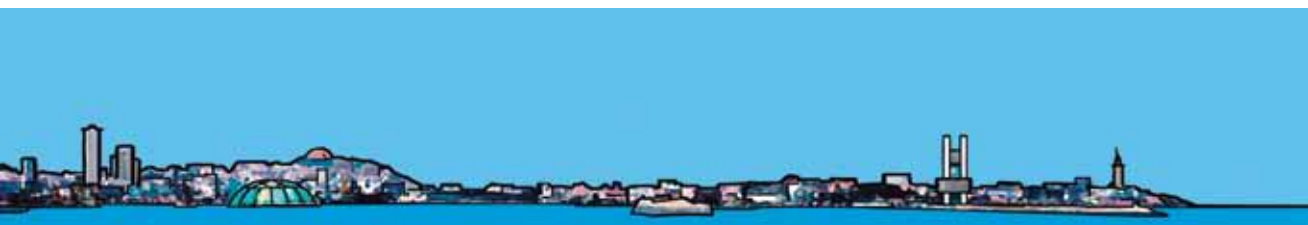
An analytic method from general to specific is followed. Subject is evaluated starting from the general topic 'The Effects of Traditional and Global Architecture related with Nature and Culture for the case of İzmir Institute of Technology in Turkey' and details are approached step by step. At the beginning, the definition of traditional and global architecture and their relations to Culture and Nature are examined. The traditional architecture and culture of Turkey is researched using the literature. A general summary is done for the Architecture of the Campus of İzmir Institute of Technology as a case study. The case of this Campus shows traditional elements even in its architecture adjusted to global context. While searching the traditional, natural, cultural and climatic aspects of this campus, the sustainability front of these elements, the site planning and buildings will be evaluated by comparing the traditional details such as the details to arrange the climate and nature to make living and working areas more comfortable, more economic, more enjoyable, more healthy to work or live in. The information is obtained from the works in architectural projects and in constructions of buildings.

RESULTS AND CONCLUSIONS

In Turkey in the campus of İzmir Institute of Technology, the traces of culture and global architectural effects appear at the same time. The principles of sustainability in such higher education buildings are important and the role of cultural architectural and traditional elements should be understood. For finding the essence, the main element and the effects of culture and global effects as source in the architecture of İzmir Institute of Technology it is necessary to look the old higher education complex examples in the history and the new site and buildings of this campus. As a result an evaluation will be done considering nature, climate, culture, traditional and global context in architecture and their relations to sustainability.

KEYWORDS

Nature, Climate, Culture, Tradition, Global Architecture



SOCIAL ENVIRONMENTS AND PERCEPTION

Chair: Giuseppe Carrus

Ecological implications of children and youth understandings and social needs in the transformation of the Amazon rainforest

Maria Inês Gasparetto Higuchi, Daniele Cunha Rosa, Sylvia Souza Forsberg & Isolda Gunther
University of Brasilia, Brazil

Despite their renowned value as repositories of biodiversity and in the regulation of the global climate, tropical forests are being destroyed at an alarming rate, specially the Amazon rain forest. To slow this devastation and preserve these ecosystems for future generations, it's necessary that we understand the factors which bring persons to destroy them.

Based on this motivation this study aimed to investigate the cognitive processes that support the decision of preserving and/or transforming the Amazon rain forest in order to attend social needs. A variation of the clinical interview method, which seeks to answer how the representation of reality is mentally constructed and organized by individuals, was utilized. This strategy gives rise to a representational situation that evaluates the explanations and actions of individuals. In this regard, this instrument of analysis of environmental cognition was planned as a symbolic task allowing the transformation of the forest from a model with nine removable blocks representing the various areas of the Amazon rain forest, which was valuated and validated by scientific experts.

The model also included a total of 12 blocks representative built elements of the urban infrastructure, which were the objects of choice for replacing (or not replacing) the original forest blocks of the model. During the task the interviewer presented arguments and contra-arguments to the subject regarding the transformations which he/she performed intending to assess the understanding about the forest and how it is constituted over time, the importance of the forests and of those areas that replaced the forest.

The study included 278 children and youths aged 6 (six) and 19 years, 144 female and 148 male residents of four cities located in northeast of Brazil, Brasilia - the Federal District (n = 58) and the cities of Ceres - GO (n = 30), urban area of Manaus (n = 121) and rural area, the Sustainable Development Reserve Uatumã - AM (n = 69). The results revealed some regularity which was possible to aggregate them in five distinct levels of understandings about the forest (NESF).

The understanding of the children and the youths about the forest varied between diffused/ undifferentiated and systemic indicated a gradual increase in the complexity of concepts. A significant correspondence was encountered between the level of understanding about the forest and the age, and geographic origin of the subjects. The actions to transform the model were evaluated from three ecological understanding indicators: IVV - index of green value (the amount of green areas left by the participants in the mo-del); ICC – index of conservation knowledge (the quality of green areas that the participants withdrew from the model) and the ICT – index of technical knowledge (technical coherence of the transformations made).

The results showed a trend of choice for urban systems that match the priority level and knowledge about the environmental damage caused by them. Residential, school and hospital were the urban environments most likely to be chosen. The least chosen were airport, industry and social center. We evaluated the possible differences in the choice of each urban environment based on sex, age and place of residence from non parametric Mann-Whitney and Kruskal Wallis. It was also performed multidimensional scaling to visualize the similarities between the groups. There were no differences by gender ($p > 0.06$). Regarding age differences were found between the groups in relation to all urban environments ($p < 0.01$), with only the group of younger children (6-8 years) did not follow the general trend and presented a sample configuration different choice.

The provision of environments in Euclidean space demonstrates randomness in the selection of urban environments in this group. The place of residence also was correlated with the choice of urban environments, significant differences were observed between groups for the frequency of choice in all urban environments ($p < 0.03$). However, by evaluating the distances in Euclidean space noted that this difference was due to choose frequency in each environment and not in the arrangement of these environments in terms of priority. Groups of Manaus-AM and AM-RDS Uatumã (residents closest to the Amazon rain forest) opted to make more changes in the forest, while many of the participants of Ceres-GO and the Federal District have chosen to withdraw less forest environments.

These results suggest that the participants' social contexts investigated in this study play a role in the understanding and the importance that they attach to the Amazon forest. Furthermore, the decision to transform the forest depended on the balance between the values attributed to the natural and constructed environments, which depended on the level of knowledge about these environments and the social necessities of the subjects involved.

The influence of urban neighborhood environment on residents' place attachment – Tain an city as an example

Heng Zhang & Hsiu Kai Chang
National Cheng Kung University, Taiwan

INTRODUCTION

How physical environments affect residents´ psychological conditions has always been a much-examined topic, and place attachment is one of its key focuses. A neighborhood constitutes the basic environment of daily life, the quality of which affects residents' place attachment. It is this influence the neighborhood environment has on place attachment that this study explores.

THEORETICAL BACKGROUND

The built environment makes an impact on the physical and psychological well-being of people who dwell therein (Wells, Evans, & Yang, 2010). In particular, public open spaces in the neighborhood provide a platform for various activities. They increase opportunities for residents to interact, in turn contributing to their building of relationships. Residents' perception of the environment also affects their activities in the neighborhood (Nasar, 2008). Improving the neighborhood environment can enhance the psychological well-being of its residents (Guite, Clark, & Ackrill, 2006).

Bonaiuto, Fornara, & Bonnes (2003, 2006) introduced a comprehensive framework for evaluating the quality of the neighborhood environment that comprises indices of perceived residential environment quality (PREQ). Four architectural and town planning dimensions of the framework, which are more related to spatial planning, are used in this study to quantitatively estimate the quality of the physical environment in the neighborhood.

Place attachment is an affective connection with a place, closely related to the quality of its physical environment (Long & Perkins, 2007). Place attachment contains two dimensions: emotional attachment and functional attachment (Shuhana & Norsidah, 2008). Scannell & Gifford (2010) suggest place attachment involves people, place, and psychological process. The nature of place attachment varies from place to place according to the context.

This study aims to analyze the relationship between the neighborhood environment and the place attachment felt by its residents. The results may provide a valuable basis for neighborhood planning.

METHOD

This paper investigates residents´ perception of their neighborhood environment and their place attachment. For the measurement of environment quality, indices of Perceived Residential environment Quality (PREQ) were used as a measuring framework. To measure residents´ place attachment, two dimensions -place identity and place dependence- were used to develop the measuring tool. Four different residential contexts were examined to include the typical residential environments found in urban areas. The four contexts are a low-density area, high-density area, historical area, and re-planned area.

A total of 353 questionnaires were collected from neighborhoods in Tainan City. First, factor analysis was performed to extract dimensions of neighborhood environment perceived by residents. Stepwise multiple regression was then used to learn which environmental factors affect people´s place attachment and how much influences they have.

RESULTS

We found five factors Tainan´s urban neighborhood environment: green area, building volume, building appearance, building density, and street space. The total extracted variance was 73.71%.

Stepwise regression yielded green area and street space as predictors of residents´ place attachment, especially street space with its large effect size (β=0.467) in comparison withβ(=0.157) for green area. The other three factors showed no significant influence on place attachment. The tight link between place attachment and street space was consistent with Taiwanese culture, where residents see streets as an integral part of their living space rather than mere traffic corridors.

CONCLUSIONS

The results suggest urban planners and community designers should pay more attention to shaping street spaces and creating green areas, especially the former. The quality of these two neighborhood features can positively impact residents´ place attachment.

KEYWORDS

Neighborhood environment, place attachment, urban neighborhood, factor analysis, stepwise regression

The impact of sound on environmental experience: Do multimodalities improve spatiotemporal landscape understanding?

Mark Lindquist, Eckart Lange & Jian Kang
University of Sheffield, UK

To date little empirical research has been conducted on the impact and effect of multisensory, and cross-modal, aural-visual interactions on landscape experience. For design and planning purposes landscape is conventionally communicated statically via one modality (i.e. visual) due to the primacy of visual information processing by the brain (Lange & Bishop, 2005). There is evidence that engaging senses beyond the visual can enhance the communication, perception and understanding of landscape and landscape dynamics. Theoretical and empirical streams have converged to the extent where current mutually exclusive sensory relationships can be challenged as a way of engaging with landscape. The importance of experience on the impact of landscape perception and character has been identified in a growing body of recent research (e.g. Scott, Carter, Brown, & White, 2009). Specifically sound has been shown to have a significant impact on landscape values (e.g. Carles, Barrio, & de Lucio, 1999), though rigorous studies are limited.

This paper presents preliminary results of exploratory empirical research investigating the impact of sound on the perception of realism of landscape visualizations, and preference for the landscapes visualized. The experiment used a 3 (visual) x 4 (aural) factorial design; visual stimuli were static images from three views of one park in Google Earth at low, medium and high levels of detail (i.e. terrain; terrain, buildings; terrain, buildings, vegetation). Aural stimuli were three on-site recordings, from the same site as the visual stimuli, that exhibited differing physical and psychoacoustic characteristics (e.g. low, medium and high loudness) and sound content (anthropogenic, natural, and mechanical), as well as a 'no sound' condition. The study used an online survey to deliver aural and visual stimuli and to collect psychological responses in the form of self-reported preference and realism measures. The hypotheses were that introducing soundscape to a digitally represented landscapes at low, medium and high levels of detail, will increase perceived realism of those visualizations when compared to no sound, and that preference for that landscape will be negatively affected by mechanical sound, and positively affected by anthropogenic and natural sounds. Preliminary results suggest, however, a more complicated relationship between preference, realism and the 'fit', or congruence, of the aural and visual stimuli. The results are considered to asses how sound can impact landscape preference and spatiotemporal understanding. The paper concludes with a discussion of the impact on designers, planners and the public, and targets future research endeavors in this area.

REFERENCES

Carles, J. L., Barrio, I. L., & de Lucio, J. V. (1999). Sound influence on landscape values. Landscape and Urban Planning, 43(4), 191-200.

Lange, E., & Bishop, I. D. (2005). Communication, Perception and Visualization. In I. D. Bishop & E. Lange (Eds.), Visualization in Landscape and Environmental Planning: Technology and applications (pp. 3-21). London: Taylor & Francis.

Scott, A., Carter, C., Brown, K., & White, V. (2009). Seeing is Not Everything: Exploring the Landscape Experiences of Different Publics. Landscape Research, 34(4), 397 - 424.

KEYWORDS

Environmental psychology, Landscape experience, Perception, Soundscape, Virtual reality

From ego-depletion to psychological restoration: A study of the cognitive, behavioural, and social benefits of contact with nature in early educational settings

Giuseppe Carrus, Massimiliano Scopelliti, Sabine Pirchio & Ylenia Passatore
University of Roma Tre, LUMSA University & Sapienza University of Rome, Italy

The study of restorative environments has gained increasing attention in psychological research, because of its implications for health and well being (e.g., Hartig, 2004). Many studies in this field have compared the restorative potential of natural vs. built environments, and have highlighted that contact with nature might have positive psychological outcomes such as increased individual well being, stress reduction, improved cognitive performance. While psychological restoration in nature has most often been studied in terms of the recovery of cognitive functioning (i.e., direct attention restoration) and stress reduction, less attention has been given to the effects of contact with restorative environments on social interaction. This idea is compatible with recent trends in social psychological research, which show that the depletion of personal psychological resources, necessary for self-regulation tasks in dailiy life experience, might results in diminished volitional control necessary for postive social interaction (e.g., Baumaister et al., 1988). Ego-depletion can however be countered by postive mood or emotions (e.g., Tice et al., 2007).

In this paper we investigate the effects of nature on children wellbeing in educational settings. We will present the results of a study where we tested the hypotheses that contact with nature in educational settings promotes psychological restoration and increases the quality of children's social interaction.

Preliminary interviews with child-care personnel were conducted in order to ascertain the main characteristics of the usual daily routines that took place in the child-care centres considered. We identified four daily routines: entrance, structured activity (drawing, painting, cut and paste), free play, post free play activity (music, lunch preparation and lunch). Children were observed in all these daily routines, comparing days where the free play activities take place in the outdoor garden vs. days where the free play activities take place in the usual indoor classroom space (i.e., "no green days"), controlling for several confounding variables. In particular, children's performance in a visual-spatial task, and children emotional and social behaviour (through a checklist) were assessed.

A pilot study was conducted with 16 children (age range 18-36 months) attending a child-care centre in Rome, Italy. Findings suggest that contact with outdoor green spaces positively influence both children's performance and social behaviour.

A main study, involving three day-care centres in Rome with indoor and outdoor green spaces was then conducted. A total of 39 children, of age ranging between 18 and 36 months, attended the day-care centres. Twelve observations of children behaviour (cognitive functioning, stress levels, social interaction) were gathered for all the four different activities, comparing "green days" vs. "no green days". Results confirm the positive effects of nature on children's cognitive functioning, stress reduction, and social interaction in educational settings. The theoretical and practical implications are discussed.

REFERENCES

Baumeister, R.E., Bratslavsky, E., Muraven, M., Tice, D.M. (1998). Ego Depletion: Is the Active Self a Limited Resource? Journal of Personality and Social Psychology, 74 (5), 1252-1265.

Hartig, T. (2004). Restorative environments. In C. Spielberger (Ed.), Encyclopedia of applied psychology (Vol. 3, pp. 273-279). San Diego, CA: Academic Press.

Tice, D.M., Baumeister, R.E., Shmueli, D., Muraven, M. (2007). Restoring the self: Positive affect helps improve self-regulation following ego depletion. Journal of Experimental Social Psychology, 43 (3), 379–384.

KEYWORDS
Contact with nature, educational settings, psychological restoration, social interaction, wellbeing.

Design principles of local center with perceptional approach for participation

Neda Sadat Sahragard Monfared, Hashem Hashem Nejad & Seyed Abbas Yazdanfar
Iran Science and Technology University, Iran

Public space is a meeting scene for social interactions. But nowadays, this social capital decreases. The solution for this problem that derivates from sustainable development is local participation. So, the case study of this paper is narrowed to participation in local center. Participation is presented in social and spatial approach and should be located on both of them. What is considered in this research is a link between these two approaches and it is perceptional concepts. Definition of the link in three variant of the paper shows the similarity of the paper with place model of David Canter. The three facet of canter's model that includes activities, physical attributes and conceptions (canter, 1977,the psychology of place,p 157) are developed to participation, design principles and perceptional concepts. Activity has three levels include necessary, optional and social activities as refer to Gehl's books. Participation is one of the the highest level of social activities because it has procedure. Design principles are similar to physics but it can be more detailed. Perceptional concepts have correspondence with imagery but it works better in this paper because the list of the concepts and priority of them and unity of them in mental image of people is the factors that can be evaluated.

During the perception process, the quality of environment change to concepts in mind and formed the mental image. So, it helps people to feel the sense of community and encourage them to participate. These concepts and design principles require categorizing. The perceptional concepts include territory, security, identity and public belongings. The design principles include transparency, readability, diversity, form, spatial hierarchy.

The research method includes two sections. First, the important perceptional concepts and design principles gather with descriptive-analytic method and with reviewing studies as a research tool. Second, the preference of concepts defined with logical argumentation and correlation experiment.

This paper chooses one of the communities of "Tehran" as a case study. Then, it takes the questionnaire from people of this community. In this questionnaire the list of perceptional concepts which is collected from literature review is presented and asks people which of them are more important in your mind via different question. The hypothesis of the paper is that some of these perceptional concepts have priority to improve participation. So the

data analysis from questionnaire is done to come close to hypothesis and two concepts that people percept and encourage them to participate are derivated. If some specific concepts have unity in mental image of people the accuracy of hypothesis is proved. After finalizing these specific perceptional concepts, the corresponding design principles which are extracted from literature review are presented as a final model and conclusion of paper. So, the conclusion of paper is presentation of the model that is located on place theory. Also the preference of the concepts and design principles that relates to participation is presented.

PUBLIC FACILITIES IN HEALTH AND EDUCATION

Chair: Cláudia Campos Andrade

Public facilities as elements of territorial cohesion. Case study University and Hospital Networks in Galicia

Cristina García Fontán
University of A Coruña, Spain

Public facilities need to be seen from the territory they served, their impact is bigger than the city where are located. They were not planned under any logic more than the opportunity, and now is moment to rethink a strategic planning.

Last 30 years have been very important for the regional development in Spain. The process of decentralization of competences from the central government to the regional administration, has had a great impact in the territorial development, especially of the most peripheral regions.

In the present context of economic and urban crisis, this study proposes an analysis and a reflection about the strategic investment in planning public facilities. After years of development of big facilities and infrastructures without the planning of territorial cohesion, we propose to analyze the state of art and see the sustainability of the territory. The case study is located in Galicia, a Spanish region. The public facilities that we analyze are Higher Education (Universities) and Health facilities (Hospitals). Those facilities make up networks, systems, nodes, and the role they play for territorial, economic and social cohesion is essential. We study how they perform at territorial, local and urban scale. Universities and Hospitals are nodes that generate important tensions in the territory besides being what P. Hall identifies as sources of innovation.

The key aspects of the research are the territorial identity, the position in the landscape, the sustainability, the viability and the urban assemblage of those public facilities.

The focus is on functions and roles of the institutions from within the institutions and their impacts on their context, the urban structure, the social cohesion, the economic relevance and other aspects.

Comparative cartographies are the tool that show how are located in relation with the city and the territory. Form, size, urban connectivity, occupation of land, sustainability, ecological footprint are compared parameters.

There is chased a model different from territorial planning of big facilities.

Where accessibility must be equitable and without any distinction between rural and urban population.

In order to keep what we got as society, in a sustainable way, it is necessary a reflection justifying the necessity of those facilities as engines of change.

Planning characteristics of nursing homes in Japan. The relationship between space and management

Mori Shiho, Mie University, Japan
Taniguchi Gen, Nagoya University, Japan
Inoue Yukiko, Japan College of Social Work, Japan
Kato Akikazu & Chan Seng Kee, Mie University, Japan

INTRODUCTION

Compared with western countries, aging of Japan is making rapid progress. Japanese has changed the thinking of privacy for last 20 years, so that more emphasis is placed on changes from the accommodation to the residence. But, just improving as the residence isn't that individual care and smooth management is implemented. Aging of Asian countries is making rapid progress, too. Because of an analogy of their sense of values about privacy, they try to analyze Japanese situation.

This paper clarifies a necessary condition of space planning to implement individual care smoothly.

In the past, nursing homes were composed of shared multiple-occupancy bedrooms and large dining rooms, thus, the elderly were given the collective treatments. In 2003, a system for Unit Type Nursing Home (UTNH) was established.

UTNH is the so-called aggregation of "unit" which is composed of about 10 private rooms, kitchen, dining room, and living room. The inside unit space was divided into common space and private rooms. The outside unit space was divided into an exchange space for the neighbouring community, and an exchange space for other units.

Moreover, it is made desirable for the care staff to be exclusive with a unit, however, two units were to be united in the night-shift.

RESEARCH OBJECTIVES AND METHODOLOGY

This research analyzes the overall tendency of plan composition of UTNH which applied to government funding in the first year after institutionalization. Through the case studies, the study aims at clarifying relations between the space planning and the care method.

Primarily, the tendency of habitation space is grasped by analysis of the overall plan and the unit plan in a unit. Secondly, relation between a space plan and care method is clarified by the distance among units and the sharing situation of equipment.

As an investigation, floor plan analysis of 79 facilities was performed, and care method has been studied in existing 4 facilities.

RESULT

The average of a per capita gross floor area was 51.6 m^2, this is far larger than that (34.13 m^2) of old NH.

In relation to utilities attached with private rooms, the washstand was installed to about 90 % and the toilet was installed to about 30 %. As for the common space inside unit, it was assumed that the position of living space where the residents mainly spent time together and the private room has a relationship with the area of living space and corridor.

Although almost facilities had high independence like separate entrance, some of them were the floor planning which could easily lead to collective care service such as old NH.

The spacial features of UTNH sharing utilities among units were 1) the distance among the units was short and they had less independence and 2) the unit capacity was smaller. With these facilities, it is assumed that the facilities create the staffs working shift not in a single unit but in two or more units. Therefore, in UTNH, it can be said that there is a very close relation between space composition and staffing method.

Also in the existing UTNH, it was assumed that the care staff worked at two or more different units depending on the day of duty. As originally planned, the care staff should be exclusive with a unit, because they should care after knowing the information, feeling, and intention of residents well. However, in actual fact, the care staff could not be exclusive with a unit, because of deficiency of the number of staff.

CONCLUSION

As described above, because of trying not to have a difference between an intention of planning design and the actual management, an architect and manager need to cooperate to progress a plan. The realization of an individual care is attained only after the adoption of holistic planning.

The above report on Japanese experience should serve other Asian nations expecting faster aging of population and other nations in similar tendency. Thus, there is the need to be published and discussed in the international society such as IAPS2013.

Environmental options, hospital rooms, and patients' well-being

Cláudia Campos Andrade, ISCTE-IUL, Portugal
Ann Sloan Devlin, Portugal Connecticut College, Portugal

INTRODUCTION

Being in a hospital as an inpatient is stressful. Reduced physical capabilities, painful medical procedures, uncertainty, and breaking routines are major sources of stress. But the healthcare facility's physical and social environments can also be sources of stress if unsupportive of patients (Ulrich, 1991). Specifically, an unknown and uncontrollable physical hospital environment might be appraised as harmful and demanding, but stress might be reduced if patients feel they can at least deal with and change some of the room's physical conditions.

Based on Ulrich's theory of supported design, this study investigated what kinds of design options in inpatient rooms have a strong stress-reducing effect because they foster a) sense of control over physical-social surroundings, b) access to social support, and c) access to positive distractions. We hypothesized that the more environmental options a room provides, the less stressful the less stressful the patient's experience, even if the physical environment itself is not the only cause of the stress. We are also interested in whether perceptions of control, social support, and positive distractions are mediators in the stress-reduction process.

METHOD

Participants and design. Participants were 217 students, split between Portugal (n = 142) and the United States (n = 75). There were 91 women and 125 men,with a mean age of 21

years (SD = 5.48 years). In a between-subjects design, participants were asked to imagine a hypothetical hospitalization, shown a standard illustration of a hospital room, and then randomly exposed to one of eight different combinations (in type and number) of physical design features available.

Stimulus materials. Stimulus materials consisted of a floor plan of a standard hospital room with private bath and eight different descriptions of the available room amenities. The single room had a bed, 2 bedside tables, a closet with hangers, and a window; the bathroom had a sink, a toilet, and a shower.

To develop the room descriptions, we did a pilot study to identify what room elements people think produce sense of control (SC), social support (SS), and positive distraction (PD) (N=72). These results allowed us to select four elements for each dimension (e.g., adjustable light and temperature; sleeper sofa for family and friends; and paintings of nature, respectively). Based on those elements, we developed eight different lists of room amenities, three with the four elements of each cluster (SS, PD, PC), three adding elements across clusters (SS+PD, SS+PC, PD+PC), one with all 12 elements (SS+PD+PC). The control condition included no elements.

Measures. Perceived stress was measured using Spielberger's 20-item State Anxiety Inventory (Spielberger, Gorsuch, & Lushane, 1970); perceived positive distraction was measured through eight items adapted from scales used to measure fascination (Hartig et al., 1997; Laumman et al., 2001); to measure the perceived level of control over the physical environment, items from scales in other studies were used (Lee & Brand, 2005; Veitch & Gifford, 1996). Finally, to measure the perceived social support, we created six items. To conclude, participants answered demographic questions.

Procedure. The study was conducted on-line using Qualtrics. A scenario was presented asking participants to imagine that they had been hospitalized with symptoms of acute appendicitis. Depending on experimental condition, participants were exposed to a floor plan with one of eight amenity lists for 90 seconds. Participants then answered the questions comprising the dependent variables.

RESULTS

Stress tends to decrease by the following order: all amenities; social support & positive distraction; social support; social support & perceived control; positive distraction & perceived control; positive distraction; no amenities; and perceived control. Stress is significantly higher in a room with no amenities than in a room with all amenities ($p=.009$) or with elements to promote social support and positive distraction ($p=.019$). The same is true for a room with elements that promote perceived control ($p=.007$, and $p=.014$, respectively). Irrespectively of the conditions, results show that the more elements presented in the hospital room (0, 4, 8 or 12), the less the stress expected ($r=-.264$, $p<001$)

Other results, including the results of the mediation analyses, will be discussed in terms of how hospital rooms can be purposely designed to improve patients' experience, well-being, and recovery.

The relationship between kindergarten yard and playing from the viewpoint of the difference in age

Hiromi Nakagawa
Chiba University, Japan

SOCIAL BACKGROUND AND PURPOSE

In recent years, the demand of nursery school is increasing owing to the movement of women into society.

On this occasion setting up more and more nursery school ,we have an issue how much children's growth be encouraged in limited place.

In this research, I analyze the relationship between the features of each place and playing from the viewpoint of the difference. And the purpose is to find what kindergarten should be hereafter.

PROCESS

Research object: Asaka doronnko nursery school
It has enough large kindergarten to run around. Children can not only run but also play in the mud and climb up a tree.
The kindergarten has artificial hill and hollow, which enable children to play in various ways.

RESEARCH METHOD

The observation of children who play freely in the kindergarten.
Recording the contents, place, time, the number of the group and age with the use of check sheet.
Taking pictures of the playing scene.
Inquiring survey to child care person and designer.

FINDINGS

I made off 51 zones in the kindergarten and found each feature of playing, time duration, frequency and age.

ANALYZE AND CONSIDERATION

I analyzed the findings from 3 viewpoint that the feature of playing, time duration and frequency.
Each item is categorized the difference of age.

1. the feature of playing

I categorized playing to fluid and static.
Fluid playing: playing as moving. For example chasing one another and playing train.
Static playing: playing at the same place. For example playing house with mud and water.
I found that there are few children playing static at the place which can be line of flow.
Therefore we should divide the line of flow in order to make place for both playing.

The way to separating

A: separating by difference of elevation
It encourages playing with ball and chasing one another.
B: separating by planting
It encourages the communication between children playing static near the root of tree and children playing fluid around the tree.

Accordingly connecting different feature place vague will encourage spreading interest and raise the will to play.

2. time duration – picking up the case continue more than 7 minutes.
A: children 1~3 year old
Climbing up tree – making use of complex natural element
Observation and interaction with goat. – feeling animal growth
Playing with mud - feeling the change of weather and temperature
The planning take nature in the kindergarten will be attractive for children.
B: children 4~5 year old
Near manhole - easy to make territory of the playing group.
In the hollow - be able to run around with children's strength no paying attention to younger children.
Earthenware pipes - be able to make territory of oneself or specific friend.

3, frequency – the number of times
graph: the number of case in each place and age
A: children 1~2 year old
Near building and on the artificial mountain –
In both place, child care person is easy to watch over.
They are watching over about 5 children of 1~2 year old almost time.
So, they may lead children to the place it easy to watch over.
And the place near building is suitable because very young children get tired easily.
B: children 3~5 year old
The hollow and near manhole - same as the place children play for long time.
Consequently It necessary to make sure of places suitable for different growth.
Each place is suit for different playing. So making various place is enable to play in various way for children.

GENERAL REMARKS
The 5 elements of design kindergarten
1, dividing the line of flow
2, ambiguous separation
3, taking nature in the design
4, making sure of the place for different age
5, making various tipe of place

PROSPECT
Kindergarten need to be developed for various creative playing of children with care for safety.

A study on teacher's work area of junior high schools with department system

Megumi Yano & Kaname Yanagisawa
Chiba University, Japan

BACKGROUND
Since the mid of the 1980s, open-planned schools with open spaces has been spread over the country for promoting educational diversification and individualization. As well as open-planned schools, new typed schools have been introduced including schools with department system.

The department system, which students move to subject oriented classrooms, is applied to junior high school and high school, however it is still not common in Japan. Such changes in school planning were for adapting to new learning style but also for teacher's working style. One of the new challenges was to introduce teacher's work area in classroom unit, shared with same grade or subject teachers.

In regular Japanese schools, there is a common teacher's office shared by all teachers. The merit for making such common office is to communicate and collaborate among teachers, on the other hands the demerit is to less communicate with students away from classroom.

The main purposes of introducing teacher's work area are 1) to communicate with student easily and 2) to access workspace easily during classes. Especially the teacher's work area at the school with department system seem to be very effective for promoting teachers' collaboration among same subject teachers, and also help them to create subject oriented environment.

PURPOSE AND METHODS

This study aims to clarify the problem of teacher's work area at junior high schools with department system, and to make the guideline for planning it. We conducted the questionnaire survey and the interview survey as follows.
1) Questionnaire survey: We sent 84 questionnaire sheets to 28 junior high schools (three teachers per school). We received 54 sheets back from these schools.

2) Interview survey: We visited 8 junior high schools with department system and interviewed to principal or vice principal.

RESULTS AND CONSIDERATION

We summarized the results and the consideration as following four topics.

1. Use of teacher's work area: The result shows that 87 percent of the surveyed schools have the teacher's work area, and 72 percent out of these school use it daily. The number of teachers using the teacher's work area is various.

2. Rule of teacher's work area: We found that most of schools set the rule for teacher to stay at each teacher's work area. Instead, they also make the morning meeting at the common teacher's room because of encouraging all teachers' communication.

3. Environment of teacher's work area: We found that many teachers' work-areas were well defined with partitions or walls. Most of teachers also have desire to make teacher's work-area to be well defined and independent for protecting personal information or keeping better environment.

4. The merit and demerit of teacher's work area: The results show that the merit of teacher's work area is 1) very close to classroom, 2) to keep many teaching materials, 3) easy to communicate with students, and 4) to communicate with other teacher of same subject. On the other hands, the demerit of it is 1) lack of space and equipment, 2) bad environment, 3) isolation from other subject teachers and administration.

SUGGESTION

It is important to consider the planning and designing more effective and useful teacher's work area for promoting more teachers to stay and use it. It may lead to create better

learning environment in classroom and surrounding spaces as well as improving teacher's work environment.

A study on the planning of University libraries. A case study of the new Chiba University Library

Yuko Ishizuka & Kaname Yanagisawa
Chiba University, Japan

BACKGROUND

Recently, many university libraries tend to have problems such as the lack of space, deterioration and shortage of operating cost. While, the new typed library with learning commons has been coming for supporting students' active learning and communication. New Chiba University's Library had just been completed as renovation from the previous traditional library in 2012. It has the various advanced learning spaces including learning commons.

PURPOSE OF THIS STUDY

The purpose of this study is to investigate and analyze on the new Chiba University Library to clarify the use of new spaces, and make the guideline for planning and designing of new university library.

RESEARCH METHOD

We conducted following two surveys.
1) Document survey: we investigated the documents about recent trends and problems about university facilities including library and learning commons.
2) On-site survey: we did observation survey to observe and record the behavior of students every two hours, five times a day, three days during the exam period (7/19,26,31). We conducted another survey four times a day, three days during the vacation period (8/23,9/6,24). The new library consists of four buildings, and we surveyed building N, the extended building with the learning commons. We recorded the behavior of student such as place to stay, the number, the behavior type.

The questionnaire survey was also conducted at the same time besides observation survey. After we finished these two surveys, we interviewed to the chief librarian about planning, management, and changes from the previous library.

RESULTS AND CONSIDERATION

We classified the library space into four areas, which are "Group Learning", "Presentation and Exhibition", "Computer" and "Reading and Individual Learning". We summarized the results and consideration of each area as follows.

1. Group Learning: Group learning area was highly used especially during the exam period. This area consists of "active learning zone", "communication area" and "group learning room" to be used for different activities. At active learning zone, students could move the desk, the chair and the white board freely for adopting to their group sizes and working type, therefore various arrangement and combination were seen. Group learning room is a quiet space with surrounded glass walls. However the group learning room is more spacious and comfortable than the one at the previous library, we found less students to use it because it might be more troublesome to use it for requirement the permission at a reception desk.

2. Presentation and Exhibition: Presentation and exhibition area was for students' and teachers' presentation and exhibition of their works, but students have not used so often yet. Especially "Book Tree" at the first floor seems to be best place for exhibition because people can see easily from outside, however it has been not use so much and no display at that time.

3. Computer: Computer area, especially the counter desk was used well because it might be wider than the computer desk at the center of the room. We also found the group seat with the big screen PC was used very well. During the exam period, we saw many students' groups were using PC desk for personal use, so we suggest they should provide more group working spaces.

4. Reading and Individual Learning: Reading and individual learning area have wide counter desk. The normal width of library reading desk is 800-1000mm, however, the width of the counter desk is 1500mm. Through the questionnaire survey, many students tend to satisfy this wider counter desk. However more students tend to use the desk for four persons personally by spreading their belongings on the desk. It prevent other students from using this desk spaces to cause the shortage of desk spaces especially during exam period.

SUGGESTION

Through this study, we suggest the followings.
1. Improvement suggestion in the Chiba University library
1) Separation of the personal PC desk and the group PC desk
2) Increasing the group seat with the big screen PC
3) Display and announce the seminar at the time without the display of the student
2. Planning of university library and learning commons
1) Widening reading seat width per person
2) Making the space not to limit movement
3) Making zoning clear

CONCLUSION

Through this study to investigate new Chiba University library, we could compare the previous library and the new library, we found the use of spaces at the new library. We would like to continue the investigation to clarify more detailed problem and make suggestion to improve the library.

URBAN PLANNING AND DESIGN IN EDUCATIONAL CONTEXTS

Chair: Jesús Miguel Muñoz

A study on the classroom design and planning of international schools

Juri Yamada & Kaname Yanagisawa
Chiba University, Japan

BACKGROUND AND PURPOSE

The classroom design and planning of Japanese school tend to be very uniform because of accommodating same teaching and learning style. However such traditional Japanese classroom should be changed for corresponding to recent educational revolution as internationalization and diversification in Japanese education. On the other hand, many international schools in Japan tend to have various unique learning spaces including classroom for different needs and learning styles of children with many nationalities. This study aims to clarify the feature of classroom design and planning, the relationship between learning style and spaces in international schools. It also helps making guideline for improving Japanese classroom design and planning.

METHODS

We surveyed on the following international schools in Japan and other countries.
1. St. Mary's International school, Tokyo, Japan
2. Okinawa Amicus International, Okinawa, Japan
3. International School of Kuala Lumpur, Kuala Lumpur, Malaysia
4. United World Collage of South East Asia, Singapore

The research methods are follows, 1) Interview to teachers and directors, 2) Survey on facilities and spaces including drawing typical classrooms' furniture layout and displays, 3) Observation on children's behavior and making behavior maps with plotting children (only at St. Mary's International school).

RESULTS AND CONSIDERATIONS

We found several important features in classroom design and planning through the research on the international schools as follows.
<Kindergarten and lower grade of elementary school>

1. Classroom Design: Classrooms for lower grader tend to be designed as home-like environment with unique and enjoyable interior decoration such as various pictures and seasonal ornaments, and also with cozy places such as carpeted corner, sofa and handmade furniture. We found such lower grade classroom design was based on the idea for fostering children's affection and self-belonging to their classroom and school. It also helps them to grow motivation for learning.

2. Classroom Utilization: Concerning about the use of classroom in learning, we found more various learning style in these classroom even during same class hour such as "chair

sitting style" and "floor sitting style". For example the children sat down on the floor in front during teacher's lecture or guidance, and went back to their desk to sit on their chairs during group or individual works, or observation and experimental activities. We found such changes in learning style were very effective especially for younger children to keep concentration and motivation in learning. These learning styles tend to influence on the classroom design and layout.

1. Classroom Design: Upper grade classrooms tend to be designed more simple but functional with various learning spaces and equipment. More innovative ICT equipment in their classrooms was used for their effective learning. Some classrooms had reading area for helping children to foster their attachment to reading. We found such classroom design was based on the idea for supporting children's independent learning.

2. Classroom Utilization: Concerning about the use of classroom in learning, we found various learning style also in upper grader classroom. However they used less "floor sitting style" and "formation change" than lower grade classroom. We found upper grade children often changed their learning style but keeping their position. They also used library and other self-learning spaces more than lower grader.

1. Classroom Design: Most of middle schools are introduced "department system" which children move to subject oriented classrooms. So the feature of classroom design and planning tend to be depend on subject, teaching style and teacher's preference. We found each subject classroom using various desks and other furniture for adapting to appropriate learning and teaching style in some schools. For example the International School of Kuala Lumpur used different shaped desks in each subject classroom. In middle school, classroom should be designed for adequate educational environment corresponding to subject and teaching method.

2. Classroom Utilization: Concerning about the use of classroom in learning, we found children keeping more "chair sitting" during class and few transforming the sitting style to other style. However we also found they often used other learning spaces including library according to the type of work and group. They used more professional learning equipment and spaces than elementary school children.

DISCUSSION

International schools tend to change their classroom design and planning according to grade and subject. The classrooms tend to have various learning spaces for diversified and flexible learning. Such classroom design and planning might improve children's motivation for self-learning, and also help to create comfortable and cozy classroom's environment.

How to promote multicultural urban planning and strategically prevent segregation? Case study in Helsinki, Urban Laboratory Course Autumn 2012

Helena Teräväinen
University of Helsinki, Finland

Finland has recently been experiencing a rapidly increasing level of ethnic, linguistic and cultural diversity, if not everywhere in the country, anyway in the Greater Helsinki Metropolitan area, in other words in South and mostly in the Capital City and its neighboring regions.

Todays urban planning problems in Finland are on the global level identical with the whole world: how to build up ecological living environments and sustainable traffic systems in the fiercely growing capital city area and at the same time prevent urban sprawl in neighboring regions. In the country is now relatively high unemployment but aging people and low birth numbers show us that the need for foreign workers, immigrants with their own culture certainly will increase. Today in the Helsinki region are living 1,33 million people and can 100 000 are foreign language speakers. According to the prognosis the amount of foreign natives will rise in the area in next years.

What kind of new skills and thinking do the next generation's town planners need – those who are studying now? They probably will face even more ruthless situations and problems what we can predict, both on local level as also globally.

THEORETICAL BACKGROUND

In Autumn 2012 we started a new course at Master's level (also for post-graduated) in Urban Planning at the Department of Architecture (in our School of Arts, Design and Architecture in Aalto University), which was aiming, more than previously to the future situation and strategic planning, the students having both research and planning tasks. The standpoint of the course was first human being and his biological and social needs and the course was to enlighten especially the political and cultural context and contemporary challenges of planning and design.

The idea of the course named "Urban Laboratory" is that successfully finishing the course the students will be able to search and analyze literature on human beings and their social and political relationships, drawing from humanities and social sciences. They also are able to address contemporary issues on cities and city regions as well as should be able to carry out small research projects and fieldwork. They also would be able to assess the relevance of different planning and design tasks in their political and cultural context and to communicate and work together in a multidisciplinary and international group.

The overall theme of the course in this first year was segregation, and the students were aiming at a strategic plan related to segregation. As a planning laboratory, this of course was also related to the built environment. The segregation was a theme where all the dimensions discussed so far come together.

RESEARCH & METHODS

The course was open also foreign students but in this first year only two of the 20 students came elsewhere than Finland. Students were working together in four groups and also individually.

After that the groups presented as a final task a strategic plan for addressing segregation in the Helsinki Metropolitan Area (or Lahti Region) targeting a chosen area. In the plan they should include a report based on literature and own research, including SWOT analysis, vision of the future of the area in 30 years and path that leads to this vision. In the presentation they should also show the time dimension.

One group (number 2) was dealing with Lahti: Strategies For Decreasing Demographic Segregation in the Lahti Region. Others had chosen their case studies in Helsinki Region and were also presenting the segregation strategy for the capital city area. Group 1 was dealing the new metro line and its different possible impacts: "Western Metro Bringing Diversity to Espoo, Strategic plan on segregation". Group 3 was dealing with a suburb with

bad reputation and its future possibilities after the new railroad from Helsinki Centre to the Airport has been built: "Kannelmäki Strategic Plan on Segregation". Group 4 was studying two different but side-by-side situated neighborhoods in northern Helsinki: "Counteracting Segregation: Strategic plan for the neighborhoods of Tapulikaupunki and Puistola".

CONCLUSIONS

This year I myself have had the focus on the multicultural city and I had a two months field research in New York, which seems to be the most multicultural city in the world. That as background and also because I was one of the teachers in the course my aim is in this presentation and paper to analytically study (content analysis) the reports the student are producing (the group seminar is already done but individual reports are coming later this month) is already in the first course Urban Laboratory. In the analysis I'm pointing out which is the Helsinki region's situation (according segregation and diversity) and what issues the students managed to get revealed and how does this differentiate (if it does) from the official and public atmosphere. This will have impact to the course but also to the future urban planning in Finland in general.

The relationship between nursery schoolyard and playing behavior

Hiromi Nakagawa & Kaname Yanagisawa
Chiba University, Japan

BACKGROUND AND PURPOSE

Since 1995, the demand for nursery school has been grown rapidly because of increasing the number of working mother influenced by the recession in Japan. There are not enough nursery schools especially in urban area, and also problem in the lack of activity space for children because of the space limitation in urban area. However the activity space especially in outdoor schoolyard is very important for children. We aim to clarify the relationship between the schoolyard and children's free play in nursery school. We analyzed the features of each area in the schoolyard and also the playing behavior of children observed. We would like to propose the guideline for planning the schoolyard in nursery schools.

RESEARCH METHODS

We conducted research on the schoolyard of Asaka Doronko nursery school for 3 days. There are various activity areas such as hill, hollow for playing in water and mud, trees for climbing, open space with grass, earthen pipe for hiding and climbing, hut for goats, slope for sliding and buried tires. We observed the various children's behaviors in the schoolyard. We recorded the place, the time, the number of group and the age of each child into the checking sheet as well as taking pictures. We also interviewed to the teachers and the designer of the nursery school.

FINDINGS AND CONSIDERATIONS

We analyzed the findings as three viewpoints that are the two types of play, the play lasting for long time and the play happened many times. We also focused on the age difference in these analyses.

1.The two types of play

We categorized the observed children's plays into two types, moving play and static play.
Moving play: play moving around at different places such as chasing and train game.
Static play: play at same place such as house play with mud and water.

We found that few static plays happened at the places many children always were passing. Therefore activity area for static plays should be separated from the line of children's flow.

2. The play lasting for long time more than 7 minutes

1) 1~3 year old children

They tend to play incorporated in nature such as climbing up trees, observing and interacting with goats, and playing with mud and water for a long time. Children like to enjoy more natural settings than artificial settings. They might sense season by the change of weather and temperature through the mud and water play. Therefore introducing natural settings into schoolyard should be effective and attractive for younger children.

2) 4~5 years old children

They tend to play with a small group near the earthenware pipes and the manhole, and run around at the hollow in the ground for a long time. They tend to make their own territory at that time. We found they could play more actively if the activity area was more independent from other area because they didn't have to pay attention to younger children.

3. The play happened many times

1) 1~3 year old children

They often play near the building and on the artificial mountain. In both places, the teachers can supervise children easily. The teachers must keep on eyes on 1~2 year old children in almost time. So they may encourage the children to play in these places with easy supervision. Younger children tend to play near their homerooms in the building because it is easier for them to come back if they get tired.

2) 4~5 years old children

They often play at the hollow in the ground and near the manhole. They also tend to play in these places for longer time. Older children like to play actively with friends at the independent activity area many times and also for a long time.

SUGGESTION

We would like to suggest followings in designing nursery schoolyards.

1. Separating the line of children's flow from the secured activity area

We should prevent moving children from interrupting static play area. So separating the line of children's flow from the secured activity area enables them to concentrate in their play.

2. Moderate separation and connection

We should make moderate-defined boundary for activity area by level changing or plants for securing children to play with ball and chasing. Moderate-defined boundary can make children's playgroup to communicate with other children playing near them. Connecting different activity areas should encourage children to change their interests and motivations to various plays.

3. Incorporated nature into designing schoolyard

Nature is more important and effective for children's play than artificial settings. Children can improve the ability to discover and create their own play through nature.

4. Designing places suitable for different age group

Children tend to have own preference in playing according to age and growth. Younger children should play in safer and closer place near homerooms. Older children need the independent place they can play actively.

We should provide different types of places for children to play. We should design

Outdoor as learning environment for children at a primary school of Bangladesh

Matluba Khan & M Zakiul Islam
Bangladesh University of Engineering and Technology – BUET, Bangladesh

Schools are designed generally focusing the classrooms guided by the idea "learning occurs only in classroom". Usually the outdoor environment is ignored. In many cases, specially in Dhaka city, residences are converted into schools without any concern for the necessity of sufficient outdoor spaces. But In the rural areas primary schools have a large field in front of the main school building providing the children with some scope of roaming around and play. But it is a matter of regret that these spaces often are unutilized or underutilized. In most cases, large open spaces dedicated to physical activities do not have a proportional number of users and intensity of use in relation to the distribution of children.

However research completed by the neuro-scientists around the world is proving the importance of school design or the built environment on the learning experience (Eberherd 2009). The students learn better while the lesson incorporates the outdoor environment (Lieberman and Hoody 1998, Malone and Tranter 2002, Tai, Haque, et al. 2006). A survey was carried out by this author in 2010 on 30 students in 3 different schools of Dhaka reveals that in general children mostly like to be in the natural environment. Literature shows that children are fond of –places with sufficient variety in the environment, and with natural elements such as grass, trees, gardens and parks (Broda 2007). Children benefit from interaction with nature in all aspects of their development: physical, mental, moral, and emotional (Tai, L et al, 2006) and one of the central tenants of the Montessori philosophy is the connection with the natural world of the outdoors, which philosophy is practiced all over the world including India.

Quality-Based Curriculum Implementation Programme by the National Curriculum and Textbook Board (NCTB) aims at making the students learning processes easy, delightful and attractive through the practice of multiple activities in the classrooms, but the classrooms in the primary schools are not designed for holding these multiple activities. Different programmes are taken by the Government to make children's learning process delightful and interesting. Outdoor environment has attracted the attention of the researchers of developed societies for its contribution to improved cognitive competency and as such has been proven its potential as a solution (Environment-Based Education: Creating High Performance Schools and Students, 2000; Place-based education and student achievement, 2011). Research on outdoor environment for children are increasing day by day across the world but very few studies are carried out in the context of Bangladesh. With this background this study aims to explore the role of outdoor environment of school in students' learning. The main objective was to investigate possibilities of outdoor as learning environment for primary school children in Bangladesh. Importance of outdoor in the learning process will be known which in turn can guide future design of primary school of Bangladesh.

This study has been conducted through the design and construction of an outdoor class in a primary school of Bangladesh. It has been conducted over thirty children from class IV

of that school. Data collection occurred through multiple methods including achievement test of children, focus group discussion and in-depth interview with children and teacher. Data analysis has been conducted at various levels. Statistical analysis was done using SPSS Statistics 17.0 (released August 23, 2008) and Microsoft Excel 2007.

The findings show a significant difference between the achievements of children after they are taught in their indoor classroom and outdoor class. The difference is most significant at knowledge, analysis and application levels within cognitive domain of learning. Besides, the children showed increased engagement, motivation and enthusiasm about learning in outdoor environment of their school.

REFERENCES

Broda, H. (2007). Schoolyard-Enhanced Learning: Using the Outdoors as an Instructional Tool, K–8. Stenhouse Publishers.

Eberherd, V. P. (2009). Brain Landscape: The Co-existence of Neuroscience and Architecture. Environment-Based Education: Creating High Performance Schools and Students. (2000). Washington, D.C: The National Environmental Education & Training Foundation.

Lieberman, G. A., & Hoody, L. (1998). Closing the Achievement Gap: Using the Environment as an Integrating Context for Learning. San Diego, Calif. State Education and Environment Roundtable.

Place-based education and student achievement. (2006). Retrieved 4 22, 2012, from Place-based Education Evaluation Collaborative: http://www.peecworks.org/PEEC/PEEC_Research/

Tai, L., Haque, M. T., McLellan, G. K., & Knight, E. J. (2006). Designing Outdoor Environments for Children (First ed.). the United States of America: McGraw-Hill.

KEYWORDS

Children, outdoor environment, learning process, school design, Bangladesh

PERCEPTION OF URBAN SPACE AND PLACE ATTACHMENT

Chair: Derya Oktay

Personality and behaviour inferences based in the place of residence

Jose Palma Oliveira, University of Lisbon, Portugal
Fátima Bernardo, University of Evora, Portugal

Drawing all kind of personality inferences from where the people live is something that we usually do every day. However, one considers that those inferences are not related with the nature of the constructed environment but more with the nature of the "postulated" social group that occupies it (theory of social identity). However due to the connection of the human groups with a specific "locale" and the consequences of the anthropological rule "of the first to arrive" (Flannery & Marcus, 2012), one could postulate that the group became the space and viceversa. That reflection is absent in the social studies arena, even in excellent revisions (Yuki &Brewer, 2010).

Of course that this space-group concept has innumerous theoretical and practical consequences, namely that a local identity and evaluation cannot be perceived as unique and independent, but instead is always inscribed in a social net of identifications and evaluations (like a web of social identities). This is in a clear contrast with the current work in local identity that is as ''a substructure of the self-identity of the person consisting of, broadly conceived, cognition about the physical world in which the individual lives'' (Proshansky, Fabian &Kaminoff, 1983, p. 59).

We will briefly revise a serie of studies that we have been doing in our lab (Bernardo, 2012) that shows that neighborhoods can be the trigger of a series of phenomena (i.e., discrimination, entetitivity, etc.) that are normaly associated to social groups and not spatial ones.

We will focus our presentation from two large field studies. The first one was done in Lisbon to compare 6 neighborhoods (80 subjects each). The second one was done in Ponta Delgada (Azores) where we compare subjects from urban and urban-rural "freguesias" (300 subjects).

All of these subjects where asked about their neighborhoods and the ones around. They evaluate the perceived entitivity, local and social identity, and perceived homogeneity of the different groups.

The results point that people can differentiate their own and others urban spaces in terms of their "groupness", and that is correlated with their own and the others local identity and the attributes that they ascribed to the others.

This series of studies show that local identities should be understood as a social ecology of identities that could be better analyzed as social identity (Tajfel& Turner, 1998)

Place-space and place-making. An integrative agenda to investigate place-identity

Eman El Nachar, Beirut Arab University, Libano
Aleya Abdel-Hadi, Modern Sciences and Art University, Egypt

This research adopts the view that holistic philosophy is the core of sustainability. It is concerned with the issue of studying characteristics of the built-environments in their relation to aspects of place-identity. In growing volume of literature, place-making in buildings and spaces is addressed as a challenging design issue in most of our cities. From culture perspectives, while spaces are viewed to represent the physical container of human activities, places are deduced to symbolize a way of life collectively shared by a group of people in specific time (Rapoport, 1977, 1983). Nevertheless, some pioneering attempts describe place as an experiential entity that integrates human activities and forms of buil-dings. Canter (1977) and Norberg-Schulz (2007) observed that place could be perceived as a socio-physical unit of environmental experience from the inter-relation between human actions and the physical attributes. This explains how the daily experience of cities has profound impacts on identity feelings and although some of these experiences enhance feelings of proud of local culture and identity, others bring about frustrations and disconnectedness with place and time. As for the built environment, it signifies an iconic object for the identity of any place inhabited by a group of people; hence, the problem of placelessness is usually created by absence of cultural iconic items in the built environment (Salama, 2007).

The literature concerning place-making issues, witnessed remarkable research endeavour in the field of design; however, it was mostly devoted to discuss the topic from aesthetic perspectives. In most cases discussions focus on the problem of imported western design and their fit or non-fit in non-western cities (Nasar, 1998, Al-Kodmani et al., 2012.). Meanwhile the issue of incorporating vernacular design elements to preserve cultural identity is 'tackled'… (Salama, A. 2002, Salama, A. 2007). In most cases, instinctive approaches together with descriptive and/or interpretive criticism are followed to analyse the existing conflicts between local versus global designs and vernacular versus international styles. The outcomes of research call for the urgent need to support cultural values in design, while advocating issues of privacy, mix use, territoriality and personalisation in the study of place-identity.

Contesting with instinctive approaches that focus on aesthetic qualities only, this research develops an integrative agenda to examine characteristics of spaces and buildings from social, psychological and cultural perspectives. It adopts a theoretical method to review approaches and theories explaining the concept of place, place- making and processes relevant to place-identity. Theoretical analysis to the mentioned issues led to the development of a conceptual model in which characteristics of buildings and spaces together with aspects of place-identity are perceived holistically. Finally, the study draws a framework for methods, tools and integrative procedures to examine aspects of the built-environment in their relevance to place-identity.

REFERENCES

AlKodmany, Kh. et al. (2012). Skyscrapers And Placemaking: Supporting Local Culture And Identity, IJAR- International Journal for Architecture and Research

Nasar, J. (1998) The evaluation image of the city. London, UK: Sage Publications.

Norberg-Schulz, C. (2007) The Problem of Place In America. In M. Larice & E. Macdonald (Eds.), The Urban Design Reader, London, U.K.: Routledge, 125137.

Rapoport, A., (1983). Development, culture change and supportive design. Habitat International, 7(5), 249268.

Rapoport, A. (1997). Human Aspects of Urban Forms. Oxford, U.K.: Pergamon Press.

Salama, A. (2007). Mediterranean Visual Messages: The Conundrum of Identity, Isms, and Meaning in Contemporary Architectural Research, IJAR 1(1), 86104.

Salama, A. (2002). Contemporary Cairo Demystified: A critical Voice on Architecture and Urbanism. ARCHIS. Journal of Architecture. City, and visual Culture, Stitch Publications, Amsterdam, the Netherlands.

The barbican estate: Representation and attachment

Clara Weber
University of Surrey, UK

The Barbican Estate in the middle of the City of London is one of Britain's last Brutalist megastructures, an architectural and social experiment. The urban village with heterogeneity in building type, function, and complexity is architecturally marked by complex spatial sequences but homogenous appearance. By excluding motorized transport the Barbican revived the pedestrian's role as core to urban life, and supports random encounters. Barbican's costly flats have long been en vogue, leading the public to entitle it as "council estate for the rich". Despite its role in the history of architecture and urban planning, the Barbican provokes controversial reactions: ecstasy from the inside and rejection from the outside. The question is whether the Barbican's success is based in the actual qualities of the urban village, more than just its image.

To gain a better understanding of the success of the Barbican Estate, this study focuses on the understudied influence of its urban structure and physical characteristics on how inhabitants build attachment to the estate. Further, the influence of place identity on the attachment process is investigated. The research builds upon Scannell and Gifford's (2010) concept of attachment as a multidimensional model, in which physical facilitators are part, and place identity is interrelated. The place identity concept is further informed by Twigger-Ross and Uzzell's (1997) framework. The mixed-method approach will include qualitative walkthrough interviews to identify physical facilitators, and a secondary questionnaire survey allowing the validation of qualitative findings and testing the influence of place identity on the attachment process. Further, the influence of housing type, residents' age, and experience with architecture and urban planning on place attachment will be investigated. The research results should shed light onto success parameters of urbanity and can inform building and urban planning.

The fear to the city: An exploratory analysis

Pablo Páramo
Pilot University od Colombia – National Pedagogical University

SUMMARY
The city has been studied by the urban researchers as an important milieu of social interaction (Bawa-Cavia 2011) and personal growth (Carr and Lynch, 1968). Also as a setting for learning from diversity (Sennett, 1996), the learning of rules of civility (Paramo and Raven 2009), and as a place of interchange of goods and information (Meier, 1972). However, this optimistic view is under threat.

Cultural diversity is now considered dangerous in many european countries, and going out to the street can represent to be exposed to a car accident, be a victim of an assault, or of a terrorist attack. Adding to the risk that any of these events occurs, there exist the discourse of terror that has been build by media (Varela, 2012), which contributes to increase the fear to the city. As stated by Bauman (2007), this situation creates a paradox if we consider that cities were built with walls and moats in order to be protected against dangers coming from outside; the city stopped being a shelter to become a dangerous place, to become a dangerous place.

This study adds to the discussions that are taking place around the reasons why there is fear in the city and what it is feared (Gutiérrez, 2005). In particular, explores some of the impact of fear on contemporary urban life, the way urban designers aim to reduce crime in public spaces, and how individuals conceptualize the fear to the city. To study the conceptual structure that people have about the most fearfully situations in the city, 50 participants identified the most common and most feared situations they face in their daily lifes. Using cards representing the most feaful situations people face in public places, 90 participantas were then asked to classify the situations in terms of the they thought experience fear in the city, using The Multiple Sorting Procedure (Wilson, 1995).

The results reveal a conceptual structure based on the fear of be victim of a direct attack associated to the agents of fear and the city spatial conditions. From the findings, theoretical implications are discussed and recommendations are given for urban planning and management in order to recover the city spaces for public life.

REFERENCES

Bauman, Z (2007) Miedo líquido: la sociedad contemporánea y sus temores. Barcelona: Paidós.

Bawa-Cavia, A (2011). Sensing the Urban; Using Location-Based Social Network Data in Urban Analysis. PURBA Workshop at Pervasive.

Carr, S., y Lynch, K. (1968). "Where learning happens", pp. 1277-1291. Daedalus fall: 1277-1291.

Gutiérrez, O (2005) La ciudad y el miedo.VII Coloquio de Geografía Urbana. Universidad de Girona.

Meier, R. L. (1962) A communication theory of urban growth. The Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University, The M. I. T. Press

Páramo, P y Cuervo, M (2009) La experiencia en el espacio público de Bogotá durante el siglo XX. Bogotá: Ediciones Universidad Pedagógica Nacional.

Sennett, R. (1996). El declive del hombre público. Barcelona: Ed. Península.

Varela, S (2012). Los medios y el miedo: Ponencia presentada en el congreso de IAPS. Galsgow.

Wilson, M (1997). Structuring Qualitative Data: Multidimensional Scalogram Analysis. En: G.M.Breakwell, S. Hammond and C. Fife-Schaw: Research Methods in Psychology. London: SAGE

KEYWORDS

Fear, MST, Quality of Urban Life

ENGAGING COMMUNITY IN RISK AND VULNERABILITY MANAGEMENT

Chair: Tony Craig

Opportunities for security governance in the face of local safety crisis

Abdul Samad Hadi, Abdul Hadi Harman Shah, Shaharudin Idrus, & Ahmad Fariz Mohamed
LESTARI – UKM, Malaysia

The rapid growth experienced by Malaysia's cities in recent years have had the negative side effect of increased neighborhood crime and sense of insecurity among the residents. Social problems are also on the rise and increasingly more places are seen as being unsafe. Schools, the workplace, streets and housing areas are faced with increasing crime. Implicit in the desire for safety is the admission that the positive role of cities in generating development and spread effects has produced side effects to the cities that may negate the benefits in the first place. These are consequences of pursuing growth and development per se that lack of equity. Problems that resulted from uneven spread of economic benefits, and exacerbated by difficulties of access to facilities, amenities and basic needs to all urbanites and rural inhabitants. There is also a rising consciousness of personal and family member safety especially with respect to violent crimes that include snatch theft, carjacking and break ins. The general awareness towards crime has also increased in the last two decades through print and alternative media reports. While this has increased perceived threat, real threat has also increased. This situation has resulted in the seige mentality experienced by residents, visualized by gates and metal-grilled houses. A fear of the surroundings that lead to restlessness.

While there is a difference between the perception of being safe in a place as opposed to the actual safeness of a place, the livability of a place is dependent on both. A person's sense of being safe will determine whether he or she will make the city his or her place of residence. One need not to have been physically harmed or socially excluded to perceive the place as being unsafe, or unwelcoming. Planning for safety partly is an exercise in influencing the perception, as well as actual safety. Physical design as well as governance strategies are needed to improve perception and actuality. The traditional response path has usually been from the individual, through the community or personally to the authorities.

The traditional response have also been technological and increased recess. CCTVs as well as gated and guarded communities are on the rise that, although having the impact of reduced crime, also resulted in other social problems including that of social exclusion. The authorities, the police in particular, have also responded well, resulting in a reported decline in crime. However, the crisis have also provided opportunities for increased police-community cooperation, together with local government agencies ensuring increased vigilance. Safe neighborhoods need to develop a sense of belon-

ging and place, avoiding the feeling of being marginalized for any segment of the community. Safe neighborhoods also require good and effective governance to carry out all the necessary functions expected. Being the focal points for the country socio-economic development the urban centres have to be managed efficiently to bring out the essence of the country's strength and competitiveness while ensuring local security.

This paper presents findings from a participation observation study into the increased cooperation between local authorities and the communities as well as within the communities themselves. With the advent of the livable city concept, a re-evaluation of what makes a safe city is again brought to the fore. Using Jane Jacobs's concept of the neighborhood ballet that increased the sense of identity and security, the paper analyzed the workings of the neighborhood watch and other community activities in the Seremban area in Malaysia that provided an alternate bottom up solution to traditional top down authoritative control.

KEYWORDS
Neighborhood crime, siege mentality, neighborhood governance, safe city, urban crime prevention.

Achieving safety through governing risks? Urban crime prevention strategies in Sweden

Rolf Lidskog
Örebro University, Sweden

Internationally, there is a general trend towards risk management. In almost all fields of social life, actors are pondering how to organize and navigate in face of risk and unsafety, not least when it comes to crime and safety issues. One implication of this trend is that urban spaces are increasingly being assessed from a risk perspective, and community safety is being made as an important goal of crime prevention work. The main policy ideas and instruments associated with urban crime prevention and community safety measures have spread widely. Cities on all continents have developed programmes for reducing crime and achieving safety and scholars argue that crime control policy has now taken a preventive turn, implying an emphasis on safety issues and fear reduction.

This paper analyzes the Swedish crime prevention policy, in particular to what extent it considers that this policy should mainly be implemented in urban settings. As a country with a well-developed welfare system and a long tradition of social crime prevention, Sweden makes a good subject for the exploration of the extent to which the community safety paradigm has influenced crime prevention policy and the extent to which this policy is regarded as applicable to urban settings. This is done by investigating the national crime prevention programme and the governmental commission reports that preceded it.

The point of departure is the understanding that how a problem is framed is performative, i.e., the framing does something in and to the world. Launching national policies, formulating preventive programme, and developing strategies for preventing crime and reducing fear have profound implications for the shaping of cities. By configuring crime and unsafety as risks and developing strategies for managing them, authorities manifest a belief that public safety can be improved.

The analysis finds that the chosen strategies for preventing crime and reducing fear have profound implications for the shaping of cities. By way of conclusion, it is found that configuring crime and unsafety as risks and by developing strategies for managing them, this policy may ultimately exacerbate public fear, perceived insecurity, and suspicion of strangers.

KEYWORDS
Crime prevention, community safety, preventive turn, policy convergence, Sweden

Orkcemp: Exploring ideas about community in Orkney

Carlos Galán-Díaz & Liz Dinnie
The James Hutton Institute, UK

What does it mean to you to be part of a local community? Are you part of your local community? These were just some of the questions we asked as part of OrkCEmP (Orkney Community Energy Monitoring Project), a project which is exploring residents' perceptions of community engagement in a Scottish rural island community. OrkCEmP follows an energy monitoring project being run by Orkney Housing Association (OHAL) to encourage its tenants to reduce their energy consumption and to create a community garden to 'grow green'. These two objectives, reducing energy and growing green, are used as a way to explore how institutions (OHAL) manage and facilitate change, and how this may impact on community engagement and other social objectives.

OrkCEmP recognises that social aspects of community life, such as empowerment, are multi-scalar, applying at individual, community, local, regional and national levels. It is also informed by the recognition that the practices and institutions of governance (the ways in which actors, including governments, other public bodies, private sector and civil society come together to solve societal problems or create opportunities) are also scalar, and influence the nature and extent of empowerment and transitions towards sustainability.

OrkCEmP's objectives are a) To contribute to understandings of how local communities can be empowered or can empower themselves; b) To follow the processes used to engage residents in the Climate Challenge Fund (CCF) project "Reducing Energy Growing Green", run by OHAL, both during and after funding; c) To provide OHAL with the know-how to perform a Carbon (CO_2) Footprint assessment of a selection of its housing residents so that actual behaviour change can be monitored over time (minimum 2 years) and feedback given to residents; d) To explore the capacity of OHAL to manage and facilitate change, and consider the impact that new and existing institutions may have on rural community development, capacity and resilience.

OrkCEmP uses a mixed-methods approach to gather and analyse data, for example representatives of community interests and OHAL staff have been interviewed using semi-structured qualitative interviews, OHAL residents have been given an information pack which includes a Carbon Footprint Calculator and a questionnaire that explores a wide range of issues such as perceptions of renewable energy, frequency of environment-related behaviours and lifestyle, subjective well-being, perceptions of community well-being, etcetera. Participant observation by both researchers whilst visiting Orkney contributes to further understanding of the difficulties and attractions of life in a rural island community. To date OrkCEmP has engaged 100 households, 7 community representatives and 2 OHAL staff spread over the Orkney Isles.

This paper will discuss initial results of how 11 significant actors in Orkney perceive and deal with community life, and the relationship of community engagement to empowerment. OrkCEmP has made evident that within the Orcadian context that: a) Involvement in community activities is seen by residents as occurring throughout the life course, and which contributes to the quality of the social fabric. Moreover, being part of an active community allows people to contribute and then be supported whilst not being active themselves; b) Community life requires personal investments, mainly time, which is seen as indispensable. Views around this issue also showed that communities that are long-lasting are those where this rather large investment of members' time is seen as worthwhile irrespective of the outcomes.

These two indicative findings are discussed in terms of the role played by institutions in facilitating engagement and change in community life. For example, it suggests that communities ought to be supported within a long-term community life horizon that enables community activities 'now' and does not expect immediate results. Implications and recommendations for policy making are proposed.

Psychological costs of poverty

María Montero-López Lena, National Autonomous University of Mexico[1], Mexico
Gary W. Evans, Cornell University, USA

INTRODUCTION

Mankind arrived to XXI century with 1000 million people living in poverty conditions. (UN, 2002). In Mexico, despite government programs to combat poverty, the number of equity poor exceeds 48 million (CONEVAL, 2012). Within this population, women living in extreme poverty represent 60%. (Instituto Nacional de la Mujer, 2010).

Despite the evident impact that the impoverished conditions generate on the functioning of the human being, few works has been done systematically, from the psychological perspective, let alone from an environmental conception.

THEORETICAL BACKGROUND

In order to document some of the psychological costs of poverty particularly in women and children, we held a research program which conceptual foundation was the social ecological approach (Montero & Evans, 2010).

Consistent with the social ecological approach, poverty is supposed as a cumulative exposure to multiple physical and psychosocial stressors (Evans & English, 2002). Among the defining features of this approach are including: The multidimensional conceptualization of the phenomena that it study. The emphasis on the transactions between the individual and the context in which is develops. The multidisciplinary linkage allows the implementation of a multitrait-multimethod investigation strategy. Among the paradigmatic theories of the referred approach it is remarked the ecological theory of human development (Bronfenbrenner, 1977). This theory allows the conceptualization of the development as subsumed niches in systems that regards from face to face interaction to macroeconomic transactions that occur in a given time and space. Within this context, poverty is a complex phenomenon that involves differential impacts from micro to macro level and it has transformed over time.

METHODS

To document possible differences and similarities in the response of mothers and children living in poverty and non-poverty situations regarding to physical stressors, socio-emotional and physiological, we conducted a research program consistent with a multitrait-multimethod methodology, obtaining direct measures (physical and physiological) in combination with indirect records (questionnaires and interviews).

Household interviews were conducted with 174 mother-child dyads. Among the variables considered are included: poverty level (six indicators), environmental noise, substandard housing density, frequency of loneliness in both mothers and children, depression, perceived stress, self-control, stressful life events, heart rate in children and tolerance to frustration.

RESULTS

We documented some of the costs that poverty has in the psycho-physiological functioning of those that lives in it. Considering the physiological variables, both poverty and non-poverty children had similar tendencies in the relationship diastole-systole. However, considering the stressful life events there is a tendency in which in poverty people experience more catastrophic situations than in non-poverty situations. In the same way, there was detected a significant difference in the environmental conditions in which both groups are developed, evidencing more noise stimulation and density in those that lives in impoverishment. Also it was detected differences in the averages between both groups considering the psychological variables (depression, stress, self-control). Finally it was interesting to find a significant disparity in the perception of the loneliness experience that mothers perceive of their children and the ones that children have reported directly.

CONCLUSIONS

The conceptualization of poverty, as a state of imbalance resultant of exposure to the accumulation of multiple stressors offers advantages both heuristic and practical instrumentation. In the first case, the generation of original knowledge by combining physical, psychological and social variables allows the derivation of explanatory models more attached to reality and more likely to structure effective community intervention proposals. Regarding the practical implementation, considering variables in multiples levels, is potentiated the effectiveness of social interventions. In the future, the challenge is to solve is the identification of crucial variables that favor building explanatory and predictive models, considering the social context and the culture in which this problem arises. It will be noted that from the evidence found it has been developed an intervention program that seeks to improve the socio-emotional resources of mothers in poverty in order to mitigate the adverse impacts of this social problem.

REFERENCES

Bronfenbrenner, U. (1977). Toward an Experimental Ecology of Human Development. *American Psychologist*, 32 (7), 513-530.

Consejo Nacional de Evaluación de la Política de Desarrollo Social. (2012). Informe de Evaluación de la Política de Desarrollo Social 2012. Retrieved from: http://www.coneval.gob.mx/cmsconeval/rw/pages/medicion/index.es.do

Evans, G. W. & English, K. (2002). The environment of poverty: Multiple stressor exposure, psychophysiological stress, and socioemotional adjustment. *Child Development*, 73, 1238-1248.

Instituto Nacional de las Mujeres. 2010. Pobreza y género. Una aproximación a la forma diferencial en que afecta la pobreza a mujeres y hombres en Mexico, 2010. Retrieved from: http://cedoc.inmujeres.gob.mx/documentos_download/101180.pdf

Montero M. & Evans, W. G., 2010. Perspectiva ecológica social, una opción heurística para el estudio de la pobreza. In: M. Montero & D. Mayer (Eds.) 2010. Ecología social de la pobreza: Impactos psicosociales, desafíos multidisciplinarios. Mexico: UNAM

ONU / CEPAL, (2002). Panorama Social de América Latina (2001–2002) Síntesis. *Perfiles Educativos,* (24), 95, 76 -97

KEY WORDS
Poverty, social ecology, stress, noise, density

[1] This research was supported by UNAM-DGAPA, PAPIIT IN-301311-3, "Optimización de recursos socio-emocionales de madres en pobreza".

Community development model of Kedung Cowek subdistrict as coastal community based on subdisstrict profile as social capital data

Akhmad Fauzie
Hag Tuah Universty, Indonesia

This study aims to design an integrated community development model that is based on social capital data in Kedung Cowek Subdistrict community. Kedung Cowek Subdistrict is one of the coastal area in Surabaya Municipality. The concept and measurement tool for social capital used refers to the World Bank's concept of social capital and the SOCAT (Social Capital Assessment Tool). This concept and measurement tool was used by Badan Pemberdayaan Masyarakat dan Keluarga Berencana (BAPEMAS-KB) Surabaya Municipality to identify subdistrict profiles that include: Subdistrict Potential, Subdistrict Type and Subdistrict Development Degree. The research data is taken from Kedung Cowek Subdistrict's Profile 2009. The research data also includes in-depth interviews. Based on Subdistrict Potential Data that include: natural resource potential, human resource potential, institutional potential and tools and infrastructure potential, Kedung Cowek Subdistrict is a subdistrict with low potential. Based on the analysis of subdistrict type, Kedung Cowek Subdistrict has the potential to develop and become a subdistrict with middle/big industrial potential. Based on the analysis of subdistrict development degree, Kedung Cowek Subdistrivct is Kelurahan Swadaya Mula-Madya. It means that Kedung Cowek Subdistrict is not able yet to manage the resources owned. The basic problems for Kedung Cowek Subdistrict are education, health and the economy. This condition will threaten the natural resources potential of the Kedung Cowek Subdistrict. The community development model that will be suggested focuses on people centered development with a focus on entrepreneurship in the area of seashell manufacture, because Kedung Cowek Subdistrict has the necessary raw material and supporting social capital.

KEYWORDS
community development, social capital, Kedung Cowek Subdistrict

URBAN PLANNING: CULTURE AND REGULATIONS

Chair: Paula Castro

Urban-rural interface: Living environments in a changing world

Ronit Davidovich-Marton
DMR Planning and Development, Israel

For some time now rapid urbanization has emerged as a global phenomenon – 2007 marked a zenith with the first time more than 50% of the world's population was urban. There is no doubting rapid urbanization is prolific, but it is most certainly an ambiguous and unclear process. Although more and more of the world's population is urban and many cities are becoming 'mega-cities', nonetheless, rapid urbanization is a primary cause for significant change and variety to cities and countries.

Urbanization continues to expand, yet the trend is changing –especially in the Developed World. Smaller urban centers seem to also attract the allure of rural living which is causing urbanization trends to turn on their heads – especially amongst more wealthier populations (for instance in France, Belgium, Ireland, Poland and the United Kingdom). These urban-rural processes raise a number of questions regarding the qualities, characteristics and trends of urban and rural areas; what living spaces are created, and what living spaces are emerging? What are these living spaces offering to contemporary society? This is especially poignant in the shadow of contemporary society being characterized by longer life expectancies, the emergence of a new and energetic generation of "over 50's empty nesters", people marrying later and the emergence of entirely new definitions of family and community. This together with rapid technological advancements has fostered the rise of new glocal economies which encourage entrepreneurialism and establish new social and psychological spaces. These are elemental changes to physical space and to time that reflect new, current and unfamiliar patterns for human living.

With a backdrop of these changes – the meanings of city and countryside need to be revised and updated – especially when considering the following questions: what differentiates between the two; what is a 'good, smart' city; what is the current role of the countryside in today's reality; what is the responsibility of the city and what is the economic, social, environmental and moral responsibility of the countryside.

Today's reality requires a redefining of meanings so as to reflect evolution into the next phase of urban-rural development. The city and country alike seek out qualities that are meet the needs of contemporary society. Yet, although the interface between the two traditionally has been the setting for potential innovation, amd meetings, for establishing connections and growth - in recent years this point has seen conflicts, suburbanization, the blurring of boundaries between city and country and come to serve as the stage for clashes between differing interests.

The interfaces between urban and rural spaces is a specifically interesting and "energetic" area. Mainly because that is the space that can create the synergy between different and usually separated components and characteristics: urban and rural municipalities, open

and built areas, different communities, cultures etc. In order to create those "Opportunity Spaces", planning and development should work in a 'Post sustainability' methodology; Linking 'sustainability' to development in a way that enables and encourages the combination and not separation; partnership and interrelations and not differentiation ; The plan should express open and flow; so that synergy will cross local municipal and formal borders and create new "Smart regions" based on the potential – as a function of the meeting between the different environmental, social, economical energies of the place and the people and, not less important, using new innovative technologies for development, public space, public participation etc. This planning methodology is based on the added value and unique characteristics of each component, as the infrastructure for creation of hybrid smart opportunity spaces. Regions that share their growth energies (cultural, social, environmental, historical etc.). A new 'Growth Supply'. This is one of the greatest challenges for sustainability as a methodology of planning and growth. The article will present examples and projects to illustrate the concept.

The impact of planning regulations versus livelihood activities of residents in Tanzania and South Africa

Wolfgang Scholz, Sabine Baumgart, Susanna Godehart, Peter Robinson & Tanya Dayaram
TU Dortmund University, Germany

Our last research 2010-2012 revealed that the current planning regulations and standards in Tanzania and their implementation are not suitable to guide urban development, to respond effectively to urban growth, to regulate changing land uses, to support the growing livelihood needs of the residents, and most importantly to balance private individual and public interests. The bottlenecks are not only seen in unsuitable statutory planning regulations but also in the extremely limited capacity of the administration to enforce them. The combination of these two shortcomings leads to locally based decision making on the plot level and on a case by case decision executed by mostly poorly trained officers in the subwards, often in contradiction to public interests and legal regulations.

The current research (2013) focuses on the current practice of urban land use planning and implementation of plans including the challenges associated with and the potentials embedded in local decision making processes in rapidly urbanising poor economies using Tanzania as a paradigmatic case and South Africa as the comparison case. Based on findings from the first research phase it seeks to explore opportunities and limits of the principle of subsidarity in the urban land development and growing livelihood activities of the settlers. The focus lies on the search for critical land use planning issues, appropriate planning regulations and differentiated land use categories which can flexibly respond to the growing land use needs. Most importantly, the idea is to identify adequate institutions for land use development control and appropriate implementation mechanisms based on the principle of subsidiarity. The research will also analyse and corroborate findings in similar situations in Africa, especially in South Africa, to draw lessons of experience from a country with a similarly high urbanisation pressure, informal settlements, inadequate public administration and technical capacity, but with a more advanced physical planning system and more diversified experience in plan implementation.

In Tanzania, informal urban development is widely spread and the main factor of urban development. The planning authorities in Tanzania have developed instruments to deal with

informal settlements such as the Community Infrastructure Upgrading Programme (CIUP), the formal instrument of settlement regularisation (act no. 4 of 1999) aiming at plot registration, land use control and redevelopment and the Unplanned Settlement Programme (USP) to prepare land use plans according to the needs and capacities of the residents while respecting professional inputs and guidelines.

In South Africa, informal settlements have existed for more than 30 years. Since 1994 the government has implemented a massive housing programme of 3 million houses with the objective to eradicate them. This has not been achieved. To the contrary the number of households living in informal settlements has increase from 1.5 to 2 million. The problem was interpreted as a housing problem and was largely ignored by urban planning authorities who waited for the housing programme to relocate or formalise them. Only in recent years the planning authorities acknowledging them as a broader phenomenon of informal urbanisation and are looking for adequate instruments and planning approaches. Therefore, it is intended in the research project to draw conclusions from the Tanzanian approaches towards informal settlements and to analyse potentials for knowledge transfer to South Africa.

Both countries undertake a process of decentralisation of planning decisions towards the local level following the principle of subsidiarity. However, as the case of Dar es Salaam revealed, the transfer of planning decisions, here especially permits for building extensions and land use changes on the plot level, to the lowest level on the settlements themselves (subward level) faces problems due to knowledge gaps on the side of the executing officers since they are not well trained in planning issues and, more importantly, it can cause problems due to the personal involvement of the officers. Therefore, it is intended for both case study countries to explore the potentials, challenges, problems and limitations of the principle of subsidiarity for planning decision making processes.

In methodological terms this phase will be based on explorative and comparative approaches. It will apply qualitative and quantitative methods during the empirical part such as expert interviews, semi-structured interviews, expert workshops, quantitative and qualitative surveys in the settlements, land use inventories and data processing using Excel and GIS programmes.

Culture, behavior, and urban development in Cairo informal areas

Hassan El Mouelhi
Berlin Technical University, Germany

In Cairo, as in many other cities of the global south, informal settlements are the product of the process of rapid uncontrolled urbanization, accompanied by the failing of government's role in providing appropriate housing. Informal areas and urban poor residents of Cairo city have been largely ignored by former neoliberal state regime (Sims, 2011). Land mismanagement and urban planning issues affect daily life in Cairo, which about 70% of its inhabitants live in informal settlements. Self-help/built settlements were the only alternative by the rural-urban migrants to fulfill their need for housing after moving to Cairo aiming to improve their income.

THEORETICAL BACKGROUND

Studying the relation between informality, culture and built environment still needs a lot of efforts from researchers. Amos Rapoport has discussed the relation between human beings, their behaviors and their environments. Culture and space correlate in urban form (Rapoport, 1977). Lifestyle influences the organization of the city through whatever variables – race, ethnic, religion, class, income – so that the city is a collection of different groups, with different lifestyles reflecting different cultures and subcultures Urban informality turned to be a "new" way of life (Al Sayyad, 2004), he argued that informality is more close to liberalization concept, rather than formality.

Exploring relations between the informal settlements residents' culture, their behaviors and the process of informal urban development is the aim of this research. Studying cultural factors of informal settlements demands to critically assess and reflect the work of various academic disciplines. Cultural anthropology's main concern is to understand culture. The debate about the relevance of culture to urban development is grounded in several disciplines, mainly EBS and urban sociology. Hence, crossing through theories and methods of different interrelated disciplines, using their techniques could benefit the understanding of residents' culture in this research field.

The research argues that the emergence of an informal urban governance system that organizes their lives, forming non-written rules and power relations from the cultural factors; the residents with upper Egyptian traditional origins, carrying values and rural lifestyle formed the majority of the first settlers in many informal areas; adaptation to the city, including the relation to the government, to the formal Cairo society and their image in the media. Economy and profession within these areas also plays a role, in addition to religion. These factors interact together, with the initial urban characteristics of the area to shape the area's path of urban development. This paper is aiming to exploring relations between informal governance system and informal urban development of Cairo city based on a qualitative case study approach.

It is argued through the Egyptian discourse that those dwellers behave in their environment without any regulations or control. The research shows that the relations between the people and their behaviors in the built environment is controlled by "hidden rules" deduced from cultural factors, that develops through looking for their identity within the city, and through interacting with their physical environments. The relation of such areas to their urban context –including political and economic factors - in Cairo city might give an explanation. In addition, different generations of migrants from rural areas -upper Egypt- interact together with other dwellers from other Cairo districts in a certain mechanism, which influences their lifestyle.

METHODS

This study focuses on Upper Egyptians as a target group - carrying traditional rural background - in different Cairo informal settlements. So the main questions are: how do those people behave in their urban spaces? And why? How are cultural factors influencing their behaviors? How the urban development of their informal areas could be considered as the outcome of the interaction between those cultural factors and the physical urban characteristics of the areas?

Based on case study areas and grounded theory, a qualitative exploratory field work research was conducted, using mapping, photos analysis, observation, participatory observation in addition to semi-structured interviews covering different generations of residents and different genders.

RESULTS AND CONCLUSIONS:

This research concludes that Cultural factors are interrelated, and they influence the residents' lifestyle and the way they behave in their urban spaces. Cultural factors share in the urban development of the Cairo informal areas through interacting with the physical characteristics of the area. These interactions occur differently in different areas.

REFERENCES

Rapoport, A. (1977). Human Aspects of Urban form: Towards a Man, Environment to Urban Form and Design. Pergamon Press.

Rapoport, A. (1990). The Meaning of the Built Environment: A Nonverbal Communication Approach. Tucson: University of Arizona Press.

Sims, D. (2011) Understanding Cairo, a city out of control. American university in Cairo press: Cairo.

Al Sayyad, N. (2004) Urban informality as a "New" way of life. In Roy, A., Al Sayyad, N.: Urban Informality: Transnational Perspectives from the Middle East, Latin America, and South Asia (Transnational Perspectives on Space and Place). Lexington Books: Lanham and London.

KEYWORDS

Culture, behavior, urban informality, power relations, urban governance.

Making city, building citizenship. The Coruña's Civic Agreement. Dissemination and projection in its local active policies

Héctor M. Pose
University of A Coruña, Spain

INTRODUCTION

Decentralization and staging of a higher local self-government has often been valued by its political, institutional or administrative dimensions (Amendola, 2000; Ramírez y Aguilar, 2006). Ethical implications have also been valued (UCLG, 2007). Freedom of action and trust in the competences attributed to local authorities are presupposed in order to resolve from and by themselves their affairs or those conferred by laws, as the closer entities for administration of the citizenship issues. This decentralization does not necessarily mean democracy, even when it is interpreted that it is what gives a true meaning and large scope to the local autonomy (Caride, 2009).

From this perspective, the existence of elected representative institutions and / or different forms of social participation, through which citizens express their collective preferences and interests are some of the key components. They can be incorporated into the municipality management in order to optimize their democratic potential and their socio-political competence (Borja y Muxí, 2001). The City of Coruña's Civic Agreement is seen as something to be included, recognized and valued, as a dialogue tool among its political representatives, organizations and institutions (Carta de Atenas, 1942).

METHODOLOGY

An inter-university team from the Universities of Coruña (Spain) and Santiago de Compostela (Spain) was commissioned by the City Council of Coruña with the objective of:

a) Planning the dissemination of the Coruña's Civic Agreement among the citizenship; and b) Translating this Civic Agreement into active policies with its corresponding programs and services, and further concrete action plans.

DISCUSSION

This paper make an approach to the local planning from a social education perspective, and tries to carry out the necessary programs to translate the civic agreement into action (Maderuelo, 2001; Sennet, 2001; Azúa y otros, 2004. Some reflections on the vicissitudes of local politics and its impact, as well as the difficulties of coordinating teams of applied research will be made. Finally, some innovative solutions are proposed.

REFERENCES

Amendola, G. (2000). La ciudad postmoderna. Madrid: Celeste ediciones.
Azúa, F. y otros (2004). La arquitectura de la no-ciudad. Universidad Pública de Navarra. Pamplona.

Carta de Atenas (1942).
Borja, J. y Muxí, Z. (2001). L´espai public: ciutat I ciutadania. Diputació de Barcelona: Barcelona.

Caride, J. A. (coord) (2009). Los derechos humanos en la educación y la cultura. Homosapiens: Rosario (Argentina).

Maderuelo, J. (2001). Arte public: naturaleza y ciudad. Fundación César Manrique: Lanzarote.

Ramírez, P. y Aguilar, M. (coords) (2006): Pensar y habitar la ciudad. Anthropos: Barcelona.
Sennet, R. (2001). Vida urbana e identidad personal. Península: Barcelona.

KEYWORDS: Civic Pact, city governance, civic culture, social participation, live pedagogical strategies.

HOUSING AND SUSTAINABLE ARCHITECTURE

Chair: José M. Palma Oliveira

Greening the neighbourhood for livability: The case of Seremban, Malaysia

Shaharudin Idrus, Abdul Samad Hadi, Abdul Hadi Harman Shah, Mohd Raffi Othman & Ahmad Fariz Mohamed
University Kebangsaan Malaysia, Malaysia

This paper discusses the greening of neighbourhoods for housing livability as experienced by urban dwellers in Seremban, Malaysia. The Seremban Municipality is located in the State of Negeri Sembilan in Peninsula Malaysia, and currently experiencing vibrant economic, social and physical developments. Malaysia itself has continued to grow and develop with economic performance showing an increase in gross domestic products (GDP) since the economic melt-down during the years of 1987/88 and 1997/98. In 2012 the country continued to show steady and sustainable economic growth of the country. Like other state capitals in Malaysia, Seremban has grown out of its 'sleepy hollow' image of yesteryears and municipal boundaries have changed to accommodate these developments.

The study which forms the basis for this paper focuses on the urban physical, social and the everyday life of the dwellers in line with the concept of new urbanism that makes these features part of environments recognized for their livability, desirability and sense of place. The study makes an assumption that when housing livability in the urban area is achieved it will lead to urban-wide livability which contributes eventually to sustainable development of the country. The paper focuses on three aspects of greening: greening of technology; greening of the area; and greening of social well-being.

Greening of technology analyses the carbon usage and change in the urban area. The greening of the area looks at the landscaping initiative and the usage of the green area for social and health purposes. Meanwhile greening of social well being discusses housing prices, social relationships within the neighbourhoods and the achievement of affordable housing in Malaysia. Malaysia is now moving towards a predominantly middle class society that demands more than just the basics of housing quality. The housing development pattern shows how wealth accumulation occurs in the urban area with the government seen as pro-development, emphasizing housing development through support in terms of capital (land and financial) as well as housing policy.

Decisions to buy or to rent houses are made based on the people's perceived attraction of housing areas or on feedbacks they get about the cost of houses or the level of rent offered in a particular place from various sources. The analysis of perception and then the decision to buy or rent a house were done at two levels; before purchase, and during or after inhabiting the house in a residential area. This was done to look into why the owners and tenants choose to stay in a particular housing area. The results showed the existence of livability elements in a chosen residential area. At the same time there are elements of 'vulnerability' that tend to limit the shaping of livability in full. The housing sector in Seremban and elsewhere in the country has now become a major development sector. Inves-

tigating housing distribution and expansion via individual housing estates in the Seremban municipal area offers a window to look at decision-makings at the largest scale (small areas of housing estates). The study offers a new approach to studying housing development and urban area expansion based on data at the community level; with implications drawn and translated into suggestions and recommendations for the authorities.

The usefulness of the new approach in decision making at the community level, is its ability to engage the rich detailed information on housing. This includes secondary data from various agencies (government and private) as one of the main source of information for the study. Among these are carbon usage, land use change, housing ownership and the ethnicity of the individual homeowners, all used to illustrate the greening of the neighbourhoods. All contribute to the modification of the local urbanites' lifestyle that began from pre-industrial urban Malaysia.

Time preference and risk aversion among development and construction professionals and managers

Ian Ellingham, Cambridge Architectural Research Limited, UK
William Fawcett, Pembroke College, Universitiy of Cambridge, UK
Peter Wallström, Lulea University of Technology, Sweden

INTRODUCTION

This research examined decision-making in the building industry, as part of 'Cileccta', a European Commission funded project, to support improved evaluation of project alternatives, in particular relative to sustainability. Sustainability in buildings implies the achievement of meaningful performance over long periods of time, but many building decisions are made without quantified analysis. An understanding of the fundamental attitudes of different decision-makers will allow better calibration of decision-making tools.

THEORETICAL BACKGROUND

Key to investment decisions is intertemporal choice, "...decisions involving trade-offs among costs and benefits occurring at different times." (Frederick et al, 2002), and the discounted utility model has become a widely accepted approach for investment and public policy decision-making, where one number incorporates various factors, including fundamental (risk-free) time preference, anticipated changes in affluence, and risk factors (UK Treasury Green Book, 2003).

Business literature generally assumes that discounting numbers reflect somewhat rational market assessments. Yet it is known that individual assessments do vary substantially - sometimes in complex and sometimes irrational ways, as explored by Tversky and Kahneman, among others. Alternative theories of why different people have different attitudes about risk and time preference exist (Rogers, 1994). Many decisions in the building industry are made on the basis of informed intuition. Reasons why quantitative decision-making is difficult when dealing with land and buildings include, project individuality, lack of transparency, limited analytic resources and project complexity. Existing research in the area has been undertaken by Arrondel and Masson (2007) and Dohmen et al (2009), among others.

METHODS

A survey of building industry decision-makers was undertaken both on paper and on-line (in 5 European languages). Questions asked about (i) attitudes with respect to sustainability,

(ii) decisions that most practitioners in the building industry would have faced or be familiar with, and (iii) the profile of the respondent. Contacts were made through the Cileccta project partners and through building industry groups, and paper surveys were distributed at building industry events.

RESULTS

A total of 247 surveys were returned from a wide mix of building industry participants, from 13 European and 10 non-European countries, reflecting the global nature of the industry.

Analysis of the responses revealed significant correlations, confirming differences in time preference and risk aversion relating to respondents' roles in the building industry, age and affluence. Consultants generally exhibited a lower acceptance of risk than people filling more entrepreneurial roles. Significant differences in decision responses were found between architects, engineers and 'builders' (contractors, developers and investors). From the decisions made by respondents, implied discount rates were developed - some of which fall into ranges which are unfeasible. Moreover, it was found that individuals making judgements about different building decisions showed significant inconsistency, possibly resulting from specific experience with some of the decisions posed.

CONCLUSIONS

The dissenting opinion heard in project meetings, can be explained, in part, to differences in attitudes towards time and risk between participants of different disciplines. The findings demonstrated the weakness of using unsupported informed judgement to make sustainable decisions in the building industry. There is a need for good decision-support tools, to compensate for individual predilections.

SELECTED REFERENCES

Arrondel, L. and Masson, A. (2007) How to measure risk and time preferences of savers? Paper presented at the 5th International Financial Research Forum, 12 June, 2007.

Dohmen, T.; Falk, A.; Huffman, D. and Sunde, U. (2009) Are Risk Aversion and Impatience Related to Cognitive Ability? CESifo Working Paper No. 2620, Munich: Center for Economic Studies.

Frederick, S.; Loewenstein, Ge.; and O'Donoghue, T. (2002) Time Discounting and Time Preference: A Critical Review. Journal of Economic Literature, Vol. XL, pp. 351-401

HM Treasury (2003) The Green Book: Appraisal and Evaluation in Central Government. HM Treasury.

Kahneman, D.; Slovic, P.; and Tversky, A. (eds) (1985) Judgement under Uncertainty: Heuristics and biases, Cambridge University Press

Rogers, A, R (1994) Evolution of time preference by natural selection. American Economic Review 84:3.

Zeckhauser, R. J. and Viscusi, W. K. (2008) Discounting dilemmas. Journal of Risk and Uncertainty, 27.

KEYWORDS

Time-preference, Risk-aversion, Property, Development, Construction

Mapping human factors for sustainable living

Pernilla Hagbert, Universty of Houston, USA
Olga Bannova, Chalmers University of Technology, Sweden

This paper addresses architectural and design considerations of sustainable living challenges in extreme environments, and how derived design strategies can be applied to everyday life in other regions on Earth, related to a living lab design research methodology.

As defined by NASA Astrobiology Institute: Extreme is a relative word. An extreme environment can be characterized by conditions that are far outside the boundaries in which we humans dwell comfortably in these categories: pH (measure of acidity), pressure, temperature, salinity, radiation, desiccation (measure of dryness), and oxygen level." (NAI)

Usually an extreme environment is defined by its climate or weather conditions and therefore pretty much delimited by its geographical location. But the definition is broader than that when we look at all aspects of human life or lifestyle. What makes a place we visit or live extreme? This is an environment that poses special limitations and/or hardships for people to survive and maintain relative physical and psychological comfort. The limitations are usually in:

· Resources;
· Availability of services and/ spaces;
· Moving or transportation.

Hardships may include all or some of the following:

· Strong restrictions to execute everyday work tasks;
· Impossibility to perform social interactions;
· Constraints in fulfilling necessary living needs.

Sustainable planning and development is an increasingly important factor everywhere in the world, but has become a critical element for success of designing and planning for extreme environments. The idea of sustainability can be applied practically to all aspects of human society creating multiple facets of sustainability that include (Hanne Petersen, 1999):

· Ecological/environmental
· Economic
· Social
· Political

The research outlined here investigates these aspects of sustainability and possible applications of lessons learned in the design of future environments, as a part of a larger EU project studying sustainable living. Investigating essential human needs and how those needs can be addressed in design practices is a relevant challenge. The project particularly revolves around developing user-centered design research methodologies and measures, studying how sustainable innovations are applied and perceived in everyday life and living environments. By gaining insights into the usability and acceptance of sustainable strategies and processes regarding both spatial and material properties, the objective is to create sensing platforms for measuring human activity related to a radically reduced energy and resource consumption in combination with qualitative methodologies.

The project is structured into three phases: early insight studies; full-scale living lab studies; and finally studies in the existing housing stock, where sustainable living strategies are im-

plemented. The research presented here mainly concerns the first phase, with the intention of applying the insights gained, informing design considerations and further research in the living lab currently in the process of being built as student housing.

Through co-creation workshops and surveys in the form of activity diaries among student respondents, primary empirical data on daily living activities is gathered. A functional decomposition of student housing is mapped according to: grouping of activities and human functions; levels of private or shared use of space and resources; and defined or perceived corresponding spatial, energy and resource requirements.

The results from this data analysis are developed in a human tree of living functions. Through a cross-analysis, overlapping spatial, energy and resource requirements are outlined in regards to both a current functional understanding and in a posed extreme. In addition, the human factor conditions (physical, organisational or behavioral prerequisites), for amelioration and optimization of living functions from a residential quality perspective as well as the radical reduction of energy- and resource consumption are discussed.

The paper is concluded with focus points for further investigation, informing the design of facilities where several human factors of student living are explored, both in regards to physical design parameters as well as social psychological indicators influencing sustainable practices and user perceptions in home environments.

REFERENCES

Hanne Petersen, B. P. (1999). Dependency, Autonomy, Sustainability in the Arctic. Aldershot: Ashgate.

NAI. (n.d.). NAI: Ask an astrobiologist. Retrieved December 11, 2012, from NASA Astrobiology Institute: http://nai.nasa.gov/astrobio/feat_questions/extreme.cfm

Harrison, A. A., Clearwater, Y. A., McKay, C. P. (1990). From Antarctica to Outer Space: Life in Isolation and Confinement. Springer.

KEYWORDS

Human factors, sustainable, housing, extreme environments, user-centered

Reevaluating micro scale urban voids: Strategies for creating landscape value

H. Serdar Kaya & Meltem Erdem

Istanbul Technical University, Turkey

The physical structures of cities are changed according to the factors that are shaped by economy, technology and social structure. The adaptation process of the existing urban structure to the new emerging conditions usually occurs as the transformation of the existing structure instead of complete restructuring of the whole system. During this transformation process, small scale unemployed spaces and voids that are not suitable for construction, emerge as a result of overlapping of the new urban systems into the existing built environment.

As a general trend, large open areas are required to create an effective green system within the city. On the other hand, metropolitan cities, such as Istanbul, are suffering from lack of large open spaces due to dense urban development. It is also not feasible to create

such a great green infrastructure within the city in terms of economy. Lack of suitable land within dense urban fabric and economic considerations lead planners and designers to search for plausible ways to create sustainable communities. At that point, consideration of small scale unemployed open spaces within densely settled urban core, appear to be a feasible and practical way of creating sustainable and livable environments.

Although the size of each void can be too small compare to the urban scale, they occupy large areas as a whole. Also it can be assumed that those spaces are distributed homogenously within the city due to the fact that all neighborhoods have the similar unemployed spaces.

Those spaces have remarkable potentials to contribute to the urban ecology and public life if approached properly with well-organized design strategies. Small scale interventions can lead sustainable development at the broader scale with diverse programs and contexts. It is a compelling issue to propose a design layout for those sites due to the factors such as shape, size, ground qualities etc. Therefore by introducing specific and thematic design approaches, those sites can be transformed into livable public open spaces that create economic, environmental and social values within the city as a respond to the open space requirement and sustainable development.

İstanbul is one of metropolitan cities with highly dense built environment experiencing environmental problems since 1950's. Through the urban development process, as the ratio of the densely settled neighborhoods increased, the size of the city blocks and lots had been decreased. Large open spaces and green areas turn into housing areas or shopping malls. Especially in the central core such as Beyoglu district, this process lead the disappearance of large open spaces which was used as a part of the urban green system.

With this respect this paper aims to investigate the potentials of those unemployed spaces within dense urban fabric of Beyoglu, Istanbul and propose systematic approach for transformation of those spaces into liable environments. In the context of the research, unemployed spaces are mapped to show how those spaces can contribute to the broader environmental system with diverse programs and context. As a result of initial research it is found that there are different typologies regarding to their spatial configurations and locations. Some of them are; enclosed voids, pocket voids, stick voids, road leftovers. According to the typological analysis, different design approaches proposed to be used for different urban systems. Those can be summarized as follows:

• Those spaces can be evaluated as the lowest level of the green hierarchy with diverse programs ranged from actively used pocket park to more passive green stations that promotes urban biodiversity.
• They can be used as the linkage elements or shortcuts of the pedestrian network
• They can be used as landscape infrastructures that fosters storm-water management
• Those spaces can be used as small urban laboratories and showcases that introduce newest green technologies and materials. Also those showcases can raise awareness in public about urban ecologies and environmental issues.

This research proves that how small scale unemployed sites can participate to the wider urban system with its Beyoglu case study. It is believed that it is possible to improve environmental quality by introducing site specific design approaches to small scale underused spaces by considering their effects at urban scale.

KEYWORDS
Urban voids, urban landscape, sustainable development, landscape design, green network

Celebrating buildings of glass in the tropical regions. A flaw in Architecture

Crispino C. Ochieng
Jomo Kenyatta University of Agriculture and Technology, Kenya

The study identifies environmental issues in buildings within the tropical regions of Nairobi, Kenya that render building with surfaces are predominantly glass to be uninhabitable. Currently, between Cape Town in South Africa and Cairo in Egypt, all within the tropical region, presumed avant garde designers have taken to wrapping their buildings in glass, a mumbo jumbo of this period. Such design ignores the building typology.

In the tropics, without appreciating some of the problems that are associated with glass, designers have blindly embraced glass as a dominant building material, more so in the elevations. Generally, for more than half of the year, the tropical region will be hot. Temperatures here can be very high. Yet within this region there are buildings with glass material forming more than 90 percent of the surface. Majorities of architects as well as the general public view glass surface both as suave, erudition and the face of the 21st century urbanism. Unrelenting efforts are involved towards the production of iconic building forms. At the altar of achieving this feeling, problems of the tropics including, harsh climatic conditions and weather, struggling economies and poor culture of building maintenance and sustenance are hardly addressed in the design.

Among the issues that are particular to the tropical region are, the hot sun rays that through the day moves across the building most of the days; lack of proper air circulation due to lack of environmental planning in some cases; lack of proper spatial articulation that is informed by the need for air circulation; lack of privacy; sustainability and maintenance; and intense heat that is generated by the glass surface. Notwithstanding the latest innovations in the glass industry, some of these cannot be readily wished away. Thus when designing in the tropics, when necessary, selective and innovative use of glass on the surfaces of building is necessary.

KEYWORDS
Tropical; Glass; Innovative; Environment; Sustainability

SUSTAINABILITY IN URBAN SPACE: PARTICIPATORY APPROACHES AND HUMAN BEHAVIOUR

Chair: Hülya Turgut

Participatory design of 'Pedestrian-focused' streets through the application of universal design principles

Anli Ataöv Demirkan & Soghra Rashidi
Middle East Technical University, Turkey

INTRODUCTION

In recent decades universal design concepts have gained momentum in urban environments throughout the world. Universal design refers to a set of design principles that aim at making the users' experience walkable, comfortable, safe and accessible in space for all without segregating with respect to age, gender and ability. The emergence of universal design approach depends substantially on many years of work on accessibility and the lessons learned from the relevant efforts. Projects aiming at producing accessible space and the fundamental values of the disability rights movement in large constitute the foundation on which the universal design concepts were built.
Theorical background

LITRETURE REVIEW: PEDESTRAIN FOCUS STREETS IN URBAN ENVIRONMENT

A. Evaluation of the background and current situation

B. What is Pedestrian Focused Street?

B-1- Pedestrians
• Pedestrians Defined
• Pedestrian Needs

B-2- Elements of Pedestrian Focused Streets
• Use and Comfort of all users
• Green Infrastructure/Streets
• Furnishings and Utilities
• Street Trees and Landscaping
• Street Lighting
• Protective Barriers
• Work Zones

B-3- Pedestrian Focused Streets and Problems of Accessibility
1-Diversity of users and their accessibility problems (elderly, children and people with disabilities)
2-Barriers, obstacles incorrect design and application problems for diversity of users
-insufficient orientation
-wrong materials

-improper details
-incorrect dimensions
-improper colors, textures
-unaesthetic applications
Evaluation: Pedestrian focused streets must be accessible for diversity of users.

CONCEPTUAL FRAMEWORK: UNIVERSAL DESIGN AS A NEW PARADIGM FOR DESIGN FOR DIVERSITY OF USERS

- Definitions of universal design
- principles of universal design
- History and legal achievement of UD in the international world
- Significance of Universal Design in urban environment and pedestrian focus streets

METHODS, RESULTS AND CONCLUSIONS

This paper presents a participatory design case of 'pedestrian-focused streets' in the Çankaya District of Ankara, Turkey, particularly the Olgunar Street Design case, in which the researcher plays a catalyzing role in involving diverse users in a design process and integrating universal design principles into the generation of the design outcome. Treating a design process as a scientific inquiry aims at achieving the empowerment of the users as well as the change in the way local authorities undertake the design of public space. Respectively, the study conducts a participatory research process including the identification of strengths and weaknesses of the street and the solutions to transform the existing street into a pedestrian-focused structure by using the universal design principles. To do that, in -depth interviews, focus groups, and a design charette will be applied with the participation of street users, local officials, and planners.

This paper answers the main question such as:
MRQ: How the people's prospect can be integrated into the sustainable design process of streets that accommodate the use of people?
RQ1: what are the issues that enhance the use of people on streets?
RQ2: what are the spatial solutions that accommodate and increase people's use of streets?
RQ3: what is the practical design model that enhances the sustainability of pedestrian focused street?

KEYWORDS

Universal Design, pedestrianized streets, Participation, Sustainability, urban design.

Sustainable project for constructing the Pocket Park in the collaboration with inhabitants, students and local professionals in Sanjo, Japan

Shin-ya Nishimura, Satoshi Boda & Noriko Sakurai
Niigata University, Japan

INTRODUCTION

Nishimura laboratory (Prof. Dr. Shin-ya Nishimura, Department of Architecture, Niigata University) have started to develop the actual town planning project for rebuilding the community by constructing the small pocket park. This project is the actual town planning by making up the design and constructing the pocket park located nearby a walkway in the

center of Sanjo City. In this project the inhabitants, local professions and undergraduate students collaborate as the volunteers and the budget is only used for purchasing the materials such as concrete and metals. Since 2007 we have successfully built five pocket parks. The object of this scheme is for the inhabitants to preserve their own environment and landscape by designing and building in collaboration with the local professionals and students. They walk around the city, examine the characteristics of the environment and way of life, discuss planning and design.

THEORETICAL BACKGROUND

There are many cases in which students collaborate on projects with citizens in small cities. However, these are usually only making up the city planning presentations, or temporal spaces or temporal sculptures. They have the same aim of re-building the community but these projects are not able to be sustainable not lasting for years. In our project, students and inhabitants walk around the city, research the characteristics of the environment, discuss planning and design, and build the pocket park together. These small parks are permanent structures made to be part of the city.

METHODS AND CONCEPT FOR THIS SUSTAINABLE PROJECT

We created the new concept for our project as follows; the project for pocket park reflecting SATOYAMA. SATOYAMA is the word that means the country side forests which are preserved by the inhabitants for keeping the sustainable environment. In Japan each city has a lot of SATOYAMA located around and these are owned by city hall or private. They are the traditional symbols for sustainable environment from the ancient time in Japan. People planted trees as the materials of housing and picked up the wild glasses as their foods or medicines in this forests. Through the collaboration with the students, inhabitants and professionals, the pocket part will be planted only by the plants from one SATOYAMA. Every new pocket park is representing each SATOYAMA with their trees and glasses. By transplanting the trees and glasses from country side forest to the new pocket park, the inhabitants could recognize the scenery of SATOYAMA at this pocket park in the center of the city, such as the flower blossoms and leaves changing colors.

RESULTS

These pocket parks work many roles with this concept. The collaboration of inhabitants and the students on this project make this a unique and sustainable town planning activity in Japan. Through replanting the trees and plants from SATOYAMA, we have maintained the diversity of our works by not keeping to ordinary criteria for design but by making each small park unique. We think that this has been necessary to preserve the traditional and natural landscape in Sanjo City and to make this project sustainable.

CONCLUSION

This pocket parks work as the mirror reflecting the environmental conditions of country side forest. Each pocket park coincides to each SATOYAMA one by one. Transplanting the plants is conducted only by voluntary work of inhabitants, professionals and students. They dick out the wild plants form the local forest and replant at the pocket park with the assist of the professional gardeners. This transplantation saves the cost for buying new trees and glasses. As the local trees and glasses have grown at the typical environment for a long time, they connect the local mode of life, the local culture and history. By walking around the new pocket parks, they have the chance to fill the atmosphere of SATOYAMA and to be able to transfer their knowledge to their children and young generations. As we successfully carried out our project, we were awarded prizes by the government of Japan and the professional institute.

Major urban design qualities supportive of stationary social activities in central urban open spaces within large cities

Paula Barros
Federal University of Minas Gerais, Brazil

The large majority of the world population lives in rapidly changing environments where the quest for more sustainable modes of urban life is top of the political agenda. The current challenge is to generate human-centred carbon-free cities. Despite attempts to enhance the quality of urban life, however, many settlements around the world are still commonly characterised by noise, atmospheric pollution and other sorts of intrusive sensory information likely to lead their inhabitants to become more impulsive, impatient and irritated.

These conditions raise issues regarding the effectiveness of some urban design proposals in contributing towards the generation of human-centred environments. Although recent literature has acknowledged that urban design should take account of non-visual as well as visual sensory aspects of environments in the design of the post-carbon city, most theory, practice and teaching of urban design have focused on the visual qualities of spaces.

This approach has led practitioners and policy makers to over-emphasise the appearance of urban open spaces, even though urban design necessarily influences the multisensory qualities, meanings and behavioural patterns which compose urban settings. Although it is widely accepted that design plays an important role in facilitating (or inhibiting) the performance of social activities in urban open spaces, design processes have often been based on the practitioners own intuitions and preferences instead of knowledge of how people interact with urban open spaces. Given this background, the following research question emerges: 'What urban design qualities are likely to attract and support stationary social activities in open spaces within large cities?'

Three urban squares located in the central area of Belo Horizonte (Brazil), a busy mixed-use dense area characterized by buildings in different styles and heights, were selected as case study sites: Liberdade Square, Raul Soares Square and Estação Square. Since they attract people in greater variety and quantity than do other urban squares, these three locations were chosen as representing a potentially enlightening opportunity to identify the key urban design qualities likely to attract and retain people in central urban open spaces within large cities.

A multi-method approach to data collection and analysis was applied to answer the research question. Structured interviews, unstructured observation, behavioural mapping techniques, sketch maps and an innovative sensory-behavioural mapping technique were chosen to gather behavioural and perceptual data in situ. Data was processed, summarized and analysed in ArcGIS and in SPSS/PC.

The qualitative analysis of the answers given to open-ended questions involved sifting the material to identify common themes. The quantitative analyses of the perceptual and behavioural data were represented as frequencies and/or by statistical indicators from non-parametric statistical tests (Kruskal-Wallis test and Mann-Whitney U test). The GIS environment was preferred for spatializing the summarized data.

Five urban design qualities emerged from the present study as supportive of social activities in urban open spaces within the context of Belo Horizonte: naturalness, richness, prospect-refuge, pleasantness and legibility. In addition, the present research demonstrates that an

approach to the multisensory design of urban open spaces responsive to user needs and preferences is feasible and holds the promise of guiding best practice in the creation of high-quality gathering urban open spaces within the post-carbon city.

Further, it is hoped that the methodology proposed may motivate practitioners and policy makers to apply knowledge of environment-behaviour studies throughout the process of multisensory urban design in different cities around the world because it could be readily applied to other types of contexts. The present study, therefore, contributes to the theoretical debate on how to generate more human-centred urban environments by providing findings which have implications for policy and practice of urban design.

Inclusive housing strategies to age in place: From empirical research to collaborative design studios

Carole Després, Denise Piché & Laurence Jodoin-Nicole
Université Laval, Canada

This communication is about "Adapting the suburban built environment to frail elderly," a five-year transdisciplinaryprogram of research and action undertaken in 2012 by the Interdisciplinary Research Group on Suburbs (GIRBa), in the context of the elective specialization in Evaluation, Programming and Design of the Master's of Architecture at Laval University (Quebec, Canada). The content was developed on the basis ofGIRBa's long-lasting involvement in research on Post-War Word II suburbs, with the specific goal of identifying policy and planning orientationsthat wouldsupport the desire of elderly suburbanites to age in place.

After drawingthe social and physical picture of Quebec's suburbs, and poin-ting atcritical empirical findings, the presentation will focus on the first collaborative design studioin Fall 2012.The 4-month process involved14 Masters Students and a panel of 25 experts from health and planning authorities at the provincial, regional, municipal and borough government levels, from non-profit housing organizations, economic development councils, private and non-profit developers, as well as researchers from threeuniversities specialized in gerontology, readaptation, architecture and planning, with the financial support of the Centre d'excellencesur le Vieillissement de Québec, a Health Institute affiliated with Laval University.

The strategy included a literature search, as well as a review of exemplary housing projects in Quebec and elsewhere. The student also visited several non-profit housing projects in three cities (with some prolonged observation periods and interviews with residents and staff). The collaborativeprocess allow for
1) the definition of a common mission, that support not only frail elders' desire to age in place but to remain active socially and physically in a safe, comfortable and personal manner, regardless of their tenure status, income or ability level;
2) the identification of a list of objectives and performance criteria to respect to reach them;
3) the development of innovative housing solutions taking into account existing housing stock, in-place regulations and grant programs, public and private wills and means.

This very dense and productive process allowed for the identification of restrictive legislations, zoning regulations, grant allocation programs, programmatic requirements, and building codes, among others. It is also clear from comments gathered from the various stakeholders involved that it answered an urgent need for sharing scientific and operational or tacit knowledge with the prospective vision brought by design, which is at the very heart of transdisciplinarity.

VULNERABILITY, RESILIENCE AND RESTORATION

Chair: Adina Dumitru

Unintended consequences of natural resources-based developments. The case of As Pontes in Coruña (Galicia, Spain)

Xaquín S. Pérez Sindín López
University of A Coruña, Spain

INTRODUCTION

The dimension of one of the largest power stations in Spain does not pass unnoticed for any visitor traveling on the modern but not busy highway that join the cities of Ferrol and Lugo as it passes next to the town of As Pontes de Garcia Rodriguez. Located just one kilometer from the downtown, its construction and operation as of 1979 would definitely change a place that by that time was not far from many others villages that form the most genuine rural Galicia.

The closure of the adjacent opencast coalmine, its conversion into an artificial lake, as well as the massive early retirement plan implemented, finally defined its particular idiosyncrasies up to date. The economic and demographic decline lived as of mid-90´s despite the industrial revitalization policies; as well as the challenge faced in a context of crisis, call for a major attention on such regions.

This research aims to understand the long term social consequences of natural resources-based developments, and the problems faced in a context of crisis and global change.

THEORETICAL BACKGROUND

In the 70´s and after recognized the limitation of the classical sociologist, Riley Dunlap and William R. Catton suggest a new paradigm within sociology that takes full account of environmental variables in explaining human behavior. Despite the conceptual and empirical differences among mainstreaming, environmental sociology has gained a considerable consolidation in explaining the problems around the interaction among social, natural and build environment and how to solve them.

The literature on social change in natural resources-based rural communities in US suggests a number of social consequences presumably applicable to other regions. Apart from having addressed more classical sociological problems faced by the so called "boomtown", such as Gemeinschaft survival or social disruption, authors as Freudenburg has gone further in suggesting a number of long-term social consequences of resources-based growth and development. The "addictive" character of such economies due to the resources dependency, the "mixed blessings of good jobs" (Krannich, 2012) that can produce high wages but also create disincentives for residents to invest in alternative skills or entrepreneurial initiatives; and the erosion of "human, social, physical capital", are some of the hypothesis tested by mean the current research.

METHODS

By mean a case study design, both quantitative and qualitative data collection techniques and analysis procedures has been used. Secondary data from official statistical sources has been collected, as well as primary data through self-administrated questionnaire among early retirees; in-depth interviews among social, political and economic institutions representative and observation.

RESULTS

A simple observer attitude allows the researcher find a clear interaction between the build and social environment. The presence of the imposing power plant fireplace in the local cultural production confirms the central role of the build environment in the formation of the community identity. Also, the underlying discourse around the coal-based growth suggests a generally positive perception of the social change experienced over the last decades.

However, the results obtained accounts for a number of unintended consequences of the resources-growth that could explain many of the current development problems. The lacking entrepreneur activities account for the hope of the second generation to get a "good job" as their parents did. This hope is nurture by political institutions and trade unions who despite the closure of the mine and the fewer chance to repeat such "boom", still struggle for attracting large scale industrial projects, usually by substantial subventions. The formers know about the electoral benefits and the latters would have more difficult its action in a more dispersed labor market.

Lower unemployment and poverty rates in comparison with other close towns and national rates; "grants hunting investors"; a particular perception of such build environment elements as the artificial lake, landscape degradation, skilled young emigration, demographic decline, as well as health problems among retirees, are also some of the unintended consequences identified after the analysis of the data collected.

CONCLUSIONS

The results obtained confirm the character "addictive" of the local economy; a conception of what is a "good job" that limits other alternatives and entrepreneur activities; the erosion of the human capital due to emigration and physic impact provoked by the industrial activity may have irremediable consequences. The results suggest significantly lower community resilience what in a context of crisis and global changes make the adoption of sustainable development strategies more important than ever.

REFERENCES

Baeten, G., Swyngedouw, E., & Albrechts, L. (1999). Politics, institutions and regional restructuring processes: From managed growth to planned fragmentation in the reconversion of belgiums last coal mining region. Regional Studies, 33(3), 247-258.

Clemente, F., & Summers, G. F. (1973). Industrial development and the elderly: A longitudinal analysis. Journal of Gerontology, 28(4), 479-483.

Dunlap, R. E., & Catton, W. R. (1979). Environmental sociology. Annual Review of Sociology, 5, 243-273.

Freudenburg, W. R. (1992). Addictive economies: Extractive industries and vulnerable localities in a changing world Economy1. Rural Sociology, 57(3), 305-332.

Freudenburg, W. R. (1980). A community study of an energy boomtown: The basic data. Rural Sociological Society,

Freudenburg, W. R., & Frickel, S. (1994). Digging deeper: Mining-dependent regions in historical perspective. Rural Sociology, 59(2), 266-288.

Freudenburg, W. R., & Jones, T. R. (1991). Attitudes and stress in the presence of technological risk: A test of the supreme court hypothesis. Social Forces, 69(4), 1143-1168.

Frickel, S., & Freudenburg, W. R. (1996). Mining the past: Historical context and the changing implications of natural resource extraction. Social Problems, 43(4), 444-466.

Haase, A., Steinführer, A., & Kabisch, S. (2004). Results of the questionnaire survey in Leipzig. Harfst, J., Lintz, G., & Wirth, P. (2012). Structural change in former mining regions–Identifying potentials and building capacities. Vulnerability, Risk and Complexity: Impacts of Global Change on Human Habitats.Advances in People-Environment Studies. Göttingen,

Kabisch, S. (2004). Revitalisation chances for communities in post-mining landscapes. Peckiana, 3, 87-99.

Krannich, R. S. (2012). Social change in natural resource-based rural communities: The evolution of sociological research and knowledge as influenced by william R. freudenburg. Journal of Environmental Studies and Sciences, , 1-10.

Summers, G. F. (1986). Rural community development. Annual Review of Sociology, 12(0360-0572, 0360-0572), 347-371.

Wirth, P., Mali, B. Č., & Fischer, W. (2012). Problems and potentials of post-mining regions.

KEYWORD
Post-mining regions, social change, revitalization strategies, place identity, build environment

The possible impacts of climate change in the city of Recife, Brazil

Luiz Priori Jr
Federal University of Pernambuco, Brazil

This article aims to present a study conducted between the months of August and November 2012, which aimed to determine points of vulnerability in the urban infrastructure of Recife. The results were analyzed by means of relationship between risk and vulnerability, based on urban resilience to climate change underway in the region. Recife is the capital city of the Brazilian State of Pernambuco and it is located on the northeast coast of the country. According to Census 2010, conducted by IBGE - Brazilian Institute of Geography and Statistics (IBGE, 2010), the city of Recife has a population of 1,536,934 inhabitants, distributed in 94 neighborhoods. Recife has an area of 210 km², which corresponds to 0.2% of the land area of the State of Pernambuco. Its growth was from the center to the periphery, where there were several sugar mills as Madalena, Torre, Cordeiro, Várzea, Apipucos, Dois Irmãos, Casa Forte, Belém, Monteiro and later, some sites like Pina, Coelhos, Manguinhos, Espinheiro, among others (FJN, 2012).

Several phenomena related to possible global climate change can be enumerated (RIBEIRO, 2008; Satterthwaite, 2007; GASPER, 2011, IPCC 2012; Pilkey & YOUNG, 2009; BAETLEY,

2009), however, for this study, it will give priority to those that may occur in the coastal cities of Northeast Brazil, like: rising temperatures, heavy rainfall and rising sea levels, and their effects on the urban environment.

The research strategy applied was the case study and the criterion used was the direct observation (Yin, 2005), through pathway was being made to identify vulnerabilities in the infrastructure of the neighborhoods of Recife, which were recorded using photographic images and in a next step was made a deeper analysis of the results, including the insertion of other neighborhoods that are searched retrospectively. In this paper are presented only the most relevant observations and conclusions of the study.

The districts initially contemplated in this study and presented here were: neighborhoods of Recife's old Center (Bairro do Recife and Bairro de Santo Antônio), the rich neighborhood of Boa Viagem Beach e the poor neighborhood of Alto José do Pinho Hills. The criteria for choosing these neighborhoods due to the characteristics displayed by these locations, making it the flagship in the perception of the city as a whole.

The observations were grouped according to the four cities' supporting vectors by Leite & Awad (2012), which are: energy, water / wastewater, urban mobility and public safety. As the study is being directed to the vulnerabilities in urban infrastructure, the aspect of public safety was considered through the prism of buildings' structural integrity, and the item solid residue was added because of its interference in urban management. Getting analyzes focused in the areas: mobility and accessibility; buildings' structural integrity, solid waste, water / wastewater (urban drainage), and electricity.

This exploratory research showed that many of the vulnerabilities found in the infrastructure of the three areas studied are similar, even if focused on neighborhoods with very different populations' income patterns and properties' sales values. So it can be concluded that the vulnerabilities were similar in the following aspects: difficulty for mobility (cars and pedestrians), inadequate sidewalks (or lack thereof), drainage problems in the distribution of water, open sewage, garbage collection and irregular buildings. These affinities enable the analysis of the many urban vulnerabilities of Recife, considering the city as a whole, since the similarities between them are striking.

KEYWORDS
Urban Resilience, Climate Change, Urban Environment.

Vulnerabilities and resilience of communities living in circumstances of risk

Edinéa Alcântara de Barros Silva & Rosinha Barbosa Fátima Furtado
Federal University of Pernambuco, Brazil

In Recife and other cities in Brazil and worldwide, the sites available to those excluded from the housing system were hills and floodplains. The strategy used to occupy these spaces and provide a minimal dwelling infrastructure – cutting into the hillside and building embankments – does not always offer sufficient safety, and may sometimes expose residents to repeated risk of landslides or flooding.

In some cases these settlements are so well consolidated that moving the community is not an option, or the only alternative may be distant localities and a housing typology unsuited to residents customary way of life. Some communities, trying to make their situation sustainable, pursue alternative approaches. When facing disasters, these communities have taken clear independent steps to promote solidarity, reduce human losses, support those affected and overcome traumas and difficulties in the wake of the disaster. Though they may live in vulnerable situations with high risk exposure, some communities develop resilience in response to repeated disasters, and more minor and localised incidents.

The right psychosocial, cultural and environmental conditions can allow individuals, groups and communities to develop ways of resisting and overcoming such adversity, actually making them stronger as a result.

Building on a study by Kotliarenco (1997), Melillo (2005) summarises the characteristics of the resilient individual as follows: skill, adaptability, low susceptibility, positive affect, capacity, resistance to destruction, positive key behaviours, special temperament and cognitive skills.

Adger (200) defines community resilience as the ability of communities to absorb external shocks within their social infrastructure. Brown (1996 apud NORRIS et al., p. 129, 2008) defines it as "the ability to overcome adversity or a continually stressful life, or easily adjust to them". Ganor (2003 apud ibidem) describes resilience as "the ability of individuals and communities to cope with a state of continual stress over the long term; the ability to draw on unknown inward strengths and resources to deal effectively with such difficulties."

Resilient communities, then, would be capable of finding effective ways to deal with challenges that arise, including disasters. This point is important because the affected populations are precisely those showing the greatest socio-environmental vulnerability. Reflecting on the way of life of these communities, their capacity to cope with difficulties and survive the multiple fragmentation of the urban and socioeconomic space within which they live is indeed remarkable. They draw on their ingenuity, social resources and creativity to adapt and survive, both as individuals and on a group level, developing forms of solidarity in response to difficulties and threats.

This study aims to identify: i) how situations of risk arise and develop; ii) the mechanisms and strategies for sustainability that are developed to cope with these; iii) the scope for community resilience to overcome crises and disasters; and iv) how the resilience of urban communities is structured.

The two cases studied are Beco do Óleo and UR-12, in Recife in northeastern Brazil. The first community, located on the riverbank, is subject to seasonal flooding every year. In the second, a landslide in April 2012 destroyed 5 houses, and people would have died if the response of civil defence and the community itself had not been fast enough. These two communities are typical examples of spontaneous settlements exposed to disasters and ongong risk situations common in Recife and other Brazilian cities, and they also show the prerequisistes for the types of mobilisation and community organisation being investigated. An exploratory study provided evidence of critical high-risk situations where the combination of public and community action brought about positive results. Exploratory interviews were conducted at both sites, and the main study will use focus groups; residents and public administrators were interviewed to categorise the actions seen and list indicators of resilience. The matrix of categories and indicators of resilience, derived em-

pirically, will be used to try and understand the basis of resilience in these two communities and how they overcame their vulnerability. The results will feed into the ongoing research project "Urban resilience of coastal cities: a resource to meet the challenge of climate change".

ADGER, W. (2000)Social and ecological resilience: Are they related? Progress in Human Geography 24,347–364.

GODSCHALK, D. (2003) Urban hazard mitigation: Creating resilient cities. Natural Hazards Review, 4,136–143.

MELILLO, A.; OJEDA, E. S. (org). (2005) Resiliência: descobrindo as próprias fortalezas. Artmed

NORRIS, F. H.; STEVENS, S. P; PFEFFERBAUM, B.; WYCHE, K. F.; PFEFFERBAUM, R. L. (2008) Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy for Disaster Readiness. American Journal of Community Psychology. Volume 41. N.1-2,127–150

Risky driving behaviour analysis using the theory of planned behaviour. The role of attitudinal and normative beliefs in driving under the influence of alcohol

Cristina Adelaide Pimentão Marcelino, Fernando Pessoa University, Portugal
Ricardo García Mira, University of A Coruña, Spain

The purpose of this study was to analyse risky driving behaviour of car drivers based on Ajzen's TPB. Three goals were planted: analyse if the model had a better adjustment to our data when the influence of general attitudinal beliefs or specific attitudinal beliefs was considered; identify the dimensions of the model that better explained the variations in the intention to perform the behaviour and also to the performance of the behaviour; analyse the existence of differences according to demographic variables.

According to TPB the intention to perform behaviour is dependent on attitudes towards that behaviour, subjective norm and perceived behavioural control. Studies show that TPB's contribute to 27% of behavior variability and between 23% to 67% to the intention variability (Armitage & Conner, 2001; Paris & Van den Broucke, 2008). Other investigations found that TPB´s constructs contributed to 50% of the intentions variability to maintain speed limits (Parker et al., 1992).

General and specific actitudinal beliefs. Evidences show that the correlation between intention and behavior can be improved if we make a distinction between general and specific attitudinal beliefs. The more specific the attitudinal belief, the higher the probability of the intention leading to the behavior (Lima, 1993). Specific attitudes could constitute a bridge that reduces de distance that separates behavior from general attitudes and beliefs (García Mira et al., 2003).

Driver's gender. Men present a higher risk of performing road violations and to be involved in road accidents than women and men also express a lower level of normative motivation to obey to road rules than women (Dotta-Panichi & Wagner, 2006; Lonczak et al., 2007; Vanlaar et al., 2008); Men overestimate their ability to drive and underestimate or estimate in a deficient manner the probability of damage or injury in dangerous driving situations

than women (DeJoy, 1992; Ulleberg, 2001); Men exceed more the speed limits and drive more under the influence of alcohol them women (Laapotti & Keskinen, 2004).

Driver's age. Evidences show that young drivers have more positive attitudes towards risky driving behaviour than older drivers (Moyano Díaz, 1997); Young drivers decide to behave in a more dangerous manner (Clarke et al., 2005), have less aversion to risk and more probability of being involved in road accidents (Hatfield & Fernandes, 2009) and to die in those accidents (Scott-Parker et al., 2009) than older drivers; Young drivers drive with more speed (Dotta-Panichi & Wagner, 2006; Laapotti & Keskinen, 2004) and are overrepresented in accidents in which alcohol is present (Laapotti & Keskinen, 2004).

We conducted 4 previous studies previously to the main study. In the first study we studied risky driving behaviour among 212 young drivers between 18 and 24 years old, using Ajzen's TPB. In the second study we analysed the perspective of different actors of the road system (e.g., driving instructors and police) resulting on a sample of 170 participants. In the third study (N=68 drivers) we constructed a specific attitude scale for three risky driving behaviors (using the mobile phone while driving, speeding, and driving under the influence of alcohol). Fiability analysis of the scales related to each of the three behaviors showed that the scale that presented the best internal consistence was the scale related to driving under the influence of alcohol. In the fourth study we constructed a questionnaire for the analysis of driving under the influence of alcohol (N=119 drivers). 560 drivers between 18 and 82 years old participated in the main study. Based on the results obtained in the 4 previous studies we created a set of 16 general actitudinal beliefs towards risky driving behaviour, 16 specific attitudinal beliefs towards driving under the influence of alcohol, 8 items for subjective norm, 7 itens for perceived behavioral control, 4 items for behavioral intention and 3 items for past risky driving behavior. The questionnaire was administered online using the LimeSurvey software.

The results showed a better model adjustment when driving under the influence of alcohol was explained by general attitudinal beliefs and that specific behavioural beliefs and perceived behavioural control were better predictors of the intention and past behaviour. Male drivers presented a more favorable attitude towards risky driving behavior and a greater perceived behavioral control, intention and past behavior than female drivers. This scenario is in line with other investigations that suggest a greater probability for male drivers to drive under the influence of alcohol than female drivers. Young drivers showed a more favourable attitude towards risk. Evidences show that younger drivers decide to have a more dangerous behaviour, have less aversion to risk and, consequently, greater probability of having accidents and of dyeing in those accidents.

Art museums as restorative environments?

Stefano Mastandrea, Fridanna Maricchiolo, Massimiliano Scopelliti & Giuseppe Carrus
University of Roma Tre & LUMSA University, Italy

Theories on restorative environments (Hartig, 2004), such as Attention Restoration Theory (ART; Kaplan and Kaplan, 1989) identify four environmental properties promoting restoration: being away, fascination, extent and compatibility. Can art museums respond to these general properties of environmental settings according to the ART model? Are these properties salient during a visit to an art museum? Are art museums settings capable to promote the recovery of psychological well-being, identified through stress reduction, increase in

positive emotions, and renewal of cognitive resources? In sum, can art museums be considered as restorative settings?

Not many studies dealt with the museum experience in relation to restoration and stress. A study by Clow and Fredhoi (2006) suggest a decrease in stress levels during a visit to an art gallery. A study by Mastandrea et. al (2007) found that the physical aspects of a museum environment were evaluated as more attractive, beautiful and interesting when characterized by the presence of natural elements (typically identified as high restorative in the E-B literature), such as light, plants, water, etc., compared to a museum where these aspects were not present.

On a more general level, the museum visit itself can be considered as restorative. This study aims to assess if ancient art museums (containing realistic or figurative artworks collections) vs. modern/contemporary art museums (containing avant-garde and abstract paintings, installations and performances) are able to promote the recovering from stress and mental fatigue, at different levels. Are these different art styles related to different restorative experiences in museum users? We will then consider two museums, differentiated for the art collections hosted (ancient vs. modern). Self-report and physiological measures (heart rate, blood pressure and, possibly, cortisol hormone) are taken before and after the visit in both these kind of museum settings, in order to test the possible different restorative outcomes. We also test the existence of differences in relation to different individual characteristics of visitors, such as age, education, level of art expertise, personality traits (e.g., sensation seeking, mental openness, preference for abstraction/concreteness). The data collection, still in progress, is ongoing in the ancient and modern sections of the National Gallery of Modern Art (GNAM), located in Rome, Italy. Preliminary findings suggest that the properties identified by the ART model can be related to the restorative potential of the art museum, and that the restorative potential of the art museum can vary according to the different art styles experienced. From the preliminary data, realistic or figurative artworks appear as more restorative compared to avant-garde and abstract paintings, installations and performances. The practical and theoretical implications of the study will be discussed.

GREEN SPACES AND BIODIVERSITY CONSERVATION

Chair: Ashraf Salama

Design with nature in sustainable cities

Ensiyeh Ghavampour, Brenda Vale & Mark del Aguila
Victoria University of Wellington, New Zealand

Sustainable and livable cities are those which contribute to the wellbeing and social life of people through offering psychological and social services to residents. Public spaces are valued as physical settings which fulfill the social needs of residents. The most sustainable public spaces are those which attract people for social activity. Today, however, it seems the design of public spaces in urban centres has increasingly become short term place marketing, seeking to 'sell' the urban environment in a competition to attract more visitors. Critics of this approach have proposed the theory of place with three components; the physical environment, the meaning/conception of space, and human action/behavior. They synthesized the classical view of the aesthetic quality of space with the psychology of place and approaches which emphasise that activity both produces and mirrors quality in the built environment. They address the necessity for a strong relationship between physical setting, meaning, and activity as the three components of sustainable space.

Historically, the construction and composition of small urban spaces has incorporated natural elements relevant to the local cultural context. Natural elements have a long standing link with affording people meaning in public space. Results of empirical studies indicate nature with its aesthetic, economic, and psychological and social benefits, plays a crucial role in residents' wellbeing, this being essential for the livability of cities. In the last 20 years many studies show the presence of natural elements could have individual and social effects on the behaviour of people and these are introduced in the paper. Natural elements have potential physical, emotional, cognitive and social affordance which leads to activity when public space is being utilized. They have the ability to encourage activity in place through the meaning they provide for people.

New life styles and ideas for compact and green cities show an increasing demand for small green spaces in urban areas. Yet few studies have looked at the affordance of these three components in reinforcing the sustained use of small urban spaces in city centres, where public space is at a premium and compatibility of design attributes a pre-requisite. This research is an applied study of the affordance of small urban public spaces within the framework of the theory of place. The theoretical model is assessed using the affordance of natural elements in design.

A survey based on facet theory was used to test the effect of nature on users of public space. Links between the three components of place were investigated by testing the affective effect of natural elements (furnishing using natural materials, natural surfaces and features), and of artificial elements, (furnishing using artificial materials, artificial surfaces and non-natural features) in two types of activity, being alone and with a group in a public space. Results of the survey of 158 respondents collected in four case study sites in Welling-

ton, New Zealand, show not only that people prefer natural rather than artificial materials in public spaces but also these have an affective effect on the users.

KEYWORDS
Sustainability, place making, public space nature, activity, facet theory.

Components of sustaining public space in a changing global context

Ensiyeh Ghavampour & Brenda Vale
Victoria University of Wellington, New Zealand

This paper investigates the core concept of sustainability and it's similarity with models of place making theory in urban studies to define sustainability in public space in global change.

Public spaces make a contribution to creating sustainable environments in the current global context. With advances in transportation and mobility, and increasing globalization, traditional definitions of place are being questioned in both theory and practice. Human geographers have stated that a strong sense of place is the result of human interaction with the environment. Some have stressed the importance of activity and practice as well as materiality (physical setting) and meaning. Others have offered a conception of place as the geographical setting for social action. These are discussed in this paper to show they have mediated between the objective and subjective understanding of place by defi-ning three elements of space (location, local, and sense of place). Other researchers have advanced the notion of a progressive sense of place and global sense of place. Places are viewed as a social relationship but that with globalization, such relationships are becoming more stretched than before.

In the urban design of small public spaces, a design emphasis on the physical environment assumes a fragile model of causality. Over time, the adoptability and flexibility of popular and successful public spaces ensures continuity of contributing to social life. They have and continue to be attractive to different people and changing life styles. The model of place making argues that physical setting, conception or image of space and activity work together with sense of place consequence on the link of three components.

Sustainable development is seen as an unending process with a balance between three main dimensions of environment, culture and economy addressing present needs and the needs of the next generation. With on-going changes in physical, cultural and economic contexts, adoptability and flexibility are used to evaluate success. Across disciplines, the concept of sustainability is not a new view to nature but is an integration of past views. People have changed nature since they started raising crops, but with increased urbanisation, the changes people make and continue to make, are not like changes people experienced in the past. The increasing scale of global modification has given rise to issues of sustainability. An evolution of thought and practice from fragile models of environmental impact to a strong model of progress and balance in sustainable development.

This paper argues the link between component of place should be defined strongly in this changing context to make sustainable environment. The comparison between place making model and sustainability leads this paper to suggest a framework for those designing sustainable public space.

KEYWORDS: Sustainability, public space, place-making, globalization, social activity.

Urban gardening in Prague, Czechia: Reinventing sustainability

Jana Spilková
Charles University in Prague, the Czech Republic

INTRODUCTION

Geographers and other social scientists have lately expressed a growing interest in the study of alternative food networks (AFNs) and accentuate the need for a close dialog between geography and research on alternative food networks. AFN studies are clearly a vivid and growing body of work also in the post-communist countries where the first farmers´markets, community supported agriculture, first slow food consortia and urban gardening appeared only recently. This paper represents another contribution to the new alternative food network and sustainability agenda within the post-communist countries of Europe.

THEORETICAL BACKGROUND

Self-provisioning and gardening has a long tradition in Czechia. It always used to be a practice aimed not only at its productive function (self-provisioning, sharing with relatives and friends), but also at a practice with certain recreational and psycho hygienic function, especially in the period, when people´s freedom and activities suffered under the totalitarian regime, and hobbies (such as gardening) were among the most important means of self-realization. This sustainable practice of gardening has been, however, under a steady decline during the so- called transformation period and both the extent of productive land and the number of garden colonies is decreasing.

On the other hand, the paper draws attention and introduces a new trend within the alternative food networks and their promotion - the founding of new ´´urban gardens´´. Self-provisioning and its various forms gained considerable interest on the part of both consumers and scholars during the last decade, partly thanks to the fact that during several outbreaks of food insecurity episodes (e.g., foot and mouth disease, bird flu, swine flu) consumers became more interested in fresh food and a healthy diet. Under the pressure of inspiring examples from the developed countries (USA, west and north of Europe, prominent gardens at the White House o Buckingham Palace), there are citizen groups of activists or at least people with interest in finding a place where to grow their own food. First urban gardens appeared in the capital city of Prague during the 2012 and others are planned for the next vegetation season. Mothers with children, young people, yuppies, and professionals motivated by freshness or health enjoy the possibility to grow their own food in a limited allotment, pensioners and older generations want to relive the experience gained in the era when gardening used to be an everyday part of their lives. These urban gardens have important positive impacts on society and local community, are widely promoted and quickly become part of the urban edible landscape.

METHODS

This paper depicts the history of gardening in Czechia and the extent of this practice during the communist regime. After stating a wide ranging character of this practice, it moves to the analysis of the trends in urban gardening during the transformational period (thus during the processes of democratization and market liberalization). Several databases are combined to obtain the information about the number and spatial extension of gardens within Prague in the period of 1997 - 2004, when their extension and dynamics of change was first studied. Spatial analysis is then used to reveal the changes in the period of 2005-2012. The main reasons and motives that have led to diminution of garde-

ning, gathered from the in situ control and field research, as a sustainable productive and recreational function during the nineties and the first decade of the new millennium are presented and documented by statistic and geographic analysis.

The paper then introduces the very first two examples of urban gardens in Prague and on the basis of the deep-interviews with their founders aims to depict their position within the new Czech alternative food networks. The interviews were recorded and then transcribed and analyzed by the means of the content analysis. The main findings of the paper are enriched by the most interesting statements of the reviewed persons.

CONCLUSION

The goal of this research is to show if this trend of urban gardening represents a new perspective, under different conditions and with different motivations, values and processes of functioning or it only looks for new names for the old ways of gardening that once proved effective and popular. There are in fact two opposing trends taking place, one of them is the diminution of urban gardens as known from the communist era and the second one is starting up of new gardens under different names and behind different ideas and assumptions. If there is a shift to sustainable urban gardening an especially young, alternative people are interested in it, the traditional gardening areas should be saved and used for the purposes of the new urban community gardening.

The role of norms and ambivalence in biodiversity protection

Paula Castro & Carla Mouro
ISCTE-IUL, Portugal

Legal innovations, i.e. new laws, are routinely used by governments to promote innovative practices. In our days, there are many new laws with sustainability and environmental protection goals, a fact that makes the psycho-social processes involved in their reception worthy of more attention from environmental psychology. The environmental policy of the European Union (EU), in particular, has in the last two decades been strongly reliant on legal regulations, and EU member states now have countless new sustainability laws (Castro, 2012). Surveys have consistently shown that the goals behind the laws receive high support (e.g. Gaskell et al., 2010).Yet, some of the laws are sometimes indirectly or subtly contested (Hiedanpää, 2005; Mouro & Castro, 2012), or questioned by specific groups (Buijs, 2009; Buijs et al., 2012), and there remains a persistent gap between support and actual behaviour (Vining & Ebreo, 2002).

This reveals that although laws are an important step towards sustainability the mere existence of laws is not enough for assuring generalized change or belief/behaviour consistency (Castro, 2012; Hernandez, Martin, Ruiz, & Hidalgo, 2010). Recently both social and environmental psychology have dealt with this issue by, for instance, further investigating the influence of norms on behaviour, or taking into account that human sense-making and decision-taking often happen in the presence of ambivalence (Bonnes, Passafaro & Carrus, 2011).

This presentation addresses the aforementioned issues. It examines the impact of norms and ambivalence on biodiversity protection practices, focusing on communities living in Natura 2000 sites where biodiversity protection is legally mandated. The literature has shown the positive impact of social norms (Gockeritz, Shultz, Rendón et al., 2010; Nigbur, Lyons & Uzzell, 2010) and the negative impact of ambivalence (Castro, Garrido, Reis, &

Menezes, 2009; Ojala, 2008) in adopting home conservation behaviours, such as recycling or energy conservation. However, little is yet known about the role norms and ambivalence may play regarding the new and legally framed biodiversity-relevant practices, or about the combined effect of norms and ambivalence. It specifically remains to be seen whether pro-conservation norms can attenuate the negative impact of ambivalence on these practices. The social origins, or antecedents, of ambivalence in this area of research have likewise received little attention.

In an attempt to clarify these questions, we report results from a survey to a sample of residents of Natura 2000 sites recently subject to requests for conserving an at-risk local species – the Black Vulture. We shall present two inter-connected studies originating in the same survey. In Study 1 we compare the force of the association between different types of norms and practices relevant for the protection of the black vulture and illustrate the negative impact of ambivalence on these practices while also showing that said ambivalence is attenuated by the (pro-conservation) injunctive norms seen to prevail in the community. In Study 2 we look at the social antecedents of ambivalence, showing that telling respondents that their community had either consensual or diverse positions regarding the conservation of the Vulture altered the levels of experienced ambivalence; when they were told the positions were diversity, more ambivalence was found. Also in Study 2 we illustrate how this impact is amplified by the perceived cohesion of the community. We discuss the relevance of taking into account local positions and local norms when implementing innovative practices proposed by new laws.

Optimizing the blue carbon potention by develope mangrove land in Indonesia to reduce the global warming effect

Alfi Irfan
Bogor Agricultural University, Indonesia

INTRODUCTION

The ecosystems are being degraded and destroyed at a rapid pace along the world's coastlines, inhibiting Earth's ability to sequester carbon and contributing greatly to climate change through increased carbon dioxide emissions.

Carbon capture and storage is an approach to reduce global warming and climate change caused by greenhouse gas emissions. It aims to capture carbon dioxide from large point sources and subsequently store it away safely instead of releasing it into the atmosphere.

The development of human activity until this century directly affect the ecological environment. The process of life into the economic system such as production, distribution, and consumption also contributed to environmental damage. Ehrlich and Holdren (1971) in his theory, called the I PAT explained that the influence of a given environment (Impact) for mankind is the multiplier effect of the development of the human population (Population), the amount of affluance levels, and the development of technology. Those factor are the dominant factor in influencing environmental conditions.

BLUE CARBON STRATEGY

2.1. The Definition of Blue Carbon

Out of all the biological carbon captured in the world, over half (55%) is captured by marine living organisms – and hence called blue carbon. Some marine habitats are particularly good at this job. Mangroves, seagrass and saltmarshes might only cover 0,5% of the sea bed but account for more than 50% of all carbon storage in ocean sediments, (Nelleman et al., 2009)

Several conferences have been conducted in order to care about carbon stocks from Indonesia. In 1992, the Conference on climate change such as the Earth Summit in Rio de Janeiro, Brazil, regarding the commitment of some 150 countries to reduce carbon emissions in the atmosphere. Kyoto Protocol in 1997 in Japan, regarding the approval of 160 countries to reduce carbon emissions. However, implementation is still lacking, 38 industrial countries actually play a major role in the release of carbon emissions that contribute more than 55 percent of emissions (UNEP 2008). However, political interests and power of some superpower to make the program less effective. Reduction of Carbon Stock in Earths atmosphere should be carried out optimally by the uniformity of movement between countries. There are at least two ways that can be done in order to reduce Carbon Emissions. Carbon stocks can be added through penenaman tree can absorb carbon in the atmosphere. In addition to the forest land. Reduction of atmospheric carbon stocks can also be done through the utilization of mangrove planting pesisisr like this is less a concern for countries in the world. Carbon reduction through the utilization of the sea and things related to him or her so-called Carbon denganblue.

2.2. Comparison of Blue Carbon and Forestry Land Carbon

The world is losing its coastal vegetated habitats - mangroves, salt marshes and seagrass meadows - at a rate four times greater than its rainforests. Long valued as vital in the provision of coastal stability and abundant food resources for wildlife and human communities, these invaluable ecosystems are now also recognised for their vast and unique capacity to sequester and isolate carbon for thousands of years.

This "Blue Carbon" exceeds the carbon fixed and stored by plants on land ("Green Carbon") each year. While perhaps lacking the conservation glamour of rainforests, it is a compelling fact that "the long-term sequestration of carbon by 1km2 of mangrove area is equivalent to that occurring in 50 km^2 of tropical rainforest." The values are comparable for seagrass and salt marsh habitats. Knowing this, the wisdom of conserving habitats supporting coastal marine vegetation — primarily in estuaries — is significantly strengthened. There is an equally strong case for restoration, enhancement, and perhaps even creation of these habitats. They serve two crucial and timely functions: the conservation of biodiversity and the moderation of climate change.

CONCLUSION

In Conclusion, Indonesia has huge potential in the development of mangrove in order to reduce the effects of global warming. There are several obstacles faced in the development of mangrove Indonesia. Like the regulation that still overlap between sectors and some political interests. Solutions that can be done include mmenyinergikan all stakeholders and consider the role of the economic side of society so that construction-based ecological, economic, and social development can be realized.

Stress reducing effects of different urban green areas: An experimental study

Liisa Tyrväinen & Ann Ojala, Finnish Forests Research Institute, Metla
Kalevi Korpela, University of Tampere, Finland

INTRODUCTION

There is a link between urbanisation, lifestyle and stress. Long-term stress is related to several negative outcomes for human health and well-being. Recently, the potential of natural and green spaces in reducing stress and thus enhancing the quality of living has been recognized. It is important to find solutions for better the health of urban inhabitants, and to increase the understanding of the ecological and social benefits of urban nature (e.g. Tyrväinen et al. 2005). In spite of the growing research base, still more evidence and systematic research is needed on the psychological health effects of green spaces. This presentation is about the effects of different urban green areas on psychological restoration and well-being, based on the experimental study in Helsinki, Finland.

THEORETICAL BACKGROUND

There is a growing number of literature focused on the relationships between recreation and mental restoration in green areas. Previous research shows that green spaces help in reducing stress and enhance psychological and physiological rehabilitation (e.g. Park et al. 2010; Van den Berg and Custers, 2011); compared to urban environments, natural environments improve mood, concentration and performance (e.g. Hartig et al. 2003, Ulrich et al. 1991). Epidemiological studies show that green spaces improve the perceived general health and the longevity (e.g. Maas et al. 2009). However, a Finnish study showed that favorite extensively managed natural environments, typically urban woodlands, were more restorative than favourite urban parks (Korpela, et al., 2010; Tyrväinen et al. 2007). The experimental studies measuring physiological indicators show that walking in a forest (compared to urban environment) lower blood pressure, heart rate variability and cortisol level (e.g. Lee et al., 2012; Tsunetsugu et al. 2007). The aim of this study is to understand and to clarify the psychological responses induced by the short visits to different types of everyday urban living environments.

METHODS

We chose three different experimental sights, all situated in the Helsinki city, the capital of Finland. The three study sites were a constructed urban park, urban woodland and the centre of Helsinki. The experienced restorativeness was measured by the Restorative Outcome Scale (Korpela et al. 2008) and Perceived Restorativeness Scale (Hartig et al. 1997). The self-reported physical and mental energy level was measured by the Subjective Vitality Scale (Ryan & Frederick, 1997). The experiment consisted of the 15-minutes viewing session, that was followed by a 30-minute walking session in a given course. The experiment was carried out after a normal workday. The measures were done at the beginning of the experiment, after viewing and after walking. We also collected data about the temperature and weather conditions during the experiment. These results are not reported here. The participants were 30-61 years old healthy, non-smoking adults. The final sample consisted of 95 participants, of whom 77 we have all measures from all three study sights, which they visited in a maximum of four people's groups. The data were analysed in SPSS, using repeated-measure ANOVA.

RESULTS

Our results showed that there was a strong difference between the city centre and urban green areas. The participants felt more relaxed and vital after visiting green areas, compared to the city centre. The differences between the urban green areas were smaller, however, the urban woodland had more restorative qualities.

CONCLUSIONS

For implementing the results in urban planning, more information is needed about the effect of type of nature on the positive health benefits. This study added new knowledge about the role and importance of different urban green spaces on human health and well-being, and more precisely, the information about how everyday environments can help to cope with everyday stress. We need more information about how the urban green areas should be managed to maximize the health benefits, especially in a situation where the urban population and density is growing.

KEYWORDS

Stress, well-being, urban green areas, restoration, field experiment

HEALTHY HOUSING AND VULNERABILITY

Chair: Sherry Ahrentzen

Supportive homes for uprooted lives. A cross-disciplinary action research on the refugees centers in Milan

Rainisio Nicola, Giunta Elena & Rebaglio Agnese
Università degli Studi di Milano, Italy

INTRODUCTION

Help and support the most vulnerable sectors of population is a critical point for the contemporary urban societies, in a context marked by a sharp contrast between the lack of resources and the need to maintain an adequate level of social cohesion and welfare.

One of the most complex challenges is to protect the asylum seekers and the refugees, who have been forced to leave their countries of origin and are experimenting a condition of existential displacement, compounded by economic and psychological problems.

The italian policy about the asylum seekers has often failed to establish a successful model, able to empower their economic, social and psychical conditions as requested by the international agreements.

This field was in fact largely characterized by an emergency policy, within which the new interventions were developed in exigent circumstances, without any systemic perspective.

THE RESEARCH PROJECT

Also the housing sector suffered this lack of orderliness, and locations as abandhoned schools and mobile homes were chosen randomly to answer the urgent requests of new solutions for a temporary accomodation of the asylum seekers.

The result was a vicious circle of fragility, in which the most vulnerable people were hosted in the most unsupportive residential environments.

A research project was developed, in Milan, involving public actors, designers and environmental psychologist, with the aim of creating, in collaboration with the inhabitants of the refugees centers, some practical guidelines to evolve these spaces.

In particular, the challenge was to project some design solutions to transform an environment perceived as totally precarious in a place of virtuous temporariness, taking in consideration the multiculturality of the context and supporting new forms of individual place attachment and identification to rebuild the disrupted bonds with homes and environments.

METHODS AND RESULTS

A mixed and flexible model was used, trying to create hybrid tools able to favour the dialogue between different scientific fields and to answer the problems of the local context.

Starting from a collection of case-studies related to various form of temporary accommodations, it was developed a Post-Occupancy evaluation of some local centres.

In a first stage, a destructured method of analysis was used to recognize the basic residential needs and imaginaries, asking the refugees to share their representations about the previous place of residence, the actual home and the forms/functions able to promote an ideal hospitality.

These informations have been collected using various methods: focus groups, observations, micro planning.

At the same time, a similar approach was applied to other stakeholders, as the social workers employed in the Refugees Center and their managers.

A questionnaire was also administered to the asylum seekers to study in detail some main dimensions of the centers where they live: privacy, social relations, general quality of furniture, perceptions of fear and control, autonomy.

In the second stage, all the collected informations have been discussed in thematic sessions involving all the stakeholders, then the final guidelines have been proposed.

Those results will be presented, with regard to the processes enabled to elaborate new hybrid methodologies, to improve the local involvement in the project and the participation of the residents, and to realize a supportive environmental context for a subjective empowerment of the asylum seekers.

A social network in the posts-conflictual residential settings

Beril Ozmen Mayer & Elinwa Ugochukwu Kenechi
Eastern Mediterranean University, North Cyprus

The conflicts and struggles impairs humanity in all historical times as all other man-made catastrophes, which have also influenced residential settings in terms of the routine of everyday life practices in the existing urban environments. In the local context of Cyprus, the transformations can be observed due to the displaced and resettled different migrated groups. Especially, one of the major cities, Famagusta with lots of its population, much of its economic and socio-cultural values and touristic sites were seemingly lost as a result of the 1974 confrontation which forced a strong disconnection of the city from the sea through its organic link (Atai et al, 2010).

Moreover, recent studies reveal that the displaced victims of the war, 38 years later, still struggle with settlement issues. Displacement as a result of crisis could occur in different forms and levels, they include the loss of home, business, property, power, money, health related issues and social damages. However, one of the major issues encountered is the problem of resettling the category of displaced individuals categorized as homeless. Rossi et al (1987) suggests two distinct classes of homeless people; the literally homeless and people housed in unhealthy conditions.

In another term, resettlement can be interpreted as a process of moving from one place to another, within the same geographical confines or trans-geographical relocation, or from one house to another. It is important to note here that in any case of resettlement, is

well accepted by both the affected population and stakeholders if it is in the disaster management program (Safer Homes, 2010). The attachment that individuals get from a place is greatly influenced by the satisfaction they derive from that place (Connerly & Marans, 1985), therefore is the case with resettlement of any kind. This term further characterizes the phenomenon of loses whose impact could be either in the social, economic or both dimensions and usually as a result of displacements triggered by loss of properties, imposed restrictions on access to land, unfavorably government policies and safety questions . Such involuntary relocation of the displaced individual to a new environment, the process of resettlement and recovery has been greatly affected by the buffer zone, thus resulting in quite obvious unfavorable social conditions.

Reconstruction shoud be considered for recovery after such disasters. Thus, this process should involve both active and passive strategies that are all encompassing in rebuilding the society both in terms of psychology and the physical environment. According to Kumar (1997), reconstruction can be viewed as a rebuilding process of both formal and informal components of the society and this process involves the reforms of policies and institutions. However, it should be noted that among all other policies, achieving an effective postwar or post crisis reconstruction policy is obviously the most harsh one (Cowen and Coyne, 2005).

By applying the theories of housing network and the use of structured interviews, this study tries to understand the characteristics and operations of the housing network in Maras area of Famagusta as a post-crisis resettlement strategy. It pays close attention to the social characteristics of housing of the different groups of settlers in the area while considering the different levels of fragmented social cohesion. This study was achieved by the use of qualitative and quantitative research methods for exploration and analysis of data.

A large family with a close kinship ties has chosen as the social network on housing to examine their displacement, resettlement, and adaptation process through detecting their homing / home-making mechanism, in their housing cluster and in the neighbourhood in the area adjucant to the borders of closed Maras district. It will be very significant to detect the family, whose members have originated from different places, however formed an extended social network under the umbrella of the same large family groups and their adaptations encountered in the built environment through multiple cultural contexts. If we pointed out what opportunities and threats for achieving social sustainability for the promotion of equity and social inclusion, it is relevant with the ecological and economic principles to face the new challenges for the built environment.

KEYWORDS
Post-Conflict, Social network, Homing Mechanism, Social Sustainability, Maras Housing.

Unexpected changes as a principal factor of urban disorganization

Myriam Goluboff Scheps, Amparo Casares & Cristina García Fontán
University of A Coruña, Spain

The research compares two significant moments in the population evolution of Buenos Aires: the immigrations from Europe, straddling the 19th and 20th century, and the immigrations from interior provinces in the middle of the 20th century. And how it produces similarities and differences in the urban environment.

BACKGROUND

The idea is to compare the rhythm of immigration in the last years of the 19th century and in the first years of the 20th. In 1880, people with European cultural background occupied new urban pieces of land annexed to the city, and with the idea of the city as a civilization element (Gorelik 1998) to make their houses in. The immigration originated in the 1930s occurred when due to the economic crisis in Argentina across the countryside, and industry appeared,(Calcagno 2005). It happened a massive migration of people from the countryside to the capital, more people which expected to work than the real need of the industry created in those years.

OBJECTIVES

This work seeks to draw some conclusions. At the same social, cultural and urban context, close in time, there are two phenomena of mass migration to the city of Buenos Aires, with quite different results. In the first case this increase in population means an integrated settlement built from the standpoint of social and urban. In the second we talk about the slums: "villas miseria"

The objectives are:

- To make a systematic search of the vast literature on the growth of the greater metropolitan area of Buenos Aires and their planning and a sequential mapping. Research is completed with direct input from researchers and active participants in the growth processes.

- To compare these two moments of Buenos Aires convulsed growth. The matter is to compare the form of the city, the occupation of land, the density and the management of the problem.

- To analyze the typology of housing and the form of the public space that is generated, in the first period appeared the "casa chorizo" and "conventillo" one creating three or four houses instead of one house in a plot but inside the original urban layout the second living in one house various families one in each room. In the second period there were created spontaneous settlements "the villa miseria" in zones in the border of the city without urbanization yet.

- To see the similarities and the differences between these two processes and to see if it is possible to apply some conclusions to provoke the transformation of these unfortunate settlements, "villa miseria", and making them integrated part of the city. The city was not prepared for that increase of citizens, they came from less developed areas in cultural and economic terms, and the increment of citizens happen in a very short period of time.

It does not seem that the housing is the worst thing in these urban marginal spaces. The common spaces, the services, the integration with the city, the work of the company for the education and the integration are the most relevant aspects to solve.

The research analyses two moments with different governments, one form 1945 up to 1955 and other in the last years of the 1970 decade. The government intended, with different ideological premises in those two periods, to eradicate those spontaneous occupation of land inside the city but they couldn´t solve the problem.

From then," villas" grown inside the city and outside in the metropolitan area, where the problem is actually much more important because of migrations from other countries.

METHOD

The information is obtained by direct interviews with the actors involved in these transformations of the city, planners and citizens, as well as written documentation of processes. The information is also obtained from the comparative study of the photo-mapping planes and demographic data reflecting the evolution of the city in these periods.

DISCUSSION

This work discusses the factors entering the time factor in the analysis. In a limited context, produce either results, to establish what are the social proposals or urban planning policies to obtain the desired results: an integrated city, coherent and with equal opportunities for all its citizens.

DETERMINANTS OF SUSTAINABLE ENERGY CONSUMPTION

Chair: Patrick Devine-Wright

Psychosocial antecedents of intentions to use renewable energy devices at household level

Ferdinando Fornara, Marina Mura, Piermario Pattitoni &
Elisabetta Strazzera
Università di Cagliari & Sapienza Università di Roma, Italy

This study is part of a multidisciplinary research project on the psychosocial antecedents of the intention to use renewable energy resources at household level in the city of Cagliari (Sardinia, Italy). In particular, the target behaviours concern the willingness to invest in energetic improvement (i.e., thermal isolation of buildings), photovoltaic and solar thermal systems.

Currently the production of renewable energy is going through a particular development in Italy, also thanks to incentive policies, leading the country to the 4th place in Europe (GSE, 2011a). Of particular interest is the situation of Sardinia, since it is among the Italian Regions with the highest annual solar radiation per square meter (GSE, 2011b).

The literature on proenvironmental behaviours has shown the impact on such behaviours of psychosocial dimensions such as the individual's value orientation (Schwartz, 1992), with specific reference to the dimension of "self-transcendence and self-enhancement , and the general environmental attitudes, e.g. the ones referring to the New Human Interdependence Paradigm (Corral-Verdugo, Carrus, Bonnes, Moser, & Sinha, 2008).

Some models (e.g., the Value-Belief-Norm theory: Stern, Dietz, Abel, Guagnano, & Kalof, 1999) tried to integrate a set of dimensions including values, attitudes and personal or moral norms in order to better predict proenvironmental behaviors which are not driven by utilitarian reasons. On the other hand, the Theory of Planning Behavior (Ajzen, 1991) proved that attitudes (referred to a specific behavior), subjective norms, and perceived control over the behavior have a good prediction power of the intentions to perform a target proenvironmental behaviours. Moreover, descriptive norms seem to play a specific role in influencing such behaviours (Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007).

This survey study involved a sample of homeowners (N = 432) in the city of Cagliari. It was administered a questionnaire including measures of intentions to invest in renewable energy devices at household level, attitudes toward such devices, perceived behavioral control, universal values (Schwartz, 1992), awareness of the effects of renewable and non-renewable and ecosystem health (Abrahamse & Steg, 2009), urban stress (Homburg & Stolberg, 2006), and social norms.

Results show the association between "self-transcendence" values and general proenvironmental attitudes, which in turn are correlated to both the specific attitudes concerning the target behaviour and the social norms. The latter emerged as the most direct antecedents of the target proenvironmental intentions.

The practical and theoretical implications of the results will be discussed in the light of the theoretical framework.

Attitudes and acceptance towards wind farms in an area of economic crisis

Renato Troffa & Pierluigi Caddeo
University of Cagliari, Italy

INTRODUCTION

The present work aims to explore the attitudes and acceptation towards the Wind Farms (WF) in a specific context. In particular, this study aims to explore a territorial zone that is, at the same time, an economically depressed area and an environmentally damaged territory (because of the presence of several industries, mostly in the doldrums). Such variables are hypothesized to influence the shared representation of the Wind Farms.

THEORETICAL BACKGROUND

Public acceptability of energy artefacts is one of the main focus of the contemporary environmental and ecological Psychology, since it is one of the main factors that can influence the development of the renewable energies. Several factors have to be considered when studying such an issue (e.g. the aesthetic aspects, public support and involvement; Dewine-Wright, 2004). Further variables can be involved, as the peoples local experience with wind power (Krohn & Dahnborg, 1999) and the economic development (Slattery, Johnson, Swofford & Pasqualetti, 2012). Thus, it is important to focus, as for other relevant environmental issues, on the specific context, since the process of acceptance can be considered context and place-specific. This appears to be even more true since such an acceptance implies the modification of the landscape.

METHODS

A qualitative study was carried out in order to investigate the attitudes and the level of acceptance towards the wind-farms. The aim of the study was to identify and describe the founding factors of the attitudes and acceptance of wind-farms in the selected areas, the influence of the very specific context, and to furnish the base for the realization of a quantitative tool.

The involved areas were 2 different economically depressed zones of the Sardinian island. The 2 areas differed for as regards the presence/familiarity of the WF (presence vs absence) and the level of territorial damaging (high vs low). The tools were represented by a set of focus-groups, which were based on the outputs of a preliminary phase (semi-structured interviews). The sample was contacted in order to represent the different socio-demographic sub-groups of the local population (age, gender and educational background). The study involved both experts and non-experts.

Material gathered from the focus groups was recorded and integrally transcribed in terms of content. Thus, the obtained text was analyzed through the use of a text analysis software.

RESULTS

The specific economic situation of the considered areas seems to significantly affect the

assessment of the WF. The perception of a real shared benefit for the community (both for as regards the employment-rate and for the pure economic aspects) plays a very important role in the process of acceptance/refusing of WF.

The environmental concern seems to be articulated in two different concepts: a general environmental concern (that moves to the acceptance of the WF) and a specific worry related to the possible negative impact of WF for the landscape (that moves to the rejection of WF). It is important to stress the influence of the economic variable. Actually, since in the specific context the energy costs are perceived to be strictly related with the industrial economy. Thus, the negative impact on the landscape can be perceived as less important (the lesser evil), leading to a more positive aesthetic evaluation of the WF. Such an effect is even stronger when the WF are operative, and consequently explicitly demonstrate their importance for the economy.

It appears to be confirmed the importance of information and involvement for the acceptance-rejection. Actually, a higher level of involvement seems to help people in take-charge of the problem, to develop a more accurate representation, and, then, to more easily accept the installation of WF.

Lastly, the landscape seems to have a strong influence on the process of acceptance: the more the landscape is valued, the lower is the level of acceptance for the WF.

CONCLUSIONS

These outputs appear to be interesting for at least 2 reasons:
on one hand, they confirm the importance of the investigated geographic and social variables in influencing the attitudes and the acceptance towards the WF; on the other hand, they stress the importance of keeping into consideration the specific economic geographic context in which the WF have to be placed. Finally, the outputs of the present work furnished an adequate level of content and information for the development of the second phase of the study: a quantitative tool that could be able to more accurately deepen such an issue, investigating quantitative and fine aspects.

Further details and implications will be discussed.

A critical and empirical analysis of the national-local 'gap' in public responses towards large-scale energy infrastructures

Susana Batel & Patrick Devine-Wright
ISCTE-IUL, Portugal & University of Exeter, UK

Large-scale low carbon energy infrastructures (e.g. wind farms, power lines) are being promoted worldwide to tackle climate change. However, while national opinion polls tend to show high levels of public support, specific cases of their deployment often meet with opposition, mainly from local communities, and the 'NIMBY' (not in my back yard) concept is often invoked to explain this apparent 'gap' between national and local responses. In this paper, we critique three assumptions found in literature on this topic: first, that those affected by these infrastructures are only the communities living near a specific project - the general public's positive attitudes are often assumed, without further examining other type of perceptions at a national level; second, that local perceptions about those in-

frastructures are best examined through a project rather than place-based (Devine-Wright, 2009) approach; third, that a gap exists between national and local responses, despite the fact that studies do not often examine those, and in a comparable way, at both scales. In turn, those assumptions might contribute to perpetuate the representation of energy users as NIMBY's, or selfish, ignorant and irrational in their relation with energy. To redress those assumptions, we conducted survey research at national and local levels to assess perceptions of electricity transmission lines in general, and attitudes towards specific proposals. Our results do not provide evidence to support a 'gap' between national and local scales; instead, several similarities were found between perceptions about transmission lines in general and specific ones, across national and local scales. Furthermore, the results show the value of adopting a place-based approach to local communities' perceptions. The implications of the results for research and policy are discussed and, namely, the value of adopting a socio-psychological approach for better understanding people's responses to energy infrastructures, across different levels and scales.

Sustainable energy and sustainable communities. Social representations and rhetoric construction of energy issues in Italy

Mauro Sarrica, Sonia Brondi, Paolo Cottone, Chiara Piccolo & Bruno Mazzara
Sapienza University of Rome & University of Padova, Italy

This contribution examines the representations of sustainable energy currently coexisting in Italy.

In particular, we suggest that the representation of sustainable energy can be ideally conceived as the area of a triangle, on whose vertices are the representations of energy, of energy systems and of users (Devine-Wright 2007; Dobson 2003; Stern and Aronson 1984). Each of this vertex can be further defined adopting different parameters (i.e. economy, democracy, consciousness), giving rise to a rose of interconnected social representations (Bauer & Gaskell, 2008).

From this premises the present investigation examines a) contents and field of the social representations of sustainable energy currently shared in Italy and b) the way this issue is rhetorically constructed by stakeholders and policy makers.

The study has envisaged the use of a large textual corpus extracted from Italian parliamentary debates and the national press. Public online archives of the Chamber of Deputies and of local institutions were used to search both sources. Full texts were searched using as criteria the Italian keywords energ* and sostenibil* [sustainab*], limited to the period between 1 January 2009 and 31 December 2012. The text were then manually screened by the research team, and texts in which the themes of energy and sustainability were used in contexts different from the object of study were excluded from the subsequent analysis. Definitive corpora were subjected to qualitative and quantitative content and rhetoric analyses.

Results show that, throughout the years examined, sustainable energy was primarily represented as a matter of economics and of national interest. Despite the interest on decentralysed production systems, users are conceived mainly as consumers, whereas a true energy citizenship hardly emerge. The economic crisis as well as other political and environmental

crises (the G8, the nuclear accident at Fukushima) introduced some changes into this picture, bringing to the forefront more eco-sensitive approaches, but new representations hardly challenge the hegemonic one. The rhetoric construction and use of sustainability and its interaction with the local acceptance of energy project will be discussed.

Low carbon energy technologies and the meaning of home: The enduring significance of the hearth for older adults

Patrick Devine-Wright, Wendy Wrapson, Nicholas Hume, Sam Brown & Alan Lewis
University of Exeter, UK

'Home' has for a long time been regarded as a key topic of research in environmental psychology specifically, and the social sciences more generally.

This study explores the meaning of home in the context of two major challenges facing policy makers in Europe today: the ageing society and the transition to a low carbon energy system. The paper reports the findings of a UK-based interdisciplinary research project seeking to explore the thermal experiences of older adults (aged 60-89 years) in diverse residential contexts following the installation of low carbon and energy efficient heating technologies.

Qualitative methods (i.e. in-depth interviews) were employed with older people in four domestic contexts: care homes, sheltered housing, rented housing and owner-occupied homes.

Results from the interviews suggest that hearth-like focal points of heat and 'glow' remain important attributes of the low carbon 'home' in ways that are difficult to explain from a functional or technological perspective. For example, in rural owner-occupied homes with heat pumps installed, wood burning stoves were perceived to afford important visual, social and seasonal experiences that under floor systems of heat delivery, even when working perfectly, failed to provide. In care homes, open fires were ruled out by staff on safety grounds, however 'mock' fireplaces were installed to provide a 'cosy glow'. Across diverse home contexts, the interviews indicate the psychological aspect of thermal experiences - that 'seeing is believing' in relation to feeling warm.

The results are discussed in light of policies for reducing carbon emissions in residential contexts.

HEALTHY ENVIRONMENTS

Chair: Xavier Alcalá

Urban environmental stressors: Extend of annoyance, sleep disturbance, and impact on residential satisfaction in The Netherlands

Ric Van Poll, Oscar Breugelmans & Jeroen Devilee
National Institute for Public Health and the Environment, The Netherlands

INTRODUCTION

Urban environmental stressors like noise, malodour or light are chronic, global conditions of the environment that, in a general sense, represent noxious stimulation, and which, as stressors, place demands upon an individual to adapt to or cope with (ambient stressors). Most common effects of exposure are annoyance and sleep disturbance which may affect residential satisfaction negatively.

We performed a survey to assess the prevalence of annoyance and sleep disturbance due to these ambient stressors among residents in the Netherlands. In addition we assessed their impact on perceived environmental quality.

THEORETICAL BACKGROUND

In this study we adopted a cognitive-psychological perspective on the impact of urban environmental stressors on residential satisfaction. Key criteria are experienced satisfaction with the residential environment and perceived annoyance by urban environmental stressors. In 'Quality of Life (QoL) research, residential satisfaction is seen as one of the constituting aspects of the broader concept of 'QoL'. The perceived urban environmental quality, as measured by residential satisfaction, in turn, is affected by, amongst others, urban environmental stressors. It essentially is an effect-based view, as contrasted to an exposure based vieuw, frequently adopted by policy makers.

METHOD

The survey was an inventory of nuisance due to a variety of urban environmental (ambient) stressors in the living environment e.g. noise, malodour, vibrations, light and external safety risks. 1250 residents participated in the survey, which was performed by means of a face-to-face, structured interview. The sample appeared to be representative with respect to the distribution of age, gender and socio economic status in the Netherlands. Altogether, residents evaluated 4 different types of ambient stressors: noise, malodour, vibrations and light. More than 40 different sources (e.g., traffic, industries, agricultural, construction, drilling, sport parks), were evaluated. Annoyance, sleep disturbanceand residential satisfaction were assessed by means of an 11-point scale (0: not at all annoyed, disturbed or satisfied; 10: extremely annoyed, disturbed or satisfied). People with a score of 5 or higher are considered 'annoyed' or 'disturbed', people with a score of 8 or higher are considered 'severely annoyed' or 'severely sleep disturbed. The proportion (in %) of residents '(severely) annoyed or (severely) disturbed are presented.

RESULTS

Most people appear to be (very) satisfied with their residential situation in general (about 80%). Most annoying urban environmental stressor appeared to be a noise source: 'mopeds' (17% annoyed, 6% severely annoyed). 'Hearths/fireplaces' appeared to be to most annoying sours of malodour (7% and 2% respectively). Vibrations due to 'road traffic' appear to be the most annoying (8% and 3 % respectively). 'Street lights' was the most annoying light source (5% annoyed, 2% severely annoyed). These sources appeared to be also the most sleep disturbing sources studied, although the proportion of residents whose sleep was disturbed was lower than the proportion of residents annoyed. During the presentation the relation between residential satisfaction and urban environmental stressors will be elaborated.

CONCLUSIONS

Residential satisfaction is fairly high in the Netherlands and has increased the past few years. Still a fairly large number of residents is annoyed. Despite the government's policy effort to abate severe annoyance, people still suffer from (severe) annoyance from various sources due to noise, malodour, vibrations and/or light.

A conscientious approach to the design of sustainable therapeutic environments for vulnerable populations

Angela Bourne & Kristi Gaines
Texas Tech University, USA

THEORETICAL BACKGROUND

While the ADA (Americans with Disabilities Act 1990) has done much to make buildings accessible for people with physical impairments, it has had virtually no impact on environmental accessibility issues for people with intellectual developmental disabilities (IDD) (Castell, 2008). Providing equitable building access for the disabled is a complex and ongoing global issue especially since controlling legislation and building standards vary according to each country's understanding and/or acceptance of this issue. The majority of design information available to designers, architects and support workers who provide services to this population focuses on physical needs of people with disabilities and who are aging and ignore their intellectually/cognitive needs. Little is known and disseminated in regards to what environments for aging adults with IDD and Neuro Diversities (ND) who experience their world much differently than Neuro- Typical (NT) individuals need to live an optimal quality of life.

METHODOLOGY

The research design for this "in progress" study is based on an ecological world view perspective. This transactional view emphasizes the dynamic relationship between people and their setting. The grounded theory approach embodies a human/nature investigation and is cognizant of seminal literature on the restorative qualities of nature. The data collection method includes a literature review and case studies of several communities housing people with IDD throughout the United States. An environmental assessment of the communities was conducted and included an inventory of the physical properties and structures, behavioral observations and interviews of the residents and staff. The data collection included examining and assessing a variety of environmental design properties within the communities. The results will help develop guidelines for the creation of therapeutic living and learning environments that resonate with the neuro-sensory sensitivities of this population.

IN PROGRESS RESULTS-DISCUSSION/RATIONAL

The American Association for individuals with developmental disabilities (AAIDD) estimates that 2.5 million people in the United States have an intellectual disability - approximately 1% of the United States population. Of this population there is a rising incidence of individuals with ASD who are getting older. "A projected 500,000 children with ASD are expected to reach adulthood within the next 15 years in the US ", (Ahrentzen, 2009). Currently, there is a limited amount of appropriate housing to fulfill this need. Plans to accommodate them need to be put in place or the nation will have a crisis. Up until now, individuals with IDD were often placed in institutions for chronic elderly care. This presentation of an "in progress" research project will allow p[participants to see the steps involved in gather data to substantiate the study and learn new techniques for the development of research that supports a need in their local area.

LEARNING OBJECTIVES

By attending this presentation,
Participants will be able to:
· Explain the neuroscience design paradigm.
· Use the neuroscience paradigm to describe elements of a therapeutic environment relative to sustainable biophilla design.
· Identify basic sensory sensitivities prevalent in neuro diverse populations (ND)
· Formulate design interventions appropriate for promoting the well-being of ND populations
· Explore pros and cons of using various research methods/ tools for collecting data from special population s(IDD)

Revitalizing the linkage between nature and health: The study on green infrastructure for active travel in the compact cities

Mei-Lin Su
University of Edinburgh, UK

INTRODUCTION

The research draws on knowledge of establishing an academic-based association between the spatial attributes of urban nature and active travel for health. It is with a focus on developing a comprehensive green infrastructure planning context for promoting individuals walking and cycling for transport in densely-populated cities. Here, the neighbourhoods in Asia cities serves as a case study to assess both the challenges and the potential that green infrastructure can provide for urban dwellers. It hypothesizes that, in the compact cities with high development density and mixed-use landuse, the well-connected green spaces will further play as the essential tool to develop the physically-active life style by encouraging their active travel mode.

THEORETICAL BACKGROUND

There has been a considerable amount of research that tends to define the more sustainable and livable cities, and the active urban lifestyle is valued as one of the indicators of the sustainable city in terms of social dimension. To reach the vision, in the past few decades, much of the debates of urban planning have focused on increasing settlement density and mixed-use development to deal with the problematic car-oriented suburban and thus assure a more active urban lifestyle. The approaches aim at re-shaping the built-environment for increasing active travel, such as walking and cycling. It states that these

types of moderate physical activities on a daily basis can cope with the public health issues led by the long-term inactivity (Coombes et al., 2010, Buehler et al., 2011). However, following the advocate of building a more compact urban form, the impact of urban nature on active travel and healthy-related behaviours has just emerged as a determinant, and the underlying mechanisms are only beginning to be formed (Seaman et al., 2010).

There is now mounting international evidence that the attributes of urban green spaces are associated with health (Thompson, 2011). The key statement is that well-nest green spaces network, the green infrastructure in the research, can provide opportunities for physical activities, promote our health condition and improve well-being by facilitating social contacts. It is seen as the most critical environmental intervention for the takeup and maintenance of everyday active travel behaviour. There are now an increasing number of initiatives focused on using green infrastructure – the interconnected greenspace network – to promote formal and informal exercise programmes for urban dwellers. Research and academia have now begun to explore the form and function of greenspace and its role in terms of increasing routine levels of physical activity (Wolf, 2008, NHS, 2008, Tzoulas et al., 2007).

The idea that residents in cities can exercise in individual green spaces – such as parks – is not new. However, the use of the term 'green infrastructure' in this research implies a move away from conventional planning issues (such as the location of a sport centre, or exercise facilities in a park), towards a greater focus on the way an interconnected system of green open spaces might be designed to encourage human-powered movement, not only 'moving to greenspaces to exercise' to 'exercise within green infrastructure'.

RESEARCH METHODS

In the research it hypothesizes that in compact Asian cities, providing urban greenspace network is the alternative way to further shape an active lifestyle, and landscape urbanism strategies can be adjusted to more effectively deliver greenspace network for physical activities. In order to connect and analyse the spatial relationships between resource distribution, ecological (the environmental attributes of green infrastructure) and social factors (residents' participation in moderate physical activities) will be measured on the same basis of the Geographic Information System (GIS). The hypothesis is further tested on the statistic basis.

RESULTS AND CONCLUSIONS

This study is one of the ongoing studies for the health benefits of green infrastructure for active travel. It has initially identified and developed the correlations between the formation of green space network and active travel within the compact Asian cities. It gives the confirmation that green infrastructure are strongly consistent with the level of participation in walking and cycling.

REFERENCES

BATTY, M. & LONGLEY, P. 1994. Fractal cities: A geometry of form and function, London, Academic Press.

BOVILL, C. 1996. Fractal geometry in architecture and design, Boston, Birkhauser.

BUEHLER, R., PUCHER, J., MEROM, D. & BAUMAN, A. 2011. Active travel in Germany and the U.S.: Contributions of daily walking and cycling to physical activity. American Journal of Preventive Medicine, 41, 241-250.

CARMONA, M., HEATH, T., OC, T. & TIESDELL, S. 2003. Public places, urban spaces: the dimensions of urban design, Oxford, Architectural Press.

COOMBES, E., JONES, A. P. & HILLSDON, M. 2010. The relationship of physical activity and overweight to objectively measured green space accessibility and use. Social Science & Medicine, 70, 816-822.

COOPER, J. 2003. Fractal assessment of the street level skylines: a possible means of assessing and comparing character. Urban Morpholgy, 7, 73-82.

COOPER, J. & OSKROCHI, R. 2008. Fractal analysis of street vistas - a potential tool for assessing levels of visual variety in everyday street scenes. Environment and Planning B: Planning and Design, 35, 349-363.

HAGERHALL, C., PURCELL, T. & TAYLOR, R. 2004. Fractal dimension of landscape silhouette outlines as a predictor of landscape preference. Journal of Environmental Psychology, 24 247-255.

MANDELBROT, B. 1982. The Fractal Geometry of Nature, San Francisco, W. H. Freeman.

NHS 2008. NICE public health guidance 8: Promoting and creating built or natural environments that encourage and support physical activity. London: National Institute for Health and Clinical Excellence (NICE), The National Health Service (NHS).

SEAMAN, P. J., JONES, R. & ELLAWAY, A. 2010. Its not just about the park, its about integration too: why people choose to use or not use urban greenspaces. International Journal of Behavioral Nutrition and Physical Activity, 7, 78.

THOMPSON, C. W. 2011. Linking landscape and health: The recurring theme. Landscape and Urban Planning, 99, 187-195.

TZOULAS, K., KORPELA, K., VENN, S., YLI-PELKONEN, V., KAZMIERCZAK, A., NIEMELA, J. & JAMES, P. 2007. Promoting ecosystem and human health in urban areas using green Infrastructure: A literature review. Landscape and Urban Planning, 81, 167-178.

WOLF, K. L. 2008. Metro Nature: Its function, benefits and values. In: WACHTER, E. L. B. A. S. M. (ed.) Growing Greener Citiies. Philadelphia: University of Pennsylvania Press.

The social sustainability of public spaces in hospitals. Remarks on some case studies from Tuscany

Sabrina Borgianni, Caterina Di Costanzo, Nicoletta Setola & Maria Chiara Torricelli
University of Florence, Italy

INTRODUCTION

The fiscal crisis threatening in the Nineties the sustainability of the welfare systems in Europe has been aggravated by the financial and economic crisis of these last years. These crises have imposed a critical reflection on the transformations, broadly speaking, of models of social protection and, especially, of the structures and functions of hospitals. Hospitals, in order to ensure the right to health, should open ever more to the values of the community and to new social needs that relate to the guarantee of access to care, the promotion of a culture of social respect, the attention to the relationships professionals-patients. Indeed,

today hospital public spaces have some functions, in addition to the guarantee of access and intelligibility of patients' routes, affecting the social integration between clinical and urban spaces. The central idea of SPACES (an ongoing Italian interdisciplinary research), whose we show intermediate results, is to give guidelines for health policymakers through an interdisciplinary analysis that involves lawyers, architects and sociologists. The paper highlights a new point of view aimed at addressing changes and transitions in complex socio-spatial systems - public spaces in hospitals - thus illustrating our approach that arises from a new theoretical and methodological perspective.

THEORETICAL BACKGROUND

In the international debate, four meaningful aspects about quality of hospital architecture emerge: efficiency of health performance, promotion of patient and staff well-being, accessibility, integration in the community. The matter of hospital architecture appears as an interdisciplinary issue, embedded in the historical, geographical, political context.

In legal studies the category of space assumes a meaning mediated by philosophical studies and a direct meaning arising both from the specific nature of the right to health, which is linked to the social dimension of citizenship, and from the characteristics of rights implementation that needs a dedicated spatial organization.

Within the design disciplines framework, many studies on Evidence Based Design show how factors of environmental and architectural quality affect directly and indirectly the perception of patient well-being (Evans, 2003; Ulrich et al. 2008). So far there is a lack of interdisciplinary studies that integrate environmental and configurational factors of space with social rights studies, searching for translate in architectural terms, i. e. the tangible aspect of social rights, the values that underpin the fulfillment of social rights.

METHODS

The idea of this research is to reach – through the analysis of the relationships between spaces and rights - a greater level of knowledge of what may be the factors that affect the enjoyment of rights. This study, through the analysis of some case studies located in the Tuscany Region, combines the configurational analysis with the social rights studies, focusing on how spatial configuration and other environmental factors can facilitate or undermine those relations that represent an added value and contribute to fulfill social rights and the right to health.

The research starts from a phase of field investigation and interdisciplinary interpretation of data on case studies aimed at defining user requirements directly related to social rights to be guaranteed in hospital and to be translated into spatial characteristics. The legal perspective, after an overview on the right to health as a social right based on relationships, examines the rules governing public spaces and internal regulations of selected case studies aimed to strengthen certain social functions of public spaces. The synthesis of architectural and legal approaches is developed through some spatial and legal dimensions connected to social rights and to the right to health in public spaces of hospitals: access, accessibility, relationability.

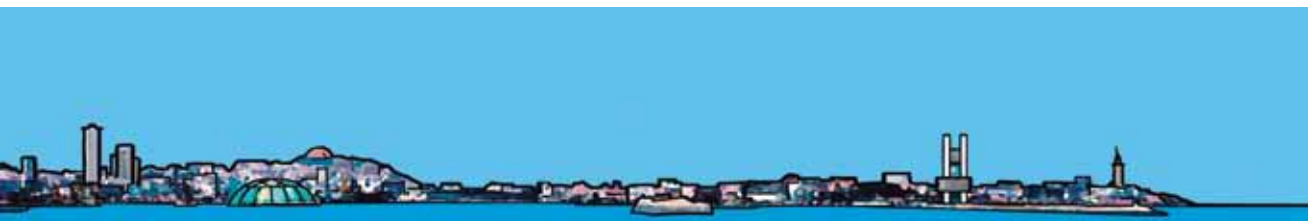
RESULTS AND CONCLUSIONS

Analyzing the ways in which social interactions occur in hospital spaces is possible to measure the effective enjoyment of rights and to consider how the improved effectiveness of the rights may increase efficiency and reflexivity degree of health facilities with respect to social goods such as solidarity and justice.

The interdisciplinary approach represents the added value of the research since it can provide decision-making processes with a more comprehensive vision of the existing problems and possible prospects.

The first contribution of this research is the vision of hospital as a place of relations. The second contribution concerns the definition of the nature and functions of public spaces in hospitals. Results show correlations among spatial properties (proximity, accessibility, visibility, intelligibility) and interaction phenomena in public spaces (informal relations between staff and patients, need of contact in waiting areas).

KEYWORDS
Hospital architecture, public spaces, social rights, relationships, right to health



ENGAGING COMMUNITY IN URBAN PLANNING

Chair: Sigrun Kabisch

Streetbook community park – Networking community engagement

Salsabeel Amin & Nagwa Sherif
The American University in Cairo, Egypt

INTRODUCTION

Where the idea came from...
The idea evolved from the act of oppression that Egypt was forced to go through during the past 30 years. People in Egypt were extremely limited in their expression, behavior and activities by strong regulations such as the Emergency Law. As a result, any attempt of expression was either disregarded or repressed. Oppression was implemented in every possible field. The regime supported laws and actions that sharply limited people's access to public space - to places where citizens could congregate, meet, talk, and interact. In terms of urban architecture/built environment, it meant that anywhere citizens might congregate and stage political demonstrations were systematically subdivided or fenced off or given over to vehicular traffic. To cite one prominent example: the area in front of the Egyptian museum was until the 1960s, a green open plaza with crisscrossing paths and a grand fountain where people would meet in the heart of Cairo. However, in the 1970s, the government fenced off the area with no clear explanation of what was to be the fate of this favorite meeting spot.

Then came along the Egyptian revolution and set a totally different scene. It created an Energy explosion within Egyptians in so many ways. Most of all, it has magnified their urge to contribute and give back to their community. However such great potential is almost all put to waste as it is not utilized properly nor does it have the built environment to facilitate it. So, potential volunteers do not know where to go or how to start.

OBJECTIVE

Community organizations such as NGO's (Non-Governmental Organizations) that are expected to handle this role have been hindered in the past regime due to political reasons. Egypt has more than 16,000 NGO's which sounds like good potential but unfortunately most of which are powerless, scattered, and unorganized. Therefore, StreetBook intends to capitalize on the vitality of NGOs' roles in order to manage the needs and serve the will of the people. The project accommodates the headquarters of NGOs operating in Egypt in a built environment designed to facilitate interaction between volunteers and NGOs..

WORKING METHODOLOGY

In order to find the needs of such a built environment, research and surveys were taken with NGO initiatives and potential volunteers; which concluded the following:

- Spaces to facilitate the activities between NGOs together:

· Spaces such as meeting rooms, conference halls and multi purpose halls that would allow NGOs to meet with one another. At this point they have no resort but to meet at hotel ballrooms.

- Spaces to facilitate the activities between NGOs and volunteers:
·Spaces such as classrooms and conference halls where NGOs could communicate to the volunteers and offer them trainings/orientations needed.
·Spaces that would act as NGO directories to inform volunteers about all NGOs and areas where they can employ there skills,

- Space for the public:
·Open spaces that could hold events for the general public/community. Ex: Orphans Day
·Open spaces that could facilitate daily public interaction. Ex: Speakers Corner, Markets.

- Space that would act as a hub and identity
·Space that would act as a magnet/icon to any volunteer in Cairo with the potential to contribute to the society.

How StreetBook operates..
The idea of StreetBook is implemented through a "gather", "enable", and "disperse" concept. In order for this concept to be implemented on a physical manner, StreetBook would need a Central and Dispersal Identity. The Central identity would allow members of grassroots organizations to gather in flexibly designed open and enclosed spaces. StreetBook hosts representatives of the eight NGO sectors in Egypt (Educational, Social, Political, Environmental, Health, Economic, Legal, and Urban) which act as directories to all the rest of the individual NGOs therefore acting as the dispersal identity which would then allow physical dispersal to different locations in order to respond and serve the continuous changing needs of our society. This is where the role of mobile architecture (namely refurbished shipping containers) is being used. The shipping containers are furbished according to function they would serve in order to create a productive work environment.

RESULTS AND CONCLUSION

StreetBook helps communities to sustain themselves by simply providing them with the place and built environment that would facilitate their activities. It creates an identity which connects and networks potential volunteers to NGOs. This correct channeling of efforts along with dispersing volunteers' efforts creates a positive multiplier effects within communities transferring their know-how to other active members and thus inflicting change to the community.

Space to assemble. From Agora to Twitter

Ryan Locke, Royal Institute of Technology of Stockholm, Sweden
María Beltrán, University CEU San Pablo, Madrid, Spain

INTRODUCTION

Citizens around the world have engaged in demonstrations fueled by various motivations since the Arab Spring commenced in 2011, ushering in a new era of global public protests, which highlights opportunities and challenges posed to public space. The context of the ongoing global crisis has resulted in new policies, imposed austerity measures, and transformations of the urban public space environment. While changes in the global economy have affected Europe as a whole, it is on the streets and squares of Mediterranean societies where the welfare state is most endangered and where we most often see people taking their demands to the streets and occupying spaces.

This paper explores the processes of reclaiming urban public spaces and examines the strong relationship between the ancient concept of physical space as a stage for democracy, and new technologies such as social media networks. The process of social assembly in traditional urban forms has been expedited through the utilization of these new technologies - which would arguably be a less powerful tool for organizing social protests without the physical space of the traditional democratic stage to set the scene.

THEORETICAL BACKGROUND AND METHODS

This paper presents a qualitative study focusing on the events that took place in Madrid's central public space (Puerta del Sol) from May 15 to June 12 of 2011, and is used as the main case study to explain the phenomena of utilizing the tools of social media to expedite the process of social assembly in public space. The qualitative research uses a case study approach, relying on the methods of participant observation and analysis of documents and materials for gathering information. The material analyzed included relevant literature, reviewed papers, journalistic observations, documentaries, and first hand impressions and photographic material by the authors.

The research draws from literatures in political science, urban economy, philosophy and planning and architecture. Public space advocates and scholars have long voiced the need to build more democratic and just spaces in the increasingly globalized cities. Additionally, experiential qualities in public space attached to the perceived importance of democracy in the city will be discussed in consideration of current architecture and urban design initiatives, which value the social above the aesthetic.

RESULTS

In Madrid, protesters united under the ongoing democratic organization named Movimiento 15-M, which mobilized thousands of citizens through Twitter and Facebook, to peacefully occupy the most symbolic space in the capital city. Camping for weeks and organizing a 'city within a city' at Pureta del Sol, they created temporary libraries, improvised dining spots and assembly areas for political and social discussion. All of this was possible through an online network system that simultaneously informed and organized the whole movement, with instantaneous communication between the protesters in the actual space, between the whole city of Madrid, the whole Spanish society and the entire world. It is an age where one can be aware of what is happening in one place can be instantly notified of it. In some cases, those notifications have led to participation.

The "taking back" and occupations of public spaces around the world has reinforced that when democracy is in question, citizens will use public spaces as they have for centuries. Results of the study point to the fact that periods of crisis highlight many future challenges for the built environment and that "occupiers" may need to find new ways to organize in public space, and may need to innovate to avoid the authorities increasing regulations on public space use.

CONCLUSION

The powerful combination of the digital and the physical is a new phenomenon, stimulating a growing interest between architects and planners, for use in the design of public spaces and cities. The context of the global crisis provides an exceptional opportunity to rethink how public spaces are used, regulated, and planned. It may be futile to try to design urban spaces right for 'the occasion', but imperative to ensure their existence. The key factor is to create spaces flexible enough to adapt to as many possible uses and occasions, while

accounting for the needs and demands of the citizenry through the participatory planning processes, and in this, consideration of new technologies is an imperative. The role of social media and the new ways of social organization due to new ways of communicating should be included in the discourse of planning and in the design of cities.

KEYWORDS
Urban democracy, social media, assembly.

Minor urban transformations toward enhancing participatory qualities of urban spaces

Aynaz Lotfata
Middle East Technical University of Ankara, Turkey

INTRODUCTION

The urban spaces have continuously experienced transformations to responding necessities of urban societies. Urban spaces have been transformed through mega and minor urban projects. The mega urban transformations are under control of upper policies. Generally, political powers have controlled transforming urban projects. They consciously deconstruct and reconstruct urban spaces according to their own tendencies. However, minor urban transformations projects are the bottom-up tactics emerging in public spaces. Bottom-up tactics are awakening invisible potentials of urban spaces. These are short termactions which Hayden calls them as "power of places". Bottom-up practices temporarily occupy urban spaces especially streets and squares to reclaim public life in urban spaces. These spatial tactics have invisibly transformed urban spaces toward enhancing and emphasizing on collective re-being in public spaces. A short-term action as temporray activities in urban spaces seems to be ephemeral. However, the temporary concept has different meaning in urban projects rather other science as Biology which a creature lives for one day. Temporary activities in urban spaces have extended in times and could change the total vision of urban spaces. Iran Islamic Revolution in 1979 has been manifested as a sample of the bottom-up socio-spatial tactic which transformed the total vision of social space. The other example is "The Hussmannization of Paris". Haussmann has reconstructed the places of Paris with potentials of revolutions after spatial tactics of "Paris commune'. Special tactics include not only social movements and revolutions but also contain all events in urban spaces like festivals, ceremonies, parade and protests. Arendt calls them the "space of appearance", or the space needed for people to be seen. Thereby, theoretically it is indispensible to focus on Delouse and Guattari theories to explain necessities of spatial tactics emergences to dismantling new being (becoming) in urban spaces through deconstructing life (person)-world.

The paper has tries to give examples around event-based societies from Middle East, North Africa and Developed societies to comparing them. On the primary level, the paper aims to explain the effects of emerged events in selected localities on changing visions of urban policies. Localities from the developed and developing countries open the way to observe differentiations on the localities spatial tactics, since each locality tactics is different according to its own political, historical, economic and cultural priorities. Today in a-changing world, spatial tactics have been instruments to manifest public voices. In reality, spatial tactics have challenged the homogenous urban policies toward bottom-up spatial planning.

The paper draws attention on spatial tactics of the developing and the developed coun-

tries to show clearly differences on inhabitants' participation in public life. To illustrate, all localities in the world have experienced social, cultural and political movements in urban spaces to somewhat but differences are on allowances for inhabitants to reappropriate urban spaces for manifesting their restlessness. For example, urban rebellions in Middle East localities under the domination of totalitarian regimes are not the same with urban protests happening in the developed localities. It depends on the policy of the public participatory in the concerned locality. Thereby, the paper aims to do the comparative analysis in the cases from the developed and the developing localities to show that although urban protests conditions are changing from locality to other, but they are spatial tactics as the minor urban transformations projects enhance public participations of inhabitants. To achieve the paper purposes, studying planning process and planning understanding of the selected localities and through SWOT analysis will lighten how much localities have planned based on the participatory culture. Additionally, the urban planning which is structured through participatory qualities has internalized any uncertainties such. In this sense, any urban activities will not play a risk to urban management, they easily even without spatial struggles can internalize in the wholeness of urban system. And there will not be a regime crisis. However, in localities where are far from the culture of participatory, spatial uncertainties have been the minor urban transformations projects toward the awakening real urban life potentials and even the regime changing. While in the most developing localities, minor spatial transformations have abbreviated in spatial rebellions, in the developed ones, they are festivals and ceremonies. But, in all with any labels, either festivals or rebellions, they have reclaimed urban spaces toward the new becoming. This study pursues a philosophical and cognitive approach to explore urban events phenomena in enhancing the participatory quality of urban life and applies the qualitative methodology to discover the relations between spatial activities and participatory planning.

User participation in the building process of social and cultural facilities. Examples from Germany and Japan

Pilyong Chong
University of Stuttgart, Germany

In recent years, many community facilities were built and managed by citizen and neighborhood participation. It was expected, to create suitable spaces for individualized requirements in the great variety of modern life and that users evolve an appreciation for management and maintenance of the facilities. However, a variety of problems of such participation are pointed out (1). For example, some participation processes were only organized superficially (2)

In the range of research on user participation in building and managing community facilities there are many reports about individual projects, but only a few studies discuss the future direction by comparing different cases. This study mainly focuses on social and cultural facilities in Germany and Japan to document the current development status of user participation in planning, construction, management and reconstruction/remodeling.

According to international comparative research into the policies of regional autonomy (3), since 1990 Germany and Japan as well as other countries have been tending to pursue a new collaboration policy between public services and their citizens. Today this policy of collaboration is widely spread in Japan, contrary to Germany where you can see a kind of

stagnancy. On the other hand, there is increasing number of so-called "Baugemeinschaften" (union residents), a group of people with an interest in the same life style, forming a union to realize a collective-housing project. The informal neighborly help has a stake in the development of public services (4).

Based on these both movements this study regards the recent citizen participation on town planning in Japan and Germany.

For each of both movements, one district in each country has been selected and interviews and questionnaires at the socio-cultural facilities have been conducted to get the common information about the facilities (building application, owner, operator and condition of public subsidies) and to regard how participation was part of the process. (About 30 facilities in each district have been selected from field observation and the list of administrative facilities).

In Germany the Tübingen Südstadt was chosen, a pioneering town development with dozens cooperative housing by Baugemeinschaften. In Yokohama, Japan the Ushioda district was chosen, developed by a welfare urbanism program including cooperation between citizens and administration. Both districts have mixed used areas of residential and commercial buildings, high percentage of foreign residents and also similar numbers in population density and population composition.

For comparative analysis, the facilities are divided into the following categories depending on how much influence the operator has on the decision-making process about the installation and operation of the facility:
a) Public facilities
b) Installed by administration but run by a private organization
c) Private facilities under administrative control using public subsidies
d) Private facilities

In Tübingen most facilities fall in the category of a) or c) with various type of use for example public schools or parish service facilities. At every stage there is a participation of operator and target group. Participation at the planning process take place not only on projects categorized in c) but also in a). Participation takes also place at the construction process. Under the control of an administration or cooperation with administration the chance of participation of users from early stage is guaranteed. As an example a public children day nursery was allowed to use the elevator of the neighborhood. This was decided by discussion with the neighbors at the planning stage. The plan has been implemented efficiently by participating in planning. In addition, in cases where participation was part of the process with operators and target groups in planning and construction, users were often asked to participate on later modification.

In the Ushioda district facilities other than private kindergarten (d) or public schools (a) such as small parks, community centers, care Plazas (welfare support centers) fall in the category of b). Participation in management of these facilities affected by the features of town planning policy in Yokohama is systematically structured, although there was no participation in planning, construction and reconstruction.

Plaza and community centers offer events for different social themes. Participants of the events create civic voluntary activities, while being assisted professionally by the administration. So they became a part of the local welfare system.

1 Cf. Tsutomu SHIGENURA and others, Reconstruction Process and Academic Support for Genkaishima -Study on Reconstruction Program #1-, Architectural Institute of Japan Kyushu Chapter Architectural Research Meeting 3, Planning (49), 141-144, 2010

2 Isami Kinoshita, Workshop -the methodology for town design by civil-, Gakugeishuppan-sha (2007)

3 NAWATA, Yoshihiko et al.: Community autonomy - Internation

Affordances in childrern's play at nature: One study in Florianópolis, Brazil

Ariane Kuhnen & Patricia Maria Schubert Peres
Federal University of Santa Catarina, Brazil

Children's participation has been growing in the planning of sustainable urban environments in order to promote a better use of urban spaces by children. Studies on children's use of urbanized settings indicate they benefit from the presence of natural elements such as trees, grass, sand and water. However, children's access to nature depends on two factors: which affordances perceived in nature that are attractive to children and parent's role as mediator of children's access to such affordances. The last corresponds to the social environment that intervenes in children's relationship with physical attributes of a place. Reed (1996) named the environment where affordances are autonomously accessed by children as Field of Free Action and the one where affordances are promoted to children as Field of Promoted Action. The affordances restricted by caregivers have been characterized by Kytta (2004) as Field of Restricted Action. Parents' acts either as promoters or restrictors of children's behaviors depend upon their own awareness of the affordances of children's exploring environment. Supported by this theoretical model that incorporates Gibson's concept of affordances (1986) into a social environment, this study aimed to identify landscape features a green urban park in Florianópolis (Brazil) that parents perceive as offering affordances for children.

A semi-structure interview guide was structured to be applied to adults face-to-face in a natural environment. The subjects (105 parents) were introduced to a sequence of questions regarding 27 affordances perceived and not perceived by them as possible for children to access in the park. In the closed questions, the parent responded yes or no, and if the answer was yes, the interviewer would ask where the caregiver perceived as possible for children to access such affordance. The open questions asked about places in the natural landscape of the park where the parent identified as possible for children to access an affordance. The results showed that most parents perceived features of the parks' landscapes such as trees, sand and water as places where children can meet several affordances. Parents perceived the trees as places that afford hanging, swinging on, climbing in, resting and hiding; the sand as a place that affords molding, digging and playing hopscotch; and the water as a place that affords swimming, fishing and playing with other children and adults. Other places evoked by parents but with less frequency were grass perceived as a place that affords running, skipping, and resting; log, slope and rock as places that afford jumping-over; jumping-down-from and looking out-from. Such results corroborate with other studies that have identified the perception and use of natural elements as resources by children, for example, vegetation used in imaginative play, motor activities, looking for privacy and social interaction (Fjortoft, 2004); sand as a place that also provides opportunities for imaginative play (Rasmussem, 2004); rocks and slopes as elements of a landscape perceived by children as obstacles that should be crossed;

(Fjortoft, 2004) and water that has been characterized as important place for socialization (Said, 2008). Therefore, this study indicates that parents recognize the natural elements of an urban green park as resources that provide a variety of affordances for children. This study also characterizes the park as a place where its physical attributes are perceived by parents as conductive of affordances to children. When parents are able to perceive all the possibilities of activities that children can do in a natural landscape, they become potential promoters of children's interaction with nature, and therefore, responsible for providing children's physical and mental health. Such impact either on human health or urban ecosystem implies rethink the value of pre-servation of natural areas and elements on urban environments.

REFERENCES

Fjortoft, I. 2004. Landscape as Playscape: The effects of natural environments on children's play and motor development. Children, Youth and Environments 14(2): 21-44.

Kÿtta, M. (2002). Affordances of children's environments in the context of cities, small towns, suburbs and rural villages in Finland and Belarus. Journal of Environmental Psychology, 22, 109-123.

Rasmussem, K. Places for children—Children's Places. 2004. Childhood, 11(2): 155-173.

Reed, E. S. (1996). Encountering the world: Toward an ecological psychology. New York: Oxford University Press.

Said, I. 2008. Evaluating affordances of streams and rivers pertaining to children's functioning in natural environment. Journal of King Saud University-Architecture and Planning Division, 20: 1-22.

KEYWORDS

Affordances, children, parents, nature, parks

poster sessions

14:00 – 14:30

SUPPORTIVE DESIGN AND THE BUILT ENVIRONMENT

Chair: Alberto Díaz

Recovery in Handmade Customization - Practical Approach to Temporary Housing for Disaster Victims

Akihiko Iwasa
Niigata University, Japan

The East Japan Great Disaster (2011) seriously destroyed seashore area in East Japan and 52,191 temporary residential units for victims were built in 913 temporary housing sites.

The temporary housing is intended to be in place for only two years. During this period, the victims underwent an important environmental transition while recovering from the mental and physical damage caused by disasters. It is important to manage such a residential environment properly so that suitable conditions for recovery can be provided.

However, temporary housing does not meet the needs of victims perfectly, because it is designed to provide the bare minimum of residential space quickly in any place struck by unexpected disaster. Therefore, in order to build an efficient residential environment for recovery, it is important that residents improve their temporary residential setting themselves.

Aiming to support residential environment of temporary housing for victims of the East Japan Great Disaster, KASETSU-NO-TORISRTSU project opened web site and provided useful information for residents to customize their temporary residential unit by themselves.

The information provided by the project were basing on the research about the self-customization of temporary housing in Chuetsu region, Niigata, struck by 7.13 Flood (2004) and Chuetsu Earthquake (2004). Because the weather condition and lifestyle in Chuetsu area are similar to those in East Japan, the information about self-customization provided by the project were useful and widely spread among residents in the temporary housing of East Japan. Moreover, this project held workshop in temporary housing site in East Japan in order to share the know-how about self-customization of temporary housing among residents.

Basing on these practical approaches, this study aims to reveal the efficient method to support victims in temporary housing recovering from disaster damage.

This study mainly focuses on handmade customization of temporary housing by residents and shows three meanings of customization, in addition to improvement of poor facilities provided initially.

1) Opportunity of communication among residents;
Because customization is common topic in residents of temporary housing, it helps them communicate easily.

2) Worth of living;
Some residents who lost their jobs by disaster and are good at craft works become expert at customization. And they find a worth of living through the necessities of their skill of customization from other residents.

3) Positive attitude toward reconstruction from damage of disaster;
Customization makes residents commit their residential environment positively. And the positive commitment links to a positive attitude toward reconstruction from damage of disaster.

At the view of recovery from disaster including mental and physical damage, these meanings of handmade customization play important role in residential environment of temporary housing. And there is possibility that such self-customization works are systematically put in supporting process in temporary housing for disaster victims.

The Collaboration of Virtual and Physical Architecture: A Comparative Study of Digital and Physical Design Processes

Aaron Kadoch
The University of Wisconsin Stevens Point, USA

INTRODUCTION

Designing websites is similar to creating buildings. Both processes represent frameworks of collaboration leading to enhanced virtual and physical experiences. (Coyle, 2011) Both require translations of ideas and data via language systems, to their virtual or physical constructs. Together they form the technological infrastructure of society. (Berners-Lee, 1999) This research tracks the translation of static documents used to design a website into dynamic formats and compares that process with building design practices. The purpose is to find understanding between the physical and virtual creative processes and foster future collaborations.

THEORETICAL BACKGROUND

Architects creating built environments rely on a technical drawing language of dimensional vectors to construct the physical world we inhabit. Similarly, web architects shape our digital infrastructure through a codex of software platforms. (Kappel, 2003) While the physical and virtual worlds we create require particular methodologies to construct, they share a commonality of process and meaning which address the combined social and technical needs of humans. (Heller, 2001) This research focused on isolating points of commonality between the architects of physical and virtual spaces comparing processes and "design thinking" particular to each discipline.

METHODS

The research assembled static data (text, spreadsheets, and conceptual diagrams) without connectivity and researched dynamic products to rebuild them. (Open source frameworks; Word-Press, proprietary systems; Share-Point, GIS) Understanding complexities of platforms was required to plan future capabilities. (Kappel, 2003) Next, a database of content was created with use-case scenarios between database entities. A comparison of standard building design and construction methods occurred simultaneously.

RESULTS

The architects of the physical and virtual environments organize client data into frameworks that serve their respective design and construction processes resulting in a common three tier structure. Tier one is content for overall purpose and meaning of use, corresponding to a website's back end (database) and a building's program (client goals). Tier two is where content manifests as relationships of parts, where a website database acquires logic and performs interconnected tasks and a building connects systems, materials and products. Tier three is the end use with a constructed product such as a website's user interface or a building's sensorial and social experience.

CONCLUSIONS

Progression between tiers requires professional communication throughout the team-based design process and logical technology integration is dependent on the efficiencies of this human dynamic. Similarly, optimal product function requires that tiers be designed as an interconnected system, yet technically independent within the framework for required flexibility and future evolution of the site. Individually a tier has no meaning. An interface without a relational database is merely a brochure, and a set of buildings without purpose is a ghost town.

KEY WORDS

Web, Infrastructure, Design, Collaboration

REFERENCES

Coyle, S. (2011). Sustainable and Resilient Communities. Hoboken, NJ: John Wiley and Sons, Inc.

Berners-Lee, T. (1999). Weaving the Web. San Francisco, CA: HarperCollins Publishers Inc.

A Study on the Sign Design and City Identity in Busan and Fukuoka

Hansok Seo
Dongseo University, South Korea

THE GOAL OF STUDY

Busan in Korea and Fukuoka in Japan are very close, sister cities in physically and economically. The visitors from one city to the other city are about one million. The two cities are pursuing to enforce their relationship through the cooperation and development beyond the national border. This study aims at exploring the sign system of the gate of each city and studying how the sign system can reflect the city identity, and suggesting the standards and guidelines of the common sign system between the cities. The result of this study will help the two cities grow together culturally and economically as Asia Gateway Slogan says.

METHODOLOGY

Through literature review, the various cases of the sign design were analyzed. 204 people participated in the questionnaire to understand the image of each city, the image of city gate, the evaluation of sign design in gate area and the needs for the improvement of the present sign information.

Also, the focused interview was performed by the design professionals to understand the framework of the guideline of the sign system and to establish the visual factors that should be considered in the Gate sign design.

FINDINGS

The followings should be considered for the city gate sign system:
-the unity of the style and size of the signs on each zone
-the unity of the typography of the four languages(Korean, Japanese, English and Chinese)
-Application of the proper color suitable for the airport, passengers terminal and railroad station
-the guideline of public sign system such as the function for communication, the unity of design, safety and material

CONCLUSIONS

Based on the results of this study, the sign design for the Busan Passengers terminal which are supposed to be completed by December, 2014 will be suggested. In Fukuoka, the signs in the city gate use Korean language with Japanese, even in voice while Busan does not use Japanese in any kind of signs. This is a hindrance for the Japanese to travel in Busan. Therefore, The new sign and information design should be done in the city gate for the future new Asian era.

Research Study of Emotional Words on Environmentally Friendly Spaces

Jisun Youn, Jiyoung Oh & Heykyung Park
Inje University, South Korea

INTRODUCTION

After the industrial revolution, urbanization and industrialization have taken place rapidly, this led to the increase in energy consumption. Due to such effects, humans have been affected by environmental pollution, and there are various international efforts to protect earths environment and its ecosystem. Environment is closely related to human life, and all humans have the desire to live in a much cleaner and beautiful environment.

In this study, we set out to find out about environmentally friendly image of spaces in regards to the emotional human desires, through a medium called language.

THEORETICAL BACKGROUND

Human emotional vocabulary: language is the representative method of expression. To express with language, perception is a prerequisite. Perception refers to the deciphering process in the brain, in which objects are recognized and decision features are revealed. Such perception form is applied to language. In other words, the perception method of human must affect language usage. In the human emotional ergonomics field, the human emotional assessment method can be divided into non-language assessment and language assessment. Non-language assessment mostly measure physiological aspects and reflexive reaction.

METHODS

- A set of adjectives were chosen from 18 advanced research papers on spatial vocabulary assessment. Furthermore, a set of adjectives was taken from 72 articles on environmentally friendly topics from recent editions (within the span of 2 years) of top 3 architectural magazines in Korea (Space, Plus and C3).

- A Total of 934 words were retrieved and a total of 326 words were selected according to adjective classification standards (sense vocabulary, emotion vocabulary, assessment vocabulary, existence vocabulary).

- 84 words were retrieved and verified by a 5-man expert team (comprised of spatial design major professor, holder of ph.ds)

- 16 emotional words that best expresses environmentally friendly spaces were selected, out of the 84 words by surveying 55 students majoring spatial design.

RESULTS & CONCLUSIONS

The sensibility people wish to feel in an environmentally friendly space were expressed in 16 words: healthy, coexisting, assimilating, warm, soft, lively, pure, cool, fresh, comfortable, relaxed, gentle, free, "harmonious, healing. Results show that when such emotional is expressed and felt in a space, people recognize it as environmentally friendly.

KEYWORDS

Emotional words, environmentally friendly space, vocabulary evaluation.

A Study on the Tendency of Environment Color of Hospital Lobby for Remodeling

Wang Zhi Hao & Heykyung Park

Inje University, South Korea

INTRODUCTION

Individual psychological state can easily manifest through color, and can be easily affected by color. Thus we should pay much attention to the improvement of indoor environment by using color design in such special interior architectural design like hospitals. More importantly, it also analyzed Chinese tourists' insights in terms of color space image; hopefully, the results can be used in the health care industry and the travel industry in the near future.

THEORETICAL BACKGROUND

According to Harold Linton's theory 'architectural color: architectural interior design and urban space'. Color is one of the most important elements, except the architectural form and architectural space, which is related to the architectural design. The important principle is that color must be fitted to the function of indoor space. Among colors, different color matching can meet different functional demands and convey different features of indoor spaces. Since colors aspects human for functions in direct and indirect ways in physiological. Thus color affects peoples life, work and learning. Therefore, you should pay more attention to the design of the interior color in the interior design.

METHODS

Five major general hospitals which had allowed taking pictures and measuring colors for this research were selected. The lobby of each hospital was defined as main entrance and reception/waiting area by analyzing the plan layouts, and then, main and sub colors used in floors, walls and furniture of each region were surveyed by the measuring facility, 'Minolta spectrophotometer CM-2600d'. Total 51 measured colors were drawn based on Munsell color system and analyzed by IRI color image scale, and then, an online survey of 113 Chinese people was carried out and analyzed to find out their color preference.

CONCLUSIONS

The results will be expressed as follows.
1. the most used color is Y color in these five hospitals. Average brightness is 6.33 and chroma is 1.88.
2. From Chinese perspective, the main colors of Koran are white, green and red. According to the national flag of Korean, white stands for the nationality and red stands for evil.
3. Area preference colors of hospitals are light blue and some light colors. Mort people prefer blue which is used in hospitals.
4. Chinese use clear, peaceful, light and soft normally. Based on this idea, it can be seen that Chinese prefer clear and simple image with light colors. This is because these light color can make people fell relax and less pressure.

In the recent years, the growth numbers of visitors visits Korean. In order to improve the Korean travel industry and attract more customers, the results of the research can be used properly.

Perceived safety, comfort and satisfaction related to the stadium experience

Sara Manca & Ferdinando Fornara
University of Cagliari, Italy

INTRODUCTION

The Italian football grounds, often dating back to the early decades of the last century, present several limitations which are connected to specific structural weaknesses. In particular, they appear oversized, lack of adequate space and services, and are inappropriate in dealing with emergencies. Such features are supposed to influence users' perception of personal safety, comfort, and general satisfaction toward the stadium experience.

The aims of this study are substantially two. The first aim is to provide a first validation of a set of tools measuring the indicators of perceived environmental quality of the stadium experience. The second aim is to analyze and compare the relative weight of such indicators on the users' assessment of their stadium experience. Furthermore, they will be detected significant differences in these responses among spectators of diverse sectors and the motivations underlying the choice of such sector.

THEORETICAL BACKGROUND

Studies conducted in the 1980s (see Canter, Comber, & Uzzell, 1989) have revealed a significant relationship among the spatial-physical setting, the users' behaviours and their consequent perception of security. Following a user-centered perspective, it was shown that the absence of open spaces, the limited number of security exits, and the presence of barriers or partition walls make the viewers' experience insecure. Moreover, a greater distance between the seats seemed to guarantee the respect of personal space and an adequate movement opportunity, thus favoring a higher degree of overall satisfaction.

METHOD

The study participants (N=300) were individuals who have had a stadium experience.
A set of measures developed on the basis of PREQIs (see Bonaiuto et al., 1999) and concerning the perceived quality of the stadium (such as architectural, social and functional aspects), the perception of safety, and other dimensions related to the football ground experience was included in a questionnaire filled in by the participants.

RESULTS

Significant relationships were found among the users' perception of safety and, respectively, the architectural, social and functional aspects related to the stadium environment. More specifically, it was observed the prominent role of architectural (such as aesthetics, spatial elements, internal and external practicability) and functional (such as transportation, reception services, security services, and emergency services) aspects in positively influencing the spectators' experience and their perception of safety, while social aspects (such as rules and atmosphere) show less weight.

Significant differences in the users' perceived safety also emerged across occupied sectors, since the Curve's spectators show a lower degree of perceived safety than Stand's spectators. As regards the sociodemographics (i.e., gender, age, and education), no significant differences were found in perception of safety and overall satisfaction.

Finally, the analysis of motivations underlying the choice of the sector show that the Stand sector is chosen for its visibility, comfort, and security, whereas the Curve is chosen for its low ticket price and atmosphere.

CONCLUSIONS

Outcomes of this study provide some empirical support for the importance of the design features of the stadium in order to improve the users' comfort, security and overall experience of the environment.

The relation between the physical environment, the social climate and burnout in the work environment

Alejandra García Saisó & Jesús Felipe Uribe
Nacional Autonomous University of Mexico, Mexico

INTRODUCTION

Human beings stay in their work environment at least eight hours a day using the physical, physiological, and social resources and capacities that are seldom recovered; almost always, they just ware out, affecting their behavior, their efficiency, and also the organization climate; generating in many occasions, situations that even compromise the workers' health.

The physical environment in which workers are submerged during their workday, has a very big influence on their behavior and above all, on the wearing out of the necessary resources to perform their functions (Donald & Siu, 2001).

Theorical background: Previous investigation has confirmed that the characteristics of the physical work environment have significant effects over the workers' behavior, perceptions, satisfaction and productivity (Maher & von Hippel in 2005).

Another characteristic of the work environment is the organization climate, which is perceived, directly or indirectly, by the institution members and that conditions the people behavior inside it (Guedez, 1998, en Chiang, Núñez & Salazar, 2007).

As a result of the work settings, the workers' and organization characteristics, a harmful event has affected the employees: the burnout or occupational wearing out, defined as a response to the chronic work stress (Freudenberger 1974, at Gil-Monte, 2002).

METHODS

The purpose of the investigation was to find out if there is a signification relation between the work environment (physical aspects and organization climate) and the presence of occupational wearing out in Mexican workers.

It was an exploratory-descriptive study, with correlation, developed with a 200 participants simple; workers that were selected in a non probabilistic way, incidentally, with a service of less than a year, in private and public companies located in Mexico City, metropolitan area.

The instruments were applied on the organizations where the participants worked:

- The Physical Environment Evaluation Scale (Escala de Evaluación del Ambiente Físico) (Garcia-Saisó, 2012): with40 reagents, organized in four dimensions: Safety, Functionality, Comfort and Pleasantness, with .918 of Alpha from Cronbach.

- Organizational Social Climate Scale (Escala de Clima Social Organizacional), WES of Moos (1974-2008) (short version, specifically developed for this study): With 26 reagents organized in four dimensions: Positive aspects, Negative or Limiting aspects, Physical aspects and Control, with .821 of Alpha from Cronbach.

- Mexican Scale of Occupational Wearing Out (Escala Mexicana de Desgaste Ocupacional) (EMEDO, Uribe, 2006), made up of 30 reagents, organized in three factors: Exhaustion, Depersonalization and Lack of Personal Realization, with .89 of Alpha from Cronbach.

RESULTS AND CONCLUSIONS

Descriptive and inferential statistics show significant statistically differences among the qualifying variables of the sample and the factors of occupational wearing out and perception of the working environment. It was found that the elements that make up the work setting, physical aspects and organizational climate, are related to the level of occupational wearing out. The general tendency indicates there exists a bigger presence of burnout related to a negative perception of the aspects that make up the work environment.

Historical and Cultural Heritage, Environmental Psychology and Affectivity

Z.A.C Cruz Bomfim, T. Moraes Ferreira, B.A. Lemos Nobre, T. Freire Monteiro, V.L. Batista & L.M. Gonçalves Siebra
Federal University of Ceará, Brazil

This study aims to recognize the way that students of public school from district Jacarecanga located in the 5th largest city in Brazil (Fortaleza) perceive and experience their affectivity with the place. This aspect will be evaluated through their relation with historical and cultural heritage of an important Historic neighborhood of the city. It corresponds to one of the activities performed in an extension project called Historical Heritage and Environmental Education – Protective actions front of the Risk and Social Vulnerability of Youth. These activities are executed by Environmental Psychology Research Laboratory from the Federal University of Ceará in 2012. We aim to understand the relation between subjectivity and place through affectivity (SAWAIA, 2009) and understand this relationship as integra-ting component of an ethical-affective rationality in urban space. The results provide one reflection about the relevance of memory, values, music, nature, art and folklore when we are talking about preservation of historical and cultural heritage. Through diagnosis-action and analysis of affec-

tive maps (BOMFIM, 2010) we can visualize affective images (feelings and emotions). The images from sample that were composed from young students from pu-blic schools from the district mentioned before were: Pleasantness, Attachment, Insecurity, Destruction and Contrast. They revealed that the city can have many meanings, like the positive esteem of the place or a negative one. Jacarecanga, the historical neighborhood, can be evaluated concerning the esteem that youth have from there. This aspect is the root to appreciation of the historical and cultural heritage. We emphasize a dialogue between research and intervention through activities of academic extension because it promotes environmental and heritage education considering youth and many neighborhood co-mmunities like merchants, residents associations and artists. The youth perspective was essential to build strategies for recovery of memory, historicity and development of appropriation of the space and belonging to the place. This experience also showed the importance of deepen cultural heritage theme considering the concepts of environmental psychology.

REFERENCES
BOMFIM, Z.A.C. Cidade e Afetividade: Estima e Construção dos Mapas afetivos de Barcelona e de São Paulo. Fortaleza: edições UFC.

SAWAIA, Bader Burihan. Psicologia e desigualdade social: uma reflexão sobre liberdade e tranformação social. Psicologia & Sociedade, vol. 21, n. 3, pp. 364-372, 2009.

KEYWORDS
Affectivity, Historical Heritage; Cultural Heritage; Environmental Psychology; Esteem of the Place.

Peri-urban open spaces and the configuration of the everyday landscape in metropolitan areas

Marta Benages-Albert & Pere Vall-Casas
International University of Catalonia, Spain

INTRODUCTION

The presence of open spaces in-between built-up areas has become recurrent in the peripheries of the contemporary metropolis. These open spaces, which do not fit with the traditional categories of public spaces, are frequently described as peri-urban open spaces. Due to their potential as a structural component, peri-urban open spaces have become a key element in the sustainable development of metropolitan regions. In mature metropolitan environments, peri-urban open spaces have progressively taken on the status of leisure areas, and configure the everyday landscape of numerous citizens. The growing use of these spaces, together with increasing social interest in their environmental and cultural values, calls for a fresh analysis that takes into account the experiences of the people who use them regularly.

THEORETICAL BACKGROUND

Experiential knowledge of urban spaces is key to recovering a sense of place, and since the 1960s has been recognised as a major catalyst for urban renewal (Jacobs, 2012[1961]); Lefebvre, 2000[1974]); Lynch, 2001[1960]). Today, the social construction of landscape is becoming particularly prevalent (Nogué, 2010) and the socio-spatial understanding of peri-urban open spaces has become an essential step in moving towards a more integrated, balanced and diverse metropolitan territory.

Hypothesis:
Peri-urban open spaces form part of the everyday landscape of citizens in metropolitan areas, and can act as alternative public spaces with their own identity.

Objective:
To identify the process of appropriation of space in peri-urban open spaces through experiential knowledge.

METHODOLOGY

In response to the above hypothesis, a qualitative analysis strategy was developed to enable us to identify the uses associated with peri-urban open spaces and people's individual perceptions of them.

An initial analysis was undertaken in two municipalities with rapid and fragmented residential growth: Plaisir, in the metropolitan region of Paris (31,709 inhabitants, 18.7 km2); and Palau-solità i Plegamans in the metropolitan region of Barcelona (14,352 inhabitants, 14.9 km^2).

Based on an exploratory reconnaissance of the context through participant observation and documentation techniques, in-depth interviews were held with local inhabitants in order to round off the experiential knowledge of the reality under study (31 interviews in Plaisir and 30 in Palau-solità i Plegamans).

An integral analysis of the data obtained enabled us to draw up a geo-ethnographic diagnosis of the peri-urban open spaces which will be crucial to their regeneration.

CONCLUSIONS

The growing use of peri-urban open spaces as everyday leisure areas underlines their importance in the physical and social cohesion of metropolitan regions. However, the specific nature of these spaces requires an alternative conceptual and methodological framework to that of conventional urban spaces. In this respect, the use of geo-ethnographic diagnosis techniques based on experiential knowledge can help to promote effective community regeneration processes. This proposal will very likely encompass cross-boundary visions and integrate regional open spaces.

REFERENCES

JACOBS, J. (2012[1961]). The Death and Life of Great American Cities. Madrid: Capitan Swing Libros.

LEFEBVRE, H. (2000[1974]). The Production of Space. Paris: Anthropos.

LYNCH, K. (2001[1960]). The Image of the City. Barcelona: Editorial Gustavo Gili.

NOGUÉ, J. (2010). Landscape, Territory and Civil Society. Valencia: Edicions TresiQuatre.

Eco-Friendly Image in Korean Ecological Museums

Jisun Youn, Jiyoung Oh & Heykyung Park
Inje University, South Korea

INTRODUCTION

Recently, the issue of eco-friendly environment has become more important all over the world, and it also has been spread in Korea, up to holding Ramsar General Assembly of Chang-Won, in 2008. And, establishing new ecological museums have been remarkably increased in Korea as one of the government's environmental policies. Ecological museum plays a vital role in communicating information and heightening consciousness of eco-friendly environment to the public. The visual image of exhibit environment like exhibition hall can enhance the effect of communication, if it represents its theme properly. The purpose of this study is to find out how recent Korean ecological museums represent eco-friendly images by investigating the major elements consisting interior space of exhibition hall.

THEORETICAL BACKGROUND

Exhibition hall is a place with a specialized purpose, being blended with visitors, information, articles and multimedia, and communicating information between them, which is the main purpose of the facility will become more effective when visitors can concentrate to displays. Therefore we can say eco friendly environmental image of eco museums, accompanying mental and emotional communion with people can help increasing the effect of exhibition. Ecology is defined by encyclopedia as the study of the relationships between plants, animals, people, and their environment, and the balances between these relationships. And, eco-friendly image was interpreted as ´´healthy´´, ´´coexisting´´, ´´clean´´, ´´blending´´, ´´warm´´, ´´soft´´, ´´harmonious´´ and ´´healing´´, according to the result of the previous vocabulary evaluation research. (J. Oh & H. Park, 2011) Therefore, major elements such as form, color and finishing materials, building up the image of the exhibit environment may be recommended to be consistent to the exhibit theme, which is here, 'eco-friendly'.

METHODS

For this research, 8 largest ecological museums with a floor space over 2,000m^2, building after 2004 were selected, and a field survey focused on form, color, and finishing materials was carried out on August, 2011. The states of the major elements were documented by texts and photos, and colors were measured by spectrum-colorimetric method using 'Spectrophotometer (Minolta CM-2600d)'.

RESULTS & CONCLUSIONS

The results are as follow:

1) In terms of forms, it was difficult to find a common denominator, as most of museums had different schemes of form. Overall, most pillars were attached to the wall, and most walls had parallel planes.

2) In terms of colors, Y or YR group of colors appeared most frequently and accent colors were mostly used in furniture and exhibition stands.

3) In terms of materials, woods, close to eco-friendly image, were dominantly applied, comparing glasses, carpets, tiles or other materials being partially applied in exhibition halls.

KEYWORDS

Eco-friendly, ecological museum, form, color, material

14:00 – 14:30

COGNITIVE AND EMOTIONAL ASPECTS OF HUMAN-ENVIRONMENT RELATIONSHIPS

Chair: Amelia Fraga

Do the levels of life affect the sense of community, residential and vital satisfaction?

Pilar Moreno-Jiménez, Macarena Vallejo, M. Luisa Ríos & M. Carmen Hidalgo
University of Málaga, Spain

This research delves into the features and relationships between sense of community and residential satisfaction. In particular, the objectives seek to: assess the levels of residential and vital satisfaction, and sense of community in urban population; know if there are differences based on sex, social class, income, employment and housing characteristics; and identify the relationships between those three variables. With a sample of 690 participants, the results show that the residential satisfaction is higher in women, people with house property and with higher incomes; It is lower in lower social classes. With respect to the sense of community, is less in the lower social class and higher in those who live at home property. With respect to the life satisfaction, it is higher in employees, with home ownership and greater economic income; It is less in low or medium-low social class. Finally, the relationships between these three variables studied are confirmed. Therefore, reinforces the idea of better living standards to favour the feeling of community, residential and vital satisfaction.

KEYWORDS
Sense of community, residential satisfaction, life satisfaction, income, social classes.

Validation and predictive capacity of the New Human Interdependence Paradigm Scale

Ernesto Suárez, Víctor Corral-Verdugo, Bernardo Hernández & Gabriel Muiños
University of La Laguna, Spain. University of Sonora, Mexico

Current research establishes the New Human Interdependence Paradigm (NHIP) and its associated scale as a view which updates previous theoretical models of beliefs towards environment and which is able to predict ecological behaviors. Among previous theories which tried to explain environmental beliefs it must be highlighted New Environmental Paradigm (Dunlap and Van Liere, 1978) and Ecocentrism- Anthropocentrism (Thompson and Barton, 1994). Both perspectives have a dichotomized view of environmental beliefs, where human and environmental interests are considered as mutually exclusive and opposed. However, empiric questioning on the duality between interest from/in people and interest from/in environment and the evidence that there are cultural differences in eva-luation of human interdependence with nature have pointed out some of the limitations of this approach.

As a consequence of previously explained, NHIP (Corral-Verdugo, Carrus, Bonnes, Moser and Sinha, 2008) has been proposed. It is defined as belief in the interdependence of time and space components of ecosystems and communities in Earth, which implies a process of integration of human necessities in dynamic environmental balance (Hernández, Suárez, Corral-Verdugo and Hess, 2012). This view emphasizes compatibility of human development and environmental preservation, as well as the necessity to keep a lifestyle which allows the benefit of current resources without entailing a lack of future needs satisfaction.

Main backgrounds of current research are Corral-Verdugo et al. (2008) and Hernández et al. (2012), studies in which NHIP Scale proved a better predictor in Ecological Behaviour than scales designed from previous theoretical perspectives. Nevertheless, the first research limitation is an excessively basic scale which does not assess in a complete way NHIP theoretical complexity, whereas the second research was developed with a scant sample.

Target of this research is to prove, by a larger sample, the relevance of the NHIP Scale and replicate results regarding predictive capacity of pro-environmental behavior. The scale proposed by Hernández et al. (2012) and a sample of 1133 individuals were used for this research.

Main results consist in verification of the proposed hypothesis, not only regarding reliability and validity but also regarding prediction of pro-environmental behavior, reaching conclusion that NHIP Scale represents an outstanding instrument besides meaning a theoretical renewal from the non-dichotomist perspective of sustainability.

KEYWORDS
Interdependence beliefs, environmental beliefs, scale validation, pro-environmental behavior.

Dunlap, R. E. y Van Liere, K. D. (1978). The New Environmental Paradigm: A proposed measuring instrument and preliminary results. Journal of Environmental Education. 9, 10-19.

Hernández, B., Suárez, E., Corral-Verdugo,V. y Hess, S. (2012). The Relationship between Social and Environmental Interdependence as an Explanation of Proenvironmental Behavior. Human ecology review, 19, 1.1-9.

Thompson, S. y Barton, M. (1994). Ecocentric and anthropocentric attitudes toward the environment.Journal of Environmental Psychology, 14, 149-157.

Corral-Verdugo, V., Carrus, G., Bonnes, M., Moser, G. y Sinha, J. (2008). Environmental beliefs and endorsement of Sustainable Development principles in water conservation: towards a New Human Interdependence Paradigm scale. Environment and Behavior, 40, 703-725.

Emotions and individual and organizational coping strategies during the emergence of the submarine volcano 1803-02 in the island of El Hierro

Cristina Ruiz, Carmen Tabernero & Bernardo Hernández
University of La Laguna & University of Córdoba, Spain

The changes in a place affect the emotions that people experience in relation to the spaces in which they live, and it depends on the personal and organizational coping strategies. Emotions are an explanatory factor in understanding the responses to natural disasters. The anger, for example, is one of the most common emotions in people who are facing a traumatic situation. In natural disasters, with emotions arising as fear or risk perception to our own safety, we must add all those emotions that result from the experience of leaving the place where we live, loss of sense of place and difficulties to the management of the situation. Other emotions, such as grief or anxiety often appear when people have to be evacuated and leave the place where they live. During the earthquake that took place on the island of Hierro (Canary Islands, Spain) between September and December 2011 a volcanic cone emerged in the seabed in front of the Restinga, a town famous for its marine biodiversity. The villagers had to be evacuated several times and fishing, sport and touristic activities were suspended. Scientists could not anticipate the result when in July 2011 begun the first earthquakes, which produced a high feeling of uncertainty. Finally, between 10 and 31 October 2011 the magma surfaced and now there is a submarine volcanic cone of 88 meters deep in the Sea of the Calms. During the month of December of that same year, 265 people from different towns on the island were interviewed individually to assess the emotions they experienced during the whole process and the coping strategies they used.

Trained interviewers, residents on the island, conducted interviews. The instruments used were an adaptation of the PANAS questionnaire, a coping scale consists of 16 strategies and a satisfaction scale of the crisis management. The instruments showed adequate levels of internal consistency. The factors analyze conducted identified four different categories of emotions (fear, interest, irritation and loss) and three coping strategies (search for information, proactive problem-oriented and denial of the problem). Residents in the area of the Restinga express more feelings of fear, irritation and loss, the rest of the inhabitants of the island. It was also noted that the search for information and proactive problem-oriented coping strategies are most commonly used for the resident in the next area, while denial of the problem is the strategy used in the rest of the island. The results obtained showed that emotional responses varied depending on the proximity to the eruption area of coping strategies and satisfaction with the management of the crisis.

Validation of emotions towards water consumption scale in a Mexican sample

Juan Carlos Manríquez Betanzos & María Montero-López Lena
UNAM, Spain

Water scarcity represents a severe limitation of human activities around the world, and causes economical and difficulty increases in its domestic supply. Despite the existing technological advances to solve this problem, there are psychological factors linked to human water consumption. If key social and psychological factors in water consumption are identified, a better manage of this resource would be implemented (Russell & Fielding, 2010).

The relevant literature about water consumption emphasizes different factors. However, we detected a lack of evidence about the role of emotional factors particularly on this behaviour, and there is not an instrument to achieve this goal.

Emotions have different functions: address attention, influence in taking decisions, stimulate learning and motivate behaviour (Cacioppo, Gardner, & Bernston, 1999). Kals, Schumacher and Montada (1999) referred that sustainable behaviour should not be only considered as a result of rational processes. This supposition was reflected in environmental psychology studies, due emotional factors predict proenvironmental behavior and inhibit the anti ecological.

Based on the cognitive theory of emotions (Ortony, Clore, & Collins, 1988), we focus on the compound emotions category, where four emotions are proposed: Gratitude, Anger, Remorse and Gratification. Actions of oneself or other persons could be evaluated as accurate or not, due they result in a high or low water consumption, with different desirability degree depending on resultant consequences.

The aim of this study was to test if gratitude, anger, remorse and gratification proposed by Ortony et al. (1988), and derived of the evaluation of water consumption behaviour would show evidence of statistical dependence to a second order construct, called Emotions Towards Water Consumption. A non random sample of Three hundred and sixty students, 221 women and 139 male with age ranged between 17 and 30 years (M= 20.14, SD= 2.01), from a public university in Mexico City responded to items.

Based on a second order confirmatory factor analysis, a final grouping of three dimensions was obtained (χ 2 (58, N = 360) = 146.11, p

These results give support to suppositions of Ortony et al. (1988), regarding the existence of different compound emotions. In addition, we compare the emotions obtained with the approached in other studies (e.g. Kals et al., 1999). Finally, we conclude the scale of Emotions Towards Water Consumption is a reliable and valid instrument to evaluate emotions to this behaviour in Mexican context.

U.S. University students' concern for environmental sustainability in the context of economic crisis

Dennis D. Kerkman & Brian J. Cowley
Park University, USA

INTRODUCTION

Environmental psychology is the study of the relationship between the habitat and its inhabitants. All humans consume aliments from the environment and produce some waste products. However, there is an inherent trade-off between environmental sustainability and economic profit. How has our regard for the environment changed in the context of the recent global economic crisis? How do cultures differ this regard?

THEORETICAL BACKGROUND

Cultures differ in their attitude toward the environment and how much they value it in comparison to their personal prosperity. Triandis (2002) includes "active versus passive orientation toward the environment" as one of his 10 fundamental "cultural syndromes" that differentiate cultural differences. Schultz (2002) found that Americans had less concern for the environment overall than any of the other 11 countries he surveyed. American attitudes

toward the environment are important because they constitute 3% of the world's population, control 30% of the world's wealth, and create more carbon dioxide than any other country except China, which has more than 3 times the U.S. population.

The European Union countries rank third in carbon dioxide emissions, but Europeans seem to value their environment more than Americans. Recently, The City of Hamburg, Germany and the Siemens Corporation surveyed 1,100 university students in eight European countries (Austria, Switzerland, Norway, Germany, France, Poland, Spain, and Belgium). They found that even in the continuing financial crisis in Europe, concern for the environment was more important (71%) than improving unemployment (66%).

METHOD

We surveyed 631 undergraduate students at a university in the Midwestern U.S. before and after the U.S. financial crisis. Students rated the importance of each item on a seven-point Likert scale. The percentage who rated each item as a 6 or 7 ("very important") were computed. The items were: Recycling, Donating to the community, Using "green" products, Reducing campus carbon footprint, and Energy conservation.

RESULTS

Scores on the five items were highly intercorrelated. They were combined into a single average score. In 2007 the U.S. unemployment rate was 4.7%, and 64.83% of the students rated environmental sustainability items as very important. However, in 2009, when U.S. unemployment reached 10%, only 41% of the students rated the environmental items as very important. As unemployment stabilized and began to decline in 2010, the students' ratings of environmental importance increased slightly to 45%.

CONCLUSIONS

Hofstede (2010) characterizes cultural differences in terms of five dimensions: Power-Distance (PD), Individualism (IND), Masculinity (MAS), Uncertainty Avoidance (UA), and Long-Term Orientation (LTO). The average scores for the eight European countries in Hamburg-Siemens sample were 46.1 (PD), 64.5 (IND), 53.25 (MAS), 75.25 (UA), and 34.25 (LTO). In contrast, the corresponding scores for the U.S. were 40, 91, 62, 46, and 29. The largest differences were in Individualism and Uncertainty avoidance. Americans' extreme individualism coupled with a willingness to take risks (tolerate uncertainty) provides the best explanation for their greater devaluing of environmental concerns in the face of economic crisis as compared to their European counterparts.

REFERENCES

Hofstede, G., Hofstede,G. J., & Minkov, M. (2010). Cultures and Organizations: Software of the Mind. 3rd Edition, McGraw-Hill. USA.

Schultz, P. W. (2002). Environmental attitudes and behaviors across cultures. In W. J. Lonner, D. L. Dinnel, S. A. Hayes, & D. N. Sattler (Eds.), Online Readings in Psychology and Culture (Unit 8, Chapter 4), (http://www.wwu.edu/~culture), Center for Cross-Cultural Research, Western Washington University, Bellingham, Washington USA.

Triandis, H. C. (2002). Odysseus Wandered for 10, I Wondered for 50 Years.

Online Readings in Psychology and Culture, Unit 2. Retrieved from http://scholarworks.gvsu.edu/orpc/vol2/iss1/1

Students: Sustainability Beats Financial Crisis. Science Guide, (15 December, 2011) retrieved from http://www.scienceguide.nl/print.aspx?id=24546

Attentional bias toward typical shops in Japan revealed by a dot-probe task: it depends when you look for it

H. Shirayanagi, K. Hirano & Y. Wada
Tohoku University, Japan

While walking down the shopping street, anyone has experienced to automatically catch the eye for an interesting shop. For instant, the shop with highly noticeable signs of course engages attention and the luxury shop without noticeable signs engages attention too. A major function of attention is to ignore irrelevant and select relevant stimuli in the environment for further scrutiny (Lavie, Hirst, Fockert, & Viding, 2004). Several cognitive studies suggest attention is automatically and selectively engaged for important information in the environment (Everaert, Spruyt & DeHouwer, 2012).

There are two types of attention. One is exogenous attention which is primarily engaged by saliency and works early and the other is endogenous attention which is primarily engaged by affect and works late. Based on these, it may be that to catch the eye for an interesting shop is assumed to be automatically attentional bias of two functionally different attention to the shop. The attentional bias towards stimuli has been investigated by a dot-probe task in experimental psychology (MacLeod, Mathews & Tata, 1986). In a dot-probe task, participants are shown a pair of stimuli for a short time at two different spatial locations on LCD. One of the stimuli is characteristic, the other stimulu is neutral. After the offset of these stimulus, a dot probe emerges at the location of the characteristic stimulus or at the location of the neutral stimulus. The allocation of attention is measured by the time needed to respond to the dot probe. It is reasoned that responding to the probe will be faster when attention is already allocated to the spatial location where the probe appears. The attentional bias towards stimuli varying with the level of emotional valence shifts as cognition proceeds revealed by a dot-probe task (Cooper and Langton, 2006). The result of two different dot-probe tasks whose presentation times for stimulus are short and long showed different pattern of attentional bias for each level of pictures affect. Accordingly, the purpose of this study was to investigate attentional bias towards different type of shops and shifting of attentional bias as cognition of shop proceeds revealed by a dot-probe task. Four different types of shops in Japan including neutral were chosen for stimuli from the view point of the salience and emotional valence (Hirano, 2000). Presentation times for a pair of stimuli is 200ms (early attention) and 800ms (late attention). Result showed that there was attentional bias towards high saliency stimulus at 200ms and stimulus with positive affect at 800ms .

The observed differential pattern of attentional bias of each typical shops may explain that attentional bias towards shop shift from saliency such as signs and goods in early attention to affect such as fascinating or pleasant in late attention.

Urban-Rural differences and the beliefs on interdependence between nature and humans

Gabriel Muiños, Fátima Negrín, Ernesto Suárez & Bernardo Hernández
University of La Laguna, Spain

Social acceptance of sustainability and sustainable development has promoted research on the existence of an emerging new way of interpreting the world and ecology. This new point of view, integrator and not dichotomous, was named the new human paradigm of interdependence (NHIP) (Garling, Biel, and Gustafsson, 2002; Corral-Verdugo, Carrus, Bonnes, Moser, and Sinha, 2008). Combining anthropcentric and ecocentric beliefs, the concept of interdependence favours the idea that humans are necessary for the conservation of the natural environment, and that humans need nature to survive.

An initial approach to an NHIP scale was made by Corral-Verdugo, et al (2008) in a cross-cultural study. The authors developed and tested a scale to assess the NHIP. The scale combines three items that incorporate the idea that human welfare depends on the integrity of nature, and two others which underline the importance of conserving todays resources for future generations. The research by Corral-Verdugo et al. (2008) attested that NHIP positively and significantly correlated with water savings. Hernandez Suarez, Corral and Hess (2012) conducted two studies that validated the construct. A model confirming the unifactorial NHIP structure was tested, the predictive capacity of NHIP in austere and altruistic proecologic behaviors evaluated, and the inflence of colectivist identity on the relation between the NHIP and sustainable behaviour identified. Ultimately, these studies seem to suggest that the new paradigm of human interdependence is a pro-sustainable worldview. On the other hand, authors like Olivos and Aragonés (2011), proposed the concept of connectivity with nature to explain the link between self and nature. From this perspective, the degree to which a person believes that he/she forms part of the natural environment provides the foundation for the type of environmental concerns that he/she develops, and the type of situations that motivate action. Olivos and Aragones, (2011) also noted that connectivity is related to the restorative effects of natural environments, experiences and personal welfare. In order to research further into the concept of NHIP a study was made to analyze whether differences exist between rural and urban residents. The initial point of view is that in the communities which live in contact with nature and depend on it for their sustenance, the idea of interdependence will be accept to a greater degree. In this sense the people who live in these areas are more conscious of the need for balance between human needs and the environment. In addition, we analyze the effects of other variables such as age, sex and educational level on the new paradigm of interdependence. The results show that the degree of acceptance of the NHIP is high in all groups regardless of age, gender or education level. As expected, there are significant differences between rural vs. urban communities. This data confirms that belief in interdependency is higher in communities which live in contact with nature and depend on it for their sustenance. However, these data should be confirmed in future researches that also analyze the degree to which other beliefs such as ecocentrism or anthropocentrism are present in these communities. Also other explanations, as the effect that connectivity with nature plays on the beliefs, would be considered.

REFERENCES

Corral, V., Carrus, G., Bonnes, M., Moser, G. & Sinha, J. (2008). Environmental beliefs and endorsement of Sustainable Development principles in water conservation: towards a New Human Interdependence Paradigm scale. Environment & Behavior, 40, 703-725.

Gärling, T., Biel, A., & Gustafsson, M. (2002). The new environmental psychology: The human interdependence paradigm. In R. B. Bechtel & A. Churchman (Eds.) (2002), Handbook of environmental psychology (pp. 85–94). New York: Wiley.

Hernández, B., Suárez, E., Corral-Verdugo, V. y Hess, S (2012).The Relationship beteween Social and Environmental Interdependence as an Explanation of Proenvironmental Behavior. Human Ecolgy Review, 19, 1-9.

Olivos P. & Aragonés, J.I. (2011) Psychometric properties of the Connectedness to Nature Scale tested on a sample of University Students. Psyecology, 2(1), 15-24.

KEYWORDS
The New Human Interdepence Paradigm, sociodemografic characteristics, environmental beliefs.

A theoretical-prescriptive approach to sustainable development promotion

Joel Martínez Soto, Rubén Martínez Miranda & Liliana Velázquez Ugalde
Nacional Autonomous University of Mexico & University of Querétaro, Mexico

INTRODUCTION

Environmental psychology faces to meaningful both academic and political problems as the question is: To what extend theoretical challenges of psychologist are able to change the human predatory behavior toward collective sustainable environment?

THEORETICAL BASING

Now a day environmental psychology faces its theoretical argues against sociology of risk, the last one keeps that if the logic of capitalism accumulation does not transform, supported on the exploited of natural resources, our planet will be destroyed (Giddens, 1999; Toledo, 2003). Environmental psychology keeps that most of the physical environmental damage is caused by both individual and collective wrongful behavior day by day.

Sociology of risk calls for the memorized knowledge in the traditional social groups by centuries they had known how to use the natural resources without extermination risks (Toledo & Barrera-Bassols, 2008). They separate good technology and bad technology; the last ones are stronger in the modernism modernizing stage of the human history. Fight for a sustainable society.

In the other hand, environmental psychology, about sustainable development, keeps that inside of modern capitalism it is possible redirecting the positive behavior as individual as collective towards sustainable environment (Schumck & Schultz, 2002).

A problem with both of these models is in the poor value about the conflict between wrongful technology against alternative clean technology, the problem is visible because consumer market. All of this is paradoxical: if stuffs value in its own process of manufacturing there is not a problem for institutions, organizations neither authorities with whole control in ruler and assent them. However, when technology is active and visible in consumer market at the same time is makeable its high destructive power into local and global spaces, the

collective protest against of wrongful technology, even without reason get an economic assent, sometimes they are removed from consumer market.

As a result of this situation is the incomprehension between both sociological of risk and psychology of sustainable development, the first one points wrongful consequences of technology and the second points the positive impacts. Therefore, we have to begin to evaluate the manufacturing process of technological artifacts. This condition results methodologically utopian, the truth is that this practice should be implemented.

This document is not ready to give empiric results as clues about how complement the contributions from different sustainable development models; either is not ready to essay procedures which offer a right methodology to. The contribution and commitment with this document is the conceptual review of the named theoretical approaches. Also it commits with starting a workshop and a trained for teachers and students from different schools of the university, with a view on the future about planning and starting a Master in Psychology of Sustainable Development at the Universidad Autonoma de Queretaro, the point is enlarge the offer professional academic studies worried about of sustainable development.

REFERENCES

Giddens, A. (1999) Risk and Responsibility. Modern Law Review 62(1), 1-10.

Schmuck, P., & Schultz, W. P. (2002). Psychology of sustainable development. Boston: Kluwer Academic Publishers.

Toledo, V. (2003). "Modernidad y ecología: las múltiples dimensiones de la crisis planetaria", en; Boada, M. y Toledo, V. El planeta, nuestro cuerpo. La ecología, el ambientalismo y la crisis de la modernidad. Edit. Fondo de cultura económica. Mexico.

Toledo V.M., and N. Barrera-Bassols. (1984). Ecología y Desarrollo Rural en Pátzcuaro. Instituto de Biología, UNAM.

KEYWORDS: Sustainability, environmental responsibility, sociology of risk, proenvironmental behavior, collective sustainable environment

Psychosocial intervention and socio-physical environment: Pro-environmental behaviour as a curricular subject in social educators training

Ángel Fernández González
University of Vigo, Spain

In order to achieve sustainable environments in the context of global change, it is necessary to promote an environmentally friendly behaviour, as human behaviour is at the root of most environmental problems and their solutions.

Furthermore, education is essential to promote and achieve pro-environmental behaviour. Over the late decades, environmental awareness has grown internationally, as well as the diffusion of the environmental discourse, the realization of humans damaging the environment and the need for behavioural change for sustainability. However, environmental education has been limited to a minority activists and the academic sphere. In addition,

this sort of education should not be limited, as it used to be, to the mere transmission of information and acquisition of knowledge. Neither should it be limited to formal education, but extended to the informal and non-formal, and not only through the education of young people, but also through adult education and socio-cultural animation. Thus, social educators, as specialists in these areas, can contribute significantly to the promotion of pro-environmental behaviour

THEORETICAL FRAMEWORK

As evidenced by the scientific literature, pro-environmental behaviour is a complex phenomenon which depends on many different variables. Just to mention one explanatory variable, values, it can be noted that three different value orientations may be in the basis of pro-environmental behaviour : egocentric (to protect oneself), biocentric (to protect all living beings), or social altruism (to seek the welfare of others) (Stern, Dietz, Kalof, 1993). Values, particularly the nature of self-transcendence subtype, are at the basis of the internalized moral norm, which helps to explain pro-environmental behaviour, although mediated by the awareness of the consequences of behaviour and the attribution of responsibility (Shultz & Zelezny, 1998).

We can even establish a hierarchical model of the influence of values (Novlund & Garvill, 2002) which includes the following elements: general values, environmental values, environmental problems awareness, personal norm (as a mediator) and pro-environmental behaviour.

After reviewing several studies, we conclude that there are two literature trends aiming to explain the pro-environmental behaviour by dividing variables or factors in two blocks: on the one hand, the psychosocial constructs and processes and, on the other, socio-demographic variables (Balderjahm, 1988; Bamberg & Möser, 2007; Norlund & Garvill, 2002; Oreg & Katz-Gerro, 2013).

Within the block of psychosocial process, we want to highlight some variables which had been taken into consideration in order to explain or predict pro-environmental behaviour: environmental problems awareness, internal responsibility attribution, internalization of social norms, guilt, perceived behavioural control, beliefs, attitudes, moral norms, intentions, personality variables (alienation, emotional expressiveness, control of ideology), consensus estimates for pro-environmental behaviour and cultural values .(Balderjahm, 1988; Bamberg & Möser, 2007; Hovardas & Korfiatis, 2012; Norlund & Garvill, 2002; Schultz & Zelezny, 1998).

We can also distinguish the personal level values, which serve as guiding principles in peoples lives, have an influence on their attitudes and intentions, activate moral norms and influence pro-environmental behaviour; as well as the cultural level values, which serve as guiding principles of society and create differences between societies with regard to cultural dimensions. Environmental concern is affected by post-materialist values such as self-esteem, self-expression and aesthetic satisfaction. A relationship between the contextual background or cultural values and environmental concern has been established.

Equally, environmental concern, regarding threat perception and behaviour control, affects the willingness to sacrifice, which has an impact in a variety of pro-environmental behaviours.

Moreover, we have the block of demographic variables, being age and education the ones which show more consistent effects in comparison with other variables. However, the

levels of variance explained by social structure variables regarding environmental concerns are modest.

Thus, it can be said that the psychosocial constructs were most successful in predicting pro-environmental behaviour.

Hence it follows that those educators involved in environmental education, such as social educators, should be aware of the range of variables affecting the pro-environmental behaviour Integrating that knowledge, as well as the most efficient techniques aiming to the promotion of a positive environmental behaviour on their training plans, is a way to improve the effectiveness of their intervention in the field of environmental education.

METHODS

In order to design intervention strategies aiming to promote pro-environmental behaviour with social educators (as specialists in adult education, non-formal education, socio-cultural animation and leisure education), we can use strategies or treatments that were mostly effective in experimental studies, such as those based on cognitive dissonance, goal setting, social modelling and indications (Osbaldiston & Schott, 2012). It must be noted that some treatments are more effective for certain behaviours and require different levels of engagement in treatment (easy, directions, explanations, instructions, rewards, social modelling, cognitive dissonance, feedback, commitment, goal setting) and different kinds of pro-environmental behaviour efforts (public recycling, public energy conservation, water conservation, curbside recycling, recycling centre, energy conservation in the home, taking home energy, conservation of gasoline, other behaviours).

CONCLUSIONS

It is necessary to reformulate the objectives of environmental education, taking into account the different variables that can influence and explain pro-environmental behaviour and the effectiveness of different methods and strategies used according to the objectives to be achieved.

Firstly, it is necessary to consider the variables related to psychosocial processes which lie behind the pro-environmental behaviour. And, secondly, it is also necessary to incorporate cultural values into the environmental education programs.

REFERENCES

Balderjahm, I. (1988). Personality variables and environmental attitudes as predictors of ecologically responsible consumption patterns. Journal of Business Research, 17, 51-56.

Bamberg & Möser (2007). Twuenty years after Hines, Hungerford, and Tomera: a new meta-analysis of psychosocial determinants of pro-environmental behavior. Journal of Environmental Psychology, 27, 14-25.

Hovardas, T. & Korfiatis, K. (2012). Effects of an environmental education course on consensus estimates for proenvironmental intentios. Environment and Behavior, 44, 760-784.

Norlund, A. M. & Garvill, J. (2002). Value estructures behind proenvironmental behavior. Environment and behavior, 34, 7-40-756.

Oreg, S. & Katz-Gerro, T. (2013). Predicting proenvironmental behavior cros-nationally: values, the Theory of Planned Behavior, and Value-Belief-Norm Theory. Environment and Behavior, 38, 462-483.

Osbaldiston, R., Schott, J.P. (2012). Environmental sustainability and behavioral science: meta-analysis of proenvironmental behavior experiments. Environment and Behavior, 44 (2), 257-299.

Shultz, P. W. & Zelezny, L.C. (1998). Values and proenvironmental behavior: a five-country survey. Journal of Cross-Cultural Psychology, 29, 540-558.

Stern, P.C., Dietz, T., & Kalof, L. (1993). Value orientation and environmental concern. Environment and Behavior, 25, 322-348.

Using scenarios to support resilient community-based natural resource management

Carlos Galán-Díaz, Julia Martín-Ortega, Kerry Waylen, Kirsty Blackstock & Alain Brown
James Hutton Institute, UK

INTRODUCTION

COMET-LA (COmmunity-based Management of EnvironmenTal challenges in Latin America) (2011-2014) aims to identify community-based governance models for the management of natural resources that could be used in different socio-ecological systems in the context of climate change and increasing competition over resources.

Key to the project is a learning arena between civil society and scientists: the ethos of the project is very much about working with and for communities to co-construct understandings of local natural resource management, likely future challenges and potential responses. This project works with partners in sites across three countries: Colombia, Mexico and Argentina.

CASE STUDIES

MEXICO: The indigenous community of Santiago Comaltepec -Oaxaca collectively own 19,000 ha of forest based resources using a unique governance system consisting of a general assembly and 'usos y costumbres'. The community faces issues of depopulation and rural poverty.

COLOMBIA: The Community Councils of the Upper and Middle Dagua, and the Lower Rio Calima are being empowered to deal with conflicts related to the access to and use of natural resources, such as: access (e.g. illegal timber extraction, mining and hunting), overexploitation (particularly forest and fisheries), infrastructure development affecting ecosystems and local communities, access to and forms of use of water, presence of illicit crops and illegal armed groups.

ARGENTINA: The estuary of Bahia Blanca faces potential damage by urban and port development, affecting the fishing and recreational use. The objective is to develop an integrated coastal management program with the active participation of users.

METHODS AND PLAN OF WORK

Our contribution to COMET-LA is exploring if and how scenarios of future change can provide a shared and reflexive space of knowledge and debate to enable creative solutions to acute problems in times of potential future crisis. Scenarios are but one part of a range of methods or ways of characterising the future, see Carter et al., 2007. In COMET-LA we will analyse future scenarios using Prospective Structural Analysis (PSA) (Godet, 1994, 2001), this method can help describe any system by identifying its most important influence relationships (instead of just focussing on cause-effect relations). The PSA is done iteratively throughout the course of the project.

- The project members will evaluate and adopt the most suitable scenario development methodologies for working with communities. These will include researchers, Civil Society Organisations (CSOs) and local community representatives.

- The scenarios will adapt existing global storylines of change (e.g. Millennium Project, 2010) and supplement them with variables identified via the PSA's Characterization and Structural Analysis undertaken in each of the case studies. These storylines will focus on plausible drivers most likely to generate the greatest environmental challenges in each of the case studies. This will help these local communities to identify locally-owned solutions to future resource management challenges.

- COMET-LA will contribute to the literature on community-based natural resource management (CBNRM): we acknowledge that although there are no 'silver bullet' solutions our experiences can provide some insights into useful strategies for resource governance and management.

- These narratives will be used to explore how local communities-based management systems might respond to future shocks.

REFERENCES

Carter, T. R., Jones, R. N., Lu, X., Bhadwal, S., Conde, C., Mearns, L. O., et al. (2007). New assessment methods and the characterisation of future conditions. In M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden & C. E. Hanson (Eds.), *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 133-137). Cambridge, UK: Cambridge University Press.

Godet, M. (1994). *From Anticipation to Action: A Handbook of Strategic Prospective*. United Nations Educational, Paris.

Godet, M. (2001). *Creating futures. Scenario planning as a strategic management tool.* Economica, London.

Millennium Project (2010). Future Studies around the World, 7.1 Latin America 2030. In J. C. Glenn, T. J. Gordon, & E. Florescu (Eds.), *The Millennium Project: 2010 State of the Future.* Washington, DC.

Parents as potential mediators of children's relationship with nature: a case study in Florianópolis, Brazil

Patricia Maria Schubert Peres
Federal University of Santa Catarina, Brazil

Sustainable places consider people's mental and physical health and studies indicate that children benefit from the use of green spaces or the presence of natural elements in urbanized spaces. However, children's access to these settings depends on two factors: which affordances are perceived as attractive to children and parent's role as mediator of children's access to affordances. The last corresponds to the social environment that intervenes in children's relationship with physical attributes of a place.

Reed (1996) named the environment where affordances are autonomously accessed by children as Field of Free Action and the one where affordances are promoted to children as Field of Promoted Action. The affordances restricted by caregivers have been characterized by Kytta (2004) as Field of Restricted Action. Parents' acts as promoters or either restrictors of children's behaviors depend upon their own perception of affordances that they identify as possible for children to access. Supported by this theoretical model, the present study aimed to describe parents' perception on affordances that children may perceive in an urban green park, in Florianópolis, Santa Catarina, Brazil. The subjects (105 parents) were interviewed face-to-face guided by open-ended questions about 27 affordances.

The closed questions corresponded to dichotomous items (yes or no) about affordances perceived as possible and not possible for children to access in the park and affordances allowed and not allowed for children to access in the park. The open questions asked parents to identify places in the park where would be possible for children to access the affordances and reasons for not allowing children to access the affordances not allowed to be accessed. The results indicated that more than 50% of the parents perceived 24 affordances as possible for children to access in the park. Regarding the places where children could use the affordances, the tree was evoked as a place that afford hanging in, swinging in, climbing in, and sheltering; the sand as a place that affords molding, digging and playing hopscotch; and the water as a place that affords swimming, fishing and playing with children and adults. Such results corroborate with other studies that have identified the perception and use of natural elements as resources by children.

On the other hand, affordances such as hiding, looking out from, climbing in, hanging in, swinging on, jumping-down-from, jumping over, throwing, using animals to play, using plants to play and fishing would not be allowed for children to access by 11% to 35% of the parents. Regarding the reasons for restricting the use of these affordances, they are related first to physical danger, secondly, danger to others, thirdly, threatening to nature, and lastly, children's lack of ability.

The result indicates that park could be potentially characterized as a Field of Promoted Action, since most parents perceive its natural landscape as a place that offers a variety of affordances allowed to be accessed by children. Once parents have a potential of optimizing the use of attributes of natural landscapes by children, they become important promoters of children's health.

KEYWORDS
Affordances, children, parents, nature, urban green parks

Author Index

A

Abdel-Hadi, Aleya: 139,175
Abdul Hadi, Harman Shah: 142, 178, 190
Abdul Hadi, Samad: 142, 178, 190
Agnese, Rebaglio: 218
Aguilar Díaz, Miguel Ángel: 53
Ahmad Fariz Mohamed: 142, 178, 190
Ahmad Hariza Hashim: 131, 133
Ahrentzen, Sherry: 25, 218
Akikazu, Kato: 159
Alcalá, Xavier: 228
Alcántara de Barros e Silva, Edinéa: 205
Alonso-Betanzos, Amparo: 41
Alves, Susana: 60
Amin, Salsabeel: 235
Andrade, Claudia: 158, 160
Anghinoni, L.G.: 108
Annese, Mariella: 93

B

Baltierra Magaña, Adrián: 70
Balzani, Marcello: 75
Bannova, Olga: 193
Barros, Paula: 200
Batel, Susana: 225
Batista, V.L.: 251
Baumgart, Sabine: 185
Beltrán, María: 236
Benages-Albert, Marta: 252
Benli, Ayşen Cevriye: 149
Bernardo, Fátima: 174
Bins Ely, V.H.M.: 108
Blackstock, Kirsty: 266
Boda, Satoshi: 198
Borgianni, Sabrina: 232
Bosch, Francisco: 100
Bourne, Angela: 229
Breugelmans, Oscar: 228
Brondi, Sonia: 226
Brown, Alain: 266
Brown, Sam: 227

C

Caddeo, Pierluigi: 68, 224
Calabrese, Lea: 75
Callewaert, John: 112
Camaggio, Roberta: 121
Carneiro Rocha, C.: 99
Carrus, Giuseppe: 38, 151, 155, 208
Casares, Amparo: 220
Castro, Paula: 135, 184, 213
Cavalcanti, Patricia B.: 103, 108
Celete, Carolina: 122
Cervinka, Renate: 28, 30
Chang, Hsiu Kai: 152
Chiesa, Antonia M.A.: 143
Chong, Pilyong: 239
Conde García, Jesús: 147
Corral-Verdugo, Víctor: 128, 255
Cottone, Paolo: 226
Cowley, Brian J.: 258
Craig, Tony: 41, 178
Crespo González, Cristóbal: 126
Cruz Bomfim, Zulmira Aurea: 99, 251
Cuadros, Genaro: 100
Cubukcu, Ebru: 107

D

Davidovich-Marton, Ronit: 184
Dayaram, Tanya: 185
De Santana, J.M.A.: 108
Dean, Moira: 92
Dee, John: 94
Del Aguila, Mark: 90, 210
Del Brocco, Barbara: 93
Demirkan, Anli Ataöv: 197
Després, Carole: 25, 27, 70, 201
Devilee, Jeroen: 228
Devine-Wright, Patrick: 223, 225, 227
Devlin, Ann Sloan: 160
Di Costanzo, Caterina: 232
Di Guida, Marina: 45
Díaz, Alberto: 244
Dincyurek, Ozgur: 148
Dinnie, Liz: 180
Dos Santos Raymundo, Luana: 130
Dumitru, Adina: 39, 44, 117, 202

E

Edgerton, Edward: 62, 91
El Mouelhi, Hassan: 186
El Nachar, Eman: 175
Ellingham, Ian: 191
Emmert, S.B.: 49, 50
Erdem, Meltem: 194
Evans, Gary W.: 181

F

Farsang, Andrea: 47, 50, 51
Fauzie, Akhmad: 183
Fawcett, William: 191
Feijó Viana, Taís: 105
Feres, Giovana: 122
Fernández González, Ángel: 263
Fonseca de Alencar, H.: 99
Fontenla-Romero, Óscar: 41
Fornara, Ferdinando: 133, 223, 249
Forsberg, Sylvia Souza: 151
Fraga Mosquera, Amelia: 115, 255
Freire Monteiro, T.: 99, 251
Fudge, Shane: 47, 51
Fukuda, Yumiko: 82
Furtado, Fátima: 205

G

Gaines, Kristi: 229
Galán-Díaz, Carlos: 180, 266
García Fontán, Cristina: 158, 220
García Olvera, Héctor: 70
García Saisó, Alejandra: 250
García, María Pilar: 103
García Mira, Ricardo: 38, 39, 41, 44, 115, 117, 136, 207
Gen, Taniguchi: 159
Ghavampour, Ensiyeh: 210, 211
Giunta, Elena: 218
Godehart, Susanna: 185
Goluboff Scheps, Myriam: 220
Gonçalves Siebra, L. M.: 251
González Álvarez, Sandra: 126
Goulart Dorneles, Vanessa: 97
Gray, Grant: 62
Gunther, Isolda: 151

H

Haase, Dagmar: 58, 60
Hagbert, Pernilla: 193
Hansok, Seo: 246
Harfst, Jörn: 74
Hashem, Nejad: 156
Hayles, Carolyn: 92
Heinish, Larissa Miranda: 97
Hepguzel, Burcin: 107
Hernández, Bernardo: 128, 255, 257, 261
Herranz-Pascual, M. Karmele: 63, 118
Hidalgo, M. Carmen: 255
Higuchi, Maria Inês Gaspareto: 151
Hirano, K.: 260
Hood, Ellen Scott: 106
Hume, Nicholas: 227
Hwasil, Kim: 78

I

Idrus, Shaharudin: 142, 178, 190
Ilin, Corina: 42
Imilan, Walter: 113
Irfan, Alfi: 214
Ishigaki, Aya: 82
Ishizuka, Yuko: 165
Islam, M. Zakiul: 172
Iwasa, Akihiko: 244

J

Jacinto, Ana Sofía: 135
Jean-Baptiste, Nathalie: 59
Jiménez, Bernardo: 53
Jinkyung, Paik: 78
Jiyoung, Oh: 247, 254
Jodoin-Nicole, Laurence: 201
Johansson, Rolf: 96, 146

K

Kabisch, Nadja: 58
Kabisch, Sigrun: 58, 59, 235
Kadoch, Aaaron: 245
Kang, Jian: 154
Kaya, H. Serdar: 194
Kee, Chan Seng: 159
Kerkman, Dennis D.: 77, 86, 258
Khan, Matluba: 172
Kimpian, Judit: 45
Kobayashi, Fumika: 82
Kondili, E.: 50
Korpela, Kalevi: 216
Krause, Katharina: 134
Kuhnen, Ariane: 130, 241

L

Lange, Eckart: 154
Lappin, Sarah: 92
Lawrence, Roderick J.: 25
Lema Blanco, Isabel: 112, 136
Lemos Nobre, B.A.: 99, 251
Lewis, Alan: 227
Lidskog, Rolf: 179
Lindquist, Mark: 154
Locke, Ryan: 236
Longhinotti Felippe, Maira: 130
Lopes Zampieri, Fábio Lúcio: 97
Lotfata, Aynaz: 238
Luiten, W.J.: 49

M

Manca, Sara: 249
Manríquez Betanzos, Juan Carlos: 257
Marans, Robert W.: 112
Maricchiolo, Fridanna: 208
Marrone, Paola: 45
Martincigh, Lucía: 45
Martínez Miranda, Rubén: 262
Martínez Soto, Joel: 262
Martín-Ortega, Julia: 266
Masly, Dariusz: 114
Mastandrea, Stefano: 208
Mativi Rocha, Andressa: 106
Maturana, Beatriz C.: 113
Mayer, Beril Ozmen: 219
Mazzara, Bruno: 226
McCullough, Jane E.: 92
Medrano, Leandro S.: 118, 122, 139, 140
Meier, Josiane: 134
Meloni, Alessia: 86
Mesejo Conde, Mónica: 126
Metternich, Alex: 129
Miao, Qing: 91, 119
Montero-López Lena, María: 181, 257
Mora, Rodrigo: 100
Moraes Ferreira, T.L.: 99, 251
Moreno-Jiménez, Pilar: 255
Mori, Suguru: 65
Moro Bins Ely, Vera Helena: 97
Mouro, Carla: 135, 213
Moza, Daniela: 42
Muiños, Gabriel: 128, 255, 261
Muntañola Thornberg, Josep: 77
Muñoz, Miguel: 117, 167
Mura, Marina: 223

N

Nagle, Cássia Bartsch: 118
Nakagawa, Hiromi: 162, 170
Namuganyi, Lilian: 96
Nayoung, Lee: 78
Nefs, Merten: 60
Negrín, Fátima: 261
Nejadriahi, Halleh: 148
Nicola, Rainisio: 218
Nilsson, Kristina L.: 87
Nishimura, Shin-ya: 198
Noriega Toledo, Mario Augusto: 53, 55
Nunes, C.C.: 108

O

Ochieng, Crispino C.: 196
Ogura, Hitomi: 80
Ojala, Ann: 216
Oktay, Derya: 33, 36, 174
Olivera Bonilla, Ana Rosa: 57
Ornetzeder, Michael: 95
Othman, Mohd Raffi: 190

P

Palma Oliveira, José M.: 174, 190
Páramo, Pablo: 96, 176
Park, Heykyung: 247, 248, 254
Passatore, Ylenia: 155
Pasupuleti, Ram Sateesh: 87
Pattitoni, Piermario: 223
Pedrós Fernández, Óscar: 126
Peña Pereda, Felipe: 126
Pérez Sindín López, Xaquin S.: 202
Perlaviciute, G.: 47
Piccolo, Chiara: 226
Piché, Denise: 201
Pimentão Marcelino, Cristina A.: 207
Pirchio, Sabine: 155
Polhill, Gary: 41
Portella, Adriana: 106
Pose, Héctor M.. 188
Prieto López, Juan Ignacio: 126
Priori, Luiz: 204
Profice Léa Tiriba, Christiana C.: 84

Q

Quintanilha,Inês: 106

R

Rappl, Katrin: 139
Rashidi, Soghra: 197
Regueiro Ferreira, Rosa María: 88
Reza, Ehsan: 72
Riemer, Manuel: 129
Ríos, M. Luisa: 255
Roberto, Eliane: 122, 140
Robinson, Peter: 185
Rodríguez Blanco, Emilio: 126
Rodríguez García, Miguel: 41
Rosa, Daniele Cunha: 151
Rossato, Luca: 75
Rothmann, Carlos: 100
Ruiz, Cristina: 257

S

Sahragard Monfared, Neda Sadat: 156
Sakurai, Noriko: 198
Salama, Ashraf: 124, 210
Salgamcioglu, Mehmet Emin: 144
Samah, Asnarulkhadi Abu: 133
Sánchez Maroño, Noelia: 41
Sardo, Giulia: 68
Sarrica, Mauro: 226
Saura Carulla, Magda: 77
Scholz, Wolfgang: 185
Schubert Peres, Patricia María: 130, 241, 268
Schweizer-Ries, Petra: 28, 29, 129
Scopelliti, Massimiliano: 155, 208
Seidel, Andrew: 124
Senick, Jennifer: 28, 31
Setola, Nicoletta: 232
Shehayeb, Dina K.: 33, 34
Sherif, Nagwa: 235
Shiho, Mori: 159
Shimokura, Reiko: 82
Shirayanagi, H.: 260
Shojai, Amir: 65
Shon, Seung Kwang: 62, 125
Silva Martins, A.K.: 99
Sim, Duncan: 62
Sinval Cantarelli, Xavier: 106
Souza Feitosa, M.Z.: 99
Spilková, Jana: 212
Stachura, Ewa: 94
Stancu, Alexandra: 42
Stasiskiene, Z.: 47, 50
Staskevicius, A.: 47
Strazzera, Elisabetta: 223
Su, Mei-Lin: 230
Suárez, Ernesto: 128, 255, 261

T

Tabernero, Carmen: 257
Teräväinen, Helena: 168
Torricelli, Maria Chiara: 232
Troffa, Renato: 68, 224
Turgut, Hülya: 33, 197
Tyrrell, Roger Graham: 71
Tyrväinen, Liisa: 216

U

Ugochukwu Kenechi, Elinwa: 219
Unlu, Alper: 144
Uribe, Jesús Felipe: 250
Uzzell, David: 38

V

Vale, Brenda: 210, 211
Vall-Casas, Perre: 252
Vallejo, Macarena: 255
Van Poll, Ric: 228
Varela Tembra, Juan José: 88
Vázquez-Díaz, Sonia: 66
Velázquez Ugalde, Liliana: 262
Venhoeven, L.: 47, 50
Vitterso, G.: 50

W

Wada, Y.: 260
Wallström, Peter: 191
Watson, Chris: 131
Watt, Alan: 51
Waylen, Kerry: 266
Weber, Clara: 176
Wehrmeyer, Walter: 47, 50, 51
Wessela, Eva: 129
Widyawati, Laili Fuji: 89
Wiedmann, Florian: 124
Wrapson, Wendy: 227

Y

Yamada, Juri: 167
Yamamo, Sachiko: 82
Yanagisawa, Kaname: 80, 163, 165, 167, 170
Yano, Megumi: 163
Yazdanfar, Seyed Abbas: 156
Yoshitani da Luz, Gabriela: 97
Youn, Jisun: 247, 254
Yubin, Park: 78
Yukiko, Inoue: 159

Z

Zasada, Ingo: 60
Zhang, Heng: 152
Zhi Hao, Wang: 248
Zhou, Jingmin: 91, 119

notes

Convenors

International Association People-Environment Studies

iaps housing network

iaps sustainability network

iaps Culture&Space network

Xoan Vicente Viqueira
Instituto de Estudios e Investigación Psicosocial

People-Environment Research Group

Departamento de Psicoloxía
Grupo de Investigación Persoa-Ambiente
UNIVERSIDADE DA CORUÑA

Sponsors

Gobierno de España
Ministerio de Educación, Cultura y Deporte

XUNTA DE GALICIA
CONSELLERÍA DE CULTURA, EDUCACIÓN E ORDENACIÓN UNIVERSITARIA

Deputación DA CORUÑA

Ayuntamiento de A Coruña
Concello da Coruña

Compañía de Tranvías de la Coruña S.A.

Turismo de A Coruña

Vicerreitoría de Estudantes, Deportes e Cultura
UNIVERSIDADE DA CORUÑA

Facultade de Ciencias da Educación
UNIVERSIDADE DA CORUÑA

Venue

Facultade de Ciencias da Educación
UNIVERSIDADE DA CORUÑA

Technical secretariat

ORZÁNCONGRES
iaps2013@orzancongres.com
Ph: +34 981 900 700