This page is intentionally left blank.
This page is intentionally left blank.
DRS 2016 Programme Committee

Conference Chair
Peter Lloyd, University of Brighton, UK

Conference Co-Chairs
Tracy Bhamra, Loughborough University, United Kingdom
Stephen Boyd-Davis, Royal College of Art, United Kingdom
Jonathan Chapman, University of Brighton, United Kingdom
Peter Childs, Imperial College, United Kingdom

International Scientific Review Committee
Tracy Bhamra, Loughborough University, United Kingdom
Erik Bohemia, Loughborough University, United Kingdom
Lin Lin Chen, National Taiwan University of Science and Technology, Taiwan
Nathan Crilly, University of Cambridge, United Kingdom
Paul Hekkert, TU Delft, The Netherlands
Peter Lloyd, University of Brighton, UK

Debates, Conversations and Workshops Chairs
Stella Boess, TU Delft, The Netherlands
Carlos Peralta, University of Brighton, UK
Cameron Tonkinwise, Carnegie Mellon University, US

Conference Experience Chairs
Dan Lockton, Royal College of Art, UK
Veronica Ranner, Royal College of Art, UK

PhD by Design
Bianca Elzenbaumer, Leeds College of Art, UK
Maria Portugal, Goldsmiths University, UK
Alison Thomson, Goldsmiths University, UK

DRS Special Interest Group Chairs
Erik Bohemia, Loughborough University, UK
Rebecca Cain, Warwick University, UK
Hua Dong, Tongji University, China
Tom Fisher, Nottingham Trent University, UK
Sarah Kettley, Nottingham Trent University, UK
Kristina Niedderer, University of Wolverhampton, UK
Nithikul Nimkulrat, Estonian Academy of Arts, Talinn
Michael Tovey, Coventry University, UK
Rhoda Trimmingham, Loughborough University, UK

Executive Advisors
Carl DiSalvo, Georgia Institute of Technology, US
Kees Dorst, University of Technology, Sydney, Australia
Janet Mcdonnell, University of the Arts London, UK
Johan Redström, Umeå Institute of Design, Sweden
Erik Stolterman, Indiana University, US
Anna Valtonen, Aalto School of Arts, Design and Architecture, Finland
International Board of Reviewers
Tom Ainsworth, University of Brighton, United Kingdom
Katerina Alexiou, The Open University, United Kingdom
Manola Antonioli, Ecole Nationale Supérieure d’Architecture Paris La Villette, France
Rina Arya, Wolverhampton, United Kingdom
Harriet Atkinson, University of Brighton, United Kingdom
Stephen Awonyi, Texas State University, United States
Jeremy Aynsley, University of Brighton, United Kingdom
Leonard Bachman, University of Houston College of Architecture, United States
Betsy Barnhart, Iowa State University, United States
Giovanni Baule, Politecnico di Milano, Italy
Nigan Bayazit, Istanbul Technical University, Turkey
Michaël Berghman, TU Delft, Netherlands
Tracy Bhamra, Loughborough University, United Kingdom
Richard Bibb, Loughborough University, United Kingdom
Noemi Bitterman, Technion, Israel
Alison Black, Reading University, United Kingdom
Janneke Blijlevens, Royal Melbourne Institute of Technology University, Australia
Anne Boddington, University of Brighton, United Kingdom
Stella Boess, Delft University of Technology, Netherlands
Erik Bohemia, Loughborough University, United Kingdom
Casper Boks, NTNU, Norway
Elizabeth Boling, Indiana University, United States
Andy Boucher, Goldsmiths, University of London, United Kingdom
Simon Bowen, Newcastle University, United Kingdom
Stephen Boyd Davis, Royal College of Art, United Kingdom
Jamie Brasset, Central Saint Martins, United Kingdom
Philip Breedon, Nottingham Trent University, United Kingdom
Charlie Breindahl, Royal Danish Academy of Fine Arts, Denmark
Patrick Bresnihan, Trinity College Dublin, Ireland
Cheryl Buckley, University of Brighton, United Kingdom
Jacob Buur, University of Southern Denmark, Denmark
Rebecca Cain, University of Warwick, United Kingdom
Elena Caratti, Politecnico di Milano, Italy
Philip Cash, DTU, Denmark
Tom Cassidy, University of Leeds, United Kingdom
Julia Cassim, Kyoto Institute of Technology, Japan
Jonathan Chapman, University of Brighton, United Kingdom
Chien-Hsiung Chen, Taiwan Tech, Taiwan, R.O.C.
Chun-Chih Chen, National Kaohsiung Normal University, Taiwan, R.O.C.
Chun-Di Chen, National Taipei University of Education, Taiwan, R.O.C.
Kuohsiang Chen, I-Shou University, Taiwan, R.O.C.
Lin-Lin Chen, National Taiwan University of Science and Technology, Taiwan, R.O.C.
Peter Childs, Imperial College London, United Kingdom
Wen-Ko Chiu, Chang Gung University, Taiwan, R.O.C.
Bo Christensen, Copenhagen Business School, Denmark
Henri Christiaans, UNIST, School of Design & Human Engineering, South Korea
Abdusselam Selami Cifter, Mimar Sinan Fine Arts University, Turkey
Nazli Cila, Amsterdam University of Applied Sciences, Netherlands
Mollie Claypool, University College London, United Kingdom
Stephen Clune, Lancaster University, United Kingdom
Tim Cooper, Nottingham Trent University, United Kingdom
Anne Cranny-Francis, University of Technology Sydney, Australia
Nathan Crilby, University of Cambridge, United Kingdom
Odette da Silva, TU Delft, Netherlands
Massimo De Angelis, University of East London, United Kingdom
Michel de Blois, Université Laval, Canada
Cees de Bont, Hong Kong Polytechnic University, Hong Kong
Christine de Lille, Delft University of Technology, Netherlands
Jakki Dehn, Jakki Dehn Materials, United Kingdom
Val Mitchell, Loughborough University, United Kingdom
Kathryn Moore, Birmingham City University, United Kingdom
Michael Moore, Ulster University, United Kingdom
Sarah Morehead, Northumbria University, United Kingdom
Nicola Morelli, Aalborg University, Denmark
Mariale Moreno, Cranfield University, United Kingdom
Andrew Morris, Loughborough University, United Kingdom
Andrew Morrison, AHO, Norway
Jeanne-Louise Moys, Reading University, United Kingdom
Tara Mullaney, Umēa Institute of Design, Sweden
Yukari Nagai, Japan Advanced Institute of Science and Technology, Japan
Ki Young Nam, KAIST, South Korea
Kristina Niedderer, Wolverhampton University, United Kingdom
Liv Merete Nielsen, Oslo and Akershus university college, Norway
Nithikul Nimkulrat, Estonian Academy of Arts, Estonia
Conall Ó Catháin, Past Chairman DRS, Ireland
Arlene Oak, University of Alberta, Canada
Maja Oppenheimer, Royal College of Art, United Kingdom
Elif Ozcan, Delft University of Technology, Netherlands
Kursat Ozenc, Stanford, United States
Verena Paepcke-Hjeltness, Iowa State University, United States
Eujin Pei, Brunel University London, United Kingdom
Carlos Peralta, University of brighton, United Kingdom
José Pérez de Lama, University of Sevilla, Spain
Oscar Person, Aalto University, Finland
Ann Petersmans, Hasselt University, Belgium
Daniela Petrelli, Sheffield Hallam University, United Kingdom
Doina Petrescu, The University of Sheffield, United Kingdom
Ida Nilstad Pettersen, Norwegian University of Science and Technology (NTNU), Norway
Sarah Pink, RMIT University, Australia
Silvia Pizzocaro, Politecnico di Milano, Italy
Philip Plowright, Lawrence Technological University, Universidad de Castilla-La Mancha, United States
Anna Pohlmeier, Delft University of Technology, Netherlands
Tiiu Poldma, University of Montreal, Canada
Lubomir Popov, Bowling Green State University, United States
Vesna Popovic, Queensland University of Technology, Australia
Thomas Porathe, Norwegian University of Science and Technology, Norway
Ruben Post, TU Delft, Netherlands
William Prindle, Iowa State University, United States
Charlie Ranscombe, Swinburne, Australia
Yaone Rapitsenyane, University of Botswana, Botswana
Ingo Rauth, Chalmers University of Technology, Sweden
Kirstine Riis, University College Telemark, Norway
Paul Rodgers, Northumbria University, United Kingdom
Zoe Romano, WeMake, Makerspace, Italy
Jose Antonio Rosa, Iowa State University, United States
Seymour Roworth-Stokes, Coventry University, United Kingdom
Robin Roy, The Open University, United Kingdom
Keith Russell, University of Newcastle, Australia, Australia
Daniel Saakes, KAIST, South Korea
Noemi Maria Sadowska, Regent’s University London, United Kingdom
Miguel Said Vieira, Independent, Brazil
Fatina Saikaly, Co-Creando, Italy
Filippo Salustri, Ryerson University, Canada
Liz Sanders, The Ohio State University, United States
Rick Schiff, TU Delft, Netherlands
James Seif, UNIST, South Korea
Nick Senske, Iowa State University, United States
Matt Sinclair, Loughborough University, United Kingdom
Kin Wai Michael Siu, The Hong Kong Polytechnic University, Hong Kong
Dirk Snelders, TU Delft, Netherlands
Table of Content

Editorial.................................................................................................................................................................................................................. 1

– Volume 1 –

SECTION 1
50 YEARS OF DESIGN RESEARCH

Design Research: What is it? What is it for?.................................................................................................................................................. 5
Victor Margolin
Schön’s Legacy: Examining Contemporary Citation Practices in DRS Publications .......................................................................................... 17
Jordan Beck, Laureline Chiapello
The Idea of Architecture, The User As Inhabitant: Design through a Christopher Alexander Lens ............................................................ 31
Molly Wright Steenson
Design Research for Sustainability: Historic Origin and Development ..................................................................................................... 43
Astrid Skjerven
The Design Methods Movement: From Optimism to Darwinism .............................................................................................................. 51
John Z. Langrish
User Design: Constructions of the “user” in the history of design research ............................................................................................. 65
Theodora Varoudi
60 years of creativity in business organizations ......................................................................................................................................... 83
Ricardo Sosa, Pete Rive and Andy M. Connor
20th Century Boys: Pioneering British Design Thinkers .......................................................................................................................... 97
Emma Murphy and Martyn Evans
Design Research and Design Participation ................................................................................................................................................... 111
Robert Aish
The Design Research Society in the 1980s and 1990s: a memoir ........................................................................................................... 125
Conall Ó Catháin

SECTION 2
AESTHETIC PLEASURE IN DESIGN

Introduction: Aesthetic Pleasure in Design ............................................................................................................................................. 139
Michaël Berghman and Paul Hekkert
Measuring design typicality – a comparison of objective and subjective approaches .................................................................................. 145
Stefan Mayer and Jan R. Landwehr
Most Advanced yet Acceptable: A case of referential form-driven meaning innovation ........................................................................... 157
Seong geun Lee, James Self and Ekaterina Andrietc
Extracting Design Aesthetic Heuristics from Scientific Literature ........................................................................................................... 179
Ana Cadavid, Stefany Ruiz-Córdoba and Jorge Maya
Putting product design in context: Consumer responses to design fluency as a function of presentation context ........................................ 203
Laura K. M. Graf and Jan R. Landwehr
The Value of Transparency for Designing Product Innovations ............................................................................................................. 215
Peiyao Cheng and Ruth Mugge
A comparison between colour preference and colour harmony – taking athletic shoe design as an example.............................................. 233
Li-Chen Ou
Creating Novel Encounters with Nature: Approaches and Design Explorations ...................................................................................... 245
Thomas J. L. Van Rompay and Geke D. S. Ludden
Introducing Experience Goals into Packaging Design .......................................................................................................................... 259
Markus Joutsela and Virpi Roto
The beauty of balance – An empirical integration of the Unified Model of Aesthetics for product design .................................................. 277
Michaël Berghman and Paul Hekkert

SECTION 3
DESIGN EPISTEMOLOGY

Introduction: Design Epistemology.......................................................................................................................................................... 295
Derek Jones, Philip Plowright, Leonard Bachman and Tiiu Poldma
Mapping design knowledge: 36 years of Design Studies ......................................................................................................................... 303
Kathryn Burns, Jack Ingram and Louise Annable
I know this one, but the answer is complex ........................................................................................................................................ 321
Simon Downs
Source domains of Architectural Knowledge: Mappings, Categories, Validity and Relevance .................................................................... 339
Philip D Plowright
Danny Godin
Design Fiction: Does the search for plausibility lead to deception? ........................................................................................................ 369
Paul Coulton, Joseph Lindley and Haider Ali Akmal
Graphicality: why is there not such a word? ................................................................. 385
Robert Harland and David Craib

Design as Anticipation and Innovation: Co-creating a future by learning from the future as it emerges .................................................. 401
Markus F. Peschl and Thomas Fundneider

SECTION 4
Introduction: Design Education and Learning ........................................................................ 419
Michael Tovey

"Dis-course is Killer!" Educating the critically reflective designer .................................................... 425
Veronika Kelly

Design Culture and Contemporary Education .............................................................................. 441
Therese Uri

Promoting an emancipatory research paradigm in Design Education and Practice .................. 455
Lesley-Ann Noel

Design Thinking: A Rod For Design's Own Back? ................................................................. 471
Aysar Ghassan

Designing the unknown: supervising design students who manage mental health issues .............. 483
Welby Ings

Using Design Thinking to create a new education paradigm for elementary level children for higher student engagement and success 501
Lesley-Ann Noel and Tsai Lu Liu

Design Research in Interior Design Education: A Living Framework for Teaching the Undergraduate Capstone Studio in the 21st Century 513
Charles Boggs, Helena Moussatche, Catherine Pizzichemi and Meghan Woodcock

Designing Universities of the Future ......................................................................................... 525
Anna Valtonen

Design Futures: A Pedagogy for Long-Horizon Design Scenarios ........................................... 539
Peter Scupelli, Arnold Wasserman, and Judy Brooks

Design and Interdisciplinarity: the improbable introduction of “fundamental physics” in a design school ......................................................... 555
Annie Gentes, Anne-Lyse Renon and Julien Bobroff

Card Games Creation as a Learning Method .............................................................................. 569
Birgit S. Bauer

“Spend another day in our class talking about this research please”: Student insights from a research-based design thinking exercise 593
Cynthia J. Atman, Arif Ahmer, Jennifer A. Turns and Jim Borgford-Parnell

Communication is not collaboration: observations from a case study in collaborative learning ................................................................. 609
Iestyn Jowers, Mark Gaved, Gary Elliott-Cirigottiis, Delphine Dallison, Alan Rochead and Mark Craig

The use of argumentation in design research ............................................................................. 625
Stella Boess

Digital Sketch Modelling: Integrating digital sketching as a transition between sketching and CAD in Industrial Design Education .......... 637
Charlie Ranscombe and Katherine Bisset-Johnson

Prototyping in the in-between. A Method for Spatial Design education ...................................... 653
Jennie Andersson Schaeffer and Marianne Palmgren

Global Flows of Materials: Design Research and Practice in Architecture .................................. 669
Janet McGaw

Evaluating Living and Learning on Campus: A Community Engaged Research Model.................. 685
Rebekah Radtke

What is sought from graphic designers? A first thematic analysis of job offers for graphic design positions in the United Kingdom .......... 705
Paulo Roberto Nicoletti Dziobczenskiand Oscar Person

LVIID: An Avant-Garde Publication with Pedagogical and Epistemological Aims ......................... 719
Cynthia J. Atman, Arif Ahmer, Jennifer A. Turns and Jim Borgford-Parnell

Design Studio Desk and Shared Place Attachments: A Study on Ownership, Personalization, and Agency ...................................................... 729
Meredith James

Online Reflective Interactions on Social Network Sites in Design Studio Course ......................... 751
Simge Hough

Junior designers’ awareness of personal values and their employment choices ............................. 767
Anna Jonkmans, Julia Wurl, Dirk Snelders and Lenny van Onselen

Knowledgetability culture: Co-creation in practice ..................................................................... 781
Alicen Coddington, Colin Giang, Alexander Graham, Anne Prince, Pauliina Mattila, Christine Thong and Anita Kocsis

Visual Thinking Styles and Idea Generation Strategies Employed in Visual Brainstorming Sessions ...................................................................... 795
Nad A.G.Z. Börekçi

The Future of Product Design Utilising Printed Electronics .................................................................. 813
Nicola York, Darren Southsee and Mark Evans
SECTION 5

AESTHETICS, COSMOPOLITICS AND DESIGN

Introduction: Aesthetics, Cosmopolitics and Design ............................................................................................................................ 873
Alex Wilkie

Framing Values in Design .................................................................................................................................................................... 881
Marta Gasparin and William Green

The Prototype as a Cosmopolitical Place: Ethnographic design practice and research at the National Zoo ............................................ 895
Martin Tironi, Pablo Hermansen and José Neira

The Role of Participation in Designing for IoT ...................................................................................................................................... 913
Anuradha Reddy and Per Linde

Aesthetics, Cosmopolitics and Design Futures in Computational Fashion ............................................................................................. 927
Laura Forlano

Designing diagrams for social issues .................................................................................................................................................... 941
Michele Mauri and Paolo Ciuccarelli

A Creative Ontological Analysis of Collective Imagery during Co-Design for Service Innovation .................................................... 969
Priscilla Chueng-Nainby, John Lee, BingXin Zi and Astury Gardin

Post-critical potentials in experimental co-design ................................................................................................................................ 985
Sissel Olander

Collaborative Imaging. The communicative practice of hand sketching in experimental physics ........................................................... 997
Judith Marlen Dobler

The Aesthetics of Action in New Social Design .................................................................................................................................... 1013
Ilpo Koskinen

Designing Debate: The Entanglement of Speculative Design and Upstream Engagement ............................................................. 1025
Tobie Kerridge

SECTION 6

DESIGN AND TRANSLATION

Introduction: Design and Translation ................................................................................................................................................. 1039
Giovanni Baule and Elena Caratti

Towards Translation Design A New Paradigm for Design Research ..................................................................................................... 1047
Giovanni Baule and Elena Caratti

Design as translation activity: a semiotic overview ............................................................................................................................. 1061
Salvatore Zingale

Word to Image – Image to Word The Contribution of Visual Communication to Understanding and Dialog ............................................. 1073
Michael Renner

Perception, Meaning and Transmodal Design ..................................................................................................................................... 1089
Mathias Nordvall and Mattias Arvola

The Ways of Synesthetic Translation: Design models for media accessibility ....................................................................................... 1101
Dina Riccó

The narratives and the supports. Remediating Design Culture in the translation of transmedia artefacts ............................................. 1111
Matteo Cissellardi and Derrick de Kerckhove

Rules of Thumb: An Experiment in Contextual Transposition ............................................................................................................. 1123
Damon Taylor, Monika Büscher, Lesley Murray, Chris Speed and Theodore Zamenopoulos

Intercultural Communication ................................................................................................................................................................. 1139
Ruedi Baur and Ulrike Felsing

Elucidating perceptions of Australian and Chinese industrial design from the next generation of industrial designers ..................... 1163
Blair Kuys and Wenwen Zhang

Translating picturebooks: Re-examining interlingual and intersemiotic translation ............................................................................. 1179
Anne Ketola

Long Kesh: Site - Sign - Body ............................................................................................................................................................... 1191
Ola Ståhl
Exploring Design for Happiness in the Home and Implications for Future Domestic Living ...................................................................1529

Disentangling complexity: a visualisation-led tool for healthcare associated infection training ...........................................................1515

Introduction: Design for Health, Wellbeing and Happiness .................................................................................................................1434

In the moment: designing for late stage dementia..............................................................................................................................1442

Introduction: Design for Design The Influence and Legacy of John Heskett .........................................................................................1205

Using symbolic meaning as a means to design for happiness: The development of a card set for designers .........................................1553

Design for Ageing-in-place: Evidence from Australia ...........................................................................................................................1458

Co-creating narratives: an approach to the design of interactive medical devices, informed by phenomenology .................................1487

Supporting healthy behaviour: A stages of change perspective on changing snacking habits of children .............................................1473

An alternative approach to influencing behaviour: Adapting Darnton’s Nine Principles framework for scaling up individual upcycling 1277

Supporting healthy behaviour: A stages of change perspective on changing snacking habits of children .............................................1473

An alternative approach to influencing behaviour: Adapting Darnton’s Nine Principles framework for scaling up individual upcycling 1277

A Design Primer for the Domestication of Health Technologies ........................................................................................................1499

Disentangling complexity: a visualisation-led tool for healthcare associated infection training ...........................................................1515

Designs with benefits: hearth fire nights and bittersweet chores .......................................................................................................1573

Happy moments: A well-being driven design of a Car2Go ...................................................................................................................1589

– Volume 4 –

SECTION 8
Design for Behaviour Change

Introduction: Design for Behaviour Change ........................................................................................................................................1271

Kristina Niedderer, Geke Ludden, Rebecca Cain, Andrew Morris and Alja Freimane

An alternative approach to influencing behaviour: Adapting Darnton’s Nine Principles framework for scaling up individual upcycling 1277

Kyungeun Sung, Tim Cooper and Sarah Kettley

Assessment of the Co-creative Design Process ...................................................................................................................................1291

Pratik Vyas, Robert Young, Petia Sice and Nicholas Spencer

The potential of Design for Behaviour Change to foster the transition to a circular economy ..............................................................1305

Laura Piscicelli and Geke Dina Simone Ludden

Developing a theory-driven method to design for behaviour change: two case studies .........................................................................1323

Anita Van Essen, Sander Hermesen and Reint Jan Renes

What a designer can change: a proposal for a categorisation of artefact-related aspects ..................................................................1339

Anneli Selvefors, Helena Strömberg and Sara Renström

Exploring and communicating user diversity for behavioural change ..................................................................................................1357

Aykut Coskun and Cigdem Erbug

How I learned to appreciate our tame social scientist: experiences in integrating design research and the behavioural sciences.....1375

Sander Hermesen, Remko van der Lugt, Sander Mulder and Reint Jan Renes

A Design Approach for Risk Communication, the Case of Type 2 Diabetes .......................................................................................1390

Farzaneh Eftekhari and Tsai Lu Liu

Metadesigning Design Research – How can designers collaboratively grow a research platform? ...........................................................1412

Mathilda Tham, Anna-Karin Arvidsson, Mikael Blomqvist, Susanne Bonja, Sara Hyltén-Cavallius, Lena Håkansson, Miguel Salinas, Marie Sterte, Ola Ståhl, Tobias Svensén and Ole Victor

SECTION 9
Design for Health, Wellbeing and Happiness

Introduction: Design for Health, Wellbeing and Happiness ..............................................................................................................1434

Rebecca Cain, Noemi Bitterman, Geke Ludden, Jamie Mackrill, Elif Ozcan, Ann Petermans and Carolina Escobar-Tello

In the moment: designing for late stage dementia..............................................................................................................................1442

Cathy Treadaway, David Prytherch, Gail Kenning and Jac Fennell

Design for Ageing-in-place: Evidence from Australia ...........................................................................................................................1458

Naseem Ahmadpour and Alen Keirnan

Supporting healthy behaviour: A stages of change perspective on changing snacking habits of children .............................................1473

Geke D.S. Ludden and Laura H.J. de Ruijter

Co-creating narratives: an approach to the design of interactive medical devices, informed by phenomenology .................................1487

Rowan Page and Mark Richardson

A Design Primer for the Domestication of Health Technologies ........................................................................................................1499

Paul Chamberlain and Claire Craig

Disentangling complexity: a visualisation-led tool for healthcare associated infection training ...........................................................1515

Alastair S. Macdonald, David Loudon, Susan Wan and Colin Macduff

Exploring Design for Happiness in the Home and Implications for Future Domestic Living .................................................................1529

Emily Corrigan-Doyle, Carolina Escobar-Tello and Kathy Pui Ying Lo

Using symbolic meaning as a means to design for happiness: The development of a card set for designers ...........................................1553

Mafalda Casais, Ruth Mugge and Pieter M. A. Desmet

Designs with benefits: hearth fire nights and bittersweet chores .......................................................................................................1573

Stella U. Boess and Anna E. Pohlmeyer

Happy moments: A well-being driven design of a Car2Go ...................................................................................................................1589

Tessa Duste, Pieter Desmet and Elmer van Grondelle
Intuitive Interaction research – new directions and possible responses ........................................................................................................2065
Alethea Blackler and Vesna Popovic

Skilling and learning through digital Do-It-Yourself: the role of (Co-)Design ........................................................................................................2077
Giuseppe Salvia, Carmen Bruno and Marita Canina

Design Research, Storytelling, and Entrepreneur Women in Rural Costa Rica: a case study ..........................................................................................2091
Maria Gabriela Hernandez

Temporal design: looking at time as social coordination .....................................................................................................................2109
Larissa Pshetetz, Michelle Bastian and Chris Speed

A Physical Modeling Tool to Support Collaborative Interpretation of Conversations ............................................................................................2123
Piotr Michura, Stan Ruecker, Celso Scalsetský, Guilherme Meyer, Chiara Del Gaudio, Gerry Derksen, Julia Dias, Elizabeth Jerne
egan, Juan de la Rosa, Xinyue Zhou and Priscilla Ferronato

– Volume 6 –

SECTION 13
DESIGN INNOVATION FOR SOCIETY

Introduction: Design Innovation for Society ...............................................................................................................................................2143
Nynke Tromp and Mieke van der Bijl-Brouwer

The Challenges of Human-Centred Design in a Public Sector Innovation Context ..........................................................................................2149
Mieke van der Bijl-Brouwer

Activating the core economy by design ....................................................................................................................................................2165
Rebeca Torres Castaneda and Paul Micklethwait

On presenting a rich picture for stakeholder dialogue ..........................................................................................................................2183
Abigail C. Durrant, Wendy Moncur, David S. Kirk, Diego Trujillo Pisanty and Kathryn Orzech

Design and the Creation of Representational Artefacts for Interactive Social Problem Solving ..................................................................................2203
Richard Cooney, Nifeli Stewart, Tania Ivanka and Neal Haslem

Appreciative Co-design: From Problem Solving to Strength-Based Re-authoring in Social Design .......................................................................2221
Tasman Munro

Design Tools for Enhanced New Product Development in Low Income Economies .........................................................................................2241
Timothy Whitehead, Mark Evans and Guy Bingham

Redesigning governance – a call for design across three orders of governance ..............................................................................................2257
Tanja Rosenqvist and Cynthia Mitchell

Involving stakeholders in cross-border regional design ............................................................................................................................2273
Anett Kempenaar

From the specificity of the project in design to social innovation by design: a contribution .......................................................................2287
Marie-Julie Catoir-Brisson, Stéphane Vial, Michela Deni and Thomas Watkin

SECTION 14
EFFECTIVE INFORMATION DESIGN

Introduction: Effective Information Design ......................................................................................................................................................2303
Alison Black and Sue Walker

Informing the design of mobile device-based patient instructions leaflets: the case of Fentanyl patches ...................................................................2309
Myrto Koumoundourou, Panayiotis Koutsabasis and Jenny S. Darzentas

Design methods for meaning discovery: a patient-oriented health research case study .................................................................................2327
David Craib and Lorenzo Imbesi

Expectations and prejudices usurp judgements of schematic map effectiveness ..............................................................................................2343
Maxwell J. Roberts and Ida C.N. Vaeng

Data Visualisation Does Political Things .....................................................................................................................................................2361
Joanna Boehnert

The information designer through the lens of design for learning ...................................................................................................................2381
Eden Potter

A user centred approach to developing an actionable visualisation for ‘balance health’ ....................................................................................2393
Shruti Grover, Simon Johnson, Ross Atkin and Chris Mcginley

SECTION 15
Design Thinking

Introduction: Design Thinking .................................................................................................................................................................2417
Seda Yilmaz, Verena Paepcke-Hjeltness and Tejas Dhadphale

From Technology-Driven to Experience-Driven Innovation: A Case from the Aviation Industry using VIP .......................................................2425
Wan-Jen Jenny Tsy and Christine de Lille

Critically Exploring the Development of a Conceptual Framework for Building Innovative Brands .................................................................................2447
Xinya You and David Hands

United We Stand: A Critique of the Design Thinking Approach in Interdisciplinary Innovation ........................................................................2465
Fiona Maciver, Julian Malins, Julia Kantorovitch and Aggelos Liapis
## SECTION 18
### EMBODIED MAKING AND LEARNING

**Introduction: Embodied Making and Learning**
Marte S. Gulliksen, Camilla Groth, Maarit Mäkelä and Pirita Seitamaa-Hakkarainen

- The role of sensory experiences and emotions in craft practice .......................................................... 2895
  - Camilla Groth
- Learning to learn: What can be learned from first-hand experience with materials? ................................. 2911
  - Biljana C. Fredriksen
- Why making matters—developing an interdisciplinary research project on how embodied making may contribute to learning .......................................................... 2925
  - Marte S. Gulliksen
- Physiological measurements of drawing and forming activities ..................................................................... 2941
  - Marianne Leinikka, Minna Huotilainen, Pirita Seitamaa-Hakkarainen, Camilla Groth, Mimmu Rankanen and Maarit Mäkelä
- Code, Decode, Recode: Constructing, deconstructing and reconstructing knowledge through making ........ 2959
  - Anna Piper
- Experience Labs: co-creating health and care innovations using design tools and artefacts .......................... 2965
  - Tara French, Gemma Teal and Sneha Raman

## SECTION 19
### DESIGN FOR TANGIBLE, EMBEDDED AND NETWORKED TECHNOLOGIES

**Introduction: Design for Tangible, Embedded and Networked Technologies**
Sarah Kettley and Anne Cranney-Francis

- Designing from, with and by Data: Introducing the ablative framework ....................................................... 2991
  - Chris Speed and Jon Oberlander
- Feel it! See it! Hear it! Probing Tangible Interaction and Data Representational Modality ................................. 3005
  - Trevor Hogan and Eva Hornecker
- Designing Information Feedback within Hybrid Physical/Digital Interactions ............................................... 3019
  - David Gullick and Paul Coulton
- Harnessing the Digital Records of Everyday Things ..................................................................................... 3033
  - Dimitrios Darzentas, Adrian Hazzard, Michael Brown, Martin Flintham and Steve Benford
- A Toaster For Life: Using Design Fiction To Facilitate Discussion On The Creation Of A Sustainable Internet of Things ........................................................................... 3049
  - Michael Stead
- Making Service Design in a Digital Business .................................................................................................. 3069
  - Piia Rytilahti, Simo Rontti, Titta Jylkäs, Mira Alhonsuo, Hanna-Riina Vuontisjärvi and Laura Laivismaa
- Ad Hoc Pairings: Semantic Relationships and Mobile Devices ......................................................................... 3085
  - Jason O. Germany
- Serious Play Strategies in the Design of Kinetic and Wearable Devices ............................................................ 3103
  - Lois Frankel and Ellen Hrinivich
- Tangibility in e-textile participatory service design with mental health participants ....................................... 3121
  - Sarah Kettley, Anna Sadkowska and Rachel Lucas
- Wearable Sensory Devices for Children in Play Areas ..................................................................................... 3133
  - Cai-Ru Liao, Wen-Huei Chou and Chung-Wen Hung
- Intuitive Interaction in a Mixed Reality System ............................................................................................. 3149
  - Shital Desai, Alethea Blackler and Vesna Popovic
- From nano to macro: material inspiration within ubiquitous computing research ........................................ 3165
  - Isabel Paiva

## SECTION 20
### EXPERIENTIAL KNOWLEDGE

**Introduction: Experiential Knowledge**
Nithikul Nimkulrat

- Double-loop reflective practice as an approach to understanding knowledge and experience ...................... 3177
  - John Gribbin, Mersha Aftab, Robert Young and Sumin Park
- Designing “little worlds” in Walnut Park: How architects adopted an ethnographic case study on living with dementia ............................................................................ 3199
  - Valerie Van der Linden, Iris Van Steenwinkel, Hua Dong and Ann Heylighen
- Bonding through Designing; how a participatory approach to videography can catalyse an emotive and reflective dialogue with young people ........................................ 3213
  - Marianne Mc Ara
- Capturing architects’ designerly ways of knowing about users: Exploring an ethnographic research approach ......................................................................................... 3229
  - Valerie Van der Linden, Hua Dong and Ann Heylighen

## SECTION 21
### INCLUSIVE DESIGN

**Introduction: Inclusive Design**
Hua Dong .......................................................................................................................................................... 3247
Designing for older people: But who is an older person? .................................................................3251
Raghavendra Reddy Gudur, Alethea Blackler, Vesna Popovic and Doug Mahar
Towards designing inclusion: insights from a user data collection study in China ................................3263
Weining Ning and Hua Dong
‘Difficult’ packaging for older Chinese adults ..................................................................................3279
Xuezi Ma, Hua Dong
Crafted with Care: Reflections from co-designing wearable technologies with care home residents .........................................................3295
Christopher Sze Chong Lim and Sara Nevay
To Shed Some Light on Empowerment: Towards Designing for Embodied Functionality ................3313
Jelle van Dijk and Fenne Verhoeven
Towards more culturally inclusive communication design practices: exploring creative participation between non-Indigenous and Indigenous people in Australia ................................................................................3349
Nicola St John
Designing meaningful vehicle for older users: culture, technology, and experience .........................3373
Chao Zhao, Vesna Popovic and Xiaobo Lu
Towards Innovative and Inclusive Architecture ................................................................................3393
Sidse Grangaard
Hidden public spaces: when a university campus becomes a place for communities ........................3407
Davide Fassi, Laura Galluzzo and Liat Rogel

SECTION 22
FOOD AND EATING DESIGN

Introduction: Food and Eating Design ................................................................................................3427
Hendrik N.J. Schifferstein
Designing with Empathy: Implications for Food Design .....................................................................3435
Hafdis Sunna Hermannsdottir, Cecilie Dawes, Hanne Gideonosen and Eva De Moor
Designing for sustainability: a dialogue-based approach to the design of food packaging experiences ........................................................................3449
Zoi Stergiadou, Jenny Darzentas and Spyros Bofylatos
Towards a sensory congruent beer bottle: Consumer associations between beer brands, flavours, and bottle designs ..........................3467
Anna Fenko, Sanne Heiltjes and Lianne van den Berg-Weitzel

SECTION 23
OBJECTS, PRACTICES, EXPERIENCES AND NETWORKS

Introduction: Objects, Practices, Experiences and Networks ................................................................3479
Tom Fisher and Lorraine Gamman
Stories in a Beespoon: Exploring Future Folklore through Design ......................................................3485
Deborah Maxwell, Liz Edwards, Toby Pillatt and Niamh Downing
Uber and Language/Action Theory ....................................................................................................3503
Michael Arnold Mages
Emotional Fit: Developing a new fashion design methodology for mature women ..............................3521
Katherine Townsend, Ania Sadowska and Juliana Sissons
From Afterthought to Precondition: re-engaging Design Ethics from Technology, Sustainability, and Responsibility ..................................................3539
Jeffrey Chan
Design for Resourceful Ageing: Intervening in the Ethics of Gerontechnology ..................................3553
Elisa Giaccardi, Lenneke Kuijer and Louis Neven

SECTION 24
REFRAMING THE PARADOX – EXAMINING THE INTERSECTIONS BETWEEN EVIDENCE-BASED DESIGN AND DESIGN FOR THE PUBLIC SECTOR

Introduction: Reframing the Paradox – Evidence-based Design and Design for the Public Sector ........3569
Luke Feast
Open Practices: lessons from co-design of public services for behaviour change .............................3573
Simon O’Rafferty, Adam DeEyto and Huw Lewis
Capturing the “How”: Showing the value of co-design through creative evaluation ..........................3591
Arthi Kanchana Manohar, Madeline Smith and Mirian Calvo
Design in the Time of Policy Problems ..............................................................................................3605
Lucy Kimbell
The introduction of design to policymaking: Policy Lab and the UK government ..............................3619
Jocelyn Bailey and Peter Lloyd
Problematising Evidence-Based Design: A Case Study of Designing for Services in the Finnish Government .................................................................3635
Helena Sustar and Luke Feast
Section 25
Sustainable Design

Introduction: Sustainable Design
Rhoda Trimingham

Design for Sustainability: An Evolutionary Review
Fabrizio Ceschin and Idil Gaziulusoy

Consumer Product Design and Innovation: Past, present and future
Robin Roy

Product-Service Systems or Service Design ‘By-Products’? A Systems Thinking Approach
John Darzentas and Jenny Darzentas

Supporting SMEs in designing sustainable business models for energy access for the BoP: a strategic design tool
Silvia Emili, Fabrizio Ceschin and David Harrison

Extending clothing lifetimes: an exploration of design and supply chain challenges
Lynn Oxborrow and Stella Claxton

The effect of consumer attitudes on design for product longevity: The case of the fashion industry
Angharad McLaren, Helen Goworek, Tim Cooper, Lynn Oxborrow and Helen Hill

Frameing Complexity in Design through theories of Social Practice and Structuration: A comparative case study of urban cycling
Tobias Barnes Hofmeister and Martina Keitsch

Integrating Sustainability Literacy into Design Education
Andrea Quam

Design of resilient consumer products
Anders Haug

Designing for Sustainable Transition through Value Sensitive Design
Luisa Sze-man Mok, Sampsa Hyysalo and Jenni Väänänen

Mixing up everyday life - uncovering sufficiency practices through designerly tools
Miriam Lahusen, Susanne Ritzmann, Florian Sametinger, Gesche Joost and Lars-Arvid Brischke

Give car-free life a try: Designing seeds for changed practices
Mia Hesselgren and Hanna Hasselqvist

A sociotechnical framework for the design of collaborative services: diagnosis and conceptualisation
Joon Sang Baek, Sojung Kim and Yoonee Pahk

Moving Textile Artisans’ Communities towards a Sustainable Future – A Theoretical Framework
Francesco Mazzarella, Carolina Escobar-Tello and Val Mitchell

Sharing 10 years of experience with class AUP0479 – Design for Sustainability
Maria Cecilia Santos, Tatiana Sakurai and Verena Lima

Section 26
The Politics of Commoning and Design

Introduction: The Politics of Commoning and Design
Bianca Elzenbaumer, Valeria Graziano and Kim Trogal

Commons & community economies: entry points to design for eco-social justice?
Fabio Franz and Bianca Elzenbaumer

Design Togetherness, Pluralism and Convergence
Monica Lindh Karlsson and Johan Redström

Designing participation for commoning in temporary spaces: A case study in Aveiro, Portugal
Janaina Teles Barbosa, Maria Hellström Reimer and João Almeida Mota

From Rules in Use to Culture in Use – Commoning and Infrastructuring Practices in an Open Cultural Movement
Sanna Marttila

Index of Authors

This page is intentionally left blank
The narratives and the supports. Remediating Design Culture in the translation of transmedia artefacts.

Matteo Ciastellardi\textsuperscript{a}\textsuperscript{*} and Derrick de Kerckhove\textsuperscript{b}

\textsuperscript{a}Politecnico di Milano, Italy
\textsuperscript{b}University of Toronto, Canada
\textsuperscript{*} matteo.ciastellardi@polimi.it
DOI: 10.21606/drs.2016.272

Abstract: Media culture has fostered over the last century an incessant proliferation of ideas, models, and artefacts that have defined specific milestones and precise references for designers, researchers, and professionals in several disciplines. Since the mid-'80s, an increasing transdisciplinarity, the ability to experiment more effective techniques, the widespread diffusion of specific tools, and a worldwide network to interconnect emerging knowledge and skills redefined the contents production and consumption.

The growth of social-driven patterns based on bottom-up collaboration, interchanging format of distribution and consumption, connective intelligence, and sharing economy fostered the rise of participative audiences and the emergence of transmedia narratives (Jenkins et al. 2006).

The paradigm shift of the realism of the forms (Flusser, 1997), the growth of crowdsourced and crowdfunded business models (Surowiecki, 2004), accessibility as a protocol not only for consumption but for development (Steve, 2004; Lessig 2004), the birth of new Software Cultures (Manovich, 2010), are some of the passages towards the definition of hybrid artefacts, collectively built and sometimes opened to narrow but very (re)active audiences.

Transmedia artefacts are among the first concrete results of this change of perspective. Over the past 50 years it has been possible to witness the birth of such transmedia experiments and artefacts (The Magus by John Fowles, 1965, and Ong's Hat, 1980). From subsequent projects (like Inanimate Alice, 2005, and The Cosmonaut, 2013), the designer's work becomes a process of hybrid and interconnected teams.

This paper aims at detecting the grassroots and the role of design culture in the definition of transmedia artefacts, showing how designers' skills move towards a translation of the narrative elements not only in terms of
adaptation from one support to another, or from one idiom to a new one, but mainly setting up crossed strategies of cultural "remediation" (Bolter & Grusin, 2000).

**Keywords:** Transmedia, Design Culture, Translation, New Audiences.

### Design Culture from Convergence to Transmedia Artefacts

Since the mid-'80s, an increasing transdisciplinarity, the ability to experiment more effective techniques, the widespread diffusion of specific tools, and a worldwide network to interconnect emerging knowledge and skills have redefined the production and consumption of contents. In this sense, Media Culture has fostered over the last decades an incessant proliferation of ideas, models, and artefacts that have defined specific milestones and precise references for designers, researchers, and professionals in several disciplines. Internet and the increasing permeation and use of traditional media and new devices have defined an emerging design culture based on an epistemological sphere of participation, production, and transmission of knowledge and culture.

During the 1990s critics made radical claims for a narrative revolution in the light of hypertext, gaming, MUDs, and MOOs (Douglas, 1992; Landow, 1992; Aarseth, 1997; Murray, 1997; Hayles, 2001), stating that new audiences would find different possibilities to be part of storytelling experiences and co-authoring them. New terms were introduced such as **wreader** (Landow, 1992; Landow, 1997; Rau, 2000) and **interactor** (Douglas, 1996; Murray, 1997).

The rhetoric of narrative artefact moved therefore from a semiotically-measured perspective (De Saussure, 1916; Hjelmslev, 1969) to a deconstruction of contents and channels that were able to give expression to new products (Derrida, 1974; Landow, 1994; Bolter & Grusin, 1999). The paradigm shift of the realism of the forms (Flusser, 1997), the growth of crowdsourced and crowdfunded business models (Surowiecki, 2004), accessibility as a protocol not only for consumption but for development (Steve, 2004; Lessig, 2004 and the European research lines ICT-02.07.2007), the birth of new Software Cultures (Manovich, 2010), are some of the passages towards the definition of hybrid artefacts, collectively built and sometimes opened to narrow but very (re)active audiences.

In this scenario, the growth of social-driven patterns based on bottom-up collaboration, interchanging format of distribution and consumption, connective intelligence, and sharing economy fostered the rise of participative audiences and the emergence of what will assume the name of “convergence culture” (Jenkins et al. 2006). The idea of convergence can be resumed, according to Jenkins, to the “flow of content across multiple media platforms, the cooperation between multiple media industries, and the migratory behaviour of media audiences who would go almost anywhere in search of the kinds of entertainment experiences they wanted” (2006). The possibility for “consumers to archive, annotate, appropriate and recirculate media content in powerful new ways” (Jenkins, 2004, p.33) redefined the business models and the project management for media
productions. If, on one side, the total freedom offered through digital technologies and cultural assets defines new possibilities for micro-productions and cross-networked actions, on the other the big challenge is the Media Convergence (Jenkins, 2004, p.37) between these consumer-driven processes and the top-down corporate and market-driven practices. According to this phenomenon, many aspects of Design Culture in relation to media productions and communication artefacts faced the change and started to reconceive the necessary patterns to favour the merging of producers and consumers, transforming them into participants who are “expected to interact with each other according to a new set of rules which none of us fully understands” (Jenkins, 2006, par. 3).

Transmedia artefacts are one of the first concrete results of this change of perspective. We intend with Transmedia Artefacts all the productions that can be created, distributed, and consumed across multiple platforms and formats, in order to expand the participative audiences as well as the narrative itself. Over the past 50 years it has been possible to witness the birth of early stage transmedia experiments and artefacts, starting from metafictions like The Magus by John Fowles, 1965, and collaborative fictions like Ong’s Hat, 1980, among the others, whose innovation consisted in the effort of individual participants/authors/ readers to set up the narrative. From successive projects (like Inanimate Alice, 2005 and The Cosmonaut, 2013), the designer’s work becomes a process of hybridization and interconnection between the project patterns and the limitless continuum with the participative publics. According to the contents, hybridization and deep remixability (Manovich, 2010) are not the only aspects of a transmedia production, but they are the basis of an emergent translation model that must confront the deep architectures of the platforms, the social dimension of the audiences, the different layers of a narrative, and the participatory production assets.

Transmedia design: the remediation of top down and bottom up philosophies

In the twentieth century Western art and, in part, literature, have promoted an aesthetics of play and self-reflexivity creating the ideal of an active participation of the receiver/audience - reader, spectator, and user - in the production of narrative artefacts and through different supports. According to this cultural stream, and as we have already underlined, in the last years both technologies (platforms, software, bandwidth, media, and distribution channels) and audiences’ assets (participation, crowdfunding, crowdsourcing) played an important role in the definition of unstructured and self-generated narrative artefacts. Independent producers (youtubers, bloggers, artists, programmers, hackers, etc.) emerged spontaneously and nowadays we can count on a wide variety of communication artefacts (videos, fanart, ezines, books, music, apps, etc.) easily fitting into the broad area of transmedia productions. The philosophy of a total independence (from the market capitalization) favoured audience engagement and the audience engagement itself fed the idea of a possible alternative
Matteo Ciastellardi and Derrick De Kerckhove

market value: “engagement-based models see the audience as a collective of active agents whose labor may generate alternative forms of market value” (Jenkins et al., 2013, p.116).

In this sense what we can experience in the creation of transmedia artefacts is a remediation of a cultural production into another, from the point of view of the contents, from the definition of its “spreadability” across different supports (claiming Jenkins, 2014), from the aspect of market strategies. It is exactly this last point, giving recognition to market assets, that can determine the balancing of the project toward a top-down or a bottom-up asset (defining, consequently, the possibility of other opportunities). This tendency is very central in the adoption of strategies for the project, starting from the constitution of the team, to arrive at the definition of the plans and the policies to adopt in designing the final artefact(s).

What emerge in this remediation of two different models, where we can define “remediation” as the dynamic and selective translation of a model into another and vice versa, is a loop that continuously alternates the models by means of the convergence culture assets.

![Figure 1](image)

Figure 1  The loop of convergence culture determined by the continuum between the top-down participation and the bottom-up market strategies in a transmedia production

As we can see in fig. 1, the loop of convergence culture in a transmedia production is constituted by two interconnected spheres (bottom-up and top-down models) and it has on the opposite side two different market models: Sharing Economy and traditional Big Market investors. In the model of Big Investors, the audiences (Target Audiences) are merely the target of the capital strategists (defined in accordance with the mainstream artefacts), while in the opposite model, the audiences (Collaborative Participation) are the principal “makers”, the community in charge to decide the funding strategies and the related sustainable actions. If, on one side, Big Investors shape the audiences and the principal trends by the power of their market position, on the other side the participative communities can move from some of those streams (and often the communities rise on the
streams of Big Investors) to restart a new articulation of contents production and consumption, defining sharing economy activity and setting up the most appropriate production.

In a transmedia production this model starts to introduce a first concept of translation in terms of migration among different paradigms. The scheme does not pretend to illustrate a monolithic passage between the different steps, but it shows the principal tendencies of the fluxes that can determine a transmedia production and its life cycle.

Figure 1 also alludes to another important consideration: what has changed is not only the support but the processes behind the production, the reproduction and the content consumption.

What has emerged is a new mindset, an amniotic network constituted by the everyday environment, in which people define their sets of mnesic traces, personal experiences, unconscious patterns, and social relations. All of this absorbs the external environment by a process of mimesis that represents the osmotic layer dealing with different narrative “peers”: Family, Friends, Colleagues/Employers, Neighbours, Accidental/Desired connections, Networked Identities. Narrative concepts such as plot, event structures, temporality have been questioned; as well as questions about how stories are produced and experienced have been debated in relation to new elements like interactivity, immersion, and agency. The impact of media and nowadays of social media on narratology and storytelling has also redefined the meaning of readership and authorship: authors have become an icon of themselves, a collective-minded producer self-perceived by their narrative experiences (de Kerckhove, 2003).

For these reasons, in a transmedia production what is necessary is to find elements grounded in the (narrow) community of the participants and in the processes of consumption/interaction to adapt any further experience (fanzine, collector’s items, new story plots, etc.) based on the principal core of the artefact (a movie, a book, an event, etc.) in terms of development, content editing, and overall management, primarily as a social translation.

> the spread of all forms of media relies as much (or more) on their circulation by the audience as it does on their commercial distribution, that spreadability is determined by processes of social appraisal rather than technical or creative wizardry and on the active participation of engaged audiences. (Jenkins, et al, 2013, p.196)

In fact, in the Transmedia artefacts production and in the collective/connective consumptions of transmedia contents, the articulation of complex social patterns has redefined the possibilities of expression, participation, and definition of narrative lines.

**Transmedia Design Translation.**

If the definition of a transmedia artefact can often depend on the relation between participative public and traditional investors, it seems that the figure of designer is usually
Matteo Ciastellardi and Derrick De Kerckhove

devoted to mediate the needs of audiences in a capital-driven project, or to start up a reasonably independent experience with a narrow team of people involved. Apart from these two possible cases and from the wide variety of initiatives that grows on variants of these cases, when we speak about transmedia productions, we can consider the design culture under a different perspective. In accordance with Jenkins for example, the figure of (content) creators can be resumed according to his definition:

“Content creators do not work magic, nor are they powerless. Creators don’t design viruses, nor do they simply wait for something to happen. Successful creators understand the strategic and technical aspects they need to master in order to create content more likely to spread, and they think about what motivates participants to share information and to build relationships with the communities shaping its circulation.” (Jenkins, 2013, p.196)

Moreover, Jenkins recalls also the human-driven content mining that allows having a successful production:

“success in creating material people want to spread requires some attention to the patterns and motivations of media circulation, both of which are driven by the meanings people can draw from content. After all, humans rarely engage in meaningless activities. Sometimes, it may not be readily apparent why people are doing what they are doing, but striving to understand a person’s or community’s motivation and interest is key for creating texts more likely to spread.”

(Jenkins, 2013, p.198)

Close to Jenkins, but on another layer of analysis, Castells remarks on the diversity, the autonomy, and the production of meaning in the public mind as a turning point of our networked digital era:

“we are indeed in a new communication realm, and ultimately in a new medium, whose backbone is made of computer networks, whose language is digital, and whose senders are globally distributed and globally interactive. True, the medium, even a medium as revolutionary as this one, does not determine the content and effect of its messages. But it makes possible the unlimited diversity and the largely autonomous origin of most of the communication flows that construct, and reconstruct every second the global and local production of meaning in the public mind.”

(Castells, 2007, p.248)

Positions such as those of Jenkins and Castells were already present in the early research about Media Literacy (Share, 2002; Jenkins, 2005; Hobbs, 2006), and in many different contributions from Translation Studies (Munday, 2009; Saldanha and O’Brien, 2013; Pérez-González, 2014; House, 2014) clearly underlining the cross-fertilization between the support of communication, the cultural codes of the different audiences, and the human environmental variables.

When we speak about a transmedia artefact we can intend a summa of different products related one to another, i.e The Johnny Cash Project (http://www.thejohnnycashproject.com/, last visited February 22, 2016), the movie Cosmonaut (facebook page at https://www.facebook.com/cosmonauta.pelicula, last visited
The narratives and the supports

February 22, 2016), or a specific narrative of the product, i.e. my specific clip and music created inside the Johnny Cash Project (http://www.thejohnnycashproject.com/-#/explore/TopRated, last visited February 22, 2016), the Poetry Book of Cosmonaut (http://www.frostclick.com/wp/index.php/2010/10/03/poetics-for-cosmonauts-by-henry-pierrot/, last visited February 22, 2016). On one side we have to carefully consider the necessary dimension of interpolation among supports, cultural codes, and human environmental variables, on the other side, we have to reflect on the narrative(s) that will be developed and remediated. In this sense, in order to define the directions of the productions, we can summarize at least three different design lines conceiving a transmedia artefact:

1. A new transmedia narrative, original, with no previous streams from other artefacts, developed to offer multiple possibilities across different supports and other narratives.
2. A remediated transmedia narrative, inspired, derived or rewritten from previous streams, offering multiple possibilities across different supports and other narratives.
3. A remediated transmedia narrative, inspired, newly created or based upon a part of a previous narrative item (the environment, one character, an event, an object, a claim, etc.) offering multiple possibilities across different supports and other narratives (for example, building a connective transmedia historical record of an urban community based on the names given to its streets).

Apart from the (not so) obvious destination of the artefact, that is to say offering multiple possibilities across different supports and narratives, the definition of the entire transmedia artefact necessarily needs an operational framework of translation to face the complexity of the storylines (products, events, new plots, etc.). In these artefacts, one can generally define the process of translation mostly in terms of one specific activity: adaptation, reduction, language and graphic interpretation, software porting, etc. The deconstruction of a project in single actions meant to fasten the different phases of production is recommended and acceptable, but an overall vision of the project must not only summarize the single activities, but also define a protocol of translation based on the different layers that constitute the essential set of the transmedia artefact.

In order to define a flexible matrix for the translation of transmedia artefacts, this ongoing research proposes a combined qualitative and quantitative research method. It can be argued that traditional criteria of analysis cannot be applied in discussing transmedia artefacts, that digital products require a new methodological approach. C. Hayles insists on the necessity of studying the specific materiality of the support or better she proposes the MSA – Media-Specific Analysis (Hayles, 2004).

The method is organized around two deeply interconnected approaches: a) desk analysis of the narrative contexts and supports and b) (online) action theoretical framework of analysis

1. The desk analysis of the narrative contexts and supports aims at defining the best practices, cases, specific solutions, and similar artefacts to understand and to
position the transmedia concept or to move from the emerged patterns to design a first draft of the project. This analysis tries to establish typologies of artefacts and typologies of media/channels/supports; consequently, the theoretical models we will apply to analyze the cases spread across Semiotics, Translation Studies, Literary Theory (rhetoric) and aspects of New Media Literacy, Poststructuralist models of text analysis.

2. The (online) action theoretical framework of analysis (reinterpreting Houkes, Vermaas, Dorst, Vries) is a set of online activities based on the case studies to detect the relations among the behavior/engagement of the audiences, the possibility offered by different supports, the limits and the constrains of the environment, and the exiting layers of different storylines. This phase moves from a multimodal approach (Kress 2004) to map out the transmedia processes and to recognize recurring/emerging patterns in the translation from previous artifacts to new ones (remediation).

The application of such cross-methodology offers an analytical script to map out possibilities, needs, limits, milestones, and blind spots of the different levels of the translation process for transmedia artifacts. In figure 2 it is possible to see a sample of Transmedia Design Translation Chart, as a representational analysis of a specific case (The Cosmonaut), in which it is possible to summarize graphically the different patterns and the necessary phases for the design of a transmedia product.

Figure 2  Transmedia Design Translation Chart. The figure describes a sample of the different phases and their relation with the overall resources involved. The case illustrated is The Cosmonaut.

This Chart results help to compare and evaluate different case studies. Every case is mapped out showing the principal phases that constitute the overall architecture of the transmedia artefact (audiences, supports, contents, and environment), the participatory assets and the resources adopted to define the final product. The different mix of the phases, resources, and assets traces the profile of potentialities, weaknesses and types of investment according to the product created. The comparison with the data retrieved from the action theoretical framework and, partially, from desk analysis, offers a rich portrait of every case. The
comparison between several cases, with different aims and different tendencies related to
the phases, defines the principal guidelines and the more recent patterns to translate a
narrative into another one, intending with the term “narrative” the set of the possible plots,
forks, stories, apps, multimedia products, etc. What can be helpful in case of low level
engagement, what platforms can improve meet-up sessions, what storyline to create a plot
of a political fiction, etc. are a few questions related to the possibility of the Charts to offer
flexible translation guidelines for technical elements, specific behaviour, narrative contexts,
and more specificities in transmedia environments. The research and the analysis are still
ongoing, but the final goal for the Transmedia Design Translation Chart is to improve the
comprehension and the trends of transmedia phenomena, as unique artefacts as well as
micro-universes of different cultural assets.

A case study: the Cosmonaut.

One of the aim of the research is to analyse and to classify several case studies according to
specific drivers and to consider the different modalities of translation between the core
narrative and the derivative artefacts, in their transmedia sphere of engagement and
consumption. One of the most interesting case studies is the example of the transmedia
movie The Cosmonaut.

The Cosmonaut is a project started in Spain (Collettivo Riot Cinema) in 2012-2013. It is a
crowdfunded initiative (as a regular production and a movie investment able to raise more
than 400,000 euro) and a crowdsourced experience (the original script was available online
in order to recompose the storytelling and the users were able to download, lend, re-cut or
use the film footage in any way they wished). The objectives of the project are to reach a
high level of creative freedom (i.e. to tell a story without being limited by the format), to
offer to the spectators a real choice (audience engagement), to obtain direct monetization
(by means of different format) and to be opened to brand involvement. What is more
interesting is the wide variety of narratives, experiences, communication artefacts derived
from the original script and translated into autonomous and different stories, on multiple
supports and channels, in a perfect transmedia environment. The transmedia universe of the
Cosmonaut can be resumed as in figure 3:
Figure 3 allows one to resume the “satellite” narratives in the following lines and to directly define the narrative categories adopted for a clearly heterogeneous transmedia world:

- **Webisodes (35+)** - expand parts of the universe of the *The Cosmonaut* that are less evident in the film, by presenting secondary plot lines... Webisodes are short episodes distributed only online, not necessarily strictly related to the main narrative, and they allow for creating different spheres of knowledge, relation, and engagement.

- **Social media (Nayik)** - through the use of 13 different Facebook profiles, with 7 main characters and 6 secondary ones, they create a fiction that will interact with the personal profiles of the fans who wish to join in. The use of social software allows for creating a second reality in a fictionalized environment.

- **Fictionalized documentary (Hummingbird)** - about a group of filmmakers who visit the set of “The Cosmonaut” in former USSR territories. They will interview people and follow ambiguous clues which will bring them closer to the elusive truth. This artefact, completely standalone from the main narrative, can expand the audiences and the narratives of the production.

- **Collectors book** - Evocative marketing item, *Memento Album, Poetry for Cosmonauts*

- **Real documentary.** The possibility to change the asset in the principal line of communication is an interesting example of convergent narrative with different audiences.

- **Music** - soundtrack, album inspired by the plot, transmedia sessions.

- **Educational Content** - special pack, workbook on indie cinema, different cuts.

- **Onsite Experiences** - theater + party, premiere.

- **Merchandising.**

- **K-program (club).**

- **Fan+artists.**
From the case study it is possible to retrieve a series of different experiences in several formats and oriented towards multiple audiences. All the narratives emerged from the principal core (we can say the movie “The Cosmonaut” in this case) can determine a simplified scheme of possible translations, according to the Transmedia Translation Design Chart presented in Figure 2.

This case is a very rich example of different level of translation from an original core (the Cosmonaut as a film) to other transmedia products. The possibility to plan, organize, maintain, and realize different immersive and participative experiences remediating just a few aspects of an original narrative it is an interesting challenge in terms of participative design and, in the case of the Cosmonaut, the result has been excellent.

Conclusions

The promises of transmedia narratives are today one of the most important and fertile segments of cultural production. The possibility of expression opened to everybody is not limited to those who have specific skills; the different markets move towards a form of convergence that transform audiences from passive spectators to active prosumers; the constant innovation of media, that become supports for sharing and exchanging: all these elements are milestones of a social and industrial revolution that the design culture is gradually practising more and more.

The continued growth of these artefacts and the need to find innovative production spaces have allowed for spreading the transmedia model, also if sometimes without rationalizing tools and guidelines for analysis, transformation, and remediation.

The proposal of the research presented in these pages wants to be a contribution towards a model of translation for transmedia artefacts.

Entrusting the designer with a task of research and development supported by powerful tools and scalable methods, and moving from a narrative form, that is mainstream, or isolated track, or new brief, the challenge is to ask the designer to build a project to translate all patterns examined over the research path, and turn them into a final artefact that can offer maximum responsiveness to the proposed objectives.

This task requires a change of perspective about some traditional models of content translation, media translation, and editorial translation about communication artefacts, but it allows for moving toward a frontier that is fundamentally changing the rules of the social, economic, and cultural consumption and production.

According to McLuhan, everybody can be an artist in the electric age (McLuhan, 1964) but even an artist must have pretty good consciousness of the world around to create something unique.
References


Hayles, N. K.,


About the Authors:

Matteo Ciastellardi, PhD, is Senior Researcher and he teaches Sociology of Media at Politecnico di Milano. He worked 5 years at the Internet Interdisciplinary Institute (IN3) directed by Manuel Castells in Barcelona. His research interests are Transmedia Literacy, Cultural Analytics and Hybrid Ontologies.

Derrick de Kerckhove is a former Director of the McLuhan Program at the University of Toronto. He subsequently joined the Faculty of Sociology of the University Federico II in Naples. Presently, scientific director of the Rome based monthly Media Duemila.
<table>
<thead>
<tr>
<th>Name</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdelmohsen, Sherif</td>
<td>1969</td>
</tr>
<tr>
<td>Aftab, Mersha</td>
<td>3181</td>
</tr>
<tr>
<td>Ahmadpour, Naseem</td>
<td>1457</td>
</tr>
<tr>
<td>Ahmer, Arif</td>
<td>593</td>
</tr>
<tr>
<td>Aish, Robert</td>
<td>111</td>
</tr>
<tr>
<td>Alhonsuo, Mira</td>
<td>3069</td>
</tr>
<tr>
<td>Alshawaf, Eman</td>
<td>959</td>
</tr>
<tr>
<td>Andrietc, Ekaterina</td>
<td>157</td>
</tr>
<tr>
<td>Annable, Louise</td>
<td>303</td>
</tr>
<tr>
<td>Arvidsson, Anna-Karin</td>
<td>1411</td>
</tr>
<tr>
<td>Arvola, Mattias</td>
<td>1089</td>
</tr>
<tr>
<td>Atkin, Ross</td>
<td>2391</td>
</tr>
<tr>
<td>Atkinson, Harriet</td>
<td>2583</td>
</tr>
<tr>
<td>Atman, Cynthia J.</td>
<td>593</td>
</tr>
<tr>
<td>Bachman, Leonard</td>
<td>295</td>
</tr>
<tr>
<td>Baek, Joon Sang</td>
<td>3943</td>
</tr>
<tr>
<td>Bailey, Jocelyn</td>
<td>3619</td>
</tr>
<tr>
<td>Bakir, Ramy</td>
<td>1969</td>
</tr>
<tr>
<td>Barbosa, Janaina Teles</td>
<td>4045</td>
</tr>
<tr>
<td>Bastian, Michelle</td>
<td>2107</td>
</tr>
<tr>
<td>Bauer, Birgit S.</td>
<td>569</td>
</tr>
<tr>
<td>Baule, Giovanni</td>
<td>1039, 1047</td>
</tr>
<tr>
<td>Baur, Ruedi</td>
<td>1139</td>
</tr>
<tr>
<td>Beck, Jordan</td>
<td>17</td>
</tr>
<tr>
<td>Benford, Steve</td>
<td>3033</td>
</tr>
<tr>
<td>Berghman, Michaël</td>
<td>139, 277</td>
</tr>
<tr>
<td>Bingham, Guy</td>
<td>2239</td>
</tr>
<tr>
<td>Bisset-Johnson, Katherine</td>
<td>637</td>
</tr>
<tr>
<td>Bitterman, Noemi</td>
<td>1433</td>
</tr>
<tr>
<td>Black, Alison</td>
<td>2301</td>
</tr>
<tr>
<td>Blackler, Alethea</td>
<td>2063, 3149, 3251</td>
</tr>
<tr>
<td>Blomqvist, Mikael</td>
<td>1411</td>
</tr>
<tr>
<td>Bobroff, Julien</td>
<td>555</td>
</tr>
<tr>
<td>Boehnert, Joanna</td>
<td>2359</td>
</tr>
<tr>
<td>Boess, Stella</td>
<td>625, 1573</td>
</tr>
<tr>
<td>Bofylatos, Spyros</td>
<td>3449</td>
</tr>
<tr>
<td>Boggs, Charles</td>
<td>513</td>
</tr>
<tr>
<td>Bohemia, Erik</td>
<td>1699, 1881</td>
</tr>
<tr>
<td>Bonja, Susanne</td>
<td>1411</td>
</tr>
<tr>
<td>Börekçi, Naz A.G.Z.</td>
<td>795</td>
</tr>
<tr>
<td>Borgford-Parnell, Jim</td>
<td>593</td>
</tr>
<tr>
<td>Boyd Davis, Stephen</td>
<td>2591</td>
</tr>
<tr>
<td>Boyko, Chris</td>
<td>1677</td>
</tr>
<tr>
<td>Boztepe, Suzan</td>
<td>1253</td>
</tr>
<tr>
<td>Braga, Mariana Fonseca</td>
<td>1863</td>
</tr>
<tr>
<td>Brisckhe, Lars-Arvid</td>
<td>3913</td>
</tr>
<tr>
<td>Broadley, Cara</td>
<td>1737</td>
</tr>
<tr>
<td>Brooks, Judy</td>
<td>539</td>
</tr>
<tr>
<td>Brown, Michael</td>
<td>3033</td>
</tr>
<tr>
<td>Brulé, Émeline</td>
<td>1985</td>
</tr>
<tr>
<td>Burnett, Dan</td>
<td>1609, 1625</td>
</tr>
<tr>
<td>Burns, Kathryn</td>
<td>303</td>
</tr>
<tr>
<td>Büscher, Monika</td>
<td>1123</td>
</tr>
<tr>
<td>Buur, Jacob</td>
<td>1723</td>
</tr>
<tr>
<td>Cadavid, Ana</td>
<td>179</td>
</tr>
<tr>
<td>Cain, Rebecca</td>
<td>1271, 1433</td>
</tr>
<tr>
<td>Calvo, Mirian</td>
<td>3591</td>
</tr>
<tr>
<td>Canina, Marita</td>
<td>2075</td>
</tr>
<tr>
<td>Caratti, Elena</td>
<td>1039, 1047</td>
</tr>
<tr>
<td>Carmen Bruno</td>
<td>2075</td>
</tr>
<tr>
<td>Casais, Mafalda</td>
<td>1553</td>
</tr>
<tr>
<td>Castanedo, Rebeca Torres</td>
<td>2163</td>
</tr>
<tr>
<td>Catoir-Brisson, Marie-Julie</td>
<td>2285</td>
</tr>
<tr>
<td>Celi, Manuela</td>
<td>2015</td>
</tr>
<tr>
<td>Ceschin, Fabrizio</td>
<td>3731, 3785</td>
</tr>
<tr>
<td>Chamberlain, Paul</td>
<td>1499</td>
</tr>
<tr>
<td>Chamorro-Koc, Marianella</td>
<td>1643</td>
</tr>
<tr>
<td>Champion, Katherine</td>
<td>1737</td>
</tr>
<tr>
<td>Chan, Jeffrey</td>
<td>3539</td>
</tr>
<tr>
<td>Chatzakis, Emmanouil</td>
<td>1881</td>
</tr>
<tr>
<td>Cheng, Peiyao</td>
<td>215</td>
</tr>
<tr>
<td>Chiapello, Laureline</td>
<td>17</td>
</tr>
<tr>
<td>Chou, Wen-Huei</td>
<td>3133</td>
</tr>
<tr>
<td>Christensen, Anders</td>
<td>1757</td>
</tr>
<tr>
<td>Chueng-Nainby, Priscilla</td>
<td>969</td>
</tr>
<tr>
<td>Chun, Min Hi</td>
<td>1935</td>
</tr>
<tr>
<td>Ciastellardi, Matteo</td>
<td>1111</td>
</tr>
<tr>
<td>Ciuccarelli, Paolo</td>
<td>941</td>
</tr>
<tr>
<td>Claxton, Stella</td>
<td>3815</td>
</tr>
<tr>
<td>Coddington, Alicen</td>
<td>781</td>
</tr>
<tr>
<td>Connor, Andy M.</td>
<td>83</td>
</tr>
<tr>
<td>Cooney, Richard</td>
<td>2201</td>
</tr>
<tr>
<td>Cooper, Rachel</td>
<td>1677, 1699</td>
</tr>
<tr>
<td>Cooper, Tim</td>
<td>1277, 3831</td>
</tr>
<tr>
<td>Corrigan-Doyle, Emily</td>
<td>1529</td>
</tr>
<tr>
<td>Coskun, Aykut</td>
<td>1357</td>
</tr>
<tr>
<td>Côté, Valérie</td>
<td>3669</td>
</tr>
<tr>
<td>Coulton, Paul</td>
<td>369, 1609, 3019</td>
</tr>
<tr>
<td>Craib, David</td>
<td>385, 2325</td>
</tr>
<tr>
<td>Craig, Claire</td>
<td>1499</td>
</tr>
<tr>
<td>Craig, Mark</td>
<td>609</td>
</tr>
<tr>
<td>Cranny-Francis, Anne</td>
<td>2985</td>
</tr>
<tr>
<td>Dallison, Delphine</td>
<td>609</td>
</tr>
<tr>
<td>Danahay, Evan</td>
<td>2533</td>
</tr>
<tr>
<td>Darzentas, Dimitrios</td>
<td>3033</td>
</tr>
<tr>
<td>Darzentas, Jenny</td>
<td>3449, 3771</td>
</tr>
<tr>
<td>Darzentas, Jenny S.</td>
<td>2307</td>
</tr>
<tr>
<td>Darzentas, John</td>
<td>3771</td>
</tr>
<tr>
<td>Dawes, Cecilie</td>
<td>3435</td>
</tr>
<tr>
<td>de Eyto, Adam</td>
<td>2709</td>
</tr>
<tr>
<td>de Kerckhove, Derrick</td>
<td>1111</td>
</tr>
<tr>
<td>de la Rosa, Juan</td>
<td>2121</td>
</tr>
<tr>
<td>de Lille, Christine</td>
<td>2423, 2563</td>
</tr>
<tr>
<td>De Moor, Eva</td>
<td>3435</td>
</tr>
<tr>
<td>De Paoli, Giovanni</td>
<td>853</td>
</tr>
<tr>
<td>de Ruijter, Laura</td>
<td>1473</td>
</tr>
</tbody>
</table>
De Smet, Annelies, 2759
De Eyto, Adam, 3573
Del Gaudio, Chiara, 2121
Deni, Michela, 2285
Derkse, Shital, 3149
Deserti, Alessandro, 2015
Desmet, Pieter, 1553, 1589
Desmet, Pieter M. A., 1999
Dhadphale, Tejas, 2415
Dias, Julia, 2121
Djaelani, Robert, 3705
Dong, Hua, 3199, 3229, 3247, 3263, 3279
Dorst, Kees, 2493, 2667
Downing, Niamh, 3485
Downs, Simon, 321
Dunn, Nick, 1677
Durrant, Abigail C., 2181
Duste, Tessa, 1589
Dziobczenski, Paulo Roberto Nicoletti, 705
Earl, Christopher, 3687
Earl, Christopher F, 2519
Eckert, Claudia, 2519
Edwards, Liz, 3485
Eftekhar, Farzaneh, 1389
Elliot-Cirigottis, Gary, 609
Elzenbaumer, Bianca, 4005, 4015
Emili, Silvia, 3785
Erbug, Cigdem, 1357
Escobar-Tello, Carolina, 1433, 1529, 3961
Evans, Mark, 813, 2239
Evans, Martyn, 97
Fassi, Davide, 3407
Feast, Luke, 3569, 3635
Felsing, Ulrike, 1139
Fenko, Anna, 3467
Fennell, Jac, 1441
Ferronato, Priscilla, 2121
Fisher, Tom, 3479
Flintham, Martin, 3033
Forlano, Laura, 927
Frankel, Lois, 3103
Franz, Fabio, 4015
Fredriksen, Biljana C., 2911
Freimane, Aija, 1271
French, Tara, 2965, 3653
Fundeiner, Thomas, 401
Gabrielse, Gorm, 1211
Gagnon, Caroline, 3699
Galeotti, Anamaria, 2837
Galluzzo, Laura, 3407
Gamman, Lorraine, 3479
Garde, Julia Anne, 2043
Gardin, Astury, 969
Gasparin, Marta, 881
Gaved, Mark, 609
Gaziulusoy, Idil, 3731
Gentes, Annie, 555
Germany, Jason O., 3085
Ghassan, Aysar, 471
Giaccardi, Elisa, 3553
Giang, Colin, 781
Gideonsen, Hanne, 3435
Godin, Danny, 355
Görgül, Emine, 2825
Goworek, Helen, 3831
Gradinar, Adrian, 1609
Graf, Laura K. M., 203
Graham, Alexander, 781
Grangaard, Sidse, 3393
Gray, Colin M., 2549
Graziano, Valeria, 4005
Green, William, 881
Gribbin, John, 3181
Gristwood, Simone, 2591
Groth, Camilla, 2889, 2895, 2941
Grover, Shruti, 2391
Gudiksen, Sune, 1757
Gudur, Raghavendra Reddy, 3251
Guité, Manon, 853
Gullick, David, 3019
Gulliksen, Marte S., 2889, 2925
Hadfield, Mark, 2709
Håkansson, Lena, 1411
Hall, Ashley, 2481
Hall, Peter A., 2625
Hands, David, 2445
Hanington, Bruce, 729
Harland, Robert, 385
Harrison, David, 3785
Haslem, Neal, 2201
Hasselqvist, Hanna, 3929
Haug, Anders, 1903, 3873
Hazzard, Adrian, 3033
Heaton, Lorna, 853
Heiltjes, Sanne, 3467
Hekkert, Paul, 139, 277
Henriksen, Pernille, 1757
Hermansdóttir, Hafdis Sunna, 3435
Hermansen, Pablo, 895
Hermansen, Sander, 1323, 1375
Hernandez, Maria Gabriela, 2089
Hesselgren, Mia, 3929
Heylighen, Ann, 3199, 3229
Hill, Helen, 3831
Hofmeister, Tobias Barnes, 3847
Hogan, Trevor, 3005
Hornecker, Eva, 3005
Hough, Simge, 751
Hrinivich, Ellen, 3103
<table>
<thead>
<tr>
<th>Author</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huang, Tao</td>
<td>2699</td>
</tr>
<tr>
<td>Hung, Chung-Wen</td>
<td>3133</td>
</tr>
<tr>
<td>Huotilainen, Minna</td>
<td>2941</td>
</tr>
<tr>
<td>Hutchings, Maggie</td>
<td>2709</td>
</tr>
<tr>
<td>Hyltén-Cavallius, Sara</td>
<td>1411</td>
</tr>
<tr>
<td>Hyysalo, Sampa</td>
<td>3889</td>
</tr>
<tr>
<td>Imbesi, Lorenzo</td>
<td>2325</td>
</tr>
<tr>
<td>Ingram, Jack</td>
<td>303</td>
</tr>
<tr>
<td>Ings, Welby</td>
<td>483</td>
</tr>
<tr>
<td>Ivanka, Tania</td>
<td>2201</td>
</tr>
<tr>
<td>James, Meredith</td>
<td>719</td>
</tr>
<tr>
<td>Janssens, Nel</td>
<td>2759</td>
</tr>
<tr>
<td>Jernegan, Elizabeth</td>
<td>2121</td>
</tr>
<tr>
<td>Johnson, Michael Pierre</td>
<td>1737</td>
</tr>
<tr>
<td>Johnson, Simon</td>
<td>2391</td>
</tr>
<tr>
<td>Jones, Derek</td>
<td>295</td>
</tr>
<tr>
<td>Jonkmans, Anna</td>
<td>767</td>
</tr>
<tr>
<td>Joost, Gesche</td>
<td>3913</td>
</tr>
<tr>
<td>Joutsela, Markus</td>
<td>259</td>
</tr>
<tr>
<td>Jowers, Iestyn</td>
<td>609</td>
</tr>
<tr>
<td>Jun, Gyuchan Thomas</td>
<td>1809</td>
</tr>
<tr>
<td>Jylkäs, Titta</td>
<td>3069</td>
</tr>
<tr>
<td>Kaland, Lennart</td>
<td>835, 2563</td>
</tr>
<tr>
<td>Kantorovitch, Julia</td>
<td>2463</td>
</tr>
<tr>
<td>Karlsson, Monica Lindh</td>
<td>4029</td>
</tr>
<tr>
<td>Keirnan, Alen</td>
<td>1457</td>
</tr>
<tr>
<td>Keitsch, Martina</td>
<td>3847</td>
</tr>
<tr>
<td>Kelly, Veronika</td>
<td>425</td>
</tr>
<tr>
<td>Kempenaar, Annet</td>
<td>2271</td>
</tr>
<tr>
<td>Kenning, Gail</td>
<td>1441</td>
</tr>
<tr>
<td>Kerridge, Tobie</td>
<td>1025</td>
</tr>
<tr>
<td>Ketola, Anne</td>
<td>1179</td>
</tr>
<tr>
<td>Kettley, Sarah</td>
<td>1277, 2985, 3121</td>
</tr>
<tr>
<td>Kim, KwanMyung</td>
<td>1919</td>
</tr>
<tr>
<td>Kim, Sojung</td>
<td>3943</td>
</tr>
<tr>
<td>Kimbell, Lucy</td>
<td>3605</td>
</tr>
<tr>
<td>Kirk, David S.</td>
<td>2181</td>
</tr>
<tr>
<td>Knutz, Eva</td>
<td>1827</td>
</tr>
<tr>
<td>Kocsis, Anita</td>
<td>781</td>
</tr>
<tr>
<td>Kokotovich, Vasilije</td>
<td>2493</td>
</tr>
<tr>
<td>Komatsu, Tamami</td>
<td>2029, 2313</td>
</tr>
<tr>
<td>Koskeni, Ilpo</td>
<td>1013</td>
</tr>
<tr>
<td>Kotlarewski, Nathan</td>
<td>2533</td>
</tr>
<tr>
<td>Koumoundourou, Myrto</td>
<td>2307</td>
</tr>
<tr>
<td>Koutsabasis, Panayiotis</td>
<td>2307</td>
</tr>
<tr>
<td>Kristensen, Tore</td>
<td>1205, 1211</td>
</tr>
<tr>
<td>Krzywinski, Jens</td>
<td>2869</td>
</tr>
<tr>
<td>Kuijer, Lenneke</td>
<td>3553</td>
</tr>
<tr>
<td>Kuys, Blair</td>
<td>1163, 2533</td>
</tr>
<tr>
<td>Kuzmina, Ksenija</td>
<td>1809</td>
</tr>
<tr>
<td>Kylmäinen, Tiina</td>
<td>1627</td>
</tr>
<tr>
<td>Lahusen, Miriam</td>
<td>3913</td>
</tr>
<tr>
<td>Laivamaa, Laura</td>
<td>3069</td>
</tr>
<tr>
<td>Landwehr, Jan R.</td>
<td>145, 203</td>
</tr>
<tr>
<td>Langrish, John Z.</td>
<td>51</td>
</tr>
<tr>
<td>Lee, John</td>
<td>969</td>
</tr>
<tr>
<td>Lee, Seong geun</td>
<td>157</td>
</tr>
<tr>
<td>Leinikka, Marianne</td>
<td>2941</td>
</tr>
<tr>
<td>Lenskjold, Tau U.</td>
<td>1827</td>
</tr>
<tr>
<td>Lewis, Huw</td>
<td>3573</td>
</tr>
<tr>
<td>Liao, Cai-Ru</td>
<td>3133</td>
</tr>
<tr>
<td>Liapis, Aggelos</td>
<td>2463</td>
</tr>
<tr>
<td>Lim, Christopher Sze Chong</td>
<td>3295</td>
</tr>
<tr>
<td>Lima, Verena</td>
<td>3983</td>
</tr>
<tr>
<td>Linde, Per</td>
<td>913</td>
</tr>
<tr>
<td>Lindley, Joseph</td>
<td>369</td>
</tr>
<tr>
<td>Liu, Sylvia</td>
<td>1205, 1237</td>
</tr>
<tr>
<td>Liu, Tsai Lu</td>
<td>501, 1389</td>
</tr>
<tr>
<td>Lloyd, Peter</td>
<td>3619, 3687</td>
</tr>
<tr>
<td>Lønne, Irene Alma</td>
<td>1223</td>
</tr>
<tr>
<td>Loudon, David</td>
<td>1515</td>
</tr>
<tr>
<td>Lu, Xiaobo</td>
<td>3373</td>
</tr>
<tr>
<td>Lucas, Rachel</td>
<td>3121</td>
</tr>
<tr>
<td>Ludden, Geke</td>
<td>245, 1271, 1305, 1433, 1473</td>
</tr>
<tr>
<td>Lulham, Rohan</td>
<td>1777</td>
</tr>
<tr>
<td>Ma, Xuezi</td>
<td>3279</td>
</tr>
<tr>
<td>Macdonald, Alastair S.</td>
<td>1515</td>
</tr>
<tr>
<td>Macduff, Colin</td>
<td>1515</td>
</tr>
<tr>
<td>Maciver, Fiona</td>
<td>2463</td>
</tr>
<tr>
<td>Mackrill, Jamie</td>
<td>1433</td>
</tr>
<tr>
<td>Mages, Michael Arnold</td>
<td>3503</td>
</tr>
<tr>
<td>Maguire, Martin</td>
<td>1809</td>
</tr>
<tr>
<td>Mahar, Doug</td>
<td>3251</td>
</tr>
<tr>
<td>Mahler, Carmel</td>
<td>2709</td>
</tr>
<tr>
<td>Mäkelä, Maarit</td>
<td>2889, 2941</td>
</tr>
<tr>
<td>Malins, Julian</td>
<td>2463</td>
</tr>
<tr>
<td>Manohar, Arthi Kanchana</td>
<td>3591</td>
</tr>
<tr>
<td>Marchand, Anne</td>
<td>2653</td>
</tr>
<tr>
<td>Marenko, Betti</td>
<td>2755</td>
</tr>
<tr>
<td>Margolin, Victor</td>
<td>5</td>
</tr>
<tr>
<td>Markussen, Thomas</td>
<td>1827</td>
</tr>
<tr>
<td>Marlen Dobler, Judith</td>
<td>997</td>
</tr>
<tr>
<td>Marttila, Sanna</td>
<td>4063</td>
</tr>
<tr>
<td>Mattila, Pauliina</td>
<td>781</td>
</tr>
<tr>
<td>Mauri, Michele</td>
<td>941</td>
</tr>
<tr>
<td>Maxwell, Deborah</td>
<td>3485</td>
</tr>
<tr>
<td>Maya, Jorge</td>
<td>179</td>
</tr>
<tr>
<td>Mayer, Stefan</td>
<td>145</td>
</tr>
<tr>
<td>Mazzarella, Francesco</td>
<td>3961</td>
</tr>
<tr>
<td>Mazzilli, Clice</td>
<td>2837</td>
</tr>
<tr>
<td>McAra, Marianne</td>
<td>3213</td>
</tr>
<tr>
<td>McGaw, Janet</td>
<td>669</td>
</tr>
<tr>
<td>McGilp, Helen</td>
<td>2519</td>
</tr>
<tr>
<td>Mcginley, Chris</td>
<td>2391</td>
</tr>
<tr>
<td>McHattie, Lynn-Sayers</td>
<td>1737</td>
</tr>
<tr>
<td>McLaren, Angharad</td>
<td>3831</td>
</tr>
<tr>
<td>Mercer, Lisa</td>
<td>2029</td>
</tr>
<tr>
<td>Messell, Tania</td>
<td>2737</td>
</tr>
<tr>
<td>Meyer, Guilherme</td>
<td>2121</td>
</tr>
<tr>
<td>Michura, Piotr</td>
<td>2121</td>
</tr>
<tr>
<td>Author</td>
<td>Page Numbers</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Micklethwaite, Paul</td>
<td>2163</td>
</tr>
<tr>
<td>Mitchell, Cynthia</td>
<td>2255</td>
</tr>
<tr>
<td>Mitchell, Val</td>
<td>1809, 3961</td>
</tr>
<tr>
<td>Mok, Luisa Sze-man</td>
<td>3889</td>
</tr>
<tr>
<td>Moncur, Wendy</td>
<td>2181</td>
</tr>
<tr>
<td>Moreno, Mariale</td>
<td>1809</td>
</tr>
<tr>
<td>Morris, Andrew</td>
<td>1271</td>
</tr>
<tr>
<td>Mota, João Almeida</td>
<td>4045</td>
</tr>
<tr>
<td>Moussatche, Helena</td>
<td>513</td>
</tr>
<tr>
<td>Mugge, Ruth</td>
<td>215, 1553</td>
</tr>
<tr>
<td>Mulder, Sander</td>
<td>1375, 2809</td>
</tr>
<tr>
<td>Munro, Tasman</td>
<td>2219</td>
</tr>
<tr>
<td>Murphy, Emma</td>
<td>97</td>
</tr>
<tr>
<td>Murray, Lesley</td>
<td>1123</td>
</tr>
<tr>
<td>Neira, José</td>
<td>895</td>
</tr>
<tr>
<td>Nevay, Sara</td>
<td>3295</td>
</tr>
<tr>
<td>Neven, Louis</td>
<td>3553</td>
</tr>
<tr>
<td>Niedderer, Kristina</td>
<td>1271</td>
</tr>
<tr>
<td>Nimkulrat, Nithikul</td>
<td>3177</td>
</tr>
<tr>
<td>Ning, Weining</td>
<td>3263</td>
</tr>
<tr>
<td>Noel, Lesley-Ann</td>
<td>455, 501</td>
</tr>
<tr>
<td>Nordvall, Mathias</td>
<td>1089</td>
</tr>
<tr>
<td>Norris, Jane</td>
<td>2795</td>
</tr>
<tr>
<td>O Cátháin, Conall</td>
<td>125</td>
</tr>
<tr>
<td>O’Rafferty, Simon</td>
<td>3573</td>
</tr>
<tr>
<td>Oberlander, lan</td>
<td>2919</td>
</tr>
<tr>
<td>Olander, Sissel</td>
<td>985</td>
</tr>
<tr>
<td>Oppenheimer, Maya Rae</td>
<td>2583</td>
</tr>
<tr>
<td>Orzech, Kathryn</td>
<td>2181</td>
</tr>
<tr>
<td>Ou, Li-Chen</td>
<td>233</td>
</tr>
<tr>
<td>Oxborrow, Lynn</td>
<td>3815, 3831</td>
</tr>
<tr>
<td>Ozcan, Elif</td>
<td>1433</td>
</tr>
<tr>
<td>Ozkaramanli, Deger</td>
<td>1999</td>
</tr>
<tr>
<td>Paepcke-Hjeltness, Ve</td>
<td>2415</td>
</tr>
<tr>
<td>Page, Rowan</td>
<td>1487</td>
</tr>
<tr>
<td>Pahk, Yoonee</td>
<td>3943</td>
</tr>
<tr>
<td>Paiva, Isabel</td>
<td>3165</td>
</tr>
<tr>
<td>Palmgren, Marianne</td>
<td>653</td>
</tr>
<tr>
<td>Park, Sumin</td>
<td>3181</td>
</tr>
<tr>
<td>Parker, Chris</td>
<td>1809</td>
</tr>
<tr>
<td>Pasman, Gert</td>
<td>1659</td>
</tr>
<tr>
<td>Person, Oscar</td>
<td>705</td>
</tr>
<tr>
<td>Peschl, Markus F.</td>
<td>401</td>
</tr>
<tr>
<td>Petermans, Ann</td>
<td>1433</td>
</tr>
<tr>
<td>Pillatt, Toby</td>
<td>3485</td>
</tr>
<tr>
<td>Piper, Anna</td>
<td>2959</td>
</tr>
<tr>
<td>Pisanty, Diego Trujillo</td>
<td>2181</td>
</tr>
<tr>
<td>Piscicelli, Laura</td>
<td>1305</td>
</tr>
<tr>
<td>Pizzichemi, Catherine</td>
<td>513</td>
</tr>
<tr>
<td>Plokwright, Philip</td>
<td>295</td>
</tr>
<tr>
<td>Plokwright, Philip D.</td>
<td>339</td>
</tr>
<tr>
<td>Pohlmeier, Anna E.</td>
<td>1573</td>
</tr>
<tr>
<td>Poldma, Tiu</td>
<td>595</td>
</tr>
<tr>
<td>Pollastr, Serena</td>
<td>1677</td>
</tr>
<tr>
<td>Popovic, Vesna</td>
<td>2063, 3149, 3251, 3373</td>
</tr>
<tr>
<td>Porter, Samantha</td>
<td>1809</td>
</tr>
<tr>
<td>Potter, Eden</td>
<td>2379</td>
</tr>
<tr>
<td>Prince, Anne</td>
<td>781</td>
</tr>
<tr>
<td>Prochnier, Isabel</td>
<td>2653</td>
</tr>
<tr>
<td>Prytherch, David</td>
<td>1441</td>
</tr>
<tr>
<td>Pschetz, Larissa</td>
<td>2107</td>
</tr>
<tr>
<td>Pui Ying Lo, Kathy</td>
<td>1529</td>
</tr>
<tr>
<td>Quam, Andrea</td>
<td>3861</td>
</tr>
<tr>
<td>Radtke, Rebekah</td>
<td>685</td>
</tr>
<tr>
<td>Raman, Sneha</td>
<td>2965</td>
</tr>
<tr>
<td>Rankanen, Mimmu</td>
<td>2941</td>
</tr>
<tr>
<td>Ranscombe, Charlie</td>
<td>637</td>
</tr>
<tr>
<td>Rashidi, Ingrid Halland</td>
<td>2637</td>
</tr>
<tr>
<td>Reddy, Anuradha</td>
<td>913</td>
</tr>
<tr>
<td>Redström, Johan</td>
<td>4029</td>
</tr>
<tr>
<td>Reimer, Maria Hellström</td>
<td>4045</td>
</tr>
<tr>
<td>Renes, Reint Jan</td>
<td>1323, 1375</td>
</tr>
<tr>
<td>Renner, Michael</td>
<td>1073</td>
</tr>
<tr>
<td>Renon, Anne-Lyse</td>
<td>555</td>
</tr>
<tr>
<td>Renström, Sara</td>
<td>1339</td>
</tr>
<tr>
<td>Reumont, Marie</td>
<td>853</td>
</tr>
<tr>
<td>Revsbaek, Line</td>
<td>1723</td>
</tr>
<tr>
<td>Riccò, Dina</td>
<td>1101</td>
</tr>
<tr>
<td>Richardson, Mark</td>
<td>1487</td>
</tr>
<tr>
<td>Ritzmann, Susanne</td>
<td>3913</td>
</tr>
<tr>
<td>Rive, Pete</td>
<td>83</td>
</tr>
<tr>
<td>Rizzo, Francesca</td>
<td>2015</td>
</tr>
<tr>
<td>Roberts, Maxwell J.</td>
<td>2341</td>
</tr>
<tr>
<td>Rochead, Alan</td>
<td>609</td>
</tr>
<tr>
<td>Rodgers, Paul A.</td>
<td>2677</td>
</tr>
<tr>
<td>Rogel, Liat</td>
<td>3407</td>
</tr>
<tr>
<td>Rontti, Simo</td>
<td>3069</td>
</tr>
<tr>
<td>Rosenqvist, Tanja</td>
<td>2255</td>
</tr>
<tr>
<td>Roto, Virpi</td>
<td>259</td>
</tr>
<tr>
<td>Roy, Robin</td>
<td>3755</td>
</tr>
<tr>
<td>Ruecker, Stan</td>
<td>2121</td>
</tr>
<tr>
<td>Ruiz-Córdoba, Stefany</td>
<td>179</td>
</tr>
<tr>
<td>Rytilahti, Pia</td>
<td>3069</td>
</tr>
<tr>
<td>Sadkowska, Ania</td>
<td>3521</td>
</tr>
<tr>
<td>Sadkowska, Anna</td>
<td>3121</td>
</tr>
<tr>
<td>Sakurai, Tatiana</td>
<td>3983</td>
</tr>
<tr>
<td>Salinas, Miguel</td>
<td>1411</td>
</tr>
<tr>
<td>Salvia, Giuseppe</td>
<td>2075</td>
</tr>
<tr>
<td>Sametinger, Florian</td>
<td>3913</td>
</tr>
<tr>
<td>Santos, Maria Cecilia</td>
<td>3983</td>
</tr>
<tr>
<td>Sarmiento, Ricardo Mejia</td>
<td>1659</td>
</tr>
<tr>
<td>Scaletsky, Celso</td>
<td>2121</td>
</tr>
<tr>
<td>Schaeffer, Jennie Andersson</td>
<td>653</td>
</tr>
<tr>
<td>Schifferstein, Hendrik N.J.</td>
<td>3427</td>
</tr>
<tr>
<td>Scupelli, Peter</td>
<td>539, 729</td>
</tr>
<tr>
<td>Seitamaa-Hakkarainen, Pirita</td>
<td>2889, 2941</td>
</tr>
<tr>
<td>Self, James</td>
<td>157</td>
</tr>
<tr>
<td>Selvefors, Anneli</td>
<td>1339</td>
</tr>
<tr>
<td>Shroyer, Kathryn E.</td>
<td>593</td>
</tr>
<tr>
<td>Sice, Petia</td>
<td>1291</td>
</tr>
</tbody>
</table>
“Over fifty years the Design Research Society has been fundamental to developing and supporting the field of Design Research. In that time many influential and innovative conferences have been held and the 50th Anniversary in Brighton conference continues that tradition. The breadth and depth of design research represented in these proceedings is extremely impressive and shows, I think, not only how important design research has become, but also the considerable potential that it holds for the future.”

- Professor Nigel Cross
PRESIDENT OF THE DRS