Participatory Practice in Space, Place, and Service Design
Questions of Access, Engagement and Creative Experience

Edited by
Kelly L. Anderson
Monash University, Australia

Series editor
Graham Cairns
AMPS (Architecture, Media, Politics, Society)

The Interdisciplinary Built Environment

VERNON PRESS
Copyright © 2022 by the authors.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of Vernon Art and Science Inc.

www.vernonpress.com

In the Americas:  In the rest of the world:
Vernon Press            Vernon Press
1000 N West Street, Suite 1200  C/Sancti Espiritu 17,
Wilmington, Delaware, 19801     Malaga, 29006
United States            Spain

The Interdisciplinary Built Environment

Library of Congress Control Number: 2022939790

ISBN: 978-1-64889-190-8

Cover design by Vernon Press using elements designed by Freepik.

Product and company names mentioned in this work are the trademarks of their respective owners. While every care has been taken in preparing this work, neither the authors nor Vernon Art and Science Inc. may be held responsible for any loss or damage caused or alleged to be caused directly or indirectly by the information contained in it.

Every effort has been made to trace all copyright holders, but if any have been inadvertently overlooked the publisher will be pleased to include any necessary credits in any subsequent reprint or edition.
Table of contents

List of Illustrations \hspace{0.2cm} vii
List of Tables \hspace{0.2cm} xi
Contributors \hspace{0.2cm} xiii
Acronyms \hspace{0.2cm} xxiii
Introduction \hspace{0.2cm} xxv

Kelly L. Anderson  
Monash University, Australia

Section One: Access \hspace{0.2cm} 1

Chapter 1 \hspace{0.2cm} Achieving Women's Health in Diverse Socio-Economic Neighbourhoods \hspace{0.2cm} 3
Seyeon Lee  
Syracuse University, USA

Chapter 2 \hspace{0.2cm} Everyday Products \hspace{0.2cm} 23
Adam Feld  
The University of Louisian at Lafayette, USA

Chapter 3 \hspace{0.2cm} Architecture is Incidental: School Design and the Creative Agency of Teachers \hspace{0.2cm} 39
Jody Nyboer  
Syracuse University, USA

Chapter 4 \hspace{0.2cm} Activating Community Psychology Values to Promote Inclusive Academic Spaces for Diverse Populations \hspace{0.2cm} 61
Kevin Bonnell  
Wilfrid Laurier University, Canada
Renae Mantooth  
North Carolina State University, USA
Rebekah Radtke  
University Of Kentucky, USA
Section Two: Engagement

Chapter 5
Analytical Engagement - Constructing New Knowledge Generated Through Storymaking Within Co-Design Workshops

Kelly L. Anderson
Monash University, Australia

Chapter 6
Invention in Action at the Young V&A

Tom Coward
Aoc Architecture Ltd., Kingston School of Art

Chapter 7
Materialising Playfulness: Developing a Social Play Space for a Multidisciplinary Research Community

Katriina Heljakka
University of Turku, Finland
Annika Blomberg
Turku School of Economics, Finland

Chapter 8
Conceptualising the Implementation of a New Commons for Sustainable Living and Community Well-Being — An Exploration of Participatory Practices

Lisa Klautzer
TEZO Analytics LLC, Los Angeles, USA
Rumy R. Narayan
University of Vaasa, Finland
Seo Yeon Hong
TEZO Analytics LLC, Los Angeles, USA

Chapter 9
Designing With Uncertainty: Encouraging Participative Thinking in the Design Studio

Thomas-Bernard Kenniff
Université du Québec à Montréal, Canada
Section Three: Creative Experience

Chapter 10 Play and Plan: Play Mode as a Creative Experience Generator in the Potential Space of the Architectural Studio
Ehud Belferman, Shulamit Beimel, Shoham Shefy
Faculty of Architecture and Town Planning, Technion, Israel

Chapter 11 Paper Dwelling Displaced Identity
Karim Musfy
Zayed University, UAE

Chapter 12 The Inly Project: A Design Relationship for Learning
Diane Foucar-Szocki
James Madison University, USA
Donna Milani Luther
Inly School, USA
Thomas Peterman
Peterman Architects, Inc., USA
Jenny Bright
Inly School, USA
Reg Foucar-Szocki
James Madison University, USA

Chapter 13 Commons-Centric Participatory Design as Driver of Well-Being
Taylor Kuhn
Design for Agency, USA

Chapter 14 Designing with the Interrelationship of Objects, Environments and People
Gyungju Chyon
Monash University

Closing Thoughts

Index
List of Illustrations

Figure 1.1. Distinctive Words Obtained from Community Design Charrettes 10
Figure 1.2. Interest in a women-only wellness centre (n = 100) 13
Figure 1.3. Interest in a women-only wellness centre with childcare available (n = 58) 14
Figure 1.4. User-centred environmental design indicators 16
Figure 2.1. Research Participant Reviewing Sketches 28
Figure 2.2. I.D. Students Brain Scrolling 30
Figure 2.3. Research Participant Reviewing Models 33
Figure 2.4. Student Final Poster 35
Figure 4.1. Lexmark Room at the University of Kentucky (photo by Natalie Parks) 67
Figure 5.1. Design Synthesis Process. Text by Jon Kolko, icons by Margaret Hagan 83
Figure 5.2. Analytical engagement steps. Icons by Margaret Hagan 88
Figure 5.3. Participant’s experiential form on Zoom 89
Figure 6.1. Diagram describing the 7 steps to envisioning a museum. © AOC Architecture 105
Figure 6.2. Unfolded plan for Open Studio repurposing the last temporary exhibition space, ©AOC Architecture 106
Figure 6.3. The Open studio upon its opening in June 2019 Photographs © AOC Architecture 108
Figure 6.4. A sample of workshop activity, Photographs © Victoria and Albert Museum 109
Figure 6.5.1. Graphic alphabet workshop, photograph © Victoria and Albert Museum 110
Figure 6.5.2. The established alphabet © Graphic Thought Facility 110
Figure 6.6. Three prototypes derived from the workshop ideas shown, Photographs © AOC Architecture 110
Figure 6.7.1. site works for ‘Open Studio’, Photograph © AOC Architecture 113
Figure 6.7.2. Making workshop in the ‘Town Hall’, Photograph © Victoria and Albert Museum 113
Figure 6.7.3. Design development model in the studio, Photograph © Victoria and Albert Museum 113
Figure 6.8. The Local Museum – a comparison of neighbourhood maps Bethnal Green & V&A East, © AOC Architecture 114

Figure 6.9.1. Object Enquiry workshop, Photograph © Victoria and Albert Museum 116

Figure 6.9.2. Talking in the Town Square, Photograph © Victoria and Albert Museum 116

Figure 6.9.3. Local colour workshop, Photograph © Victoria and Albert Museum 116

Figure 6.10.1. Activities in the workshop, Photograph © Victoria and Albert Museum 119

Figure 6.10.2. Making play, Photograph © Victoria and Albert Museum 119

Figure 6.10.3. Design studio full of samples, drawings and model, Photograph © Victoria and Albert Museum 119

Figure 6.11.1. Collected speech bubbles, Photograph © AOC Architecture 122

Figure 6.11.2. Constructed colour chart; Explore © Franklin Till 122

Figure 6.11.3. Design review in the Town Hall, Photograph © Victoria and Albert Museum 122

Figure 7.1. Early stage prototyping of the affordances envisioned for the physical play space. Photograph by Katriina Heljakka 133

Figures 7.2–4. The finished social play space with its various affordances for mobile, social, visual, and tactile play. Photographs by Katriina Heljakka 138

Figure 8.1. Illustration of a rhizomatic structure 150

Figure 8.2. Well-being and relational engagement — connectedness through rhizomatic entrance points 155

Figure 8.3. Principles of ULLs 162

Figure 8.4. Quadruple helix model with an illustrative set of potential stakeholders 165

Figure 8.5. Project outline 166

Figure 9.1. Cavan Liao, Voyageur, first exploratory drawing 180

Figure 9.2. Vanary Lyboun, Coffin Island Archive for Lost History, section drawing 183

Figure 9.3. Aileen Ling, Passages, oblique projection 184

Figure 9.4. Nam Hoang, Chorus, assembled model 185

Figure 9.5. Arron Griffioen, In Through the Looking Glass, perspective apparatus (top) and resulting image (bottom) 186

Figure 9.6. Arron Griffioen, In Through the Looking Glass, site plan in progress with bespoke drawing instruments (left) and final site plan (right) 187
Figure 9.7. Anoushae Eirabie, Junkspace Contraption, dismantling of piano (left) and study model (right) 187
Figure 9.8. Anoushae Eirabie, Junkspace Contraption, final model (left) and section/ elevation drawing (right) 188
Figure 9.9. Thompson Nguyen, National Bath House, incremental bas-relief drawing/ model 188
Figure 9.10. Kristel Derkowski, Cycle, final presentation with steel and string model in the foreground 190

Figure 10.1. The Potential Space 201
Figure 10.2. Studio Dynamic Space 206
Figure 10.3. Four-Phases Play – before and after the production block 213
Figure 10.4. Figure & Ground, Playing with Poché 214
Figure 10.5. Three Rounds of Formal Evolution 215

Figure 11.1. Zoo Vertical Studio, Daniel Dadoyan, American University of Beirut, 1999 221
Figure 11.2. Text & Architecture Vertical Studio, Yasmine Al Machnouk, American University of Beirut, 2001 226
Figure 11.3. Cinema and Architecture, Columbia University, 1993 227
Figure 11.4. Text & Architecture Vertical Studio, Lina Ghotmeh, American University of Beirut, 2002 228
Figure 11.5. Home Studio, Maitha Alrayssi, Zayed University, 2019 233
Figure 11.6. Home Studio, Moza Almansoori, Zayed University, 2019 233
Figure 11.7. Home Studio, Zainab Alblooki, Zayed University, 2019 234
Figure 11.8. Home Studio, Shamsa Almazrouei, Zayed University, 2019 235
Figure 11.9. Home Studio, Fatema Alkhameeri, Zayed University, 2019 235

Figure 12.1. Inly’s main entrance before Tom Peterman reimagined the new building 244
Figure 12.2. Inspiration 245
Figure 12.3. Inly’s new main entrance features a rounded “barn” building, which houses the Library on the second floor and da Vinci Studio maker space on the first floor 245
Figure 12.4. The Library the tree with stained glass leaves 246
Figure 12.5. The daVinci Lab 247
Figure 12.6. Colourful stairs, corridors and hallways 247
Figure 12.7. Destination Exploration Spaces: Engaging, intimate and intentional 248
Figure 12.8. Light-filled classrooms feature cosy workspaces for small-group collaboration 249
Figure 13.1. The 5 Social Determinants of Health

Figure 13.2. Issue Definition Research Results

Figure 13.3. The Double Diamond Design Process adapted for building Stewardship

Figure 13.4. Community feedback on concepts through in-person tabling

Figure 13.5. Community feedback on concept development through participatory voting posters

Figure 13.6. Outcome of the Visual Vibrance group's participatory design process

Figure 13.7. Detail of the Tree Ecology group's participatory design process outcome

Figure 13.8. Detail of the Social Inclusion group's participatory design process outcome

Figure 13.9. Sense of Pride Reported in Post-design Research

Figure 13.10. Words Respondents Correlated with Project in Post-design Research

Figure 13.11. Responses Reported in Post-design Research

Figure 13.12. How Commons-centric participatory design leads to civic agency

Figure 14.1. Juliette Van Haren, Counting Sheep, 2018. Photograph by Juliette Van Haren

Figure 14.2. Juliette Van Haren, Wool on Wheels, 2019. Photograph by Juliette Van Haren

Figure 14.3. Nevra Kumova, TV Scene, 2018. Photograph by Nevra Kumova.

Figure 14.4. Daniel Weil, Radio in a Bag, 1981

Figure 14.5. Zihan Wang, Window, 2018. Photograph by Zihan Wang

Figure 14.6. Benjamin Kapoor, Ooid, 2018. Photograph by Benjamin Kapoor

Figure 14.7. Abe Weissman, Digital craftsman, 2018. Photograph by Abe Weissman
List of Tables

Table 6.1. Workshop Groups 108
Table 6.2. Workshop Types 108
Table 6.3. Test Lab Prototypes 111
Table 7.1. A model for materialising playfulness: Elements of play, the play space, and related primary affordances for play 137
Contributors

Seyeon Lee is an associate professor and George Miller Quasi Endowed Professor in the School of Design. Before entering academia, Lee worked as an architectural and interior designer and project manager in the offices of Clifford Planning and Architecture (Hawaii) and MG2 (Seattle) for over 14 years. Lee’s professional portfolio includes residential, commercial, retail, hospitality, and urban planning projects in the United States, South Korea, Japan, and Taiwan. She is a NCIDQ certified interior designer and a LEED Accredited Professional. As a design professional, Lee has been involved in many community design charrettes ranging from rehabilitation of a historic community space in downtown Honolulu to urban planning of a new community in the rural area of Columbia, South America. As an academic, Lee’s Ph.D. research focused on developing instructional strategies to improve and strengthen design education with learning objectives that include cost as an integral design determinant. Her research interests engage community environment with an emphasis on sustainable and affordable architectural design and planning with a special focus on improving housing conditions for the local community.

Adam Feld is an assistant professor of Industrial Design in the School of Architecture and Design (SoAD) at the University of Louisiana at Lafayette. He has an Associate of Applied Science in Visual Communication from Sinclair Community College, a Bachelor of Science in Industrial Design from the Ohio State University, and a Master of Design from the University of Cincinnati School of Design, Art, Architecture and Planning (DAAP). In 2018 Adam was awarded the Young Educator of the year from the Industrial Designers Society of America (IDSA) at the International Design Conference in New Orleans, Louisiana. Feld teaches the third-year studio sequence in addition to supporting courses such as ideation visualisation and portfolio development. Special projects he has worked on with his students are: Working with the Communicative Disorders Department on a project to design products for stroke victims, Project Pilot Run where students partnered with RedBull to develop a Bike Bag for a professional BMX rider, and Project Pilot Run 2point ZeRo another RedBull sponsored project where students developed a live streaming bag for a professional e-Sports athlete. He currently lives in Carencro, Louisiana with his wife and two children.
**Jody Nyboer** is an Assistant Professor at the School of Design, Syracuse University, where she teaches design courses and conducts research that reflects her professional experience in education and architecture. Her work focuses on inquiries that concern overlaps of pedagogy, design, and creativity. Educational contexts are the organizing thread of her scholarship. Recent work includes establishing contemporary knowledge and discourse about design critique, discerning relationships of educational environments to creative agency and production, and exploring the significance of creativity training in higher education.

**Kevin Bonnell** is a male-identified student of colour who is currently in a Masters of Community Psychology at Wilfrid Laurier University in Ontario, Canada and has previously received an Honours B.Sc. in Health Science. Kevin uses an interdisciplinary lens to support social change at a community level. Kevin's passion for social justice and systems change has led to using engaged research methods to explore mechanisms that facilitate and inhibit individuals and communities from diverse backgrounds to flourish and thrive in various ecological settings. His current research interests are using qualitative research methods like photovoice, walking interviews and narratives to centre the research process around diverse students' strengths and needs, to better inform the planning and design of inclusive campuses that promote positive well-being. He is interested in elevating the student voice in environmental design practices and community-driven research methodology while drawing on positive well-being, social justice and community engagement in higher education settings.

**Renae Mantooth** is a design researcher with a multi-disciplinary background. Renae's passion for design research and scholarship is centred around people through inclusive practices. She works to expand the breadth of knowledge that explores human behaviour in post-secondary educational settings. Her research is rooted in the practice of environmental design in that she seeks to leverage academic scholarship to inform evidence-based design. Renae is currently a Ph.D. candidate in the Ph.D. in Design program at North Carolina State University. She received her M.S. in Educational Psychology and B.A. in Interior Design. Broadly, Renae is interested in how the physical environment influences behaviour and psychological processes through systemic and societal influences. Specifically, she investigates how perceptions of environmental factors in educational settings influence the well-being, learning, and motivation of undergraduate students.
Rebekah Radtke is an Associate Professor at the University of Kentucky, College of Design School of Interiors. She earned a Master of Architecture at the School of the Art Institute of Chicago and received a Bachelor of Fine Arts in Interiors: Planning / Strategy / Design at the University of Kentucky. Her research investigates how interior design enables social change by applying boundary-spanning pedagogical approaches rather than discipline-specific processes. Since 2011, her transdisciplinary multi-scalar projects produced better living and learning environments and healthy communities in national and international venues. Her collaborative work has been funded by national entities and includes preservation projects in rural China, design-build projects in Brazil, community-activated art interventions in Appalachia and education-based design initiatives in Lexington, KY.

Kelly L Anderson is a Melbourne-based co-designer and researcher, and PhD candidate. She has spent most of her professional and creative career within the non-profit sector. Whether finding ways to communicate complex systems or designing for learning, she works to surface people’s stories throughout the design process. Graduating from Syracuse University with a bachelor’s degree in Industrial design, Kelly quickly translated her design skills to emergent and interdisciplinary spaces. Receiving her M.F.A. in Transdisciplinary Design at Parsons The New School for Design, she was awarded several distinctions including: Merit Scholar, FEMA Appreciation Certificate, the John L. Tishman Scholarship, and IDEO / Knight Foundation Civic Design Fellowship.

Tom Coward is a London-based architect and co-founding Director of AOC Architecture Ltd, an award-winning practice of architects and designers established in 2005. Agents of Change design generous architecture that is both beautiful and socially engaged. Gaining recognition for inventive inquiry, participatory practice and characterful buildings; we operate at diverse scales for demanding clients with a reputation for high-quality architecture in sensitive contexts. He sits on the GLA Architecture Design and Urbanism Panel for Engagement, Local Regeneration and Design Advice; currently assisting with a cultural toolkit to enhance space provision for the arts in London. He is a member of RIBA, a fellow of the RSA, a member of the Southwark, Harrow and Hounslow Design Review Panels, a Design Advisor in Haringey and Greenwich, and sits on the Croydon Place Review Panel. Tom studied architecture at the University of Nottingham and the Royal College of Art, where he was awarded the Alsop Architecture Prize. He has taught and lectured widely in Europe and USA, and currently leads a master’s unit at Kingston University, whilst working towards a PhD by practice. In 2011 he
was the Louis Kahn Visiting Professor at Yale researching public access to archive collections.

**Katriina Heljakka** (Doctor of Arts, MA in art history and M.Sc. in economics) is a toy researcher and visual artist who holds a post-doctoral position at University of Turku (digital culture studies). Her doctoral dissertation on adult play(fulness) in contemporary toy cultures in visual culture for Aalto University was examined in 2013. Heljakka currently studies toys and the visual, material, digital and social cultures of play in the Academy of Finland funded research project Centre of Excellence in Game Culture Studies and leads Pori Laboratory of Play (PLoP) as a research manager and designer of multidisciplinary playful interventions. Her current research interests include playful spaces, the emerging toyification of culture, toy design and the hybrid and transgenerational dimensions of ludic practices. Heljakka's academic articles have been featured in publications by e.g., New York University Press, Routledge, Palgrave, Springer, and in multiple scientific journals. In parallel to her academic career, Heljakka has worked in the toy industry, designed board games and location-based game experiences, curated and participated in art exhibitions in Europe and the U.S. and authored children's storybooks. She has functioned as a long-time member of two international organisations, Women in Toys, Entertainment and Licensing and International Toy Research Association (ITRA).

**Anniika Blomberg** (PhD in Business Administration) works as a TIAS (Turku Institute for Advanced Studies) funded post-doctoral researcher in management and organisation at Turku School of Economics, University of Turku, Pori Unit, in Finland. Her doctoral dissertation examined in 2016 dealt with organisational creativity and her current research interests include organisational creativity, collaboration, creative physical space, and knowledge-intensive work and organisations. She has published in international journals such as Facilities and Journal of Organizational Change Management and has given lectures for academics, business managers as well as practitioners both in Finland and internationally.

**Lisa Klautzer** is a co-founder of TEZO Analytics, a company focused on applied research and consulting to drive transition to new sustainable business and governance models in complex environments. She is also the co-owner and managing director of an Austrian company dedicated to developing and managing real estate and has recently completed a construction project adding 800m2 of affordable living space to the city centre.
of Graz (AT). Prior to her entrepreneurial activities, she was a researcher at the RAND Corporation, an international think tank, and associate director in the research unit of the global management consultancy CEB (now part of the technological research and consulting firm Gartner). Her research ranged from analysing models for patient-centric health care and new services in the medical sector, developing an indicator system for sustainable transportation and mobility, building a data repository and a policy information system for transnational transportation networks, assessing data privacy and security policies, providing strategies for higher education and S&T policies, and assessing the link between corporate governance and economic openness, to designing best practices for recruiting a diverse workforce and promoting female leadership. She has a law degree from the Karl-Franzens-Universität, Graz (AT), and a Ph.D in policy analysis from the Pardee RAND Graduate School, Santa Monica (USA).

**Seo Yeon Hong** is a co-founder of TEZO Analytics, a California-based company dedicated to help clients in making their business and policies more sustainable through evidence-based research. It uses applied research and other innovative technology to smoothen clients’ transition to new sustainable business and governance models in complex environments. She also has been advising many World Bank programs and studies around the world as a senior economist consultant for the programs to be economical but, at the same time, socially inclusive and sustainable, and has worked as a researcher for the RAND Corporation, an international think tank. She earned her M.B.A from the KDI School of Public Policy, Seoul, South Korea and her Ph.D in Policy Analysis from the Pardee RAND Graduate School in Santa Monica, United States. Prior to her M.B.A, she worked as a systems engineer for LG Electronics in South Korea and Brazil. In her extracurricular activities, she enjoys learning about new technologies, cultures and languages around the world.

**Rumy Narayan** is a doctoral candidate at the department of management, University of Vaasa, Finland. Her research focuses on the meaning of innovation systems, their role and the narratives that guide them in pathways toward sustainable energy transitions. Her research interests fall within a framework of innovation possibilities that could potentially address pressing global challenges of our time, while stimulating societal and economic prosperity. This entails activating innovations across sectors, actors, and disciplines, while enabling experimentation, a complex process that needs appropriate tools for coordinating and managing diverse networks. Within this context, blockchain gains relevance for her research as it could be understood as an institutional and social technology for managing and coordinating disparate actor...
networks. She has an MSc in Strategic Sustainability from Blekinge Institute of Technology, Sweden, a Diploma in environmental law from the Centre of Environmental Law, WWF, India, and a Bachelors in English literature with Economics and Political Science, from Loreto College, India. Prior to pursuing her Ph.D., she has worked as senior correspondent for The Economic Times, and held consulting and managerial positions related to sustainability and sustainable development at various global organisations including Walmart, EPEA, and the CII ITC Center for Excellence for Sustainable Development.

Thomas-Bernard Kenniff is Professor in the Environmental Design program at the École de design, Université du Québec à Montréal (UQAM) where he teaches design studios and theory and criticism. He joined UQAM in 2015 after having taught in the architecture schools at Carleton University, Ottawa, Université de Montréal and Université Laval, Québec City. He holds a PhD in Architectural History and Theory from the UCL Bartlett School of Architecture and a Master of Architecture from the University of Waterloo. His research addresses preoccupations tied to the public realm, working out the ways in which subjectivities and relationships are transformed by the collective practice of making social space. Thomas-Bernard’s PhD dissertation explored the transposition of dialogic theory to design, with a specific interest in public space and critical practice. He is currently working on a three-year research by design project on the recent development of Montréal’s public realm that looks at how public space emerges from the multiple interfaces assembled between associations and individuals. Thomas-Bernard's research and publications have included work on participant-research methods, oral history methods in architecture, urban identity, interstitial space, uncertainty and dialogic methods for design.

Ehud Belferman is an architect teacher and a researcher. For over two decades architect Dr Belferman is an adjunct senior lecturer at the Faculty of Architecture and Town Planning | Technion – Israel Institute of Technology and at the NB Haifa School of Design where he teaches design studios and theoretical seminars. Dr Belfreman's research interests are in the interdisciplinary fields between architecture psychoanalysis and education, especially the affinities between architectural spaces and mental states, architecture and anxiety; aesthetics and the phenomena of the beautiful in architecture; education and architecture. His Ph.D. dissertation in architecture named “Architecture and Anxiety — The physical changes in schools as an expression of a tendency toward real and symbolised withdrawal and self-defence of society in Israel” was honoured as the best research of 2018 in the faculty of architecture and town planning in the Technion and was nominated
for the wolf prize earlier in 2017. In his practice architect, Dr Belferman is involved in a wide range of architectural projects, public buildings, schools and privet houses.

**Shulamit Beimel** is an adjunct senior lecturer, Faculty of Architecture and Town Planning, Technion, Haifa, Israel, and Coordinator and Supervisor in Architecture design studio courses while organising joint initiative collaboration between Architecture students from the Technion and the Technical University of Berlin-TU. In 2006, Shulamit received an M.Sc. in Architecture, Faculty of Architecture and Town Planning, Technion, Haifa, Israel. Research interests included: Surfaces of Contemporary Buildings and the Ornament phenomena, the dialogue between Architecture and Design Education. 1986-1987 Outstanding Student Scholarship of the Italian Foreign Office, Advanced studies, IUAV - Instituto Universitario di Architettura di Venezia, Venice, Italy. Professional experience includes working at a private practice in Tel Aviv, specialising in residential projects, and designing private houses including interior design, flats and offices interior design. In recent years, dedicating time between teaching and practice.

**Shoam Shefy** is an architect and architecture teacher at the Faculty of Architecture and Town planning | Technion Israel Institute of Technology. He specialised in the freshmen design and interior design studios.

**Karim Musfy** is a seasoned executive and a design professor with over 20 years of international experience in development, consultancy and academia. Currently an Assistant Professor of Interior Design at Zayed University, Karim has worked with several highly reputable design consultancy firms including KEO in Abu Dhabi, Skidmore Owings & Merrill (SOM) and Perkins & Will in New York managing large-scale projects. He also worked with leading developers, overseeing global projects collectively worth circa USD 30 Billion. Karim started his career in architecture with Eisenman Architects in NY, then managed his own practice in Beirut while serving as an Adjunct Professor of Architecture at the American University of Beirut (AUB) for a period of 8 years. He also served as Assistant Professor at the American University of Sharjah (AUS) for a year. Karim holds a Master of Architecture degree from Columbia University. He is a member of the Project Management Institute in New York City and the Order of Engineers and Architects in Lebanon. His work was cited in numerous publications including A+U and El Croquis and he is mentioned in Eisenman Architect's publications Diagram Diaries and Selected and Current Works.
Diane Foucar-Szocki is an advocate of access and inclusion to quality educational experiences and spaces for all, serving as President of the Virginia Partnership for Out of School Time (VPOST) and the Harrisonburg Education Foundation and is a board member of the On the Road Collaborative. She is a professor in Learning, Technology and Leadership Education in the College of Education at James Madison University. Her interests include enhancing creativity, adult development and change. She is a certified Immunity to Change (ITC) Coach. Diane taught 1-8th grade before earning a Master's degree in Creativity and Innovation from SUNY –Buffalo State and a doctorate in Adult Education/Human Resource Development from Syracuse University. She is co-author of The Vulnerability of Teaching and Learning in Selfie Society and a Distinguished Leader of the Creative Education Foundation. With her husband, children, grandchildren, extended family and dear friends she enjoys reading, traveling, good wine, food and conversation.

Donna Milani Luther has been the visionary force of the Inly School since 1996 shepherding its growth from 160 to 250 students; expanding its Children’s House and Elementary programs; increasing fundraising; achieving dual accreditation from AISNE and AMS; and building the Meehan Family Artsbarn and the DaVinci Studio building. Donna teaches facilitation and the integration of creativity, leadership, and team building to educators and business professionals worldwide, most recently visiting Japan to both learn and teach. Donna is an adjunct faculty member at Lesley University in the national and international M.Ed. program for creative arts in learning. She also serves as an adjunct faculty member at Suffolk University, where she facilitates seminars in creativity and creative problem-solving. In addition, she designed and directs Camp Summer Stars, a performing arts program for inner-city youth. Donna holds a B.A. in speech and theatre from Bridgewater State University and an M.Ed. from Lesley University.

Thomas C. Peterman, RA, NCARB is Principal at Peterman Architects and a registered architect in MA, ME, NH, VT, CT, RI and PA. Mr Peterman served as lead architect on the Inly School and he and Ms Luther have travelled internationally to consult on similar projects. Mr Peterman earned his Master of Architecture from the Harvard Graduate School of Design and has served as a guest critic for both the Harvard GSD, the Rhode Island School of Design and as an instructor at the Boston Architectural Center. He has presented at Boston ABX and has had work published in Architectural Record Magazine, Progressive Architecture Magazine, Boston Magazine, New York Times,
Contributors

Interior Design Magazine and Ada Louise Huxtable's book The Tall Building Artistically Reconsidered.

**Jenny Bright** is Director of Counselling and Social Emotional Learning at Inly School. A Licensed Mental Health Counsellor (LMHC), she has experience as both an art teacher and preschool teacher for special needs children. After earning her master's degree in counselling from California State University, Sonoma, Jenny moved to New Orleans to serve as the Assistant Clinical Director of a school and community-based counselling program to help school communities recover from Hurricane Katrina. Jenny was later awarded a Fellowship for Social Entrepreneurship at The John F. Kennedy School of Government at Harvard University, where she received a Master's in Education in Cognitive Neuroscience and Education. She spent the following summer on the rural coast of South Africa, refurbishing a preschool and coaching early childhood teachers in play therapy techniques, curriculum and pedagogy. Since 2009, Jenny has counselled in charter and private schools in the Greater Boston area, as well as in her private practice.

**Taylor Kuhn** founded Design for Agency with the belief we can design more agency in our lives and help others to do so too. She has an MFA in transdisciplinary design from Parsons, The New School, and a BFA in communication and packaging design from the Fashion Institute of Technology. She is passionate about contributing to the awareness and practice of the commons as a resource for community resilience, and using creativity as a tool to bring people together around those shared civic issues. She is the director of Building Blocks, a program that leads participatory design projects that enhance our ownership of our shared public spaces.

**Gyungju Chyon** is Assistant Professor of MFA Industrial Design and BFA Product and at Parsons School of Design in New York. Through her practice little wonder, her work explores alternative ways of considering ecological issues by focusing on the relationships between designed things, environments, and people. Through engaging natural phenomena and experimenting with materiality, Little Wonder is interested in delving beyond technological performance, seeking deeper and more meaningful connections with our world. Interpolates between installations and product design, Little Wonder has collaborated with international companies such as Rosenthal (DEU), Interface (USA), Duravit (DEU), Emotis (FRA), and Lucifer Lighting (USA). The work has been internationally awarded, exhibited at various venues in Europe, America and Asia, and published in academic conferences, journals
and books. Prior to Parsons, she taught industrial design at the School of Architecture and Design at RMIT University in Melbourne. She earned a PhD from RMIT University in Melbourne, a MA in furniture and interior architecture design from University of Art and Design Helsinki (Aalto University) in Finland, and a BA in industrial design from Hong-Ik University in Seoul.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4Cs</td>
<td>Creativity, critical thinking, communication and collaboration</td>
</tr>
<tr>
<td>ADA</td>
<td>Americans Disabilities Act</td>
</tr>
<tr>
<td>AOC</td>
<td>Agents of Change (Architecture)</td>
</tr>
<tr>
<td>ANT</td>
<td>Actor-Network Theory</td>
</tr>
<tr>
<td>AI</td>
<td>Artificial Intelligence</td>
</tr>
<tr>
<td>AR</td>
<td>Augmented Reality</td>
</tr>
<tr>
<td>ATTA</td>
<td>Abbreviated Torrance Test for Adults</td>
</tr>
<tr>
<td>AV</td>
<td>Audio Visual</td>
</tr>
<tr>
<td>BIM</td>
<td>Building Information Modelling</td>
</tr>
<tr>
<td>C3P</td>
<td>Citizen-Public-Private Partnership</td>
</tr>
<tr>
<td>CDD</td>
<td>Communicative Disorders Department</td>
</tr>
<tr>
<td>CenterState CEO</td>
<td>CenterState Corporation for Economic Opportunity</td>
</tr>
<tr>
<td>CE</td>
<td>Circular Economy</td>
</tr>
<tr>
<td>CI</td>
<td>Creative Index</td>
</tr>
<tr>
<td>CP</td>
<td>Community Psychology</td>
</tr>
<tr>
<td>CRC</td>
<td>Collections Research Centre</td>
</tr>
<tr>
<td>DLT</td>
<td>Distributed-Ledger-Technology</td>
</tr>
<tr>
<td>GTF</td>
<td>Graphic Thought Facility</td>
</tr>
<tr>
<td>HVAC</td>
<td>Heating, Ventilation, and Air Conditioning</td>
</tr>
<tr>
<td>ID</td>
<td>Industrial Design</td>
</tr>
<tr>
<td>IRB</td>
<td>International Review Board</td>
</tr>
<tr>
<td>JPI</td>
<td>Joint Programming Initiative</td>
</tr>
<tr>
<td>LBM</td>
<td>Living Building Material</td>
</tr>
<tr>
<td>MoC</td>
<td>Museum of Childhood</td>
</tr>
<tr>
<td>MoC</td>
<td>Matters of Concern</td>
</tr>
<tr>
<td>MoF</td>
<td>Matters of Fact</td>
</tr>
<tr>
<td>NCARB</td>
<td>National Council of Architectural Registration</td>
</tr>
<tr>
<td>NIH</td>
<td>National Institutes of Health</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>ODPHP</td>
<td>Office of Disease Prevention and Health Promotion</td>
</tr>
<tr>
<td>PPPP</td>
<td>Public-Private-People Partnerships</td>
</tr>
<tr>
<td>PODPHP</td>
<td>The Office of Disease Prevention and Health Promotion</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
</tr>
<tr>
<td>RWL</td>
<td>Real-World Laboratory</td>
</tr>
<tr>
<td>SDG</td>
<td>Sustainable Development Goal</td>
</tr>
<tr>
<td>SDOH</td>
<td>Social Determinants of Health</td>
</tr>
<tr>
<td>ULL</td>
<td>Urban Living Lab</td>
</tr>
<tr>
<td>V&amp;A</td>
<td>Victoria and Albert Museum</td>
</tr>
<tr>
<td>VR</td>
<td>Virtual Reality</td>
</tr>
<tr>
<td>WHO</td>
<td>The World Health Organization</td>
</tr>
</tbody>
</table>
Introduction

Kelly L. Anderson

Monash University, Australia

This book is rooted in the belief that participatory practices are key to finding creative solutions to the many problems we face every day. It argues that engaging practitioners with the general public in mutual exploration, analysis and creative thinking is essential. It not only ensures better quality products and services, and a greater sense of civic agency, it facilitates fuller access to them, and the life opportunities they can unleash. On this basis, the book suggests that participatory practices are multi-disciplinary and relevant in fields as diverse as design, architecture, education, health care, sustainability and community activism, to name a few of those discussed across chapters. It asks questions such as how do designed objects and environments affect wellness, creativity, learning and a sense of belonging? How do products and services affect everyday experience and attitudes towards issues such as sustainability? How does giving people a creative voice in their own education, services and built environments open up their potential and strengthen identity and civic agency? Addressing these questions requires a rethinking of relations between people, objects and environments; it demands attention to space, place, and services.

In bringing together a range of projects and questions, Participatory Practice in Space, Place and Service Design offers a uniquely varied perspective of the myriad ways in which participatory practices operate across disciplines, and how they impact the communities and worlds we create and inhabit. Whether implemented in classrooms, communities or cities, the collected works herein operate across a diversity of fields: architecture, urban studies, education, public health, urban design, co-design, service design, industrial design and landscape architecture. The authors of these works range from academics, educators, scholars, researchers, designers, and architects. As such, the chapters are presented through the lens of these identities, intentionally not conforming to a homogenous structure in practice and presentation. This diversity across practitioners offers readers a variety of approaches and methods. Each chapter is presented with a distinct position and voice, exploring a wide range of case studies, projects, and emerging research interests from a global perspective. Case studies are presented throughout the
chapters, and the reader is encouraged to attune to the challenges, pitfalls, and the application of participatory methods.

While three distinct themes have emerged to assist in the organisation of chapters, the collection presented in this book is not intended to be a prescribed way of thinking or doing for its readers. Much like the practitioners and researchers invited to take part in this publication, we invite readers across space, place, and discipline to explore and interrogate the case studies presented throughout. With each chapter comes an opportunity to examine one’s own practice through investigating positions, approaches, and mindsets. Grounded in practice, pragmatism and education, contributing authors present possibilities, potentialities, and stimulations for future projects. Tethering each chapter to the next is a desire to redefine what it means to access, engage, and experience through participatory spaces, places, and services. Rather than an inventory of methods or tools, this collection is a reflexive examination of how participatory practices play a part in space, place, and services that are seen and felt in the everyday lives of people.

The first section, *Access*, focuses on how participatory practices can improve things like the accessible design of buildings, and access to services such as inclusive adult education programs. The following concepts and ideas are all explored in distinct ways to challenge, demand, and encapsulate participatory practices for issues of access: access to emotional, mental, intellectual, and psychological wellness (Lee, Ch. 1); access to everyday tasks (Feld, Ch. 2); access to a creative agency (Nyboer, Ch. 3); and access to equitable belonging (Bonnell et al., Ch. 4). Space, place, and services are redefined and re-examined across chapters, offering varying accounts of what often is not accessible among the people we design for.

The second section, *Engagement*, focuses on how to engage people in the design and uptake of new ideas, such as user prototyping initiatives for interactive museums and workshops to introduce play in the workplace. Whether it’s engaging with one’s own lived experiences (Anderson, Ch. 5); engaging with material culture in museums (Coward, Ch. 6); engaging with play in the workplace (Heljakka and Blomberg, Ch. 7); engaging with sustainable models of livability (Klautzer et al., Ch. 8); or engaging with uncertainty (Kenniff, Ch. 9), the authors here present modes and contexts that reimagine what engagement can be within space, place, and services.

The third and last section, *Creative Experience*, focuses on processes of co-creation and co-design such as students and teachers co-setting projects, or communities designing neighbourhood gardens with landscape architects. Here, authors record case studies of how participatory practices can achieve their goals by allowing people to creatively experience: one’s own potential
(Belferman et al., Ch. 10); linking identity to place (Musfy, Ch. 11); learning in schools (Foucar-Szocki et al., Ch. 12); civic agency in communities (Kuhn, Ch. 13); and sensoriality of technologies (Chyon, Ch. 14).

The three sections critically examine and question issues of access, engagement and creative experience through participatory practices among space, place and services.

**Practice-Led Participatory Research**

“[Practice-led researchers'] tend to 'dive in', to commence practising to see what emerges...This is not to say these researchers work without larger agendas or emancipatory aspirations, but they eschew the constraints of narrow problem setting and rigid methodological requirements at the outset of a project”.¹

- Haseman 2006

While research may be considered the articulation of knowledge, and practice the embodiment of knowledge,² practice-led participatory research focuses not on defending the creative artefact as a research outcome, but more on acknowledging the project itself as the frame of inquiry by which we can advance knowing with others, where the research is grounded by the project, and the theory emerges from the applied project experience³ and of its participants. Practice-led research is often generative, explorative, and iterative. Moreover, it offers space for everyday people themselves to examine and question issues of access, engagement and creative experience they themselves see in their own lives. Participatory practice centres people in its inquiry, allowing space for research to emerge and evolve with people's needs, wants and desires.

The very concept of practice provides a powerful way to re-conceptualise what the world is made up of. It links people's behaviours with the materials and technologies they engage with, underlying infrastructures, and the

---

meanings associated with them.\(^4\) Practice allows space and place to re-imagine the systems and structures that affect and surround our daily lives. Moreover, participatory practices involve everyday people in the creation of services, technology, and resources.\(^5\) They seek to represent otherwise silent voices in a range of projects and policies, creating a shift from people being the object of research to a research partner.\(^6\) Participatory practices and research are seen as a way for the public sector to respond to societal challenges and to address marginalisation and disillusionment\(^7\) within space, place and services.

While more traditional design\(^8\) practices focus on physical and visual outputs, such as: visual communication design, interior space design, product design, information design, architecture, and planning; emerging participatory practices focus on: experiencing, emotion, interacting, sustainability, serving, and transforming, challenging what we design, how we design, and who designs.\(^9\) Participatory practices not only challenge the marginalisation found in systems and structures, but also implicit in some other research methodologies.\(^10\) Participatory practices and researchers offer powerful alternatives in their creative and visual methods: modifying existing research methods to generate new ways of looking, interpreting and


\(^8\) Everybody designs who devises courses of action aimed at changing existing situations into preferred ones (Herbert Simon, 1969). https://www.designcouncil.org.uk/news-opinion/what-do-we-mean-design


representing knowledge claims, often creating their own methods to probe the phenomena of practice. Oftentimes these new ways of researching are emerging through engagement with the very people it seeks to serve.

Many participatory practices and research methods allow time for participants to reflect; which gets them doing or making something; and do not expect that responses to a research topic can necessarily be articulated in verbal or written language. Practice-led research is intrinsically experiential and researchers acknowledge that what emerges is individualistic and idiosyncratic. Some methods, as seen throughout this book, may be performative, embodied, imaginative, reflexive and material-based. These emergent practices are not meant to lay antithetical to other research methods, but offer participants various ways to access, engage and creatively experience space, place and services.

As participatory practices expand their field of application into new, emergent spaces, various challenges drive the convergence in practice and research, including: increasingly ambiguous boundaries between artefacts, structures, and processes; increasingly large-scale social, economic, and systemic issues; and an increasingly complex environment of needs, requirements and constraints. Whether making interfaces, objects, systems, services or experiences—participatory practices are as much about understanding intangible factors such as behaviour, culture, value systems and relationships as it is about questioning issues of access, engagement and creative experience.

15 Ibid.
Access

Within the first section, issues of access critically examine aspects of who actually benefits from things and through what processes they are able to do so - focusing on issues of who does, and who does not, get to use what, in what ways, and when.\textsuperscript{19} Access extends past physically entering a space, it is about all possible means by which a person is able to benefit from things.\textsuperscript{20} Issues arise and demand inquiry when a person is refused benefit from those very spaces, places, and services designed to improve their lives. The complexity around issues of access is seen throughout the scales of products, processes, systems and structures that surround our daily lives. Through participatory practices, researchers themselves can access the rich information needed about how the people they seek to improve through design are affected by such issues of access.

Engagement

Through more embodied and concrete connections with materials in physical processes of making,\textsuperscript{21} participatory practices begin to shift methods from things being an ‘object’ of study to being part of the empirical process of engagement.\textsuperscript{22} The chapters presented in this section focus on projects that showcase engagement of people in their own design process.

Space, place and services all encourage some line of action, which are designed to be obvious, expected, and seamless to execute.\textsuperscript{23} So what happens when a person cannot engage as intended? What does it mean to be discouraged, refused, or not allowed engagement in space, place and service? As practitioners, these questions demand examination of our own practice and participation. The participatory practices highlighted in this section exemplify the possibilities that can be realised through the design process,


\textsuperscript{20} Ibid., 156.


enabling people to engage in the activities necessary to achieve what they want, rather than to give them what they want.\textsuperscript{24}

When the body engages with the physical and cultural world, it must be studied in terms of the dynamic interaction between people and the environment.\textsuperscript{25} How do we, as practitioners, employ participatory methods to explore these embodied engagements, affording our participants avenues for non-verbal, sensory, kinesthetic, material and imaginary ways of knowing? Employing methods that just elicit the verbal fails to explore a large area of human engagement and understanding.\textsuperscript{26} Participatory practices can be seen as a mechanism by which people themselves engage with improving space, place and services.

### Creative Experience

Creative and visual research methods give people the opportunity to communicate different kinds of information.\textsuperscript{27} Through processes and experiences of co-creation and co-design, participants can jointly explore and articulate their latent needs and jointly explore and ‘make’ solutions.\textsuperscript{28} The process of material making is a process unto itself and can be critically explored as experiences practitioners undertake. Creative material methods can offer new insights and ways of thinking about the whole spectrum of social lives.\textsuperscript{29} If people can express their experiences in a playful and creative way their focus will shift from their current needs to dreams and wishes that are inspirational for future designs.\textsuperscript{30} Participatory practices can offer people an avenue for creatively experiencing space, place and services, in an effort to improve systems and structures through design.

---


Closing Thoughts

What follows is neither traditional nor inventive. It is not about the end-product, the end-user, or outcomes. The authors ask more questions than they answer, and the reader is encouraged to explore issues of access, engagement and creative experience in their own practice. What are the capacities and capabilities of participatory practices? How might they improve space, place, and service within complex systems? Each chapter is distinct in its own voice, identity, and culture. The diversity of practices presented here hopefully stimulates those reading to try out, build upon, and challenge the boundaries of their own practice. The chapters presented in this book do not offer a single dimension of participatory practice. Nor do they attempt to resolve or reconcile tensions within practice. Instead, the book speaks to the way that practitioners might hold these tensions, questioning issues of access, engagement, and creative experience over solutions.

Bibliography


Introduction


PAGES MISSING
FROM THIS FREE SAMPLE
Index

A
Access, 3, 6, 157, 169
affordance, 131, 138
analysis, xvii, 7, 8, 9, 10, 29, 33, 34, 47, 71, 81, 82, 83, 84, 87, 93, 96, 98, 134, 135, 163, 182, 219, 220, 241, 269, 286, 287
approach, 8, 11, 44, 47, 62, 64, 68, 69, 72, 73, 74, 75, 84, 96, 103, 105, 106, 114, 120, 121, 132, 133, 134, 141, 147, 151, 156, 160, 161, 162, 163, 164, 166, 167, 168, 176, 182, 184, 188, 210, 220, 225, 230, 231, 252, 259, 264, 265, 267, 269, 279, 280, 288, 295, 297
architectural trends, 41
architecture, xv, xviii, xix, xxii, 18, 21, 40, 46, 51, 55, 56, 62, 63, 70, 73, 74, 75, 102, 117, 153, 160, 161, 176, 179, 187, 201, 202, 204, 207, 209, 214, 220, 223, 224, 225, 226, 228, 230, 236, 244, 266, 298
artefact
artifact, 102, 182, 184

B
Built Environment, 62, 64, 66, 262

C
charrettes, xiii, 7, 8, 9, 17
civic agency, 115, 259, 265, 266, 279
community, xiii, xiv, xv, xxi, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 19, 20, 45, 47, 51, 62, 63, 64, 65, 67, 68, 69, 70, 71, 72, 73, 74, 75, 102, 113, 114, 115, 116, 117, 120, 126, 132, 134, 139, 146, 147, 151, 152, 153, 154, 155, 158, 159, 161, 163, 164, 165, 167, 168, 169, 224, 229, 230, 231, 236, 240, 241, 243, 244, 250, 251, 253, 257, 259, 260, 262, 264, 265, 267, 268, 269, 270, 273, 275, 276, 278, 279, 280
critical practice, xviii
critical thinking, xxiii, 40, 176, 179, 180, 210
data, xvii, 6, 7, 9, 10, 20, 25, 32, 50, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 93, 94, 96, 97, 98, 134, 135, 139, 163, 232, 252, 286
design education, xiii, 75, 176, 193, 284, 285, 286, 297
design method, 84, 99
discovery, 25, 29, 42, 48, 52, 179, 183, 192, 269, 270
dismembering, 219
displacement, 214, 219, 220, 222, 230, 236
diversity, 17, 62, 66, 67, 68, 69, 75, 113, 115, 224, 230, 299
dwelling, 219, 229, 232

E
emotional
emotional health, 3, 5, 56, 136, 204, 207, 209, 210, 212, 217, 243, 250, 284, 286
end-user, 23, 26, 29, 73
expatriation, 219

F
family, xx, 10, 26, 114, 119, 120, 121, 219, 220, 222, 223, 229, 231, 254

H
health facilities, 4, 7
home, 6, 17, 18, 29, 71, 202, 219, 220, 222, 223, 226, 227, 229, 231, 232, 236, 237, 240, 253, 289

I
ideation, xiii, 98, 133, 165, 269
Industrial Design, xiii, xxi, xxiii, 24, 288
instruction, 40, 42, 45, 46, 47, 48, 50, 52, 56
intellectual
intellectual health, 4, 191, 225
intergenerational, 17, 119, 120, 166
interpretation, 87, 90, 91, 96, 108
interrelationship, 43, 287, 290
iteration, 118, 270

K
knowledge, xiv, xvi, 7, 26, 40, 42, 43, 45, 46, 47, 48, 54, 55, 72, 73, 74, 76, 82, 83, 84, 86, 92, 95, 96, 146, 148, 149, 157, 161, 162, 167, 168, 176, 178, 179, 192, 193, 201, 202, 208, 210, 211, 230, 231, 236, 269, 287, 298

L
learning, xiii, xiv, xv, xvii, xx, 25, 40, 41, 42, 43, 45, 48, 52, 53, 55, 56, 66, 67, 68, 75, 97, 102, 103, 106,
Index

liveability, 146, 147, 151, 152, 154, 161, 169
lived experience, 63, 81, 85, 86, 87, 88, 89, 92, 94, 96

M

making, xvii, xviii, 62, 81, 84, 85, 86, 89, 90, 91, 92, 93, 94, 95, 96, 98, 99, 102, 104, 109, 111, 112, 120, 121, 127, 134, 138, 147, 148, 155, 163, 168, 176, 185, 189, 191, 205, 210, 243, 246, 250, 260, 263, 264, 266, 267, 269, 275, 284, 288, 289, 290, 298
marginalised
marginalized, 62, 69, 76, 116
memory, 85, 87, 88, 89, 90, 167, 222, 223, 224, 231
mental
mental health, xviii, 4, 15, 17, 18, 28, 66, 72, 90, 113, 126, 130, 131, 132, 136, 138, 200, 204, 205, 206, 207, 208, 209, 210, 214, 263
motor control, 24

N

neighbourhood, 6, 7, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 113, 114, 115, 116, 146, 147, 149, 151, 152, 154, 158, 160, 162, 163, 167, 168, 169, 265, 267, 273, 275, 278, 280

O

Object-based, 102

P

participative thinking, 176, 179, 181, 191, 193
pedagogy, xxi, 141, 176, 177, 178, 184, 192, 194
people, xiv, xv, xxi, 4, 9, 11, 12, 15, 18, 22, 24, 26, 28, 30, 45, 52, 54, 55, 62, 63, 64, 66, 68, 69, 70, 71, 72, 73, 74, 84, 86, 87, 91, 93, 98, 102, 104, 105, 113, 114, 115, 128, 130, 131, 132, 156, 157, 161, 162, 179, 224, 229, 234, 248, 251, 252, 254, 262, 266, 270, 271, 273, 275,
Index

278, 284, 286, 287, 288, 290, 292, 293, 294, 295, 297, 299
physical environment, xiv, 7, 42, 43, 46, 50, 52, 53, 54, 56, 65, 126, 130, 131, 139, 224
playfulness, 121, 126, 128, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 246
practise
  practice, 176, 177, 178, 179, 180, 181, 182, 185, 186, 191, 193
prototype, 111
prototyping, 34, 89, 92, 95, 102, 103, 133, 138
provocation, 98, 102, 117
psychological
  psychological health, xiv, 4, 5, 64, 139, 154, 204, 205, 207, 212

R
reflection, 89, 90, 109, 186, 188, 203, 206, 212, 253

S
school design, 40, 54, 56, 240, 255
schools, xviii, xxi, 40, 45, 48, 52, 53, 55, 56, 147, 240, 241, 254, 255, 256, 275
sensorial, 283, 286, 289
spatial design, 241
stories, xv, 9, 52, 73, 86, 87, 88, 90, 97, 109, 115, 255
storymaking, 86, 87, 99
stroke, xiii, 24, 26, 35
studio, xiii, xix, 12, 34, 35, 75, 101, 102, 105, 108, 109, 113, 117, 118, 119, 158, 176, 177, 178, 179, 180, 181, 183, 184, 186, 189, 190, 191, 192, 193, 201, 202, 203, 204, 205, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 220, 230, 231, 237,
Index

251, 253, 284, 287, 288, 289, 290, 297, 298
studying, 135, 199, 202
sustainability, xvii, 13, 15, 20, 28, 67, 151, 152, 154, 161, 162, 285, 286, 288, 289, 298, 300
sustainable development, xviii, xxiv, 267, 271, 281, 288, 300
sustainable living, 166
synthesis, 31, 32, 34, 45, 46, 83, 84, 86, 87, 96, 117, 181, 270
Syracuse, xv, xx, 6, 19, 20, 21

T

teaching, xix, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 126, 139, 193, 204, 230, 242, 243, 256, 286, 287
technology, xvii, 40, 64, 126, 148, 149, 164, 168, 243, 293
the commons, xxi, 151, 156, 158
tools, xviii, 8, 22, 24, 63, 72, 73, 75, 76, 84, 87, 120, 133, 137, 148, 163, 167, 168, 180, 183, 186, 187, 189, 202, 208, 211, 215, 224, 230, 232, 241, 247, 252, 266, 286, 288

U

uncertainty, 177, 178, 191, 195, 196

V

validation, 32, 33, 35, 36
visualisation, xiii, 163, 167, 181

W

wellbeing, xiv, 3, 4, 5, 6, 7, 18, 62, 64, 65, 66, 68, 69, 70, 71, 72, 75, 259, 260, 262, 263, 264, 266, 269
wellness, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
women, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 66
workspace, 126, 132, 134