

Springer Series in Design and Innovation 37

Francesca Zanella · Giampiero Bosoni ·  
Elisabetta Di Stefano · Gioia Laura Iannilli ·  
Giovanni Matteucci · Rita Messori ·  
Raffaella Trocchianesi *Editors*

# Multidisciplinary Aspects of Design

Objects, Processes, Experiences and  
Narratives

OPEN ACCESS


 Springer

## Editor-in-Chief

Francesca Tosi, *University of Florence, Florence, Italy*

## Series Editors

Claudio Germak, *Politecnico di Torino, Turin, Italy*

Francesco Zurlo , *Politecnico di Milano, Milan, Italy*

Zhi Jinyi, *Southwest Jiaotong University, Chengdu, China*

Marilaine Pozzatti Amadori, *Universidade Federal de Santa Maria, Santa Maria, Rio Grande do Sul, Brazil*

Maurizio Caon , *University of Applied Sciences and Arts, Fribourg, Switzerland*

**Springer Series in Design and Innovation** (SSDI) publishes books on innovation and the latest developments in the fields of Product Design, Interior Design and Communication Design, with particular emphasis on technological and formal innovation, and on the application of digital technologies and new materials. The series explores all aspects of design, e.g. Human-Centered Design/User Experience, Service Design, and Design Thinking, which provide transversal and innovative approaches oriented on the involvement of people throughout the design development process. In addition, it covers emerging areas of research that may represent essential opportunities for economic and social development.

In fields ranging from the humanities to engineering and architecture, design is increasingly being recognized as a key means of bringing ideas to the market by transforming them into user-friendly and appealing products or services. Moreover, it provides a variety of methodologies, tools and techniques that can be used at different stages of the innovation process to enhance the value of new products and services.

The series' scope includes monographs, professional books, advanced textbooks, selected contributions from specialized conferences and workshops, and outstanding Ph.D. theses.

The volumes of the series are single-blind peer-reviewed.

**Keywords:** Product and System Innovation; Product design; Interior design; Communication Design; Human-Centered Design/User Experience; Service Design; Design Thinking; Digital Innovation; Innovation of Materials.

### **How to submit proposals**

Proposals must include: title, keywords, presentation (max 10,000 characters), table of contents, chapter abstracts, editors'/authors' CV.

In case of proceedings, chairmen/editors are requested to submit the link to conference website (incl. relevant information such as committee members, topics, key dates, keynote speakers, information about the reviewing process, etc.), and approx. number of papers.


Proposals must be sent to: series editor Prof. Francesca Tosi ([francesca.tosi@unifi.it](mailto:francesca.tosi@unifi.it)) and/or publishing editor Mr. Pierpaolo Riva ([pierpaolo.riva@springer.com](mailto:pierpaolo.riva@springer.com)).


Francesca Zanella · Giampiero Bosoni ·  
Elisabetta Di Stefano · Gioia Laura Iannilli ·  
Giovanni Matteucci · Rita Messori ·  
Raffaella Trocchianesi  
Editors

# Multidisciplinary Aspects of Design

Objects, Processes, Experiences and Narratives

### Editors

Francesca Zanella   
Department of Engineering “Enzo Ferrari”  
University of Modena and Reggio Emilia  
Modena, Italy

Giampiero Bosoni   
Department of Design  
Politecnico di Milano  
Milan, Italy

Elisabetta Di Stefano   
Department of Humanities  
University of Palermo  
Palermo, Italy

Gioia Laura Iannilli   
Department of Philosophy  
and Communication Studies  
University of Bologna  
Bologna, Italy

Giovanni Matteucci   
Department of Philosophy  
and Communication Studies  
University of Bologna  
Bologna, Italy

Rita Messori  
Department of Humanities, Social Sciences  
and Cultural Industries  
University of Parma  
Parma, Italy

Raffaella Trocchianesi   
Department of Design  
Politecnico di Milano  
Milan, Italy



ISSN 2661-8184

ISSN 2661-8192 (electronic)

Springer Series in Design and Innovation

ISBN 978-3-031-49810-7

ISBN 978-3-031-49811-4 (eBook)

<https://doi.org/10.1007/978-3-031-49811-4>

This work was supported by Centro Studi e Archivio della Comunicazione, Università di Palermo and Politecnico di Milano.

© The Editor(s) (if applicable) and The Author(s) 2024. This book is an open access publication.

**Open Access** This book is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this book are included in the book's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the book's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors, and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Switzerland AG  
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Paper in this product is recyclable.

# Introduction

This book is the result of a long research process. The work started in 2020 with an exhibition held in Parma (*Design! Oggetti processi esperienze*, CSAC Università degli Studi di Parma), and a book of the same title, edited by F. Zanella (with essays by G. Bosoni, E. Di Stefano, G.L. Iannilli, G. Matteucci and R. Trocchianesi) and published in 2023 (Electa Milano) centered on the role of archives as memory repositories and agents for contemporary design. This first period of reflection was followed by an international conference: *Design! O.P.E.N.* (<https://www.designopen.it>) held in Parma on May 5–6, 2022. The present volume contains most of the papers presented at the conference.

Starting from the first volume (*Design! Oggetti processi esperienze*), the research was always characterized by a multidisciplinary approach, which became even more multidisciplinary at the international conference held in 2022.

In fact, the conference was organized by a network of scholars from the world of design, philosophy and history of art, whose aim was to intertwine several types of knowledge. Consequently, multidisciplinary is also the main feature of this second volume whose objective is to reflect, in an integrated manner, on the different dimensions of design, using competencies from the field of design and from that of humanities.

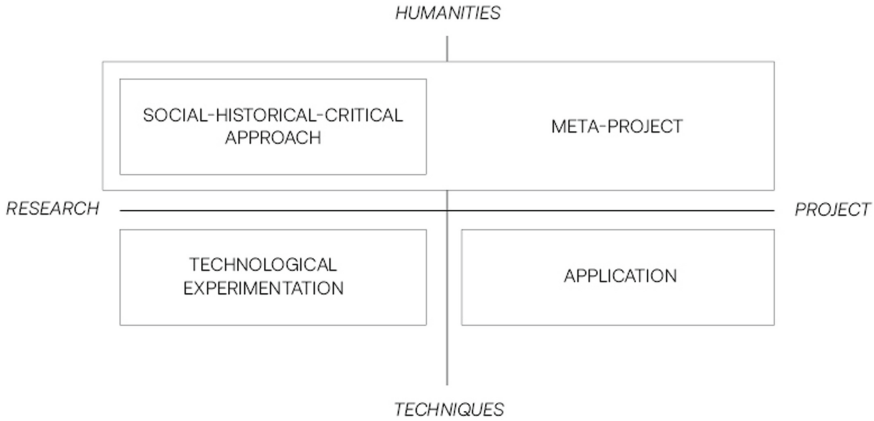
The aim of this project is to create a repertoire of opportunities of exchange and of relation among the culture of designers and the applied marketability of humanists in the project and in the innovation processes, in particular those design processes characterized by an important social and cultural impact.

In this context of exploration and experimentation in the territory of bordering subjects, stands the interpretative model in Fig. 1. It represents the potentialities in the interdisciplinary relations which verify the logics and dynamics in the “behavior” of a designer dealing with some project variables. On the vertical axis, humanities and techniques can be found, and on horizontal one, research and project.

Where these variables intersect, there can be four types of intervention:

- The intersection of techniques and research generates technological experimentation considering techniques and technology fields in continuous and fast evolution.
- Where research and humanities intersect, we are in the field of a historical/social/philosophical approach in which the analytical and critical dimensions of the research itself are developed.
- Between humanities and project, we are in the area on which our project focuses: here the meta-project approach becomes the synthetic expression of the relation among the two poles.
- Finally, between project and technique, we are in the area where the executive component of the project itself emerges.

There have already been significant studies which have stressed the importance of humanities for design and have shown that design can be a stimulus for humanities; this



**Fig. 1.** Potential synergies between design and humanities [1]

is why the conference *Design! O.P.E.N.* intended to be an opportunity for research and debate with the objective of continuing this fundamental line of work.

Some crucial issues which interdisciplinary research must tackle are:

- The research of “new problems for design”, that is, the collective need, as a scientific community, to find new directions toward which work must be periodically re-oriented, and this can be done only through a process of joint reflection.
- Research investigating the “meanings” that the product can have for design.
- Research that investigating the “value” that the design product shows.

As far as meanings are concerned, design and humanities integrated research can challenge, in a theoretically sounder way, “sustainability” by enhancing those concepts that are on the boundary between ethics and esthetics. Today, design cannot afford to dismiss ethical reflection, and, in this direction, humanistic culture can help to reinterpret the reflection on the mere functionality, in the more philosophically complex terms of the concept of “suitability for the purpose”.

With regards to the analysis of the value generated by the action of design, it may be interesting to speak of “technology of value”, which only humanistic investigation can help to process and fill with tools useful to produce not only ex-post critical knowledge, but first and foremost, oriented toward experimentation and to showing new corridors for contemporary design [1].

The volume follows the paths of reflection which structured the conference *Design! O.P.E.N.*, focusing on current themes and issues that are still at the center of the multi-disciplinary debate on design, investigated through four keywords: objects, processes, experiences and narratives, which correspond to the book chapters.

The first chapter focuses on object-oriented design, enhancing its functional narrative and experiential values. In fact, objects, beyond their value in use, bear symbolic, anthropological, political and social meanings and worldviews. This section also develops a theoretical reflection on the esthetic categories used to interpret the design object

in relation to the classic dichotomy useful-beautiful, to the category of game, to artistic values and the relation between ethics and esthetics.

The second chapter is on the designer's self-reflective moment which is focused on the analysis and on the definition of processes in various contexts, spanning innovation, social engagement, reflection on emergencies or forecasting. This section investigates how designers develop and test their models, both at production, implementation and research levels. The areas of investigation are those addressing innovation, social engagement and pursuing a reflection on emergencies or forecasting. The section is intended as an arena for discussion on topics revolving around both the different moments in the history of design and the contemporary condition. The contributions collected in the Processes Section reflect the current condition of the disciplinary debate, which is strongly characterized by a profound transformation of design processes due to the comparison with scientific research methods, with a prevailing interest for methodologies and contemporary priorities as the environmental one, or to the dematerialization of processes.

The third chapter focuses on as a theoretical and practical strategy aimed at facilitating and fostering experiential interactions among people, between people and objects or environments. This section aims at investigating the foundations and the implications of a specifically experiential turn in design from various perspectives and in various disciplines. Due to the multifaceted nature of this turn, both theoretical and practice-based research are testified by contributors.

Finally, the last chapter is on narrative. The narrative vocation of design represents a crucial key of interpretation in contemporary cultural expressions such as making history, representing through different media, archiving and exhibiting. This section explores narratives in three different "dimensions": narrative as a scenario (envisioning new contexts, behaviors, uses, spaces); narrative as a tool (creating new ways to trigger innovation); and narrative as a process (framing new methodologies to face complex issues).

Each chapter reflects the results of the conference held in Parma and is constituted by the analysis of concrete case studies and theoretical and methodological proposals aimed at highlighting the "multiverse" character of design. It is organized in the thematic subsection defined for the conference program, just to emphasize the prevailing interpretative trajectories.

A special thanks to the institutions that have funded the conference and the present publication (The Department of Humanities, Social Sciences and Cultural Industries and CSAC, University of Parma; the Department of Philosophy and Communication Studies, University of Bologna; the Department of Humanities, University of Palermo; the Department of Design, Politecnico di Milano; and the Department of Engineering Enzo Ferrari, University of Modena and Reggio Emilia) and all those who, in different ways, have contributed to reach this result (particularly Alice Biancardi and Marta Elisa Cecchi, and also: Okuniev Avhustyn; Katia Botta; Gabriela Del Rosario Abate; Giorgia Ferri; Salvatore Martino; Serena Massimo; Diego Valle; and Laura Xhaja).



Without their help, it wouldn't have been possible to make this event and this volume happen. We hope that this book will become a useful tool of reflection on the theoretical and methodological aspects between humanities and design.

The scientific committee and book editors:

Giampiero Bosoni, Elisabetta Di Stefano, Gioia Laura Iannilli, Giovanni Matteucci, Rita Messori, Raffaella Trocchianesi and Francesca Zanella.

## Reference

1. Celaschi, F.; Penati, A.; Trocchianesi, R. Design e Humanities al Politecnico di Milano, pp. 16–30. In M. Celi; E. Formia (eds) *Humanities Design Lab. Le culture del progetto e le scienze umane e sociali*. Maggioli editore, Sant'Arcangelo di Romagna (2016).

# Contents

## OBJECTS

Beyond the Beauty-Utility Diatribe: Towards New Aesthetic Categories for the Eco-design .....	3
<i>Elisabetta Di Stefano</i>	

“The Useful-Beautiful Couplet”: On the Aesthetic Appraisal of Designed Objects .....	11
<i>Jane Forsey</i>	

Imaginative Object and Mimetic Object .....	21
<i>Andrea Mecacci</i>	

## OBJECTS. Objects Between Anthropology and Material Culture

Seaweed Fabrics for Fashion Design. A Field Research Experience .....	31
<i>Paolo Franzo</i>	

Material Objects as Dispositive of Memory .....	41
<i>Toufic Haidamous</i>	

Objects Between Material Culture and Visual Culture .....	56
<i>Loredana La Fortuna</i>	

Puppets’ Tales. New Design Perspectives for a Multimedia Archive of a Humanity’s Intangible Heritage .....	65
<i>Vincenzo Maselli</i>	

Anonima Castelli. Objects, Design and Cultural Heritage .....	75
<i>Dario Scodeller</i>	

## OBJECTS. Political and Social Value of Objects

Through the Mirror. Concept Maps to not Lose (One’s Way Between) Objects .....	87
<i>Silvia Berselli</i>	

For F☆ck's Sake. The Political Narrative of Sex Toys in the Communication of MySecretCase ..... 103  
*Silvia Biasetton and Noemi Biasetton*

Telephones in Italy, the Italtel Study-Case ..... 116  
*Rosa Chiesa*

Design and Self-reproduction: A Theoretical-Political Perspective ..... 127  
*Alessio Fransoni*

**OBJECTS. Philosophy and Representation**

Everyday Design: The Aesthetic Dimension of Alternative Use ..... 139  
*Monika Favara-Kurkowski*

Digital Objects' Aesthetic Features. Virtuality and Fluid Materiality in the Aesthetic Education ..... 147  
*Lorenzo Manera*

The Value System of Objects Through the Interpretation of Photographic Language ..... 156  
*Paola Proverbio*

Objects, Things, Hyperobjects. A Philosophical Gaze on Contemporary Design ..... 165  
*Chiara Scarpitti*

**OBJECTS. Symbolic Value and Use Value**

The Evolution of Yacht: From Status-Symbol to Values' Source ..... 177  
*Giuditta Margherita Maria Ansaloni, Arianna Bionda, and Andrea Ratti*

Liberating the Imprisoned Soul of Dorian Gray: Cultural Affordance as Design Tool to Rediscover Cultural Values ..... 187  
*Andreas Sicklinger and Alireza Ajdari*

The Extraordinary Everyday. The Post-Crafts in the Historical City ..... 197  
*Viviana Trapani*

**PROCESSES**

Archives and Processes ..... 211  
*Francesca Zanella*

25 Ways to Hammer a Nail. “Postrocian” Aesthetics and Everyday Life’s Poetics in Enzo Mari ..... 225  
*Rita Messori*

**PROCESSES. Contemporary Strategies and Perspectives**

Design Through Body Memory for the Regeneration of Urban Areas ..... 235  
*Anna Anzani, Giulio Capitani, and Eugenio Guglielmi*

Environmental Re-design of the Top San No Touch 2.0 Portable Toilet: The Contribution of the Bio-inspired Approach ..... 244  
*Mariangela Francesca Balsamo*

How to Use Strategic Design Process to Address Complex Challenges: A Practical Case of Application to Discuss Strategic Design Process’ Fundamental Traits ..... 254  
*Gianluca Carella, Michele Melazzini, and Francesco Zurlo*

Design for Emergencies: The Contribution of Design Culture in Emergencies ..... 263  
*Chiara De Angelis*

**PROCESSES. Histories of Processes and Processes for History**

Exhibiting Design as a Process ..... 275  
*Fiorella Bulegato and Marco Scotti*

Toward Paris! 45 Years of Domus for a Design à la Français ..... 285  
*Elena Dellapiana*

Archival Projects. Tools and Methods for Promoting the Corporate Culture Starting from Historical Brand ..... 295  
*Elena Dellapiana, Ali Filippini, Chiara L. Remondino, and Paolo Tamborrini*

*Working in Regress* and Beyond, with Rural Material Culture [1] ..... 304  
*Elisabetta Rattalino*

**PROCESSES. Design Methodological Processes**

Air as a Design Tool: Raw Material, Infra-material Space, and Transformative Matter ..... 315  
*Francesca Ambrogio*

Evasion Design for the Novacene Era Design and Production of Cultural Imaginaries ..... 325  
*Mario Ciaramitaro and Pietro Costa*

The Physical Model as an Evolution of the Design Process: From the “Capostipite” to the Finished Product ..... 334  
*Alessandro Di Stefano and Davide Paciotti*

The Felicitating Factor. Cinzia Ruggeri’s Clothing Project ..... 344  
*Elena Fava*

Environmental Affordances: Some Meetings Between Artificial Aesthetics and Interior Design Theory ..... 354  
*Fabrizio Gay and Irene Cazzaro*

**PROCESSES. Dematerialized Processes**

The Critical Forms of Design Futures Scenarios: Introducing Unconventional Ways of Scenarios Making ..... 367  
*Ammer Harb*

How Do Design Narratives Play a Role in Cognitive and Social Processes? An Explorative-Systematizing Expert Interview ..... 377  
*Yasuyuki Hayama and Francesco Zurlo*

Human-AI System Co-creativity to Build Interactive Digital Narratives ..... 388  
*Anca Serbanescu*

Envisioning Technological Artefacts Through Anticipatory Scenarios and Diegetic Prototypes ..... 399  
*Mila Stepanovic and Venere Ferraro*

**EXPERIENCES**

Feeling Through Technology ..... 411  
*Jocelyn Spence*

**EXPERIENCES. Education and Culture**

Storytelling as a Tool to Design Museum Experiences: The Case of the Secret Marquise ..... 423  
*Licia Calvi, Bertine Bargeman, Moniek Hover, Juriaan van Waalwijk, Wim Strijbosch, and Ondrej Mitas*

Open Communication Design A Teaching Experience Based on Anti-disciplinarity, Thinkering and Speculation ..... 434  
*Francesco E. Guida*

Fashion Education: Cultivating Fashion Designers-Plants ..... 443  
*Clizia Moradei*

Accessible Experiences. Designing Synaesthetic Access to Culture ..... 452  
*Dina Riccò*

Misleading Design Implications of Adopting Embodied Interface in Everyday Objects ..... 462  
*Umberto Tolino and Ilaria Mariani*

**EXPERIENCES. Transitions**

Communication Design for Welfare, the Challenge of Preserving Human Interactions in Remote Participation. Rethinking and Redefining Collaborative Activities for a Virtual Environment ..... 475  
*Valeria Bucchetti, Michela Rossi, Umberto Tolino, Benedetta Verrotti di Pianella, and Pamela Visconti*

Aesthetics of Design for Social Innovation. Pathways for a Dialogue with Everyday Aesthetics ..... 485  
*Annalinda De Rosa and Laura Galluzzo*

*Designing Employee Experience to Experiment with Novel Working Modes. Action Research Project to Support Organizations in Engaging Employees in a Post-pandemic Scenario* ..... 493  
*Michele Melazzini and Gianluca Carella*

Design for Behavior Change in Design Education. A Case Study ..... 503  
*Margherita Pillan*

**EXPERIENCES. Can Experiences Be Measured?**

Italian Cultural Institutions Across and Beyond Covid-19: Designing Digital Cultural Experiences in Extra-Ordinary Times ..... 513  
*Ilaria Bollati, Valeria Morea, Federica Antonucci, and Marta Spanevello*

Beyond Visualisation Data as Raw Material for Uncoded Experiences ..... 526  
*Lucilla Calogero*

Designer and AR Technology: The Relationships Between the User and Virtual ..... 534  
*Antonio de Feo and Luca Casarotto*

The Robotic Service Objects. Design Approach for the Multidimensional Evaluation of Robotic Aesthetics ..... 544  
*Claudio Germak and Lorenza Abbate*

**EXPERIENCES. Tourism and Mobile Experiences**

Designing a New User Experience for the Travel Sector: A Research Project Reimagining the Role of Travel Stakeholders in the Digital Post-pandemic Age ..... 555  
*Venanzio Arquilla, Federica Caruso, Davide Genco, and Chiara Parise*

Operazione Arcevia. Existential Community. The Reality of the Experience and the Utopia of the Vision ..... 569  
*Anna Mazzanti*

Collaborative Dialogues Between Souvenirs and Territories: From Evocative Objects to Experience-Objects ..... 584  
*Marina Parente*

**NARRATIVES**

For a Novel and Transversal Narration of Extemporaneous Places of Artistic and Design Thinking: The City's Network of Crossroads Between Art and Design: The Milanese Case in the 20th Century ..... 595  
*Giampiero Bosoni*

Design Narrative ..... 603  
*Raffaella Trocchianesi*

**NARRATIVES. Communications, Strategies, Tools**

Space as a Narrative Interface. Phyigital Interactive Storytelling in the Field of Cultural Heritage ..... 613  
*Letizia Bollini*

Worldbuilding Practice as a Collaborative and Inclusive Design Process. The Case of ACTS-A Chance Through Sport ..... 623  
*Mariana Ciancia and Francesca Piredda*

The Role of Infographics in the Representation of Design Research . . . . .	632
<i>Vincenzo Cristallo and Miriam Mariani</i>	
The Open Logo and the Closed History Notes of a Social History of Visual Identities . . . . .	640
<i>Michele Galluzzo</i>	
An Advanced Design Tool for Archiving, Mapping, and Narrating a Complex System: The ADU Packaging Innovation Observatory . . . . .	649
<i>Clara Giardina</i>	
<b>NARRATIVES. Cultural Heritage, Museums, Territories</b>	
From Narrative to Phygital. An Experimental Semantic Survey . . . . .	661
<i>Marco Borsotti</i>	
Enhancing Local Cultural Heritage by Designing Narrative and Interactive Exhibitions. MEET at the “Museo del Territorio di Riccione” . . . . .	671
<i>Alessandra Bosco, Silvia Gasparotto, and Margo Lengua</i>	
Making Value: Storydoing Actions for Cultural and Creative Industries . . . . .	682
<i>Simona Colitti, Ami Liçaj, Lorela Mehmeti, and Elena Vai</i>	
Ustica, a Whole World in an Island Fragment . . . . .	694
<i>Cinzia Ferrara and Marcello Costa</i>	
<b>NARRATIVES. Interaction, Digital, Sustainability</b>	
Craftmanship and Digitalization in the Italian Knitwear Industry. A Paradigm Shift for the Narrative of Made in Italy . . . . .	705
<i>Martina Motta, Giovanni Maria Conti, Giulia Lo Scocco, and Rachele Didero</i>	
Design in the Metamorphosis of Matter . . . . .	714
<i>Michele De Chirico</i>	
Counter-Narratives Against Gender-Based Violence. A Twofold Perspective on Choices in Interactive Dramas . . . . .	724
<i>Sofia Peracchi and Ilaria Mariani</i>	
Sustainable Mobility as a Sport . . . . .	735
<i>Domenico Schillaci, Salvatore Di Dio, and Mauro Filippi</i>	



**NARRATIVES. Critical Approach, Languages, Explorations**

Provocation Through Narratives: New Speculative Design Tools  
for Human-Non-Human Collaborations ..... 747  
*Francesca Casnati, Alessandro Ianniello, and Alessia Romani*

Designer as Drama Manager: Understanding the Roles of Narrative Within  
Design Processes for Change ..... 756  
*Mariana Ciancia, Francesca Piredda, and Maresa Bertolo*

Interaction and Verisimilitude. How Narration Can Foster the Design  
Process ..... 765  
*Andrea Di Salvo*

Conversation Design for Raising Awareness on the Responsible Use  
of the Internet: Co-design of a Chatbot Game with Secondary School  
Students ..... 773  
*Mauro Filippi, Salvatore Di Dio, Domenico Schillaci, Stefano Malorni,  
Angelo Scuderi, and Sabrina Guzzo*

From a Word-Formation to a Concept-Formation: Mnemosphere  
as a Connective Tool in Interdisciplinary Design ..... 783  
*Clorinda Sissi Galasso and Marta Elisa Cecchi*

**Author Index ..... 795**



# ***Designing Employee Experience to Experiment with Novel Working Modes. Action Research Project to Support Organizations in Engaging Employees in a Post-pandemic Scenario***

Michele Melazzini<sup>(✉)</sup> and Gianluca Carella

Department of Design, Politecnico di Milano, 20158 Milano, MI, Italy  
michele.melazzini@polimi.it

**Abstract.** In a post-pandemic context, the application of user experience design to employees' perspectives represents one of the stimulating challenges both among design practitioners and researchers. The paper discusses novel approaches that Design may implement to support organizational transformation. How can Employee Experience Design be applied to support organizations in redefining working scenarios? A qualitative analysis has been run to address this question, with a Participatory Action Research method through observations and tests developed with the support of the HR department of the Corporate Investment Banking division in Intesa Sanpaolo.

Findings show how identifying key trends in employee perceptions and critical touchpoints, designing a set of experiential options and experience models to be tested, and engaging employees in the process of reflection in a collaborative design context can enhance the gradual redefinition of a qualitative employee experience. Moreover, the paper proposes a framework for *design intervention* in an organizational context, aiming to stimulate future opportunities for design practitioners and researchers to intervene in how people experience working routines.

**Keywords:** Employee Experience · Design Thinking · Organizational transformation · Strategic Design · Action Research

## **1 Introduction**

A growing number of organizations adopt *Design Thinking* to transform the organization itself into an entity capable of facing change [1]. The strategic reasons that historically drive corporations to embrace Design are related to facilitating disruptive innovation paths or improving customers' experiences. Recently, the diffused tendency is to focus on the goals more oriented to internal cultural development as for changing internal mindset or retaining and attracting talent [2]. In a post-pandemic context, the application of user experience design to employees' perspectives represents one of the stimulating challenges both among design practitioners and researchers.

The paper reflects on the design interventions in the organization that starts from the human experiential perspective: designing employee experience to nurture employee engagement. The uncertainty caused by the COVID-19 pandemic forces the organizations to explore methods to understand how employee experience is evolving and how it should be designed in such transitional working scenarios. The paper builds on a experiment conducted in a research project that applies Experience Design methods to redefine working scenarios during transitions caused by the pandemic.

The paper's primary goal is to discuss novel design interventions in employee experience that support the organizational transformation process, which can be broken down into the following specific objectives. First, to discuss the theoretical implications of a dense empirical study that presents a research and design project conducted in a specific context. Second, to propose a design approach to face the actual challenges in the knowledge workers realm, mainly aiming to support and give organizations insights on how to engage employees in a post-pandemic scenario.

The paper performs a qualitative analysis with a Participatory Action Research method through tests developed with the support of the HR department of the Corporate Investment Banking (IMI CIB) division in Intesa Sanpaolo. A significant sample of employees participated in two different iterations of an experimental test to explore how the working experience changes. The process of gathering data is developed using multiple sources of information to allow further data triangulation (semi-structured interviews and field observation mainly).

The paper articulates into four sections. The background theory presents the relationship between design, employee experience, and employee engagement to transform organizations. The research design and methodology follow, expressing how the research has been conducted. Result analysis shows the different areas of inquiry and the primary derived data. The final section consists in a discussion that summarizes the theoretical and empirical implications, including future avenues in research about design and employee engagement.

## 2 Background Theory

The theoretical focus of the research starts from the debate about *Design Thinking* (DT), which has been critically analyzed by scholars from design and business and management disciplines in the last decades. This growth of interest in design approach, and methods arises from the evolution of the design discipline itself, which is progressively shifting toward ways of thinking and doing oriented on designing solutions, and intangible offerings addressing complex problems [3].

The study focuses on the relationship between the design approach and private organizations' cultures: in this scope, Design Thinking act as the bridge between *design* and *non-design intensive* organizations. Therefore, the scientific debate is moving towards understanding how design thinking releases strong effects on organizational culture, where *organizational culture* comprises the underlying norms, values, and assumptions that define the "right way" to behave in an organization [4]. Elsbach and Stigliani affirm that it is time to review the value of Design Thinking "as more than a set of tools and, instead, as a cultural component of organizations" [5].

Design thinking can inspire organizational change by observing people's needs and behaviors within the organization: make the employees nurture their mindsets with creative confidence [6] to engage them and impact the motivational and behavioral aspects. The Kelley brothers and scholars like Buchanan sustained the intertwined connection between Design discipline evolution and organization structure: "the product to be designed is not an artifact or a customer service anymore but the organization, itself" [5–20].

The perspective of observation of design as organizational cultural phenomena helps clarify this research's position on the topic: not only physical artifacts but also employee experiences are considered signals of design culture in an organization. These signals are considered part of the aesthetic dimension of the organization, embedding values and symbols which highlight the critical aspects of organizational culture (Strati) [8].

DT activities are globally emerging in a vast variety of organizations; much rarer are instead the cases of a more in-depth adoption of design culture within the organization: because it is an arduous and lengthy process of cultural integration. The way through which design plays a role in this organizational scope, from the study interpretation, is through the *Design Interventions*: the creative distress that permeates organizational life. This research considers the human experiential perspective among the different *Design Interventions*: designing employee experience to engage and attract people inside organizations.

According to business and innovation literature, Employee Experience is the intersection of employee expectations, needs, and wants and the organizational Design of those expectations, needs, and wants [9]; the experience of employees is created by interactions across three spheres: employees' physical environments, their social connections, and the work to be done [10]. Design discipline brings an holistic view of the employee experience to be extended to what has been named "human experience" [11]: considering components such as the community, physical workspace, environment, tools, activities, and social platform simultaneously [10]. Thus, applying the User Experience design in the workplace means empathizing with employees as individuals and as a part of representative groups to fulfill experiential needs - cognitive, emotional, social, behavioral, and sensorial [12, 13].

Employee experience, contrary to employee engagement, is a long-term relationship between the employee and the company. Morgan [9] compared employee engagement as "a short adrenaline shot" while the employee experience "as the long-term redesign of the organization." Thus, organizations must design it properly, change it over the years when radical transformations occur, and keep pace with evolving employees' needs.

Designing employee experience implies looking at the entire experience through the employment lifecycle, a pathway including a multitude of touchpoints, concretization of the organization's culture (employee interactions, experience with tools, physical spaces, procedures, and policies) as well as interaction with outside sources (conversation with family and friends, former employees and media reports). Organizations must evaluate and identify the worker's needs along all the stages to accomplish a complete and specific experience for their employees.

Starting from the background theory explained and observing the significant changes that are occurring in the knowledge workers realm the research challenges specific

questions: how to apply Design to Employee Experience to support organizations in re-defining working scenarios? How to design employee experience to face the actual transitions caused by the pandemic?

### 3 Methodology

#### 3.1 Research Purpose

Because of the nature of the experiment and a specific methodological choice in addressing the research questions identified, this research process has a particular and experimental design approach. In order to generate new knowledge contributions and develop the primary assumption, this work adopts both qualitative and exploratory research methods.) [14].

The concept of Design Employee Experience to redefine the working logic is poorly defined at this moment of field development. Thus, the research strategy must be coherent with these complex challenges proposed, preferring an explorative approach. Exploratory research does not use confirmatory mechanisms like hypotheses. Instead, it aims to maximize the discovery of generalizations leading to understanding phenomena through a massive collection of insight on a subject [15].

Furthermore, during the experiment the authors considers the *empathic-aesthetic* approach theorized by Strati [8]; entering and permeating the organizational context, the involved researchers play an active role and influence the aesthetic process by which organizational discourse is socially constructed [16].

#### 3.2 Research Design

The research embraces a Participatory Action Research (PAR) methodology, developing a pilot experiment with a financial institution, IMI CIB Intesa Sanpaolo, the partner organization in this study. The experiment, named *Working Life Scenario in Evolution* (WLSE), is developed with the HR Department, specifically the *People Development* team. The sample involved in the experimentation includes 38 employees from three different business units. The employees belong to various job roles and positions.

One professor, two researchers with the support of two junior Service Designer, compose the research team. The experimental project lasts ten months, including the final assessment phase.

The process of gathering data presents multiple sources of information to allow further data triangulation. Due to the COVID-19 pandemic restrictions during the first phases of the research, the data collection tools implemented are digital.

The main tools adopted are semi-structured interviews, individual virtual conversations, and finally some methods inspired to digital ethnography research (such as digital user observation to document routines).

The research process follows the reiterative steps of the PAR approach: Planning, Action, and Reflection (fact-finding) followed by Evaluation [17, 18]. Thus, the research goes through a cycle of these stages until the action is complete.

The activities performed articulates into five steps:

- **Step 1 – Planning – *WLSE ideation***: it encompasses the design and conceptualization of the general plan of activities. This phase stimulated the partnering company through explorative research by collecting, analyzing, and interpreting the contextual data. Together with the meetings with the partner organization, it aims to collaboratively refine the experiment to make it coherently fit with the study context.
- **Step 2 – Action – *Mapping employees 'routines'***: this includes the first round of experiments with a participative session to build the relationship with the employees involved. Mapping the various employee routines as the primary results and collaboratively defining future experimental activities.
- **Step 3 – Reflection – *Define the pilot action***: it includes the study on the previous step to re-design and plan the main experimental action to test with a sample of employees.
- **Step 4 – Action – *WLSE iterative LAB***: it comprises the main experimental activities, which include a series of employee experience models to test in the participatory session.
- **Step 5 - Reflection and Evaluation – *Experiment assessment***: this includes the activity of assessment of the experimentation and the project results, comparing the findings with the framework developed in the previous stages of this research project.

## 4 Research Activities' Results

### 4.1 Planning – WLSE Ideation

The first phase describes the planning and structuring of the activities designed for this project. This step started with preliminary research, exploring how to redefine the employee experience in a post-pandemic scenario. Therefore, the explorative research combines the immersive activity of interpreting the contextual elements within IMI CIB. The aim is to define a collaborative project intertwined with the emerging needs of the organization.

A series of data gathering activities have been performed to reframe, more specifically, the drivers and expectations, which should be the guidance for the experimentation.

*Working Life Scenario in Evolution* has been ideated as an experimental project aimed at orienting people in shaping new work habits through experimentation with new models of employee experiences. With the HR team's support, the ideation phase produced different work-life scenarios intending to facilitate IMI CIB' organizational transition in the name of people's well-being and work-life quality.

### 4.2 Action – Mapping Employees Routines

The first round of experimentation includes collaborative activities to collect insights about the variety of individuals' needs after the pandemic to build up proper employee experience models.

The HR team helps identify the organization's prominent and recurring professional figures. Thus, the research team develops a set of *personas* to cover a broad spectrum of work-life situations in terms of private life and professional roles inside the specific context. *Personas* is a user archetype that helps guide decisions on product characteristics, interaction, and design, including visuals [19].

Based on these personas, the team elaborates a series of employee journeys (using the customer journey tool) to map the critical areas and opportunities in the working routines of each profile. The journeys visually reproduce a condensed version of a hypothetical day, combining each employee profile's professional and private life.

The material developed acts as a backbone for developing a digital conversation format, aiming to collect punctual data from the IMI CIB people. Thus, the data were collected through semi-structured interviews with key-informants. The key informants represent a specific persona developed in advance. Each conversation aims to match individuals' characteristics, using different stimuli to guide the talk.

### **4.3 Reflection – Define the Pilot Action**

The research team analyzes the data collected during the conversation: this phase of digital ethnographic research guides in defining the urgent topics for the IMI CIB population to be addressed through the pilot project.

In the analysis process, the research considers the working model framework that the organization adopted. It consists of the Activity Based Working (ABW) model that proposes a new way to approach the smart way of working. Moreover, this model aims to give people more flexibility and autonomy in deciding where, when, and how to perform their jobs. In this way, workspaces must adapt to individual needs, diversifying the offer of available spaces.

IMI CIB shapes the ABW model around four pillars, referring to significant work-related macro areas for their businesses. These pillars are entitled *4 Cs*: *Concentration* (related to all those activities requiring individual focus); *Collaboration* (meaning tasks that involve teams or interdepartmental work); *Communication* (referring to all kinds of information sharing and dialogues between colleagues, not exclusively work-specific), and *Contemplation* (mainly concerning individual's need for decompression). ABW is the starting point to define experiential scenarios of new ways of working to be tested in the pilot action.

The insights extracted from the previous action phase articulates into the 4Cs model to scale them into a specific organizational context. Through the analysis of these insights, promising issues are translated into design challenges. The design challenges are the primary element considered in developing the pilot action.

### **4.4 Action – WLSE Iterative LAB**

The WLSE iterative Lab pilot action presents new models of employee experiences to be tested. These models consist of prototyped working areas and *experiential options* implemented in specific areas of IMI CIB's headquarters in Milan. The LAB follows three main theoretical principles:

- ABW, as previously mentioned.
- Hybrid working, a model to combine the best of both in-office and remote work in terms of employee experience.
- Co-designed experiences, an approach to design and test new experiences with people who live them.

The various experiential options that should stimulate distinct behavior present a specific setup of the experience that recreate the conditions for users to test future working experiences. The design intervention consists of visual touchpoints, digital and physical technological tools, and space layouts. Although various limitations prevented the introduction of significant spatial changes, the research team designed the experiential conditions ad hoc.

The various options follow the 4Cs framework, grouped in four colors. Figure 1 visually synthesizes the different experiential options which respond differently to the specific macro activities of Concentration, Collaboration, Communication, and Contemplation. Each option has been appropriately labeled.



Fig. 1. WLSE LAB, Graphic representation of the different experiential options and related label.

In addition, the LAB proposes an internal communication campaign within the IMI CIB offices; various visual touchpoints propose reflections to people who navigate the offices.

The experimentation lasts ten days. During the preliminary training, the research team presented to the participants the principles at the basis of the LAB to bring people closer to the proposed working scenarios. The testing phase lets the participants use, live, and experiment with the experiential options proposed. Thus, to let them navigate the spaces and use them to run their regular job activities. A week after the experiment, a debriefing moment occurs with team leaders and HR members to gather collected insights and plan future directions.

The final step of the PAR process, the Reflection phase, is presented as a discussion of the results of the research in the following chapter.

## 5 Discussion

Synthesizing the significant number of activities and data elaborated during this research is possible to define a set of findings to discuss.



The study reflects on the novel role and way of Design intervening to change the employee experience and support the organizational transformation process.

Designing the employee experience can effectively orient people to discover new ways of working. The co-design process of employee experiences supports people in shaping new working habits. The main challenge is avoiding the tendency to reintroduce old habits (the ones adopted before the pandemic) into new and changing working scenarios. The experiment acts as a ground to train and raise awareness on the new ways of living the working routine.

The contribution of this study is to propose a specific approach to shaping a *design intervention* in the organizational context. First, designing a set of options and experience models to make employees navigate and interpret new conditions in their working context. Instead of designing a closed and fixed solution, the project aims to engage the participant in the design process collaboratively.

On the other hand, implementing and testing this *design intervention* as a pilot project with various organizational units could build a consolidated model to gradually support the organizational transformation process in front of the actual transitions. The *gradualness* is essential in overcoming an organization's resistance to embracing change, and this skepticism is typically spread in the different areas of the company. The phenomena observed are consistent with the theories on cultural change, which recommend the project-focused avenue for cultural change [5, 4, 20]. The *design intervention* level can be the fertile scope to implement new cultural assumptions that may influence organizational culture.

In addition, experimenting with novel routines - through employee experience design - triggers employee engagement in these critical times for knowledge workers. Thus, the experiment has been designed more as a service to activate critical thinking among participants rather than just a catalog of spaces to be experienced. Discussing the *ABW* model adopted by the organization, it may evolve into Experienced Based Working (EBW) after COVID-19. Given people's enhanced desire to rather work differently, the reason why they go to the office has to come under a specific purpose: "that purpose will involve curated experiences which deliver real value for both them [the employees] and the business" [21]. According to this interpretation, the concept of working routines assumes a renewed meaning as a set of work-life experiences an individual lives.

Consequently, the role of the office and workplace is adopting a new paradigm. It is increasingly becoming a place that must deliver value, where the individual is not just exploiting a set of services instead is experiencing an engaging and valuable working experience.

Finally, it is worth acknowledging the limitations that this study presents; first, it must be further verified the replicability of the Employee Experience Options model proposed. Second, the limited-time impacts on the experimental PAR phases of the study: it is challenging to conduct repetitive verifications and explorative discoveries in the scope of the pilot project. The subjectivity in the interpretation process is an explicit limitation of the study; however, the interpretive paradigm is the basis of the philosophy of design-based research.

## References

1. Zurlo, F.: Designerly way of organizing. Il design dell'organizzazione creativa | designerly way of organizing. *Des. Creat. Organ. Agathon* **5**, 11–20 (2019)
2. Dunne, D.: *Design Thinking at Work: How Innovative Organizations are Embracing Design*. University of Toronto Press, Toronto (2018)
3. Zurlo, F., Cautela, C.: Design strategies in different narrative frames. *Des. Issues* **30**(1), 19–35 (2013)
4. Schein, E.H.: *Organizational Culture and Leadership*. Jossey-Bass, Hoboken (2010)
5. Elsbach, K.D., Stigliani, I.: Design thinking and organizational culture: a review and framework for future research. *J. Manag.* **44**(6), 2274–2306 (2018)
6. Kelley, T., Kelley, D., Publishers, H.: *Creative Confidence: Unleashing the Creative Potential Within Us All*. William Collins (2013)
7. Buchanan, R.: Worlds in the making: design, management, and the reform of organizational culture. *She Ji: J. Des., Econ., Innov.* **1**(1), 5–21 (2015)
8. Strati, A.: Aesthetic understanding of organizational life. *Acad. Manag. Rev.* **17**(3), 568 (1992)
9. Morgan, J.: *The Employee Experience Advantage: How to Win the War for Talent by Giving Employees the Workspaces they want, the Tools they Need, and a Culture they Can Celebrate*. John Wiley & Sons, Hoboken (2017)
10. Lesser, E.: Designing employee experience: how a unifying approach can enhance engagement and productivity **24** (2016)
11. Rossi, M.: *Human Resource Design: Steering Human-centered Innovation within Organisations*. Springer Nature, Cham (2021)
12. Abhari, K., Mat Saad, N., Haron, M.: *Enhancing service experience through understanding employee experience management* (2008)
13. Plaskoff, J.: Employee experience: the new human resource management approach. *Strateg. HR Rev.* **16**(3), 136–141 (2017)
14. Creswell, J.W., Hanson, W.E., Clark Plano, V.L., Morales, A.: Qualitative research designs: selection and implementation. *Couns. Psychol.* **35**(2), 236–264 (2007)
15. Stebbins, R.A.: *Exploratory Research in the Social Sciences*, vol. 48. Sage, Thousand Oaks (2001)
16. Strati, A., deMontoux, P.G.: Introduction: organizing aesthetics. *Hum. Relat.* **55**(7), 755–766 (2002)
17. Lewin, K.: Action research and minority problems. *J. Soc. Issues* **2**(4), 34–46 (1946)
18. Kondon, S., Pain, R., Kesby, M.: *Participatory Action Research Approaches and Methods: Connecting People Participation and Place*. Routledge, Milton Park (2007)
19. Pruitt, J., Grudin, J.: Personas: practice and theory. In: *Proceedings of the 2003 Conference on Designing for User Experiences*, pp. 1–15 (2003)
20. Hendry, C.: Understanding and creating whole organizational change through learning theory. *Hum. Relat.* **49**(5), 621–641 (1996)
21. Unispace: COVID is taking us from ABW to experience-based working (2020). <https://www.unispace.com/insights/covid-is-taking-us-from-abw-to-experience-based-working>

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

