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Multidisciplinary Aspects of Design

Objects, Processes, Experiences and
Narratives

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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

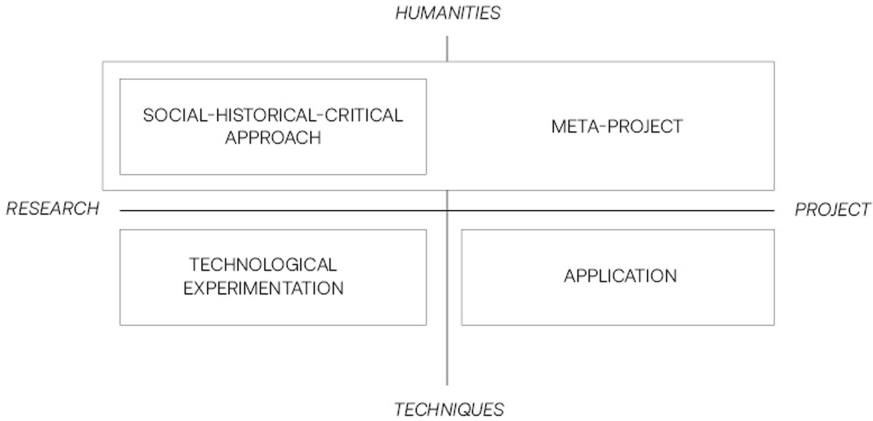


Fig. 1. Potential synergies between design and humanities [1]

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.

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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
<i>Rita Messori</i>	

PROCESSES. Contemporary Strategies and Perspectives

Design Through Body Memory for the Regeneration of Urban Areas	235
<i>Anna Anzani, Giulio Capitani, and Eugenio Guglielmi</i>	

Environmental Re-design of the Top San No Touch 2.0 Portable Toilet: The Contribution of the Bio-inspired Approach	244
<i>Mariangela Francesca Balsamo</i>	

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

Design for Emergencies: The Contribution of Design Culture in Emergencies	263
<i>Chiara De Angelis</i>	

PROCESSES. Histories of Processes and Processes for History

Exhibiting Design as a Process	275
<i>Fiorella Bulegato and Marco Scotti</i>	

Toward Paris! 45 Years of Domus for a Design à la Français	285
<i>Elena Dellapiana</i>	

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

<i>Working in Regress</i> and Beyond, with Rural Material Culture [1]	304
<i>Elisabetta Rattalino</i>	

PROCESSES. Design Methodological Processes

Air as a Design Tool: Raw Material, Infra-material Space, and Transformative Matter	315
<i>Francesca Ambrogio</i>	

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>	
NARRATIVES. Cultural Heritage, Museums, Territories	
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>	
NARRATIVES. Interaction, Digital, Sustainability	
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



From Narrative to Phygital. An Experimental Semantic Survey

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Abstract. The concept of *narrative* has radically changed how the content of events devoted to enhancing cultural heritage is offered. This evolution not only concerns the curatorial but also and above all the design aspects, with a revision of the very realization of exhibition environments. Within the design discipline of exhibition design, the *narrative* corresponds, therefore, to a conceptual principle of coordinated and relational *habitability* between space, content, and user, which is structured synchronously as scenario, tool, and process, and finds resonance in the implementation of digitized experiential modes.

Where the narrative and the digital are integrated, the innovative concept of *phygital* exhibition design develops, based on their mutual interaction.

Here, then, we elaborate on some key concepts and tools (paradigm shifts and semantic statements) whose interaction has generated and consolidated this new scenario, such as:

- the *narrative* script;
- the *storytelling* principle;
- the action of *transduction*;
- the added value of *specification* and *articulation*.

Keywords: Exhibition Design · Narrative · Phygital

1 Introduction

This essay investigates some possible definitions of contemporary exhibition design, to find new interpretative tools regarding its conceptual paradigms, such as to also represent opportunities for effective design repercussions. Methodologically, a vast bibliography on the topic of contemporary exhibition design was consulted and organized according to homogeneous thematic arcs; in parallel, countless international case studies were tracked down, classified, and analyzed, with a focus on the presence of innovative, hybrid, and strongly narrative exhibition design modes. The intent is thus to trace a sort of semantics, however experimental, of the exhibition design.

Here it is argued, how, within the design discipline of exhibition design, narration no longer corresponds simply to a conceptual need (the exhibition exists because it aims to express something of itself), but rather to a conceptual principle of coordinated and relational habitability between space, content, and user, which is structured synchronously

as a scenario, tool, and process. It is therefore argued that *narrativity* has overcome the status of a mere operational category, to assume the role of a methodical approach and development of the whole design chain, from curatorship to architectural concept. A method that substantiates each scenario to generate unknown ways of developing knowledge, as well as the fruition of its memory, accessible and shared.

The evolution of the narrative instance develops in tune with the revision of the communicative and social characteristics that enrich the concept of culture as material and object expression, proper to artifact collections, with what is defined by cultural anthropology, which privileges languages, ideologies, behaviors, and trends [1, 2]. The impact of narrativity also finds resonance in implementing digitalized experiential modes.

This essay proposes, then, where these two horizons – the narrative and the digital – are co-present and integrated, the concept of *phygital* exhibition design, based on the interaction of the physical and digital environment thanks to technologies that create hybrid and innovative communicative and interactive levels. Finally, the analytical aggregation of some key concepts and tools, the interaction of which has generated and consolidated the scenario described above, is developed here, experimenting with the intersection between well-established theoretical/practical disciplinary elements and hybridizations from other disciplines: an experimental semantic survey.

2 The Strengthening of the Concept of Narrative. The First Paradigm Shift

The concept of *narrative* has radically changed the way the content of events dedicated to enhancing cultural heritage is offered. This evolution, consolidated over the last twenty years, does not only concern the curatorial aspects but also, the design ones. It has led to a revision of the creation of exhibition environments, today increasingly understood as involving places capable of activating, in visitors, different levels of approach, exploration, and comprehension of the contents of the collections on display. This evolution represents, therefore, a true paradigm shift in the world of exhibitions, which accompanies the principal prevailing principle of the neutrality of the exhibition design, provoking a profound critical review. The design of the contents of a cultural exhibition event, its spaces, and facilities, therefore, increasingly converge, bringing the topics of curatorship and exhibition design together at the very beginning of the process of conceiving and configuring the event.

“Every exhibition harbors an idea – a thought or a consideration of a programmatic nature. This consideration is founded on the assumption the exhibited is worth showing and it is essentially a selection criterion. Now, selections may result from impulse, as a willful, subjective act, or from a carefully objective process of reasoning, supported by analysis and scholarship. But be it willful or premeditated, inspired by intuition or the intellect, every exhibition concept inevitably engages two fundamental spheres of our reality that have been recognized since time immemorial as the domain of things and the domain of words: *res* and *verba*” [3, 6].

3 First Semantic Statement: The Habitability of the Exhibition

The affirmation of the principle of the narrative value of an exhibition system implies a shift of critical and design attention from the art of *exhibit* to the art of *exhibit and tell*. We can say, therefore, that exhibition spaces evolve from the *space of displaying* to the *space of giving meaning*. A meaning that always originates from the individual object on display and from the combination of artifacts that set up the collection, but which finds resonance in the capacity of the exhibition system to contribute to the construction of relational systems between the objects themselves, as well as them and their different contexts (historical, social, technical, etc.). This paradigm shift is also accompanied, not surprisingly, by the progressive attention to the preservation and dissemination of the so-called intangible heritage, officially sanctioned by the Unesco *Convention pour la sauvegarde du patrimoine culturel immatériel*, held in Paris in October 2003. The Convention, indeed, officially recognized for the first time the need to support cultural manifestations and expressions that include oral traditions, performing arts, social practices, rituals, festive events, knowledge, or practices concerning nature and the universe, and the knowledge and skills to produce traditional crafts.¹

“The General Conference of the United Nations Educational, Scientific and Cultural Organization (...) Considering the importance of the intangible cultural heritage as a mainspring of cultural diversity (...) Considering the deep-seated interdependence between the intangible cultural heritage and the tangible cultural and natural heritage, (...) Considering the invaluable role of the intangible cultural heritage as a factor in bringing human beings closer together and ensuring exchange and understanding among them, adopts this Convention on this seventeenth day of October 2003” [4].

To convey meanings and values that are expressions of human knowledge and practices that cannot be represented exclusively by physical, “tangible” artifacts, it is necessary to resort to the construction of innovative scenarios, capable of communicating meaning through the description of behaviors, habits, and customs. The narrative not only makes comprehensible these contents, but through its transposition in terms of equipped physical scenarios, which act as active matrices, involving the experiential capacities of the visitors, it becomes a founding part of the whole conception and realization process of the exhibition and its setting. «In other words, storytelling, or the narrative mode of thought, is about *both* the storytellers *and* the listener (or viewer or visitor). Narrative stimulates personal interpretation; the person (...) experiencing the exhibition is engaged in his own kind of internal dialogue with the story. In this process

¹ The *Convention for the Safeguarding of the Intangible Cultural Heritage*, in its chapter 1 GENERAL PROVISION also gives this definition of intangible cultural heritage: «The ‘intangible cultural heritage’ means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts, and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity». (Unesco 2003). <https://ich.unesco.org/en/convention>, last accessed 2022/9/7.

of making meaning, he creates story out of story so that perceiving and creating become two sides of the same coin» [5, 59].

In this way, a new systemic order is defined between space, exhibits, and the public supported and mediated by the message, i.e. by the multiple stories that can be told to visitors through the cultural testimony that the very contents of the exhibition event can trigger. A fact that seems to affirm the growing primacy of narration over the materiality of the historical or artistic object, its representation in space, and the very structure of communication. The narrative propensity of contemporary exhibition design, however, is not in competition with the actual value of the objects on display; on the contrary, it represents a strategy placed at their service, to amplify the potential for reciprocal relations between the collection, its intrinsic meaning, its multiple and stratified contents and its public, to whom more tools for fascinating and understanding are made available. The result generates exhibition environments full of narratives made physically inhabitable by people.

4 Second Semantic Statement: The Memory

Narrative, therefore, introduces itself as a method of approach and development, the primary aim of which is broadening the accessibility to knowledge. The availability of this knowledge, as it happens with any narrative, draws on the memory of events, evokes it, synthesizes it into consolidated but linguistically up-to-date (that means comprehensible) information, and aspires to the renewing of its transmission. The construction of an accessible and shared memory becomes possible through exhibition narrative. In this sense, the exhibition design can no longer be considered mere technical/technological support: it is itself a *memory source*. As Macdonald and Basu [6, 2] state: “Contemporary exhibition practices cannot be conceived merely as means for the display and dissemination of already existing, preformulated knowledge (...) contemporary exhibition practice is—or should be—also an experimental practice (...) exhibition, too, is a site for the generation rather than the reproduction of knowledge and experience”.

Exhibition design, therefore, is not a neutral tool: it defines the dynamism of memory access since it can interact with the visitor to introduce, connect, and root information. Indeed, exhibition design is perhaps the only design discipline capable of implementing strategies to tune in to all the different accesses to memory that human beings have at their disposal: individual, social, and cultural [7, 8]. The *narrative* exhibition implements an open process of suggestion and stimulation for individual memory (that means the brain’s capacity to record events and sensations in a personal way), realized thanks to the potential to draw on and process social memory. It is a critical-communicative action with a holistic nature that assimilates and subjects to criticism the so-called cultural memory, which is a broad sphere of communicability that delimits the area in which the various collective memories compete for the relevance and plausibility of their discourses.

“Living memory dissolves into a memory supported by mediators because it is linked to material supports such as monuments, memorial sites, museums, and archives. While the mechanism of individual remembrance occurs overall spontaneously and according to the generic laws of psychology, on the collective and institutional level, this process is driven by a clear policy of remembering, or, more precisely, by a clear policy of forgetting.

There is no cultural memory capable of self-determination: it must necessarily be based on mediators and targeted policies. (...)” [8, 15–16].

On the one hand, the exhibition design acts as an *operational mediator* on different levels: the messages characterizing the exhibition intent, the contents of the collection on display, the hosting environments, the characteristics of the individual artifacts displayed, and the visitors. On the other hand, making it an active part from the very definition of the narrative structure of the curatorial palimpsest makes it a mediator also and above all at the level of communicative, perceptive, and sensorial shaping, allowing a deeper and more conscious definition of the exhibition environments that are part of the visiting experiences.

5 Third Semantic Statement: The Storytelling and the Narrative *Partitura*

Looking at the exhibition design as a narrative meta-structure requires the development of effective tools to manage and make the communicative intent available to the public. That is, it is necessary from the very first steps of the design process to give order and substance to different presences (collection and content) according to coordinated sequences. The telling takes the form of a story, and the setting becomes a storytelling activity. It should be noted, however, that the narrative meaning of exhibition design goes beyond the simple idea of the application of an operational script structure: storytelling is a simulacrum of knowledge. “When we read, listen to, or watch a story, we exploit our capacities for meta-thinking” [9, 25]. Through storytelling, the exhibition design decodes, translates, reveals, and, in doing so, transforms the narrative into open work and offers itself as a source of interpretation, individually renewable [5, 10–12].

Storytelling allows the exhibition structure that orders and makes available the contents of the collection to develop an invisible but concrete dialogue between them and the visitors, activating perception, and critical confrontation and thus generating experience. Storytelling, as Alessandro Baricco [13, 291] states “is not a thing that packages, or disguises, or makes up reality: it is a thing that is part of reality, it is a part of all things that are real. (...) Strip away the facts from reality and what remains is storytelling”.

Through the development of a storytelling approach, the logic, the main elements and the goals of the critical-scientific perspective for which an exhibition is conceived can be defined, as a real plot. With it, it is possible to start the activity of “translation” into usable space, where precisely the plot will find a way to develop through the elements of the collection and those of the design: what Uwe R. Brückner calls *dramaturgy* [14, 15]. «Content and information become intensively told stories that are absorbed and internalized intuitively and reflexively – or sometimes merely playfully» [16, n.d.]².

It was precisely Uwe R. Brückner who systematized the way the narrative plot is developed and managed through a meta-planning tool he called *partitura*. Just as with musical composition, the exhibition *partitura* is an instrument that accommodates, modulates, and distributes all the components of an exhibition project, from the physical (collection, location) to the perceptive and sensorial (atmosphere, experience) to

² Studio Uwe R. Brückner, *The Dramaturgy*. <https://studio-uwe-brueckner.com/philosophy/>, last accessed 2022/9/7.

the operational (actions, instruments, interactions) by arranging them in several homogeneous areas. In a continuous process of refining, all the elements thus identified and selected converge towards their most significant collocation, both in terms of realization of the identified plot, and in terms of enhancing the spatial dramaturgy that thus takes shape. It allows the strategic direction of the process of transition, conceptualization, synthesis, and formalization of the project.

6 Looking at Cultural Anthropology. Latest Semantic Statements

In this experimental process of revising the semantics of the exhibition design, it is helpful to draw, in a transversal manner, on the analytical languages adopted by cultural anthropology. Not by chance, anthropology is also interested in a revision process of what are the communicative characters capable of defining the concept of culture: a principle very close to the mandate of the exhibition design. If, as Tim Ingold [2, 11] states, «to produce means to establish a correspondence between the maker and the material», this is as true for anthropology as it is for exhibition design. In the latter, the search for the revelation of correspondence becomes an integral part of communicating and making a collection comprehensible.

An understanding that looks both at intrinsic, object value and its relational dimension, establishing connections with the historical context to which the collection belongs and with the contemporary one in which it is presented.

Some innovative tools of analysis are particularly interesting: *transduction*, *specification*, and *articulation*.

Transduction, explains Ingold, “converts (...) the kinetic quality of the gesture, that is, its flow or movement – from one register, that of bodily kinesthesia, to another, that of material flow” [2, 173]. Similarly, we can say that a display generates interactions of movements (the paths of visiting, the dynamics of approach to the environments, the interaction) and flows (informational, sensory, perceptual) that define differentiated relational relationships between collection, environments, visitors, and content.

Although the concept originated in acoustics studies, the philosopher Gilbert Simondon³, cited by Ingold, extends the principle of *transduction* to philosophy, explaining that it is “a process – be it biological, mental or social – during which an activity is set in motion by propagating itself within a given area, through a structuring of the different zones comprising the area in which it operates” [2, 173]. *Transduction*, therefore, can be an enchanting design tool for the configuration of exhibition environments equipped with primary narrative elements (thematic highlights) whose value, in terms of content to be transmitted, is developed according to a controlled and planned resonance involving several surrounding areas, defining a coordinated multilayer and multiscale communication system.

Specification and *articulation* are actions that establish different narrative depths and thus determine various correspondences between the content, the modes of its narration, and the freedom of assimilation they provide to the visitor. If *specification* implies the explicit indication, the detailed description, the adjectival determination, again with

³ See Simondon, G.: “The genesis of the individual”. In: Crary, J., Kwinter, S. (eds.), *Incorporations*. Zone, New York (1992).

Ingold's words "Assembling or concatenating rigid elements (...) within a larger totality is (...) what articulation means" [2, 186] In the act of staging, therefore, *specification* and *articulation* represent two possible approaches to the drafting of the narrative score: on the one hand, an exposition system that focuses on a few subjects of which it develops a complete and detailed treatment, and on the other hand, a scenario that favors, instead, the assembly of several elements that activate among themselves cross-references and enhancements of meaning, aimed at portraying a broader horizon of events.

7 Towards the Phygital Exhibition. The Second Conceptual Paradigm Shift

Today, the narrative instance of the exhibition design is also being consolidated in the context of the process of digital transformation of museums and exhibitions, not so much in terms of the mere implementation of their technological apparatuses, but of the integration and extension of organizational and exhibition practices themselves. There are countless innovative exhibition scenarios that digital tools have been helping to build for years: from interactive to immersive environments, through different strategies of integration with the usual analog practices. We are now accustomed, therefore, to relating to Smart Exhibition Modes based on the use of Information Technologies, to confronting the enhancement of our perceptive capacities through Virtual Reality and Augmented Reality, to expanding our relational boundaries, thanks to experiences guided by Motion Capture or Interactive Media, and, finally, to dislocating our knowledge in space and time, thanks to the use of social media.

Among the countless experiences developed in these areas, two paradigmatic milestones can be mentioned: from Gallery One⁴ realized at the end of 2012 at the Cleveland Museum of Art, one of the first cases of articulated use of digital interpretative technologies within exhibition environments and which, through the use of multi-touch interactive screens, proposed to visitors a strongly playful linguistic-experiential approach, aimed at the discovery of different levels of narration, according to the principles of entertainment and education, up to the multicoloured and almost dreamlike visions of pure digital aesthetics of teamLab Borderless, where the action/reaction of visitors triggers continuous modifications and evolutions of the immersive scenario in which they move, generating a new experiential dimension that becomes, as in the Mori Building Digital Art Museum⁵ in Odaiba, Tokyo, a hybrid museum model, 'absent' in terms of the physical presence of collections, but alive and pulsating in terms of sensorial and performative involvement.

Digital tools make it possible to introduce new scaling of how culture is valorized and disseminated, understood, however, as variables for the interpretation of significant data, such as language, behavior, ideologies, etc.

⁴ Media design and development by Local Projects; exhibit design by Gallagher and Associates; see <https://www.clevelandart.org/artlens-gallery/first-iteration>.

⁵ *teamLab Borderless* in Odaiba has been closed on August 31, 2022, and is going to be relocated to the Toranomon-Azabudai Project (completion 2023); see https://www.teamlab.art/e/borderless_azabudai/

“Our cultural period is characterized by an unprecedented scale of production and circulation, as well as global integration in cultural production, reception, and reuse. (...) We need new methods to see culture in its new scale, speed, and connectivity, combining both qualitative and quantitative approaches” [17, 104].

Digital, therefore, can no longer be just a communicative extension of the collection, making a greater accumulation of information available: instead, digital complements the visitor’s behavioral and experiential modes, summarising and enhancing them. We define this as the *phygital* exhibition: a condition of interaction between the physical environment (which is still strictly analog, based on direct, tangible, tactile communication and relational systems) and the digital environment (which is introduced as a set of virtual enhancements that intercept and modify the experiential structure of the visit).

“Linguistically, the word *phygital* is a combination of the words “physical” and “digital” to signify the ever-growing experiential cross-referencing and amalgamation of these two worlds. In other words, the term refers to the ways and means how these two realms – physical and digital – have melted into each other and hence increasingly difficult to inhabit them separately” [18]⁶.

Thanks to new technologies, exhibition environments can be configured according to hybrid and innovative communicative and interactive levels, based on the concept of cultural intelligence. This holistic and human-centered vision expands the exhibition’s narrative potential based on the active involvement of the visitor, who is offered augmented and enabling digital experiences that expand accessibility to material and especially immaterial content. In *phygital* exhibition environments, the digital action is simultaneously independent and interconnected to the physical human action/reaction in a mutable whole that takes shape thanks to the synergy between the visitor and the sensitive environment.

Nofal, Rabee and Vande Moere [19, 221] propose the “Phygital Heritage” definition that refers to a scenario where “(...) heritage information can be disclosed via simultaneous and integrated physical and digital means. By blending the digital empowerment of cultural learning, storytelling, and entertainment into the heritage artifact, activity, or environment, heritage forms an ideal application field to give meaning to the digital experience, and in turn, the digital medium can truly provide immediate access to the dynamic relevant resources”. In the *phygital* exhibition, the digital medium is inserted into the exhibition apparatus in a coherent manner, not as a supplementary system, but as an integral part of the whole narrative-exhibition structure. This insertion pursues user-friendly modes of implementation, to overcome the psychological, linguistic, and technological limits that digital systems can provoke, to approach, rather, more usual and established human gestural models, thus comprehensible and operationally easy. In this sense, it is the fruition models of the digital, rather than its technologically

⁶ In the essay “Phygital ... What’s That? Introducing the Phygital Museum Scale”, Debono (2022) proposes five different scenarios, looking for the possible combinations that, in the museum field, come from the contamination of physical and digital; he talks about “Physical with a token of digital”, “Physical with digital as an extension”, “Digital as a pointer to the physical”, “Parallel and cross-referenced existence of physical and digital” and “Digital with a token of Physical”.

advanced display, that assumes a central role in the development of innovative theoretical and applicative scenarios. Through the humanization of its modalities of fruition, the experiential interaction between real and virtual physical space favors and enhances the liveability of the exhibition apparatus and, through it, of the contents inherent in the collection on display.

8 Conclusion

This experimental semantic survey, aimed at the construction of possible semantics of contemporary exhibition design, has focused on two important paradigm shifts: one that is now consolidated – the narrative instance – and the other that is now beginning its historical journey – the *phygital* exhibition. We have verified how the latter provides the former with an important platform for coherent development that reshapes the presence of digital according to its operational humanization, strongly marked precisely by the enhancement of a broad, immediate, and customizable accessibility to content. Moreover, we have traced, also thanks to multidisciplinary hybridizations, some semantic statements useful to reconfigure the theoretical and operational approach of the design discipline of exhibition design. In both perspectives of analysis, exhibition design emerges as a privileged sphere where the narrative vocation finds a dimension of scenario, tool, and process.

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Author Index

A

Abbate, Lorenza 544
Ajdari, Alireza 187
Ambrogio, Francesca 315
Ansaloni, Giuditta Margherita Maria 177
Antonucci, Federica 513
Anzani, Anna 235
Arquilla, Venanzio 555

B

Balsamo, Mariangela Francesca 244
Bargeman, Bertine 423
Berselli, Silvia 87
Bertolo, Maresa 756
Biassetton, Noemi 103
Biassetton, Silvia 103
Bionda, Arianna 177
Bollati, Ilaria 513
Bollini, Letizia 613
Borsotti, Marco 661
Bosco, Alessandra 671
Bosoni, Giampiero 595
Bucchetti, Valeria 475
Bulegato, Fiorella 275

C

Calogero, Lucilla 526
Calvi, Licia 423
Capitani, Giulio 235
Carella, Gianluca 254, 493
Caruso, Federica 555
Casarotto, Luca 534
Casnati, Francesca 747
Cazzaro, Irene 354
Cecchi, Marta Elisa 783
Chiesa, Rosa 116
Ciancia, Mariana 623, 756
Ciaramitaro, Mario 325
Colitti, Simona 682
Conti, Giovanni Maria 705
Costa, Marcello 694

Costa, Pietro 325
Cristallo, Vincenzo 632

D

De Angelis, Chiara 263
De Chirico, Michele 714
de Feo, Antonio 534
De Rosa, Annalinda 485
Dellapiana, Elena 285, 295
Di Dio, Salvatore 735, 773
Di Salvo, Andrea 765
Di Stefano, Alessandro 334
Di Stefano, Elisabetta 3
Didero, Rachele 705

F

Fava, Elena 344
Favara-Kurkowski, Monika 139
Ferrara, Cinzia 694
Ferraro, Venere 399
Filippi, Mauro 735, 773
Filippini, Ali 295
Forsey, Jane 11
Fransoni, Alessio 127
Franzo, Paolo 31

G

Galasso, Clorinda Sissi 783
Galluzzo, Laura 485
Galluzzo, Michele 640
Gasparotto, Silvia 671
Gay, Fabrizio 354
Genco, Davide 555
Germak, Claudio 544
Giardina, Clara 649
Guglielmi, Eugenio 235
Guida, Francesco E. 434
Guzzo, Sabrina 773

H

Haidamous, Toufic 41
Harb, Ammer 367

Hayama, Yasuyuki 377
 Hover, Moniek 423

I

Ianniello, Alessandro 747

L

La Fortuna, Loredana 56
 Lengua, Margo 671
 Liçaj, Ami 682
 Lo Scocco, Giulia 705

M

Malorni, Stefano 773
 Manera, Lorenzo 147
 Mariani, Ilaria 462, 724
 Mariani, Miriam 632
 Maselli, Vincenzo 65
 Mazzanti, Anna 569
 Mecacci, Andrea 21
 Mehmeti, Lorela 682
 Melazzini, Michele 254, 493
 Messori, Rita 225
 Mitas, Ondrej 423
 Moradei, Clizia 443
 Morea, Valeria 513
 Motta, Martina 705

P

Paciotti, Davide 334
 Parente, Marina 584
 Parise, Chiara 555
 Peracchi, Sofia 724
 Pillan, Margherita 503
 Piredda, Francesca 623, 756
 Proverbio, Paola 156

R

Rattalino, Elisabetta 304
 Ratti, Andrea 177
 Remondino, Chiara L. 295
 Riccò, Dina 452
 Romani, Alessia 747
 Rossi, Michela 475

S

Scarpitti, Chiara 165
 Schillaci, Domenico 735, 773
 Scodeller, Dario 75
 Scotti, Marco 275
 Scuderi, Angelo 773
 Serbanescu, Anca 388
 Sicklinger, Andreas 187
 Spanevello, Marta 513
 Spence, Jocelyn 411
 Stepanovic, Mila 399
 Strijbosch, Wim 423

T

Tamborrini, Paolo 295
 Tolino, Umberto 462, 475
 Trapani, Viviana 197
 Trocchianesi, Raffaella 603

V

Vai, Elena 682
 van Waalwijk, Juriaan 423
 Verrotti di Pianella, Benedetta 475
 Visconti, Pamela 475

Z

Zanella, Francesca 211
 Zurlo, Francesco 254, 377