Francesca Zanella · Giampiero Bosoni ·
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Raffaella Trocchianesi *Editors*

Multidisciplinary Aspects of Design

Objects, Processes, Experiences and Narratives

Springer

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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, multidisciplinarity 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
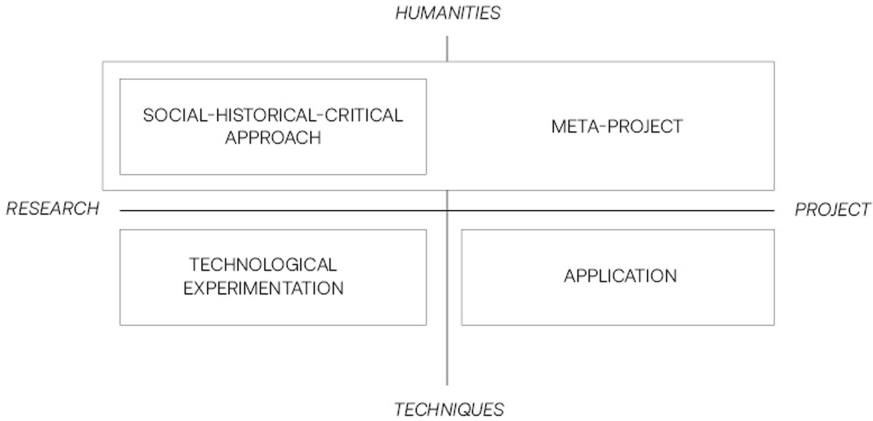
HUMANITIES

SOCIAL-HISTORICAL-CRITICAL APPROACH	META-PROJECT

RESEARCH ———————————————————————— PROJECT

TECHNOLOGICAL EXPERIMENTATION	APPLICATION

TECHNIQUES

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 multidisciplinary 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.

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

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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 rela-
tional 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

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[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

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[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 Simondon[3], 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 multiscalar 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

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[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 One[4] 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 Museum[5] 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.

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[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

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[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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