Springer Series in Design and Innovation 37

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Multidisciplinary Aspects of Design

Objects, Processes, Experiences and Narratives

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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.

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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

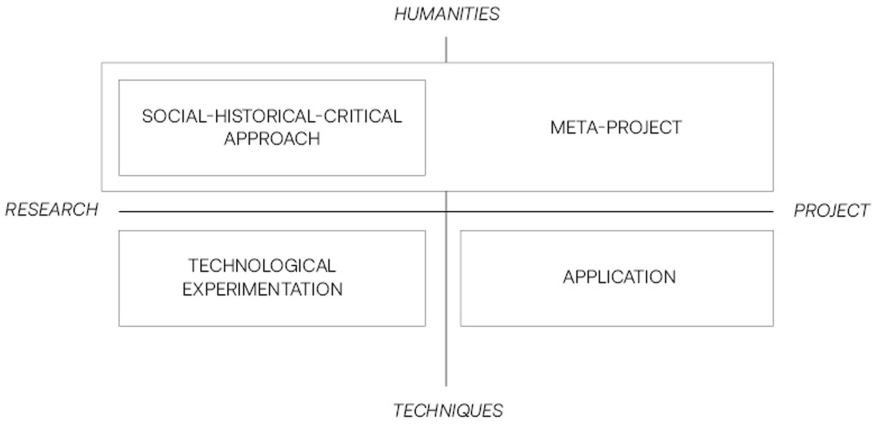

Fig. 1. Potential synergies between design and humanities [1]

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.

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
Elisabetta Di Stefano

"The Useful-Beautiful Couplet": On the Aesthetic Appraisal of Designed Objects 11
Jane Forsey

Imaginative Object and Mimetic Object 21
Andrea Mecacci

OBJECTS. Objects Between Anthropology and Material Culture

Seaweed Fabrics for Fashion Design. A Field Research Experience 31
Paolo Franzo

Material Objects as Dispositive of Memory 41
Toufic Haidamous

Objects Between Material Culture and Visual Culture 56
Loredana La Fortuna

Puppets' Tales. New Design Perspectives for a Multimedia Archive of a Humanity's Intangible Heritage 65
Vincenzo Maselli

Anonima Castelli. Objects, Design and Cultural Heritage 75
Dario Scodeller

OBJECTS. Political and Social Value of Objects

Through the Mirror. Concept Maps to not Lose (One's Way Between) Objects 87
Silvia Berselli

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. "Postcrocian" 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. Phygital 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
Vincenzo Cristallo and Miriam Mariani

The Open Logo and the Closed History Notes of a Social History of Visual Identities 640
Michele Galluzzo

An Advanced Design Tool for Archiving, Mapping, and Narrating a Complex System: The ADU Packaging Innovation Observatory 649
Clara Giardina

NARRATIVES. Cultural Heritage, Museums, Territories

From Narrative to Phygital. An Experimental Semantic Survey 661
Marco Borsotti

Enhancing Local Cultural Heritage by Designing Narrative and Interactive Exhibitions. MEET at the "Museo del Territorio di Riccione" 671
Alessandra Bosco, Silvia Gasparotto, and Margo Lengua

Making Value: Storydoing Actions for Cultural and Creative Industries 682
Simona Colitti, Ami Liçaj, Lorela Mehmeti, and Elena Vai

Ustica, a Whole World in an Island Fragment 694
Cinzia Ferrara and Marcello Costa

NARRATIVES.Interaction, Digital, Sustainability

Craftmanship and Digitalization in the Italian Knitwear Industry. A Paradigm Shift for the Narrative of Made in Italy 705
Martina Motta, Giovanni Maria Conti, Giulia Lo Scocco, and Rachele Didero

Design in the Metamorphosis of Matter 714
Michele De Chirico

Counter-Narratives Against Gender-Based Violence. A Twofold Perspective on Choices in Interactive Dramas 724
Sofia Peracchi and Ilaria Mariani

Sustainable Mobility as a Sport 735
Domenico Schillaci, Salvatore Di Dio, and Mauro Filippi

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

The Evolution of Yacht: From Status-Symbol to Values' Source

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Abstract. In addition to fulfilling their primary function, the so-called "status-symbol" objects also vehicles of deeper meaning. Among them, yacht have been often seen as a tool to convey messages of different content throughout the years. The aim of this study is twofold: to show the evolution of yacht design meaning during the last decades, and to outline the future one, according to the redefinition of the concept of luxury goods, category of which yacht belong. The study results confirm that the yachting sector is starting to adopt new perspectives toward sustainability and that, to succeeded in this, the multidisciplinary of design is an essential aid, if not the only possible way to tackle the challenge to convey new messages.

Keywords: Yacht evolution · Yacht design · Luxury Concept · Luxury Goods

1 Research Context

1.1 Yacht Design Discipline

Yacht design is a cross-disciplinary sector dealing with the panning of pleasure boat involving knowledge of the scientific fields of engineering, design, and architecture [1]. The output of yacht designers' effort is an object with different levels of complexity, because of its dual nature: pleasure craft embodies both the internal symbolic and functional values of the house as a refuge (stability, safety, privacy, comfort) and the external ones of the vehicles (lightness, dynamicity, manoeuvrability). To combine these two aspects the yacht designer must deal not only with aesthetic features, but also with technological ones: it is a matter of dealing with an articulated system of historically represented morphological and spatial relations, in which the multiplicity of human activities, the spatial areas, and the equipment present on the craft continue, on the one hand, to relate to a strong tradition of nautical practice but, on the other hand, is called on to deal with the evolution of roles and tasks on board.

© The Author(s) 2024
F. Zanella et al. (Eds.): Design! OPEN 2022, SSDI 37, pp. 177–186, 2024.
https://doi.org/10.1007/978-3-031-49811-4_17

1.2 Raising Market Trends

Today more than ever designers and shipbuilders are facing the challenge to keep up with the growing market trends. The market is rapidly evolving since 2016 and is recovering from a hard downturn that began in 2008. Furthermore, the lack of freedom experienced during the Covid-19 pandemic also contributed to increase the global yacht orderbook [2]. These two recent economic global crises highlighted a needing of significant changes both manufacturing system and design process: the yachting market, as well as the broader luxury landscape, is under transformation by the shifting wealth demographic [3]. The main raising trends are affecting the yachting sector at different levels: for this reason, they have been analysed and divided according to the different impact they have on each of these three market aspects: object, target, and values.

Object: Size Growing. The demand for small and medium crafts is shrinking and shifting, and the yacht market is growing both in sales volume and on boat size [4].

Target: Owners' Awareness. Environmental issues have made consumers more selective: the upcoming consumer force wants to see actionable plans and measurable progress regarding sustainability, and actively chooses brand that work to make the world a better place [5]. Shipyards also forecast that the yacht owners will get 10–15 years younger in the next 20 years [6].

Values: New Luxury. The luxury sector is slowly recognizing its responsibilities and opportunities to encourage sustainability in sourcing, manufacturing, and marketing [7].

2 Problem Framing

2.1 Status-Symbol Object Objects: The Yachts

Weber (1946) defined status as the degree of social honour, prestige, and respect attributed to an individual by others: the status value beliefs develop from perceptions of one's material resources, which include possessions and the symbolic meaning they represent [8]. However, not all products may be relevant to one's self-concept, because others may not view him/her using particular products, or simply because some products are not as rich in symbolic content or meaning. Prown (1982) distinguished between the inherent and attached values of possession: the inherent value is intrinsic, established by the rarity of the materials that compose the product. The attached value is more symbolic, having been attached by the people who originally made or use the object, and these values can have a significant impact on the monetary worth of the object [9]. Gottiener (1985) referred to the symbolic meaning of products as a second-order function: he used automobiles as an example. The primary function of automobiles is transportation; although, depending on the make, they often have a powerful second-order function as a symbol of social status [10]. The same can be told of yachts: among the examples provided by Enciclopedia Treccani to describe what status-symbol objects are, the first is about "owning a yacht" [11]. These products an individual purchases reflect his/her taste and consumption behaviour is a key component of lifestyle: since the lifestyle of many is changing, also the concept of status symbol is slowing becoming different [12].

2.2 Luxury and Sustainability: Conflict or Synergy?

Luxury, compared with non-luxury, is synonymous with superior quality, uniqueness and going beyond need. Given the association of luxury consumption with ostentation, overconsumption, and overproduction, the conflicts between luxury and sustainability are still evident [7]. Despite this identify mismatch, the necessity of managing sustainability has already been institutionalized. The first mention of sustainable luxury appears in Bendell and Kleanthous's World Wildlife Fund (WWF) report [13] in 2007. The report envisions moving towards authentic luxury brands that position sustainability at their core, but it offers few pathways to this resolution. Moreover, recent years' climate challenges led luxury producers to face pressure to make their business processes more sustainable supply [14]. Furthermore, a profound understanding of the mechanisms behind the successful combination of luxury and sustainability can provide insights for both enhancing individual firm success and achieving a shift towards more sustainable products, which is also desirable from a societal perspective [15]. A higher level of sustainability is also more and more required by the target: consumer behaviour which is geared towards sustainability-oriented products is often correlated with the awareness about the impact of one's own purchasing decision on the environment [16]. Moreover, according to the Global Web Index survey (2020), 64% of Gen Z and 6% of Gen Y are willing to pay more for an "environmentally friendly" product 172].

2.3 Research Questions

Yachting market trends highlight on one hand a growing demand for increasing yacht size [4], and on the other yacht owners getting younger and younger, with different needs from the previous generation [6]. According to these figures, the yachting sector risks being linked with luxury ostentation, no more considered a positive value for new generations of potential owners. However, few studies are available on sustainable luxury increasing trend in relation to yachting sector: the central goal of this research is to present the evolution of yachting products, and the practices put in place by also shipbuilders and yacht designer to convey sustainable values to their audience. This goal is addressed through the following research questions:

RQ 1: How have been yachts evolved in the last decades, in accordance with the new sustainable luxury perspective?

RQ 2: What are the new values embodied and communicated both by yachts and companies/designers?

3 Applied Methodology

According to the scope of the research questions, a two-steps methodology was adopted, consisting of (i) an initial qualitative literature review, and (ii) a subsequent case studies collection. The literature review was focused on both yacht design stylistics and technologic evolution, including academic journal paper, articles, and doctoral thesis. Three main data gathering methods were performed: desk research, yacht designers' interviews, and infield observation. The selection criterion was the same for both steps only yachts of length ranging between 30 and 100 m, built between 1990 up to date were collected and analysed.

According to the set criterion, the study first conducted a literature review based on historiographical research that considers the main theories and trends about yacht design aesthetic evolutions. This activity encompassed a review of approached from both sociologists and architectures and yacht design disciplines' historians such as Daverio (2009), Di Bucchianico (2011), Vallicelli (2011), Campolongo (2019). Then, a timeline that highlights the steps of naval design put in order the findings. The results of these first studies framed the state of the art and research inquiries. Second, case studies were selected and divided into two categories, according to the messages they convey: the purpose of the first category, which includes only real yachts, is to highlights the formal evolution of this kind of products. Then, the second category refers to a series of events, marketing and communications' operation put in place by yachting community to convey the messages that not only the objects themselves are changing, but also the values they embodied.

4 Findings and Research Evidence: The Yachting Evolution

4.1 Formal Evolution

In this paragraph are presented the case studies gathered following to the methodology applied. Aim of this section is to highlight the formal and technical evolution towards a new concept of luxury which embrace also sustainable features. In general, both interiors and exteriors are nowadays extremely different from the ones of the early 90's. For most of the twentieth century, the most representative statement to describe the nature of yachts' interior is by Barthes (1956): "an inclination for ships always means the joy of perfectly enclosing oneself, of having at hand the greatest possible number of objects and having at one's disposal a finite space" [18]. Yacht interiors have then slowing shifted from heavy over decorated space with opulent pieces of furniture and texture to a more linear, modern, and clean languages. For more than a century yacht interior had been characterized by custom made pieces of furniture, mainly built with the most exotics and darkest wood essences. Fabrics' textures and finishing materials were, in general, baroque, and heavy to see, with the effect of making spaces narrower (Fig. 1). Furthermore, especially during the last decades of the twentieth century, there was not correspondence between the land-based architecture styles and trends, and the one of yachting, which remained linked to an outdated taste. Nabilia (Fig. 1a), an 86 m superyacht built in 1979 by the Italian shipyard Benetti, was built on commission by the Saudi businessman Adnan Khashoggi, who wanted to build the world's most luxurious and modern motor yacht. She was one of the world's largest yachts at the time and soon became known the world over for her sumptuous interiors and ostentatious luxury: the 11 suites were panelled with chamois leather and bird's-eye maple; bathrooms were decked out in gold and onyx. The interior design was managed by Luigi Sturchio. Another example of the design trend of the past century is represented by Sokar, a 63 m motor yacht built in 1990 by Codecasa shipyard: the most striking aspect of the interior was the sumptuous use of lacquered briar wood veneer for most of bulkheads and elements of furniture (Fig. 1b). Then Alejandra, a 41,33 m yacht built by the Spanish shipyard Mefasa in 1993, shows how the same interior design trend was widespread also onboard sailing yacht. Her interiors, styled by design house Bruce King, which

accommodate eight in four cabins, are classically styled and features a blend of Cuban mahogany (Fig. 1c): despite the custom skylights that allow the fresh sea breeze to flood the interior spaces, there is no correspondence between the interior and the exterior; and only the scale model of the yacht displayed in a niche could help guests under-standing that are inside a sailing yacht.

Fig. 1. 1990s' interior yacht design: case studies.

During the last decade of the twentieth century, there was not correspondence between the land-based architecture styles and trends, and the one of yachting, which remained linked to an outdated taste. Only few yachts can be considered exception, ambassadors of the new raising features that today are widespread onboard (Fig. 2): Blue Velvet, built by Codecasa shipyard with Porfiristudio and launched in 1994 is one of the first motor yacht that introduced onboard "free standing" pieces of furniture directly coming from the home furnishing (Fig. 2a). Moreover, almost all the bulk-heads were covered with the same leather materials, which was a real revolution for

that time. Onboard the motor yacht Sai Ram II (Benetti shipyard, 2003) the firm Lazzarini&Pickering adopted a new perspective to design a yacht: the arrangement onboard was, in fact, completely unusual for the time. Furthermore, there were also large informal lounge areas both indoors and outdoors, with furniture made up of a few macro elements, and oversized sofas (Fig. 2b). Nowadays the hybridization trend between houses and boats, and the lower level of formalities onboard are no more a prerogative of only fully custom yacht producers: the Italian shipyard Sanlorenzo, in collaboration with Lissoni&Partners architecture firm, has been the first shipyard to open, with the SX line, to serial production the cross-over yacht designed as an open space (Fig. 2c).

Fig. 2. New trends of the yacht design interior: case studies

4.2 New Values for Sustainable Luxury in Yachting

It is important that sustainability efforts avoid being perceived as self-serving: luxury 'green-washing' is a risk if organizations engage in the proliferation of unsubstantiated ethical and sustainability claims, leading to increased consumer cynicism and mistrust [19]. Furthermore, today more than ever consumers are influenced by the perceived status of the product, as well as the perceive status of the retailer [12].

Beside design choice that allow yachts to perform in a more sustainable way, many shipyards and designers start taking part or promoting events addressed to raise awareness about sustainability needs in the yachting market. For many, sailing is not only a free-time activity but a sport that beside the competition is committed to spread positive messages to its audience, also thanks to the worldwide visibility some sporting events can boast. America's Cup is for instance going far beyond just being a responsible sport event organization: the protocol for the 37th Edition of the oldest trophy in international sport obliges all teams to build and operate two hydrogen-powered foiling chase boats for their campaign [20]. The showcasing proven hydrogen technology in the marine sector will help create a game-changing pathway for the wider industry and lead to a significant reduction in its carbon footprint.

Also The Ocean Race, thanks to its worldwide visibility and audience, is bringing attention to ocean health throughout a series of plastic clean-up events and global platform [21]: the objective is to create awareness, activate discussion, highlight local relevancy and put out a call to action to businesses, governments and individuals to play their part in turning the tide on plastic. In the online platform "Racing with purpose" of The Ocean Race website [21] are displayed all the objects and initiatives currently underway, with also a Sustainability Report (2019, 2020 and 2021) that tracks the progress in meeting their sustainability ambitions.

Then, if few years ago yachts and superyachts' brands were often associated only to the ones of supercars and watches, nowadays also marketing operations reflect the importance of being linked with organizations and events focused on environmental issues. An emblematic example of this strategy is represented by the Italian shipyard Rossinavi, which recently started a partnership with Parley for the Ocean [22], a non-profit organization that enables creators, thinkers, and leaders to collaborate and raise awareness on the rampant ocean pollution problem: the context is the one of a call to action for the yachting industry to embrace eco-innovation and development of new technologies with low environmental impact. "As yacht builders we have a natural responsibility to respect and protect the oceans" states Federico Rossi, COO of Rossinavi [22].

Also the British boatbuilder Sunseeker started a partnership with BLUE (Blue Marine Foundation), a UK-based charity dedicated to restoring the world's ocean to health by establishing marine protected areas and tackling overfishing: Project Menorca will see Sunseeker and Blue team up with a number of local organisations help tackle the numerous pressures facing the island's marine environment.

At The Superyacht Forum 2019, Water Revolution Foundation launched its Yacht Assessment Tool, created through collaboration with shipyards to minimize the marine industry's ecological footprint and preserve the ocean throughout a software tool based on computational sustainability for sustainable development within the superyacht industry.

5 Conclusion

This research aims to study how the yachting sector and shipbuilders are evolving according to the raising market demand of sustainable luxury objects. This evolution is affecting not only brand values' communications, but also the yachts themselves: within three decades yacht interiors have been completely redesigned, this thanks to a new sensibility both of yacht owners' and designers and their attention to the shift in lifestyle behavior and status symbol changes. From the market perspective, luxury brand cannot ignore that they act like industry model, and they have the duty to leave by example: a shift towards sustainable luxury can pave the way for more sustainable mass products on a broad scope as well. Shipbuilders are now called on to deal with the evolution of roles, aesthetics features and new attitudes and values such as partnerships with sustainability ambassadors' organizations, reduction of prediction footprints and attention to climate change.

To understand the complex relation between sustainability and yachting it is fundamental to consider the potential of this industry, a playground where almost unlimited budgets meet the most advanced technologies, and that's way yacht industry must start to be considered and to act as a sector can drive the change in term of sustainability.

6 Further Research

Yachts formal revolution also affected the exterior design: the lines become more straight and simple year after year, and also the volume distribution changes: the better management of the onboard spaces, also thank to several technological innovations, allowed to reduce even the number of decks: for this reason, further studies will focus on the evolution of also exterior yacht design. Moreover, the research teams will continue to foster didactic activities like workshops that both involves Master in Yacht Design students and industry stakeholders, to support shipyards and yacht designers transition toward more sustainable yacht design communication and production. Then, participation in EU funded projects and PhD scholarships are other great opportunities to also investigate another aspect of sustainability: the reduction of greenhouses gas emitted by ships and yachts during they lifetime. All these research activities will contribute to provide further assessment of how yachting sector can become a less polluting and more sustainable industry in the next years.

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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
Biasetton, Noemi 103
Biasetton, 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

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F. Zanella et al. (Eds.): Design! OPEN 2022, SSDI 37, pp. 795–796, 2024.
https://doi.org/10.1007/978-3-031-49811-4

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