ANDRÉA FRANCO PEREIRA CHIARA DEL GAUDIO (editors)

DESIGN ECOVISIONS

Research on design and sustainability in Brazil

Volume 2

2021

Design ecovisions: research on design and sustainability in Brazil - Volume 2

© 2021 Andréa Franco Pereira, Chiara Del Gaudio (editors) Editora Edgard Blücher Ltda.

Diagramação: Taís do Lago Tradução e revisão: Rafaella Holouka e Gustavo Marcelino de Souza

Blucher

Rua Pedroso Alvarenga, 1245, 4° andar 04531-934 – São Paulo – SP – Brasil Tel 55 11 3078-5366 contato@blucher.com.br www.blucher.com.br

Segundo Novo Acordo Ortográfico, conforme 5. ed. do Vocabulário Ortográfico da Língua Portuguesa, Academia Brasileira de Letras, março de 2009.

É proibida a reprodução total ou parcial por quaisquer meios, sem autorização escrita da Editora.

Cataloging-in-Publication Data (CIP) Angélica Ilacqua CRB-8/7057

Design ecovisions : research on design and sustainability in Brazil / organized by Andréa Franco Pereira, Chiara Del Gaudio. -- São Paulo : Blucher, 2021.

266 p.

Includes bibliographical references ISBN 978-65-5550-063-9 (paper) ISBN 978-65-5550-065-3 (e-book)

Design, industrial 2. Technological innovation
Social aspects 4. Sustainability I. Pereira, Andréa
Franco II. Del Gaudio, Chiara

21-0954

CDD 745.4

Todos os direitos reservados pela Editora Edgard Blücher Ltda. Indexes for Systematic Catalog: 1. Design, industrial

Editorial Board:

Doctor Professor Andréa Franco Pereira, Universidade Federal de Minas Gerais, Brazil.

Doctor Professor Chiara Del Gaudio, Carleton University, Canada.

Doctor Professor Kátia Andréa Carvalhaes Pêgo, Universidade do Estado de Minas Gerais, Brazil.

Doctor Professor Laura de Souza Cota Carvalho Silva Pinto, Universidade Federal de Minas Gerais, Brazil.

Doctor Professor Virgínia Pereira Cavalcanti, Universidade Federal de Pernambuco, Brazil.

Book publication sponsored by:

Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG)



SBDS + ISSD 2017 sponsored by:

Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)



ABSTRACT

DESIGN ECOVISIONS – Volume 2: Research on design and sustainability in Brazil presents the results of the panel discussions of the 6° Simpósio Brasileiro de Design Sustentável + International Symposium on Sustainable Design (SBDS + ISSD 2017), held in 2017 in Belo Horizonte. The event aimed at gathering researchers, students and design professionals, as well as representatives of the productive and governmental sectors, who seek to discuss the current and future framework of design in relation to various aspects of sustainable development. It was based on dynamics for exchange, sharing, and collaboration among design researchers engaged with sustainability, previously experienced in the 5th edition of the symposium, held in 2015 in Rio de Janeiro, and which results were recorded in the first volume of this series. The theme of Volume 2 is the tripod of sustainability, and it is addressed by reflecting on "design, territory and culture"; "social innovation and collaborative models"; "ecomaterials"; "environmental labelling"; "design and craftsmanship"; and "circular economy". The chapters reflect the researchers' contributions and their discussions, and are organized in three parts. The first encompasses design in the context of sustainable consumption and production, focusing on materials and environmental labelling. The second seeks to discuss design and emerging approaches through the concepts of local production, territory and collaborative models. The third part consists of reports of experiences from the event or from design practice. Thus, combining theory and practice, this book seeks to materialize the meeting as a relevant event for the area, and a fruitful space for debates on the theme of sustainability allied to design in Brazil.

FOREWORD

This work presents the results of round-table discussions which took place at the *Simpósio Brasileiro de Design Sustentável* + *International Symposium on Sustainable Design* (SBDS + ISSD) 6th edition 2017, accomplished in Belo Horizonte (MG), from August 1st to 4th, 2017.

The SBDS + ISSD is an important event and it has been settling itself through each edition as a fruitful space for debates about sustainability focused on design in Brazil. It is also important to highlight that, by the end of the event in 2017, the plenary made the decision of simplifying their name, which now can be called Sustainable Design Symposium (SDS), making its 7th edition already under this name in 2019, in Recife (PE). The main goal of this event is to reunite researchers, students and professionals of the design field, as well as representatives of the productive sector and government, who seek to discuss the design current and future situation, according to plenty aspects linked to sustainable development.

In 2017, the 6th edition was organized by the Programa de Pós-Graduação Ambiente Construído e Patrimônio Sustentável of Universidade Federal de Minas Gerais (UFMG). The first edition of the event was accomplished in Curitiba (PR), in 2007, and it was organized by Universidade Federal do Paraná (UFPR). The second edition was organized by Universidade Anhembi Morumbi, in 2009, in São Paulo (SP). In 2011, was time for Recife (PE) to host the event, which was organized by Universidade Federal de Pernambuco (UFPE). In 2013, in Porto Alegre (RS), the event was hosted by Universidade Federal do Rio Grande do Sul (UFRGS), Universidade do Vale do Rio dos Sinos (Unisinos), and the Centro Universitário Ritter dos Reis (UniRitter). In 2015, for the first time, it was held in Rio de Janeiro (RJ) by the Pontifícia Universidade Católica of Rio de Janeiro (PUC-Rio), and only in the national version of the event (SBDS).

In this 6th edition, the organizing committee decided to try to internationalize the event and keep the last edition proposal to host round-tables made mainly by Brazilian researchers, willing to value these researchers professors of diverse of Brazilian universities to allow them to have meetings between themselves and with representatives of the productive sector and government, as well as seeking for the publishment of an organized book which results from those discussions.

The event was structured in six sections: 1) design, territory and culture; 2) social innovation and cooperative models; 3) ecomaterials; 4) environmental labelling; 5) design and crafting; 6) circular economy, with the purpose to contribute to the deepening and reflection over the triple bottom line (people, planet, profit) to sum up with a better conceptual definition and limits of acting, for the professionals of these fields.

The 2017 SBDS-ISSD opening ceremony took place on August 1st, at 7 p.m., at the auditorium of the Federação das Indústrias do Estado de Minas Gerais (FIEMG).

During the mornings of August 2^{nd} and 3^{rd} , 2017, there were technical sessions of the submitted works and evaluation in process of blind review.

Forty-four works were presented and, by the organization committee decision, all of them were submitted in English to have a better international range, which allowed the scientific committee to have 20% of foreigner researchers. On the whole of the 39 members, there were professors from plenty Brazilian institutions, three from Portuguese institutions, one from a Dutch institution, two from the United Kingdom, one from Australia and one from South Africa. Sixty-two works from 35 institutions from 9 different states were submitted, along with 10 foreign institutions, which were one from Colombia, one from Canada, four from Portugal, two from the United States of America and two from the United Kingdom. The SBDS + ISSD 2017 had an international reach never seen before.

8

The works showed in those technical sessions were published online in English by the book publisher Blucher, indexed from Digital Object Identifier (DOI) and they are available in: (https://www.proceedings.blucher.com.br/article-list/sbds-issd-2017-290/list#articles).

During the afternoons of August 2nd, 3rd and 4th, 2017, three concurrent sessions were dedicated to the round-tables, talking about the six topics mentioned beforehand. During these round-tables, representatives of the universities UFMG, UFRJ, Unisinos, UFSC, UFPE, PUC-Rio, and the institutions ICMBio, Mon Caviste, MateriaLAB, FSC, MDIC, ABNT Ambiental, iT Projetos, Mary Design, Trans.forma Design for Social, Sinctronics, Cooperárvore, Refúgio Engenharia Ambiental, FIEMG and designers who are actually working in the area, were present.

The morning of August 4th was focused on the ending plenary session.

In addition to the institutions previously mentioned, the event brought 35 Brazilian universities, including congresses and the scientific committee (Esdi-UERJ, FUMEC, IFB, IFSC, PUC-MG, PUC-Rio, PUC-RS, SENAC-SP, UEL, UEMG, UFAM, UFBA, UFCSPA, UFF, UFMA, UFMG, UFMT, UFPE, UFPR, UFRGS, UFRJ, UFSC, UFU, UnB, UNESP-Bauru, UNICAMP, Unisinos, Universidade Estadual de Maringá, Universidade Federal do Cariri, Universidade Estadual de Londrina, Universidade Federal de Pelotas, Universidade do Estado do Pará, Univille, USP, UTFPR) and 15 foreign institutions (Portugal: IP Portalegre, Instituto Politécnico de Tomar, Universidade de Lisboa, Universidade do Minho, Universidade de Aveiro; the Netherlands: Leiden University; United Kingdom: University for the Creative Arts, University of Sheffield, University of Warwick; Australia: University of New South Wales; South Africa: Cape Peninsula University of Technology; Colombia: Universidad Pontificia Bolivariana; Canada: Université Laval; USA: Parsons School of Design, Virginia Tech). To sum up, 120 people were present during the SBDS + ISSD 2017, keeping the same number of previous editions.

Six students from the design course and a doctoral student from UFMG were present, who summed up to the event organization committee in many activities. Being part of the event is important for the students' formation. Besides that, the SBDS + ISSD 2017 visual identity was developed by the students of the UFMG design course, Mariana Guimarães Jacinto e Stephanie de Figueiredo Silveira. The concept intended to bring some local aspects to the environmental visualization, inspiring itself on the elements of the church São Francisco da Pampulha, Belo Horizonte's essential key and The United Nations Educational, Scientific and Cultural Organization (UNESCO) worldwide property since 2016. The Candido Portinari's composite panel was taken as the label background and the fish figure as the environmental indicator symbol, acting as the coming back of health and life to the rivers stemming from sustainability actions.

The event was supported by FIEMG, as in Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES), Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) funding agencies and Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG), the resources of the last one allowed this work to be published.

Hereafter, the following texts will reflect the round-table discussions and they will be divided into three sections: part I will bring you some works that make part of the ecomaterials field, the circular economy and the environmental labelling; part II will show you the discussion related to design, territory and the crafting culture, among other things like social innovation and collaborative models; finally, part III registers three reports by people who spent their time in the event and practice the design.

> Andréa Franco Pereira August, 2020.

FORECAST

PART I	3
1. DESIGN IN THE CONTEXT OF SUSTAINABLE CONSUMPTION AND PRODUCTION: MATERIALS AND ENVIRONMENTAL LABELLING	5
Andréa Franco Pereira	
2. THE SUSTAINABILITY ISSUE ABOUT PLASTIC MATERIALS2	9
Vicente de Paulo Santos Cerqueira	
3. A CASE STUDY ABOUT CIRCULAR ECONOMY AND SUSTAINABILITY IN A SMALL BUSINESS	5
Frederico Campos Viana	
4. CIRCULAR ECONOMY IN INDUSTRIAL DISTRICTS IN MINAS GERAIS, BRAZIL	7
Guilherme da Mata Zanforlin	
Ana Luiza Carvalho Fadel	
Wagner Soares Costa	
5. THE ECOLABELLING TYPE I IN BRAZIL'S SUSTAINABLE PUBLIC PROCUREMENT	7
Antônio José Juliani	
6. ENVIRONMENTAL LABELLING: THE IMPORTANCE OF THE CERTIFICATION RELATED TO SEVERAL ENVIRONMENTAL APPEALS PRESENT IN THE BRAZILIA MARKET	
Vinicius Gomes Ribeiro	
7. BUILDING LABELLING IN BRAZIL: A FOCUS ON ENERGY EFFICIENCY	7
Roberta Vieira Gonçalves de Souza	
8. ENVIRONMENTAL LABELLING EFFECTIVENESS FOR PRODUCTS	1
PART II	7

9. EMERGENT AND LOCAL APPROACHES IN DESIGN: LOCAL PRODUCTION, TERRITORY AND COLLABORATIVE MODELS
Chiara Del Gaudio
10. DESIGN AND SUSTAINABILITY IN PRACTICE: VALUING THE TERRITORY AS A POSSIBILITY
Laura de Souza Cota Carvalho Silva Pinto
11. SYSTEMIC DESIGN FOR EXTENDED SUSTAINABILITY
Kátia Andréa Carvalhaes Pêgo
12. PRODUCTIVE CHAINS OF AMAZONIAN SOCIOBIODIVERSITY AND ECODESIGN OPPORTUNITIES: BRAZILIAN CROCODILIANS AS A WORKING MODEL
Marcos Eduardo Coutinho
Laura de Souza Cota Carvalho Silva Pinto
Cristiano Andrey Souza do Vale
Andréa Franco Pereira
13. DESIGN & HEALTH: A FIELD OF SYMPOIETIC PRACTICES
Barbara Szaniecki
Talita Tibola
Camille Moraes
14. PARADIGMS TRANSITION IN DESIGN: WHAT IS ITS POTENTIAL TO SUSTAINABILITY AND INNOVATION RESIGNIFICATION?
Ione Maria Ghislene Bentz
15. DESIGN AND SOCIAL UTOPIAS: THE OPEN-ENDED DESIGN OF HETEROTOPIC MOVEMENTS
Chiara Del Gaudio
PART III
16. REPORT: DESIGN AND HANDICRAFT207
Virgínia Pereira Cavalcanti
17. REPORT: NOMAD WORKSHOP, LOOK FOR WHAT, FIND OUT WHAT? LOOK FOR AND FIND WHAT THE COLLECTIVE KNOWS
Christian Ullmann
18. RETHINKING DESIGN FROM OTHER LENSES: PEER-TO-PEER OPEN
DESIGN