POLITECNICO DI TORINO Repository ISTITUZIONALE

Cooperatives enterprise, incubators for the co-design of a new organizational and management model for sustainable development

Original Cooperatives enterprise, incubators for the co-design of a new organizational and management model for sustainable development / Rosini, Caterina; Barbero, Silvia ELETTRONICO 2:(2021), pp. 3222-3234. ((Intervento presentato al convegno Cumulus Roma 2021 conference tenutosi a on-line nel June 8-11, 2021.
Availability: This version is available at: 11583/2927910 since: 2022-01-31T15:59:28Z
Publisher: Cumulus the Global Association of Art and Design Education and Research. Aalto University, School of
Published DOI:
Terms of use: openAccess
This article is made available under terms and conditions as specified in the corresponding bibliographic description in the repository
Publisher copyright

(Article begins on next page)





Cumulus Conference Proceedings Series 07/2021 Rome

Design Culture(s) Cumulus Conference Proceedings Roma 2021

Volume #2

Editors

Loredana Di Lucchio Lorenzo Imbesi Angela Giambattista Viktor Malakuczi

Layout and Graphic Design

Viktor Malakuczi Concept for Cumulus Conference Proceedings Series was developed in 2018 by Jani Pulkka

Cumulus conference

Design Culture(s)
hosted by
Sapienza University of Rome, Italy
on June 8-11, 2021.
Conference website:
www.cumulusroma2020.org

Published by Cumulus

Cumulus the Global Association of Art and Design Education and Research. Aalto University, School of Arts, Design and Architecture PO BOX 31000, FI-00076 Aalto www.cumulusassociation.org

Copyright © 2021

Sapienza University of Rome, Cumulus Association, Aalto University. All content remains the property of authors, editors and institutes.

ISBN 978-952-64-9004-5 (PDF) ISSN 2490-046X Cumulus Conference Proceedings Series, N°7

Cumulus Conference Proceedings Series

Editor-in-Chief

Cumulus President Mariana Amatullo

Publications in the Series

01/17 Kolding, REDO

02/17 Bengaluru, Letters to the Future

03/18 Paris, To get there: designing together

04/18 Wuxi, Diffused Transition & Design Opportunities

05/19 Rovaniemi, Around the Campfire – Resilience and Intelligence

06/19 Bogotá, The Design After

07/21 Rome, Design Culture(s) Volume #1, Volume #2

DESIGN CULTURE(S)

Cumulus Conference Proceedings Roma 2021

Volume #2

Cumulus Conference Proceedings Series

Cumulus the Global Association of Art and Design Education and Research

Rome 2021

DE SIGN CULT URE(S)

ROMA 2021

JUNE 08.09.10.11 CUMULUS CONFERENCE

OVERVIEW

36	ABOUT THE CONFERENCE	2095	DESIGN CULTURE (OF) NEW NORMAL
49	EXHIBITIONS all tracks		track
81	DESIGN CULTURE (OF) ARTIFICIAL track	2604	DESIGN CULTURE (OF) PROXIMITY track
	·	3153	DESIGN
629	DESIGN CULTURE (OF) LANGUAGES track		CULTURE (OF) RESILIENCE track
		3929	DESIGN
1175	DESIGN CULTURE (OF) LIFE		CULTURE (OF) REVOLUTION track
	track	4383	DESIGN
1425	DESIGN CULTURE (OF) MAKING track		CULTURE (OF) THINKING track
		4768	POSTERS
1891	DESIGN CULTURE (OF) MULTIPLICITY track		all tracks

About the conference Loredana Di Lucchio, Lorenzo Imbesi	69	PROXIMITY Newcomers: Design for Immigrants Pratt Institute's School of Design, USA
EXHIBITIONS	72	RESILIENCE Designing for Resilience: Creating new possibilities for industrial cities University of Monterrey, Mexico
ARTIFICIAL City of Experiences		Oniversity of Monterrey, Mexico
George Brown College, Canada	75	REVOLUTION UFO Drift: In
LANGUAGES Post collaboration as a form of counter-culture: The birth of new languages		Search of Practice ArtEZ University of the Arts Arnhem, Netherlands
University of Johannesburg, South Africa	78	THINKING Design and awareness: user meeting ESDAP Catalunya, Spain
LIFE Design for social problems in Mexico: living with disabilities Autonomous Metropolitan University, Azcapotzalco, Mexico	81	DESIGN
	01	CULTURE (OF)
MAKING New Textile Topologies: Experiments at the intersection of surface, textile		ARTIFICIAL
and form The Swedish School of Textiles, Sweden	83	A participated parametric design experience on humanoid robotics Francesco Burlando, Xavier
MULTIPLICITY Self-Acceptance		Ferrari Tumay, Annapaola Vacanti
to Self-Indulgence Pearl Academy, India	99	A systemic vision for the common good: C A S E Goods Mobility
NEW NORMAL Expedition 2 Degrees Zurich University of the Arts		in the fourth industrial revolution Veneranda Carrino, Federica Spera

Activist Activated: Efficacies of AR Political Poster Design Sarah Edmands Martin	199	Consensual (Design) Fictions: co- creating iterative use cases to define technology conceptualization
Art, Design, and Mathematics: Software programming as artifice in the creative process		David Hernández Falagán, Andreu Belsunces Gonçalves, Kevin Koidl
Carlos de Oliveira Junior, Eduardo Ariel de Souza Teixeira	215	Design of robotic for superhuman tasks Fabrizio Formati
Artificial Creativity – Hybridizing the Artificial and the Human. Yael Eylat Van Essen	227	Design, space management and work tools: enhancing human work in transition to Industry 4.0
Artificial Intelligence is a Character? Exploring design scenarios to build interface		Luca Casarotto, Pietro Costa, Enrica Cunico
behaviours Andrea Di Salvo, Andrea Arcoraci	237	Designers' skills for Social Robotics Maximiliano Romero, Giovanni
Becoming Janus: The Subversive Potential of Face Recognition Technologies		Borga, Rohan Sashindran Vangal, Francesco Baldassarra
Romi Mikulinsky	251	Designing for the future by understanding evolving culture
Between digital and physical. Envisioning and prototyping smart material systems and artifacts from data-informed scenarios.		based on advancing technology and the changing behaviours that accompany it. Nayna Yadav
Stefano Parisi, Patrizia Bolzan, Mila Stepanovic, Laura Varisco, Ilaria Mariani	264	Designing Somatic Play for Digital Natives through a Body-centric Design Process Seçil Uğur Yavuz, Kristi Kuusk, Michaela Honauer
	Political Poster Design Sarah Edmands Martin Art, Design, and Mathematics: Software programming as artifice in the creative process Carlos de Oliveira Junior, Eduardo Ariel de Souza Teixeira Artificial Creativity – Hybridizing the Artificial and the Human. Yael Eylat Van Essen Artificial Intelligence is a Character? Exploring design scenarios to build interface behaviours Andrea Di Salvo, Andrea Arcoraci Becoming Janus: The Subversive Potential of Face Recognition Technologies Romi Mikulinsky Between digital and physical. Envisioning and prototyping smart material systems and artifacts from data-informed scenarios. Stefano Parisi, Patrizia Bolzan, Mila Stepanovic, Laura Varisco,	Political Poster Design Sarah Edmands Martin Art, Design, and Mathematics: Software programming as artifice in the creative process Carlos de Oliveira Junior, Eduardo Ariel de Souza Teixeira Artificial Creativity – Hybridizing the Artificial and the Human. Yael Eylat Van Essen Artificial Intelligence is a Character? Exploring design scenarios to build interface behaviours Andrea Di Salvo, Andrea Arcoraci Becoming Janus: The Subversive Potential of Face Recognition Technologies Romi Mikulinsky 251 Between digital and physical. Envisioning and prototyping smart material systems and artifacts from data-informed scenarios. Stefano Parisi, Patrizia Bolzan, Mila Stepanovic, Laura Varisco,

279	Designing unpredictable futures. An anthropological perspective on the algorithmical prediction of human behaviour Giovanna Santanera, Roberta Raffaetà	360	From the evaluation of acceptability to design of an assistive robot for elderly Francesca Tosi, Mattia Pistolesi, Claudia Becchimanzi
290	Digital Creativity Tools Framework Marita Canina, Carmen Bruno	376	Future heritage and heritage futures. A design perspective on the activation of Digital cultural heritage stored in archives Margherita Tufarelli
304	Digital tools that support students to reflect on their design competency growth paths John Fass, Job Rutgers	386	Going beyond the problem of privacy: individual and social impacts of the use of personal information in connected services
316	Domestic AI and Emotional Involvement. Design Perspectives Mauro Ceconello, Martina Sciannamé, Davide Spallazzo	400	Human and Artificial Intelligence for the Cultural Reform of Design Elena Laudante, Mario Buono
328	Empowered by Code, to act in real word Alfredo Calosci	412	Human Sensibility, Robotic Craft: Toward Autonomous Stonework Tom Shaked, Karen Lee Bar-Sinai,
339	Exploring Digital Inequalities: How Welfare States are disappearing behind an AI Paola Pierri	423	Interface takes command. Educational environments, tools and practices to face the new
349	From Decoration to Functionality — Research on smart accessories design in the Internet era Qingman Wu	437	normal. Alessio Caccamo Intelligent Voice Assistants: A Review of User Experience Issues and Design Challenges Lucia Rampino, Sara Colombo

Research on Gender Differences of Adult Head Shape in China Renke He, Wenxiu Yang, Wanshan Li, Haining Wang	537	The Perceptual and Dialogical Form of Design between Time, Space and Technologies Camelia Chivăran, Sonia Capece
Speculative Physical Models Created Through a Robotic Process Sara Codarin, Karl Daubmann	552	The role of Design in telepresence robotics experience Claudio Germak, Lorenza Abbate
Teaching Design in the Age of Platforms: A Framework for Platform Education Xinyi Li	565	The Venice Backup: Case studies on the use of Virtual Preservation Techniques on Architectural Heritage sites in Venice, Italy Kai Reaver
The body as an artefact: a case of hand prosthesis Venere Ferraro, Silvia Ferraris, Lucia Rampino	587	Towards a visual-based survey on explainable machine learning Beatrice Gobbo
The design of human machine interfaces: from data to risk prevention. Annalisa Di Roma, Alessandra	604	Toys and Play, Weapons and Warfare: Militarizing the Xbox Controller Rachel Berger
Scarcelli	619	Wearing the smart city: Supporting older adults to
The Designer in the AI/Machine Learning Creation Process Frederique Krupa		exercise by combining age- friendly environments and tailored digital public data Nicole Aimers, Alen Keirnan, Ann
The encounter between Design and Artificial Intelligence: how do we frame new approaches?		Borda, Sonja Pedell

754

Data visualization as a qualitative

DESIGN CULTURE (OF) LANGUAGES		driver in knowledge communication: an interpretative framework Giulia Ciliberto
A Sidewalk museum. Exhibiting the collective dimension of the moving image Nicolo Giacomo Ceccarelli, Marco Sironi, Sabrina Melis	771	Design and Cultural Sites: New signage methods and languages for fruition, accessibility and storytelling Monica Oddone, Irene Caputo, Marco Bozzola
Abstract to figurative, and everything in between: visual design approaches and linguistic codes of a traditional form of animated product.	786	Design and the 'Magical magic'. Disney and history, perceived heritage and shared memory Luisa Chimenz
Vincenzo Maselli, Eleni Mouri	800	DEsign DEcide The sign Tsvetomira Girginova
Al-Kafiye: A Symbol of Change Hala Abdel Malak	811	Designing the Gross. In search for social inclusion
Beyondstories. People Narrative makes a Territory Aureliano Capri, Valeria Michetti,		Adrien Rigobello, Nadja Gaudillière-Jami
Veneranda Carrino, Mauro Palatucci	828	Finding New Representations of Old Knowledge: a design study of visualizing I-Ching
Brand in Product. The language of the brand to govern complexity		Yvette Shen
Mario Rullo, Massimiliano Datti		Form is function. Ethics and aesthetics of digital technologies
Creating Visual Identity as Constellation: Methodological Project for a Design Workshop Ximena Izquierdo, Magdalena		in inclusive interface design. Letizia Bollini
	A Sidewalk museum. Exhibiting the collective dimension of the moving image Nicolo Giacomo Ceccarelli, Marco Sironi, Sabrina Melis Abstract to figurative, and everything in between: visual design approaches and linguistic codes of a traditional form of animated product. Vincenzo Maselli, Eleni Mouri Al-Kafiye: A Symbol of Change Hala Abdel Malak Beyondstories. People Narrative makes a Territory Aureliano Capri, Valeria Michetti, Veneranda Carrino, Mauro Palatucci Brand in Product. The language of the brand to govern complexity Mario Rullo, Massimiliano Datti Creating Visual Identity as Constellation: Methodological	A Sidewalk museum. Exhibiting the collective dimension of the moving image Nicolo Giacomo Ceccarelli, Marco Sironi, Sabrina Melis Abstract to figurative, and everything in between: visual design approaches and linguistic codes of a traditional form of animated product. Vincenzo Maselli, Eleni Mouri 800 Al-Kafiye: A Symbol of Change Hala Abdel Malak Beyondstories. People Narrative makes a Territory Aureliano Capri, Valeria Michetti, Veneranda Carrino, Mauro Palatucci Brand in Product. The language of the brand to govern complexity Mario Rullo, Massimiliano Datti 843 Creating Visual Identity as Constellation: Methodological Project for a Design Workshop

Ballacey

852	'Graphicmance'. New Visual Languages between Design and Performance Giulia Scalera	938	Performativity as a language of sense-making for cultural service in local museum Shu Hongming, Eleonora Lupo
865	Inner Geographies as poetic- aesthetic knowing: the inspiration and manifestation of creative doings through an emotively- orientated sensory methodology Mizan Rambhoros	950	Solid perspectives and optical corrections of spaces in graphic & architectural design Tommaso Empler, Adriana Caldarone, Alexandra Fusinetti
883	Italian Pavillion at XXII Triennale di Milano Ilaria Bollati, Luisa Collina, Laura Daglio, Laura Galluzzo	962	Spatial construction for ideational meaning: An analysis of interior design students' multimodal projects. Andrew Gill, Giovanna Di Monte-Milner
895	Language and identity in new Italian design Stefano Follesa, Peian Yao	976	Tales of Surprise: Exploring Sense Making Processes Through User Narratives
906	Metaphors as Knowledge Activators in Data Visualizations: the case of the Archipelago of		Miray Hamarat, Ozge Merzali Celikoglu
	Calvino's literary works Tommaso Elli, Maria de los Angeles Briones Rojas, Beatrice Gobbo, Margherita Parigini, Virginia Giustetto, Valeria Cavalloro, Michele Mauri	992	The Design of Politics: Understanding the Arrest of Cesare Battisti Through the New Media Factor Noemi Biasetton
925	Patient Autonomy Indicators: a knowledge visualization tool for patient autonomy support Wen Zhang, Yuan Liu, Li Hou	1007	The Enlightenment of the Contemporary Transformation of Chinese Traditional Visual Space Perception on Cultural Sustainability design for all Jixiang Jiang, Dong Tao

1021	The Interplay between Ethics and Aesthetics in Intelligent Systems- Users Interaction Gabriele Barzilai	1127	Visualizing Offshore Foreign Direct Investments: The Atlas of Offshore Michele Mauri, María De Los Angeles Briones Rojas, Jonathan
1034	The pluralistic aesthetics of nowadays design Francesca La Rocca		Gray, Daniel Haberly, Chris Anderson
1049	The role of vernacular typography in the linguistic landscape of multicultural Singapore: A multimodal analysis case study of	1144	What does this symbol mean? Icons as a Language for Emergency Rodrigo Ramirez
	a gentrified street Min-Yee Angeline Yam	1159	Where methods meet form Meret Ernst, Maya Ober
1063	The Threshold of Language: Design and Soma Daniela Monasterios-Tan, Susan Sentler, Ginette Chittick	1175	DESIGN CULTURE (OF) LIFE
1082	Towards a new design culture of scientific production – Innovating the formats of scientific publication of design Eleonora Lupo, Beatrice Gobbo, Emilio Lonardo	1177	Adopt a costumer - to design new processes and packagings Maria Benedetta Spadolini, Chiara Olivastri
1098	Translation Design for medicine leaflets. Research and innovation. Elena Caratti, Antonella Penati, Valeria Bucchetti	1190	Autonomy as a Design Principle: Service Design for the Technology Literacy of Older Adults Houjiang Liu, Miso Kim, Canqun He, Tia Thomson
1115	Visual dialects. Exploring early design sketching in various design disciplines John Daniel Öhrling, Åsa Wikberg- Nilsson	1208	Bio-revolutions: radical change, design cultures and non-humans Carolina Ramirez-Figueroa, Luis Hernan

1222	Cognitive Ergonomics Components for Analysis of User Interface in Healthcare Industry Mariia Zolotova, Angela Giambattista	1301	No more whining – natural smart textile Nuutinen Ana, Pietarine Heidi, Kunnas Susan , Korpinen Risto, Sipola Reeta
1238	Connect art and science for a functional biomimicry in design Andrea Forges Davanzati	1308	Paving the way to post-digital smart materials. Experiments on human perceptions of a bioinspired cellulosebased
1244	Development of a test setup for validating a cognitive assessment platform within ICU's Muriel De Boeck, Philippe Jorens,		responsive interface Stefano Parisi, Markus Holzbach, Valentina Rognoli
	Guido De Bruyne, Kristof Vaes	1325	The flow of emotions in co- creation
1256	Food design as a tool for social development: experimental study in the evaluation of child smell Lígia Afreixo, Francisco Providência, Sílvia Rocha		Mariluz Soto, Caoimhe Isha Beaulé, Satu Anneli Miettinen
		1337	The Food Futures Teaching Cluster. Food Culture, Visual Communication Design, and
1272	FUTUR.DRESS. The Superskin for the Human Body in nearspace Maria Antonietta Sbordone, Ilaria Giampetraglia, Alessandra De Luca		Collaboration Peter K. Chan, Ben McCorkle, Rick Livingston
		1351	The river and the revered: Tracing the impermanence of the land,
1286	Hybrid systems of human technological biological products: a road to a greater		the people and the embroidered Indrajit De, Saumya Pande
	sustainability? Marco Marseglia, Francesco Cantini, Alessio Tanzini	1364	The Shape of Drugs: a matter of Human-Centred Design Antonella Valeria Penati, Silvia Luisa Pizzocaro, Carlo Emilio Standoli, Valeria Maria Iannilli

1377	The Wicked Home: Living Space as Ecological Holobiont Rachel Armstrong, Rolf Hughes, Nel Janssens	1453	Amorphous Stacks: A Low-Tech Construction Method for Jointless Cast Structures Liqiong Huo, Jongwan Kwon
1392	Three Dimensional technologies: Digitising Nature Gregor MacGregor	1468	An Exploratory Study about Communicating 4D Printing between Product Designers and Manufacturing Engineers
1405	Towards Neurodesign. The Mental Effort in packaging design		Faten Ezrin Azhar, Eujin Pei
	Alessio Paoletti, Lorenzo Imbesi, Angela Giambattista	1482	Biotextiles applied to everyday objetcs Viviana Quiña, José Francisco
1413	"WIT" as a Sustainable Engine Overcoming Mind Fixation in Ideation		Alvarez Barreto, Cristina Muñoz Hidalgo
	Alon Weiss	1504	Claudio Alcorso and Post-war Textile Culture Tracey Sernack-Chee Quee
1425	DESIGN CULTURE (OF) MAKING	1521	Collaborative Capabilities: aural encounters in digital/analogue co-creative making George S. Jaramillo, Lynne J. Hocking-Mennie
1427	A designed generation: Maker's maturity and social responsibility Luca D'Elia	1535	Collaborative ontology design for Open Hardware and Open Design Massimo Menichinelli, Emilio
1438	Accumulation of empirical investigation into joint structures in wooden furniture design		Velis, Andre Rocha, Alessandra Schmidt
	Yi Shiang Lin, Ming Huang Lin, Jen Kuan Yau	1551	Contemporary Spaces of Apparel Design: Embracing both Digital and Physical Environments Krissi Riewe

1562	Design Cultures of Making: Fashion thinking as creative process and pedagogy Susan Postlethwaite	1625	I - D (I – Design _ Idiosyncratic Meta Design) Idiosyncratic Proceedings on Reading and Production Meta-Objects in Contemporary Industrial Design
1573	Design culture of playing. The musical instrument industry: an important culture of made in Italy.		Mantikou Angeliki-Sofia, Farangas Athanasios, Zafeiropoulos Theodoros, Psychoulis Alexandros
	Marco Mancini	1640	If we can't make it together, we won't make it alone. The
1588	Digital encounters in the culture of textile making: developing a hybrid craftmanship for textile design by fusing additive methods of surface fabrication with knitting technology		challenge and potential of collective making Lena Håkansson, Stephanie Carleklev, Stephan Hruza, Anna- Karin Arvidsson
	Delia Dumitrescu	1652	Inter-Weaving Culture and Crafts in Design Education
1600	Distributed design and production for distributed care. Investigation on materializing		Puja Anand, Alok Bhasin, Priyanka Khattar
	bottom-up open and indie innovation in the field of healthcare Patrizia Bolzan, Massimo Bianchini, Laura Cipriani, Stefano Maffei	1668	Learning through codesign toolkits. A case study on codesigning the cinema of the future Simone Taffe, Sonja Pedell
1614	Heterotopia of Space: How	1681	Letterpress: A Survey of Print Culture or an Immersive Learning
2011	capitalism is alienating and controlling societies Sarah Khayat		Experience Alexander Cooper, Rose Gridneff, Andrew Haslam
		1695	Made by (Material) Frustration Arielle Blonder, Shira Shoval, Eran Sharon

1711 Material culture(s). Research 1799 Research on the Application of paths in an evolving material Lacquer Craft in Modern design culture, and the connected Accessories future designer's attitudes Tianxiao Xie Doriana Dal Palù, Beatrice Lerma, Claudia De Giorgi 1811 The Emerging Fashion-Tech Paradigm in the Contemporary 1724 Mind-mapping in design culture: European Landscape A tool for ideation in graphic Chiara Di Lodovico, Chiara Colombi design education? Philip Jones, Marion Morrison 1825 The evolving role of prototypes in 1738 New scenarios for developing design research: a discussion on cooperative platforms for local terms and meanings manufacturing Silvia D. Ferraris, Gabriele Barzilai Alberto Calleo, Giorgio Dall'Osso, Laura Succini, Michele Zannoni 1840 The Making of a Dress: Explicating the Implicit Processes 1752 Playing for change: designing a Adrian Huang board game for the circular economy The shape of wellbeing: 1857 Thomas David Cockeram, Jessica investigating an approach for the Clare Robins, Emmanuel development of a design Tsekleves, Leon Cruickshank requirements framework for design for wellbeing projects 1769 Progetto Glume: from milling Sandra Dittenberger waste to resource for new materials Weaving sequential changes -1873 Danilo Perozzi, Laura Dominici, designing textiles with multiple Elena Comino embedded stages Riikka Talman Re-distributed manufacturing in 1785

Louis Rose

makerspaces. Towards a model of

sustainable production

1958

Framing diversity: designing

1891	DESIGN CULTURE (OF) MULTIPLICITY	1936	hearing aids from a deaf culture perspective Patrizia Marti
		1979	Gazes and Gatekeeping: Reconceptualising the entrance
1893	Architectural Design Education as an Agent of Change: The Case of the Ultra-Orthodox Branch, Jerusalem Elissa Rosenberg		portfolio in the post-colony Diane Steyn
		1994	Hybridity as a culture of making Maya Ober, Nicole Schneider
1904	"But I'm a lecturer not a therapist": Educational Coaching – a proposed alternative approach to supporting students	2011	Hyper-Contextual Futures in Mexico City Paolo Cardini, Karla Paniagua
	through their creative education Gary Pritchard	2025	Learning and Differences reciprocally shared and validated:
1918	Decoding the birth of transcultural fashion Shipra Kukreja		A decade long Participatory Design collaboration between KG Elementary School and AD University Raymond Patrick Zachary
1934	Design as a medium for an informal learning. INDICOlearning from the interface to the activity		Camozzi, Helene Day Fraser, Caylee Raber
	Marina Puyuelo, Mónica Val, Hugo Barros da Rochas	2040	On (un)becoming in Design Academia: A Coloured female's autoethnography
1946	De-stereotype UX Design – Discussing and managing issues		Cheri Hugo
	related to the clustering of users in the design of innovative solutions Margherita Pillan, Alessandra Mazzola	2058	The Ethics of Knowing a Shared Language and Intention in Design Lisa Elzey Mercer, Terresa Moses

2066 The Neighbourhood Home. System of environments for plural inclusion

> Ilaria Longo, Sonia Massari, Alessandro Spalletta

2081 Universal Visual Languages in a Male-oriented Society

> Valeria Bucchetti, Francesca Casnati

DESIGN 2095 **CULTURE (OF) NEW NORMAL**

2097 A Comparative Study of Online Teaching Modes of Sino-Italian School of Design: A Politecnico di Milano, Tsinghua University, and Tongji University perspective Fan Chen, Lin Li

2107 A COVID-19 Horizon Scan Looking for Post-Pandemic Implications for Design

> Marcus Foth, Glenda Amayo Caldwell, Joel Fredericks

2126 A new way of perceiving the locality: economic growth, social inclusion, environmental protection

Fabio Mongelli

2141 A Sustainable Jewellery Design Practice for Psychological Health after Covid-19

Huiyi Qu

2153 Autopoietic design; seven components for a sustainable future design model

Gonzalo Raineri Bernain

2165 Community-led design capabilities during the COVID-19 pandemic and beyond

> Mariana Fonseca Braga, Eduardo Romeiro Filho, Haddon G. Guimarães Pereira, Emmanuel Tsekleves, Rosângela Míriam L. O. Mendonça

2182 Cross-Team Brainstorming and a Comparison of Online to Physical Version

Heng-Yi Mie, Hsi-Jen Chen

2198 Design Education in a Pandemic Context

Harald Skulberg

2210 Design for Sustainable Healthcare. Cutting the impact of medical products through disposable packaging

Gabriele Maria Cito, Angela Giambattista

2227	Designing new learning experiences in pandemic time: how digital can support a new didactic in Service Design Andrea Taverna	2302	Identifying Factors for Designing a Successful Telemedical Training System for Remote Pediatric Physical Exams Elham Morshedzadeh, Ph.D., Andre Muelenaer, MD, Jr, MD,
2239	Ecosystem Framework for Community Life Circles based on Life Projects in the Post-COVID-19		MS,, Michelle Morris, Dana Werlich, Margaret Nelson, MD.
	Era Tao Chen, Yong-Ki Lee, Juyoung Chang	2316	Inter-University Design Workshop: plurality in design education Inés Alvarez-Icaza Longoria, Diego
2253	Expansive Video Capture – Up close, personal & specific tutoring "performances" Brendon Clark		Alatorre Guzmán, Reneé Harari Masri, Lucero Donaji De la Huerta Santaella, Ana Elena Hernández Palomino
2265	Gamified e-Learning approached through Emotional Design in the Post-Covid-19 era Na Wei, Yong-Ki Lee, Juyoung Chang	2332	Kids-centered Pocket Park design. Well-being for children in the urban post-covid context. Benedetta Terenzi, Anna Laura Pisello
2275	Healthcare innovation during the pandemic time: digital technologies to enhance clinic 4.0 Stefania Palmieri, Mario Bisson, Alessandro Ianniello	2347	Nanomedicine and Tourism in the post-pandemic era: smart "mobility & health" through wearable design for lab-on-chips Claudio Gambardella, Pietro Ferraro, Assia D'Alesio
2289	Hospitals' decision-making regarding infrastructural adaptations in response to Covid-19 Pleuntje Jellema, Margo Annemans, Ann Heylighen	2358	Post-pandemic medicines: towards a new normality Antonella Valeria Penati, Carlo Emilio Standoli, Patrizia Bolzan
		2372	Reaching Audiences in 2020 Sharon Hooper

2387	(Re)envisioning the contribution of design to the sustainable transition of healthcare systems Amina Pereno	2487	Telemedicine, today more than ever. The ABBRACCI design concept for COVID-19 patient monitoring Alessia Buffagni, Martina Frausin
2404	Reinforcing Networks of Place- Based Care and Resilience Julie Van Oyen, Jacquie Shaw, Laura Kozak, Jean Chisholm	2500	The Challenges and Benefits of online Education and the possible impacts of the entry of IT firms in the education ecosystem
2419	Research on rapid mass		Nayna Yadav
	production of emergency products based on FDM 3d printing Xueyan Wang, Dongmei Peng	2512	The design culture and the challenges of the new normal Nicola Morelli
2433	Semi-immersive Virtual Habitat to Enhance Relaxation in People with Dementia during COVID-19 Emergency	2524	The effects of eye expression on emotion perception Yi-Hsun Liu, Hsi-Jen Chen
	Silvia Maria Gramegna	2537	The value of design in the
2446	Shifting paradigms in Sustainable Fashion Design education: Studying implications & effectiveness of pedagogical		emergency-driven scenarios. Crafting Ecosystems with data Francesco Dell'Aglio, Enza Migliore, Chiara Scarpitti
	methods adopted in a pandemic setting Pragya Sharma	2551	Thinking With Card: Curriculum- Led Making Activities Integrated with Distance Learning Benjamin Hughes
2471	Strengthening city resilience through the re-orientation of a social innovation incubation programme in Covid-19 time. The case of 'The School of the		

Neighbourhoods'

Daniela Selloni

Marta Corubolo, Anna Meroni,

2569 Understanding public health communication design globally during the Covid-19 pandemic: The Good, the Bad and the Ugly Emmanuel Tsekleves, Mariana Fonseca Braga, Alejandro Moreno-Rangel, Linli Zhang, Mafe Salazar, Hannah Field, Hayley Alter

2594 "United in isolation. An online letterpress festival". A community response to the Covid-19 pandemic

Andrea Vendetti, Elettra Scotucci

2604 DESIGN CULTURE (OF) PROXIMITY

2606 A Design Experience for Interactive Narrative Based on The User Behavior Yuan Yao, Haipeng Mi

2619 An answer to the complex representation of territory. The fertile ground of mnemotopes and design of communication. Clorinda Sissi Galasso, Giovanni 2630 Attractive Factors in the Experience of an Online Usersupported Learning Platform Min-Yuan Ma, Hsin-Yi Huang, Eric Chen-F Hsieh

2650 City Branding and Fictional Layers: Reading Istanbul through **Filming Locations** Zeynep Arda, Onur Mengi, Deniz Deniz

2667 Co-Design processes for the inclusiveness of Rome's temporary communities Gianni Denaro, Luca D'Elia, Safouan Azouzi

2679 Co-designing the future of a public space and its related services. The case of the Reggio Emilia Ducal Palace and its park Marta Corubolo, Anna Meroni, Daniela Selloni

2694 Collaborative Futures: a pedagogical model for delivering future-focused and citizencentred design education Marianne McAra, Kirsty Ross

2710 Communicating social values to children using design solutions Laura Giraldi, Marta Maini, Francesca Morelli

Baule

2720	Creating an inclusive learning environment to support transformative learning and encourage upward educational mobility opportunities for economically or academically	2800	Design projects as drivers for organisational change in the public sector Felicitas Schmittinger, Alessandro Deserti, Francesca Rizzo
	under-resourced design students Michal Rotberg	2813	Design when you are the other 90%, a student's perspective Kyle Graham Brand
2736	Cultural Differences as Challenges		,
	and Design Drivers in the Development of Smart Assistive Technology for an Ageing Society Danying Yang, Louise Moody	2826	Design with Social Justice in Mind. The Case Study of Furniture Design in Elementary Schools Caroline Gagnon, Claudie Rousseau, Thomas Coulombe-
2752	Data visualization and knowledge sharing in participatory design to improve people liveability in		Morency, Sonia Cadoret, Colin Côté
	urban places Giovanni Borga, Massimiliano Condotta, Chiara Scanagatta	2846	Evolving future city-based retailing via design thinking: A Chinese hybrid model approach Yujia Huang, David Hands, Rachel
2768	Democratizing design: lessons from a case study in the Alpine		Cooper, Nick Dunn
	area Daniele Busciantella Ricci, Ilaria Argenziano, Marta Gandolfi, Michela Ventin	2862	Feeling Endem. How travel enhances applied-autonomy in spatial design Hans Venhuizen
2786	Design for Promoting Pro- environmental Behaviours of the Georgian Domestic Workers in Ankara Ayşe Kaplan, Lilyana Yazirlıoğlu	2878	Global Proximity: case studies of international and interdisciplinary collaboration between the USA, Italy, Guyana and Japan Valeria Albani, Paolo Cardini

Valeria Albani, Paolo Cardini

2887 Heritage and cultural accessibility: the role of design in the creation of an intercultural dialogue

> Marco Bozzola, Irene Caputo, Claudia De Giorgi

2903 **Immigrant Cultural Acculturation** - A study of Tibetan Clothing in India

Anahita Suri

2920 Making in Proximity: Design Policies for collaborative making cultures

> Lina Monaco, Luca D'Elia, Viktor Malakuczi

2931 Making practice as narrator of changing social worlds-Textiles and the Scottish Borders, in the 21st century, but based firmly on the past?

Britta Kalkreuter

2942 Multiple narratives for multiple visions: engaging citizens in building future scenarios for their city through participatory design and storytelling.

> Davide Fassi, Annalinda De Rosa, Francesco Vergani

2955 New Technological Space for Tourists. Design as a Trigger of Experience, Osmotic-Membrane Interface, Know-How Provider and Social Engager Luisa Collina, Ilaria Bollati, Claudia

Mastrantoni, Umberto Tolino

Placemeaking through Creative 2968 Practice: Enabling Change and **Empowering Future Change**makers

> Cheryl Giraudy, Saskia van Kampen

2984 Proximity as space of opportunity: connecting people, productions and territories Valentina Gianfrate, Elena Formia, Flaviano Celaschi, Elena Vai

2998 Radius 100 model – Working multidisciplinary theories, methodologies and design practice: An approach to social design beyond academia Dr. Yona Weitz, Arch. Sharon Koniak

3014 Rethinking User Experience of Parking Garage. Exploring Innovative Suicide Prevention Strategies Through Motivational Design

> Sébastien Proulx, Adam Fromme, Leila Akberdin, Maria Basile, Olivia Forsyth, Maya Jenkins, Abby Nelson, Claire Spicer

3031	Signs of the Artisan City Eleonora Trivellin, Susanna Cerri	3137	When a designer encounters an artisan: a parameter analysis investigation
3046	Social networks as enablers of design cultures: An analysis of multiplex relationships among members of a creative hub Sine Celik, Tua A. Björklund	3153	DESIGN
3059	Subversive Design. Designer Agency Through Acts of Insurgence		CULTURE (OF) RESILIENCE
	Seth Parker	3155	0 Textile. A Design Research applying Circular Economy in
3072	The City of Care Anna Anzani, Elena Elgani, Maria Renata Guarneri, Francesco Scullica		textile field Maria Antonietta Sbordone, Viviana Vollono, Carmela Ilenia Amato, Barbara Pizzicato
3084	The power of designing choices Raffaella Fagnoni	3173	A Research on the Sustainability in Traditional Cave-Dwelling Construction Skills in Northern Shanxi Province (Jinbei Area)
3101	The systemic approach and the use of new technologies to		Runze Liu, Haoming Zhou
	communicate cultural heritage and develop a culture of proximity Marco Faccini, Alessandro Spalletta	3182	A Study of Zero Waste Fashion Design and its Possibilities within a Design for Circularity Process. Debbie Moorhouse, Tracy Cassidy, Parikshit Goswami, Andrew Hewitt
3121	Towards a Design Observatory: crafting a distributed approach		
	Nina Costa, Vasco Branco, Rui Costa, Afonso Borges, Raul Cunca, Ana Catarina Silva, António Modesto	3198	Awareness, compatibility and equality as drivers to resilience in sustainable design research Giuseppe Mincolelli, Gian Andrea Giacobone, Silvia Imbesi, Michele Marchi, Filippo Petrocchi

3212	Circle Sector: exploring the role of designers in a circular economy Ben Hagenaars, Niels Hendriks	3297	Design educators in the 21st century: Applying The Compass methodology to prepare future designers as changemakers in a culture of resilience
3222	Cooperatives enterprise, incubators for the co-design of a new organizational and management model for		Catalina Cortés, Alejandra Amenábar
	sustainable development. Caterina Rosini, Silvia Barbero	3311	Design for Social Impact and Crafts Communities in Turkey Hazal Gumus Ciftci, Stuart Walker
3235	Craft Your Future: Building a circular space through the European digital craft Chele Esteve Sendra, Manuel Martínez Torán, Eileen Blackmore, Hendrik Jan Hoekstra	3324	Design Plugin: Using Design Thinking Approach in Smart Sustainable Cities Education Tarmo Jaakko Karhu, Martijn Gerhard Rietbergen
3249	Creativity as a Driver in Social Innovation Processes Debora Giorgi, Irene Fiesoli	3337	Codesign as an operative framework for Responsible Research and Innovation: the case of Krakow Technology Park
3264	Design culture (of) resilience. Space & Service design taxonomy, overcoming undefined space &		Felicitas Schmittinger, Francesca Rizzo, Alessandro Deserti
	service design contexts Nansi Van Geetsom, Andrea Wilkinson	3350	Designing community: creating resilience through collaboration Jessica Clare Robins, Emmanuel Tsekleves, Leon Cruickshank
3282	Design education and forest environments – learning from and with living systems Caroline McCaw	3365	Designing resilience. Design dealing with communities Carlo Branzaglia
		3371	Designing Resilience. Mapping Singapore's Sustainable Fashion Movements Harah Chon, Lim Jiayi Natasha, Elisa Lim

3382	Designing Sustainable Product- Service Systems applied to Distributed Economies in Water- Energy-Food Nexus approach	3476	Food Cycles. Redesigning processes and products Silvia Pericu
	Renke He, Meng Gao, Carlo Vezzoli, Ke Ma	3487	From Objects and Products to Things and Stuff Clare Green
3401	Discovering Design Values in the Chinese Pre-Qin Classics Miaosen Gong	3501	Green infrastructures and satellite images: the case study of Munich
3412	Eco-lab-orating. Insights from an ongoing intervention with design school faculty		Giovanni Borga, Filippo Iodice, Federica D'Acunto
	Rakefet Kenaan	3516	I Don't Want to Feel Outdated. The dissonance between product
3424	Educating Designers for the Circular Economy: Innovative Digital Resources, Collaborative Learning and Synergic Actions		attachment and contemporary relevance Malene Pilgaard Harsaae
	Lucinda Morrissey, Roberta Barban Franceschi, Ana Margarida Ferreira	3527	Innovation through circular economy: Tool development for multidisciplinary approach to product-service-system Design
3436	Evolving the conventional curriculum: innovative learning		João Sampaio, Ana Afonso
	interventions in a classroom to enhance design students' learning competencies Joselyn Sim, Harah Chon	3544	Lost in transition; Methodologies and tools of Product-Service Systems Design for major life transition Maria Paola Trapani, Nadejda
3448	Fashion Futuring. Rethinking sustainable fashion design		Cervinscaia, Nadejda Cervinscaia
	Alessandra Vaccari, Ilaria Vanni	3560	Materials Designers. Boosting Talent towards Circular
3458	FASHIONABLE FAÇADE: textile waste innovations for the built environment Hilde Heim		Economies Laura Clèries, Valentina Rognoli, Pere Llorach-Massana

3572	Preparedness and infrastructure design for disaster and emergency situations; the key to a resilient community Noemi Bitterman, Medardo	3655	Strengthen Ties of Social Bonding Through Design from and Emotional Perspective Deyanira Bedolla Pereda
	Chiapponi, Alessia Buffagni, Andrea Cotti	3672	Study on the Sustainable Design of the Young Elderly Oriented Smart Wearable Products
3585	Replicating the Unpredictable: Board Games as Prototypes for		Chen Han, Shen Lei
	Wildfire Evacuations Thomas Maiorana	3686	Surviving in the wild: Sustaining design and social innovation initiatives in Asia-Pacific
3597	Revised Function Analysis of Sustainability - understanding the		Cyril Tjahja
Paul To	complexity of sustainability Paul Topf Aguiar de Medeiros, Charlotte Sjödell	3699	Sustainable Deliberation; an Empathetic 'Mantra' Amita Deshpande, Ranjana Dani
3616	Role of Social Ecologies within Social Design and Social Innovation Neeta Verma	3715	Teaching and Practicing Service Design and Social Innovation: Experiences with Communities at the Margins in São Paulo, Brazil Rosana Vasques, Mari Suoheimo,
3626	Slow Engagement & Widening the Frame – Emerging Models of Social Innovation and Design		Maria Cecilia Loschiavo dos Santos
	Culture Diana Nicholas	3727	The cot, the pot and other stories Lena Gupta
3641	Smart, Safe and Green System. A Resilient-Based Strategy for Sustainable Buildings and DIY Design Cecilia Cecchini, Miriam Mariani,	3755	The Materiality of Resilience Emile De Visscher, Lorenzo Guiducci, Iva Rešetar

Paolo Mondini

3774	The poetics of waste in contexts of satisfactory use and social action Desamparados Pardo Cuenca, Patrik Baldan	3863	Walk the talk: Towards an ecological futures framework for our designed cultures Håkan Edeholt, Jomy Joseph, Nan Xia
3795	The potential of Theory of Change to visually model the underlying logic behind service design projects Luca Simeone, David Drabble, Kerstin Junge, Nicola Morelli	3878	Water infrastructure as leverage for resilient cities: a multi-scalar design perspective on urban flooding Sophie Leemans, Erik Van Daele
3810	The SDGs framework as strategic lever for design education. Simona Maccagnani, Marco	3894	Weaving the New Way of Making from the Andes Rodrigo Muñoz-Valencia
	Ricchetti	3912	Working with the United Nations
3823	The Tree and The Room: Co- Designing DIY WiFi Networks with Emergent Local Metaphors Michael Smyth, Ingi Helgason, Lauren Lapidge, Katalin Hausel		Sustainable Development Goals in Design Education Silje Alberthe Kamille Friis
		3929	DESIGN
3838	Towards 'regenerative interior design': exploring a student project Giovanna Di Monte-Milner		CULTURE (OF) REVOLUTION
3853	Trace: design and responsibility in the Prato textile distict Elisabetta Cianfanelli, Renato Stasi, Matilde De Gennaro, Maria	3931	Alternative narratives data visualization archive María de los Ángeles Briones Rojas, Michele Mauri
	Grazia Soreca, Margherita Tufarelli	3945	Becoming Lost and Found in Translation Mark Ingham

3963	Critical Thinking in fashion design education - New learning approaches for a systemic change in the fashion industry Carolin Ermer, Julia Schwarzkopf	4071	Experiments on complex systems mapping around materials. Flavia Papile, Romina Santi, Beatrice Gobbo, Tommaso Elli, Barbara Del Curto
3980	Design as a methodological stance in interdisciplinary research Valérie Côté, Caroline Gagnon, Lynda Bélanger, Daphney St- Germain	4088	Exploring visualizations of design processes from a design activist perspective – a scoping study Karina Goransson, Anna-Sara Fagerholm
3996	Design for Fast Track Democracy Jennifer Schubert, Bastian Koch	4105	Fashion-Tech Revolution: Future Frontiers from Products to Processes Alba Cappellieri, Chiara Colombi,
4009	Disrupting governance by Systemic Design and co-creating the public value Carolina Giraldo Nohra, Eliana Ferrulli, Silvia Barbero	4123	From the product to the object. The speculative design practice as instance. Chiara Scarpitti
4025	Disruptive technologies and behavioural change: Design fiction as trigger for critical thinking Mila Stepanovic, Venere Ferraro	4135	From trustful empowerment to overwhelming guilt: pedagogy in current activism practices Alexia Autissier
4043	Does design thinking matter? Empirical study and survey on the effectiveness of design thinking Hannah Park	4147	Guilty Materiality: why we play down material relations Stéphane Treilhou, Clare Green
4057	Education formats to integrate Design with Humanities, Politics, Social Sciences & Education Anna Lottersberger	4160	MANIFESTO! Now: Game Design for Revolutionary Thinking Julian Hanna, Simone Ashby, Sónia Matos, Alexis Faria, Callum Nash

4174	Ph.D. Admission System Based Comparative Study in Design Discipline under Chinese Context Fan Chen, Jing-Yi Yang	4275	Targeting Design Intervention across Levels of Complexity Tanner Slade, Nicola Morelli
4187	Politics by design Elisabetta Cianfanelli, Maria Claudia Coppola, Margherita	4288	The Agency of Discursive Design Exists in the Industrial Karma Dabaghi
4200	Projecting Change: Redefining Preservation in the Era of Sea Level Rise Liliane Wong	4303	The Patient Revolution. New design perspectives in healthcare innovative processes. Carla Sedini, Laura Cipriani, Massimo Bianchini, Barbara Parini, Stefano Maffei
4218	Realising Discourse: A Strategic Design Solution to the Problem of Addiction Jason Hobbs	4319	The transformation will not be televised Peter Friedrich Stephan, Raz Godelnik
4239	Reframing development: A proposal on the role of design research in Latin America based on situated views of the world Juan Alfonso de la Rosa	4333	Time and Design. Time as a key parameter for a survey on contemporary design Enza Migliore
4250	Speculative Design for the Public Sector. Design Fiction as a Tool for Better Understanding Public Services	4351	Walking the Line: Creative Research as Critical Activity for Design Brooke Chornyak, Tania Allen
4263	Speculative Design in Education: Mapping the Landscape Ingi Helgason, Ivica Mitrović,	4370	Why we need more somatic culture in design Silvia Sfligiotti

Julian Hanna, James Auger, Enrique Encinas, Michael Smyth

4383	DESIGN CULTURE (OF)	4472	Design History and the Decline of Historical Thinking César Peña
	THINKING	4482	Designers-Thinkers and the Critical Conscience of Design Sanna Simola
4385	Always ordinary, never straightforward: Considering the work of Lorraine Wild David Cabianca	4500	De-signing Ambiguity James Dyer, Christian S. Petersen
4403	Anticipatory Design and Futures Literacies: A Need and a Hope Andrew Morrison, Manuela Celi, Laura Clèries, Palak Dudani	4514	Disruptive Thinking in Design Education Riccardo Balbo, Elda Scaramella, Serena Selva
4420	Authorship and automation in the digital design culture Giuliano Galluccio	4524	Diversified Orientation and Design Value in Safeguarding of Intangible Cultural Heritage Tie Ji, Yinman Guo, Xiaolei Min
4434	Banham's 'Unhouse' as Anti- Interiority: Towards Twenty-First- Century Theories of Design and Domesticity Helen McCormack	4542	Domesticity and digital eugenics: design cultures of Silicon Valley Luis Hernan, Carolina Ramirez- Figueroa
4444	Bodies of Evidence: making in/visible histories in South African Design Education Nike Romano	4551	Exploring Asian Philosophies and Service Culture: the Notion of Dignity Miso Kim
4459	Culture and Relationality. Moving towards 'post-rational' modes of design Tom Ainsworth, Sally Sutherland	4562	Fantasia and analogical thinking: a specific reflection on teaching the essence of the Creative Leap Valentina Auricchio

4573	How to teach design thinking to non-design students: enablers and barriers to transfer design research practices. Gianluca Carella, Michele	4674	The Emergence of Modern Design Discourse in the Eastern Mediterranean Region (EMR) Qassim Saad
	Melazzini, Xue Pei, Cabirio Cautela, Marzia Mortati	4689	The engagement of visitors in faber's houses and studios. Empirical design research and experimental actions in Lombardy Raffaella Trocchianesi, Anna Mazzanti, Alessandra Spagnoli, Davide Spallazzo
4595	Not just Thinkers, Makers Hein Dubery, Kyle Brand		
4605	Radical Interdependence:		
	learning/doing with things Jaron Rowan	4703 Theory under suspicion: crit	Theory under suspicion: criticality and material meaning in practice
4615	Rethinking & Appropriating Design Education for a VUCA World		based research Marta Camps, Jaron Rowan
	Jan Eckert, Sabine Junginger, Guillermina Noël	4720	Tokyo 2020: globalization and self-orientalism in the communication of the next Asian
4636	Rethinking Design through Literature Susan Yelavich		Olympic Games. Claudia Tranti
	Susaii Yelavicii	4736	Towards borderless futures: How transcultural approaches changed the practice of graphic design Juliana F. Duque Which way to go? Some complicated crossroads facing design culture in Aspen. Elena Dellapiana, Ramon Rispoli
4649	The chain reaction. How to design a process for transforming museums by rethinking the role of personnel		
	Alessandra Bosco, Silvia Gasparotto	4753	
4664	The concept of Interaction Design under review: literature review and interviews with qualified informants		

Eduardo Ariel de Souza Teixeira

4774

Creative design process for

4768	POSTERS	77,7	envisioning the future of emergency medical services in smart cities Vipul Vinzuda, Niall Deloughry,
4769	A visual-analytical approach to phases of transition in people's life paths Laura Heym, Jennifer Schubert, Irene Visentini, Sofia Sanchez, Alvise Mattozzi		Leonard O'Sullivan
		4775	Design and Neuroscience for the UX. Possible tool for Designers Alessio Paoletti
4770	Aeon, in his original meaning of "life", "vital force" or "being", "generation". Ana Maria Fessmann, Elene Bakhdatze, Vaishnavi Bala, Varshini Janakiram, Janina Hietl, Gianfranco Olivotto	4776	Design as a tool for participatory transformation of urban space Jacobo Muñoz Duato, Damià Jordà Bou
		4777	Digital visual tool for design project development in a multidisciplinary team
4771	Co-creating prosthetics as fashion accessories for assisting people		Michela Carlomagno
	with disability. The case of hearing impairment Andree-Anne Blacutt, Stéphane Roche	4778	Education in social design by means of artistic photography Cecilia Casas-Romero
4772	Collaborative methods: design bridging academia and industry Teresa Franqueira, Pereira Catia	4779	Enabling Collaborative Turns: A Conversation-Based Approach for Design Workgroups Sze-Yunn Seah
4773	Craft in Makerspaces: The Potential for Social Change for Sustainability Alessandra Fasoli	4780	Experimenting new joints for more sustainable and easier to assemble furniture Patrizio Cipollone, Viktor Malakuczi, Felice Ragazzo, Michele Russo

4781	Exploring the potential uses of ocean plastic and public engagement activities for raising awareness	4788	Identities and sustainable futures David Serra Navarro, Carme Ortiz Valeri
	Xingyu Tao	4789	Interaction studies applied to
4782	Feed: design for Eating Disorders prevention in pre-adolescent age. Carlotta Belluzzi Mus		Robotic Surgery Giovanna Giugliano, Sonia Capece, Víctor Fernando Muñoz Martínez
4783	Festival Living Labs: Involving the Festival Community in Sustainable Experimentation. Marije Boonstra, Aranka Dijkstra, Peter Joore	4790	Intervention of Indian Textile Craft in Design Pedagogy for Social innovation and Economic Growth Sakshi Babbar Paul, Saroj Bala
4784	Grey matter - Matière grise. When the 'thé dansant' is no longer an option. Imagining an inclusive and intergenerational urban future, placing seniors as productive actors of the civic life. Jerome Picard, Elida Mosquera, Benoist Desfonds, Matthieu Boustany, Peeraya Suphasidh	4791	Italia 3.0. An educational strategy to enhance food as Food Cultural Heritage Monica Bortolussi, Martina Mitrione, Sonia Massari, Alessandro Spalletta
		4792	Kairos: How Digital Culture Heritage can improve society and its development through
4785	Guided by Voices from the Fields: A case study on earth, plants and fashion design Piret Puppart, Julia Valle-Noronha		Systemic Design Giovanni Capoccia, Veneranda Carrino
4786	Heirloom a device for the survival of the fittest memories Valeria Volanti	4793	Kinetic calendar for tracking physical and emotional stress in women Mariel Domínguez
4787	Hybrid Town, Stories in Maps: from China to Milan Guido Tattoni, Hagit Pincovici, Germana De Michelis	4794	Knitted expressions. Movement as material in Textile Design Faseeh Saleem

4795	Love Leftovers - Useful fictions and what if we could put our memories on sale? Teodora Ivkov, Luca D'Elia	4802	TellMi Ecosystem: an example of Design Process applied to didactic methodology. Elisa Chiodo, Michele Aquila
4796	Mass media imaginary as a symbol. How image is revealing the crises of our time through cinematic design. Celia Cuenca García	4803	Time Well Spent. Facilitating mindful and meaningful screen use through a 'Design for Humansic Living' methodology Ace Chia
4797	Neighborhood Cowork (Cowork del Barrio): Co-creating agents for social change Sandra Molina, Cynthia Jaramillo, Alejandro Ramirez	4804	Trans/Feminist Critical Making – Design as Open-Source Opposition Michelle Christensen, Florian Conradi, Marie Dietze
4798	Pen Your Thoughts: A Visual Design Language Study on Student's Learning Progression Jennifer Samonte Aguilar	4805	Visual Exploration Method to Engage Art History with Practice- based Mindset in Design Education Hanny Wijaya
4799	Real-time snow information for tourists - Utilizing AI for tourism - Case Snowman Marija Griniuk, Maija-Liisa Rautiainen, Jesse Talsi, Päivi Timonen, Michelle van Wyk		
4800	Recycling, refusing plastic use and choosing biodegradable materials for new products Alexandra Anghelache		

4801

Generations Shiu Heng Sin

Shifting Mindsets, Bridging



Cooperatives enterprise, incubators for the co-design of a new organizational and management model for sustainable development.

Caterina Rosini*a, Silvia Barberoa, ^aPolitecnico di Torino *caterina.rosini@polito.it

Abstract | In the global economic context, cooperative enterprises have a considerable impact, with approximately one billion people worldwide estimated to be members of cooperatives (ICA e International Cooperative Alliance, 2015). In the historical evolution of the cooperative enterprise, they were born progressively, different typologies according to the most emerging collective problems (Depedri & Turri, 2015). However, the profound changes in the socio-economic context have expanded the emerging social needs, resulting in greater complexity that has challenged the established resilience of cooperatives. This complexity has led to the creation of a study based on the approach of Systemic Design (SD). Thanks to the primary tool of SD, the Holistic Diagnosis (HD), is possible to determine the current scenario and its complexity. The first phase of analysis of the context of reference is viewed from multiple points of view, such as economy, society, demography, and culture to identify strengths. With this background, the aim of this study is to define the first basis to design a new organizational model for social cooperatives, in the Italian context, to face the actual fluid situation. Specifically, the study highlights the cooperatives hidden potentialities to improve the structure of the organization and provide effective answers within the economic context. The HD is the first step to develop new organizational model for cooperative enterprises to be replicated on similar business models. To reach this goal a literature review is settle to highlight the actual gaps and a case study is analyzed in depth in order to obtain original data and validate the first hypothesis.

KEYWORDS | SOCIAL COOPERATIVES, HOLISTIC ANALYSIS, ALTERNATIVE APPROACHES, SYSTEMIC DESIGN

Introduction

In Europe, the term social enterprise refers to those enterprises defined as organisations whose mission is to produce goods and services to meet the needs of local communities, social groups and people, sometimes in fragile conditions. In every European region, these enterprises have different definitions and frameworks, some studies have investigated the birth and development of this type of enterprise (Borzaga & Santuari, 1999; Barr, 1992). However, the main reasons behind the birth of social enterprises can be identified in:

- market crises due to the lack of homogeneity of information between producers and consumers; social enterprises offer an alternative to government-led interventions by creating a more socially embedded, equitable economy (Ridley-Duff & Bull, 2015).
- inability of the welfare state to meet the needs of public services; social enterprises sell or offer social services, programs, and/or products to fulfil human needs, by addressing the social problems that humans face (Rasheda, 2019).
- Individuals and/or groups of people who take actions to meet their ethical, ideological or religious aims (Hansmann, 1980; Weisbrod-, 1975; Costa, 2012).

The distinction between social enterprise and social cooperative has been the subject of different studies (Defourny, Nyssens & Brolis 2018; Linzalone, 2013; Chell, Nicolopoulou & Karataş-Özkan, 2010). The International Cooperative Alliance (ICA), whose task is to promote and strengthen autonomous cooperatives around the world, has come up against the difficulty of defining uniquely the form of the cooperative so as to reconcile all experiences on a global level (Vella, 2010). The first univocal definition was profiled at the 1996 Manchester Congress with the following description: "an autonomous association of people who come together voluntarily to meet their economic, social and cultural needs and aspirations through the creation of a jointly owned, democratically controlled enterprise". At the legislative level, cooperatives have been officially recognized in the European Union by Article 48 of the Trattato di Roma, which defined them as a specific type of "company". From this moment on, each member state has designed regulatory frameworks to protect the interests of members and third parties.

Among all the member states, Italy was the first to create ad hoc legislation to regulate this type of enterprise (Kerlin, 2006). With the law n.381/1991 art.7, the Italian normative defined social cooperatives as non-profit entities subject to an advantageous tax regime with the aim of "pursuing the general interest of the community to the human promotion and social integration of citizens". More in detail, Law 381/1991 distinguishes three types of social cooperatives: 1) Type A social cooperatives dealing with the management of social and health services, education, and cultural activities; 2) type B social cooperatives, which have the objective of introducing "disadvantaged individuals" into the world of work (at least the 30% of the cooperative's workers); 3) Type C social cooperatives represent a category made up of consortia of social cooperatives. The consortia may have different characteristics, of mutuality, territorial, cross-sector and experimentation for activities in new cooperative sectors (Borzaga, 1996; Borzaga & Janes, 2011).

In general, in Italy social cooperatives, even if they are not the predominant form of enterprise, still play an important role within the national economic context. According to the Euricse (European Research Institute on Cooperatives and Social Enterprises) report which examines both sectoral differences and the economic situation in national context, the number of social cooperatives in Italy is about 14,000 Although the Euricse survey is among the most accurate, it remains difficult to make a clear distinction between type A and type B cooperatives. However, to date, the Italian National Institute of Statistics (ISTAT) remains the main source for making historical comparisons between data, to frame with growth percentages, the phenomenon of social cooperatives in Italy, for example, referring to ISTAT data we know that in 2015 working cooperatives and social cooperatives had generate the most value added of whole cooperative sector equal to 73%. The strong growth of social cooperatives is partly due to legal regulation and partly to the growing demand for welfare services both from the community and from the individual founders of social enterprises (Galera & Borzaga, 2009). In this regard, to correctly frame the flowering of these enterprises it is important to underline how towards the end of the twentieth century in Italy there was a crisis of the welfare state that had become inefficient and state centred. In this period of economic and social crisis, cooperative enterprises began to flourish. Thanks to their social mission, cooperatives became the answer to market and government failures, which were mainly due to budget cuts that led to an increase in unemployment with a subsequent growing economic disparity and an increase in people at risk of poverty and social exclusion (Riva & Garavaglia, 2016). In this context, the strength of cooperatives lies in their ability to promote an alternative model of growth and development to that commonly adopted by for-profit companies. The alternative model translates into the creation of opportunities for economic and social inclusion and the ability to adapt political decisions to the interests and values of stakeholders (Linzalone & Lerro, 2014; Kerlin 2006). Moreover, there is a large part of the literature that has highlighted the factors related to the resilience of social cooperatives (Cecop-Cicopa Europe, 2010; Euricse, 2015; Depedri, 2010). The human capital, among other factors, is a key element for the success of social enterprises. Indeed, much research has shown that workers in social cooperatives show greater commitment and loyalty. These elements translate into lower turnover but an high organizational effectiveness and productivity (Carpita & Golia S., 2012; Becchetti, Castriota & Tortia, 2013). In recent years, in order to withstand competition in the market with other types of companies, there has been increasing diversification within social cooperatives, which contributes to the development of multidisciplinary in terms of both professionalism and services offered (Euricse, 2015). On one hand, this multidisciplinary has contributed to increasing the resilience of cooperatives in the economic context, making them capable of facing and resisting the current economic crisis; on the other hand, a more varied composition, and a continuous drive for innovation in the organization flows allow a better adaptation to the social changes underway. Moreover, the merging capacity, the strengthening and renewal of the supply chains have contributed to increase productivity and competitiveness in this sector. In agreement with Shaw E. and Carter S. (2007) we can state that social cooperatives have been identified as an innovative model to address

emerging socio-economic needs. However, despite the positive aspects, some research and studies also explain the difficulties that social cooperatives have had to face in the process of affirmation (Linzalone & Lerro, 2014; Thomas, 2004). Nevertheless, type B social cooperatives enjoy an advantageous tax regime, the outsourcing of public social services from social enterprises and the reduction of their budget are threatening the prosperity of cooperatives. Some studies have identified as major problems perceived by cooperatives: (i) the difficulty of opening to the market and becoming more independent from the public sector; (ii) the decrease in public procurement contracts by public authorities contributes to increased competition on cost-effectiveness by forcing cooperatives out of the market; (iii) the difficulty of obtaining financing and late payments by clients (Euricse, 2014; Riva & Garavaglia, 2016). Although in the past, social cooperatives have been fully able to respond to social needs, in the current context characterized by a strong complexity and also by a progressive reduction of resources, they are increasingly called upon to respond to new and particular needs (Linzalone & Lerro A., 2014; Depedri & Turri, 2015). In this framework, the present paper aims to study the current situation of Italian cooperatives not only in terms of growth and in terms of development, as already discussed in the literature through statistical, qualitative and quantitative studies. Rather, we want to investigate in deeper the internal organization and the problems related to the management of human and material resources. To this purpose, we will use the Systemic Design (SD) approach, an alternative business and design model able to provide interconnected solutions to the typical complexity of current situations, without neglecting social, environmental, and economic contexts. The analysis is strengthened from a real case study, a cooperative in Northern Italy, in order to work with primary and original data, like the historical evolution, the sectors of activity, the internal structure and the organizational flows of the work, and so on. The first step in the SD methodology is the Holistic Diagnosis (HD) to map the current scenario in all its complexity. Since the HD requires a deep level of detail, we decided to start with a single case study to use it as a reference to develop the analysis of other comparative case studies in the future, especially outside of Italy in order to have a more European scenario. The result that the study wants to achieve is to understand what are the critical issues in the current organizational model of the social cooperative, with respect to the new needs of the economic and social context. Once the criticalities of the current model and the needs of the reference context have been identified, we will proceed with the SD methodology in order to design a new model of social enterprise organization that can be replicated also on other similar realities. A fundamental aspect is also to facilitate the birth of new synergies that can involve not only public administrations but also private subjects, single citizens, or companies. The limits of the research are mainly related to the difficulty of finding all the data necessary to carry out an accurate mapping of the cooperative under examination. In fact, the cooperative in question has been in business for 30 years and has gone through many different phases that have brought with them changes in human resources and activities. In addition, there is another difficulty in obtaining information on the organisational flows of the work due to defined but not so rigidly defined roles within the cooperative as in a for-profit company, which makes the

changeover and maintenance of information more dispersive. However, we feel that by applying the SD methodology we could make a significant contribution in the innovating sector. We aim to increase knowledge about social cooperatives as an innovative business model aimed at meeting the emerging needs of today's society and to develop a new organizational strategy that meets both economic growth and workers' needs.

Method

For many years, there has been a concern to understand the growth of social cooperatives and their development in different territories. Some research has adopted qualitative methods to explore the co-evolution of social enterprises and the welfare state in Italy (Testi, Bellucci & Biggeri, 2017; Corbie, 2012). Different methods have been proposed to assess the economic benefits that these enterprises are able to achieve (Kohonen, 2012; Arogyaswamy ,2017; Cordes , 2017; Gordon, Wilson & Tonner , 2018). However, given the strong growth and development of social cooperatives and because of the difficulty in finding financing for their activities, impact assessment has become a much more discussed topic in recent years. In fact, quantitatively assessing the social impact of a cooperative can serve both the financiers, as a basis for evaluation, and the social enterprises themselves, to understand if their work is working and if it meets its objectives. The literature has developed a lot on this issue, applying different methodologies, for example, the activities and outputs created (i.e. jobs, tangible products, cost reduction...) have been examined and evaluated as main indicators of benefit delivery or results (Olsen & Galimidi, 2009). Then there are approaches such as Social Return on Investment (SROI) and Blended Value Accounting that seek to combine financial value with social value to define a single parameter that represents the company as a whole (Kroeger & Weber, 2015). Therefore, we want to try to go beyond the evaluation of the most easily measurable or immediate results (Arogyaswamy, 2017), because these types of evaluation have a big limit in the field of social cooperatives, and especially type B social cooperatives: it is not always possible to give back the results of an activity in monetary terms. For example, the inclusion of a disadvantaged person in the labour market can be evaluated in economic terms as a monetary amount saved to the state for the economic support of that individual. However, being able to assess how long the individual will remain in the labour market or whether or not he or she will have negative effects is not taken into account. In relation to this, it is therefore useful to ask whether it is no longer necessary for type B social cooperatives to talk about social impact monitoring rather than evaluation.

According to what has been described, in the current framework of cooperative enterprises there is a fair degree of complexity both in terms of what to assess and how best to assess it. The aim of the paper is to investigate through SD the complexity of the relationships between the company, the workers and the results achieved, finally defining a new system based on social, environmental and economic sustainability. The SD is an alternative design approach able to provide interconnected solutions to the complexity that characterizes the current situations, including in this process also the economic, social, and environmental contexts (Battistoni, Giraldo Nohra & Barbero, 2019). For our study and for the promotion of

an even stronger social cohesion and flourishing of local economies, the SD intervenes with the HD. The HD is an analysis process that determines the context of the system, considering both the quantitative and qualitative characteristics of the scenario under examination. Through the data collected through HD, problems and levers for change are identified. The next step will then be to define guidelines for co-designing a new system whose results are accessible and understandable to all stakeholders.

The HD, applied to our case study, is divided into two steps: the first involves in-depth analysis of the cooperative's internal relations and its operational context; the second is divided into top-down and bottom-up analysis to map the relationships with the entire value chain. Initially, we proceed to analyse the current organizational forms of workflows and the policies in place, the basic activities in the cooperative's sectors of reference and, finally, we identify all the potentialities that can be stimulated to promote sustainable development.

Specifically, phase 1:

We analyse the cooperative enterprise from its birth and historical evolution, then we examine the organizational structure from multiple points of view: workers' composition by age, cultural and economic dimension, scope of intervention. The data are collected directly at source thanks to the collaboration with the cooperative under examination and with its members. The information collected shows that the co-operative has most workers with fixed-term contracts and the majority are of Italian nationality; in fact, only 13% of the workers are of foreign origin (Fig.1). The average age of the workers is quite high, more than half of them are over 50 years old, and this factor has been identified as an influential aspect in the cooperative's capacity for growth and development. Having an older workforce implies greater difficulties in implementing internal changes especially about the digitalisation of processes and the transfer of knowledge. Most of the workforce is male, but this is due to the types of work carried out which often require greater physical strength but in no way attributable to discriminatory issues (Fig.2). In this context, the most important factor is the type of people the co-operative hires to fulfil its social mission. A 30% of the workers fall into the category of "socially disadvantaged people", which according to Italian law includes ex-prisoners, ex-alcoholics, and people with past drug addictions or in recovery, people with physical and mental disabilities. A peculiarity of the co-operative in question with respect to other co-operatives of the same type is that it chooses among disadvantaged people those who do not have any kind of work experience. In this framework, it is necessary to point out how much the social mission can influence and, in some ways, slow down the development of the organisation. Often these people are trained with the aim of making them acquire knowledge and skills useful for the job, but very often, they cannot sustain career transitions to roles that require responsibility. For the initial phase of historical analysis, interviews were carried out with the president of the cooperative and with the older members. For the organizational flows, information was collected through interviews with the department managers (Gardeners, Cemeteries, Selected waste collection) and took part in the weekly meetings in which the problems faced during the week were brought out. In this way, the designer has an immediate feedback on the validity of the data.

Once phase 1 is finished, it is necessary to frame the potentialities for the development and change of the cooperative and to do so it is essential to move on to phase 2: top-down and bottom-up analysis. In this phase, we proceed to map all the relationships with the stakeholders involved to identify the strengths and weaknesses on which to work together. HD requires a high degree of detail, fundamental to map and understand the intrinsic complexity of the study context. According to the HD results an high dependence from public institutions emerged, tangled relations with employment office for workers recruitment and internal resistance to change especially in the management sector.

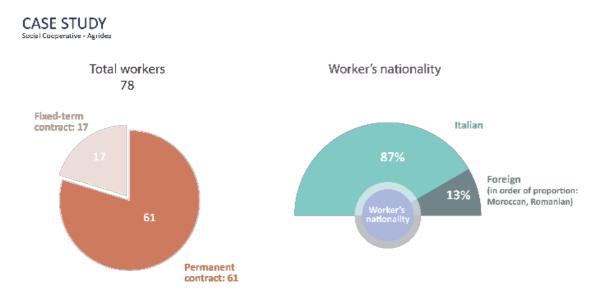


Fig. 1 type of contract and workforce nationality

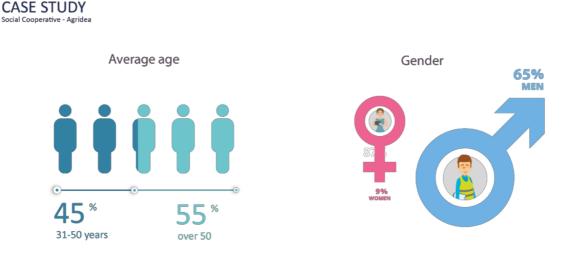


Fig.2 Workforce composition

Case Study

The type B social cooperative, Agridea is based in Turin. It was founded in 1992, following the publication of Law 381 of 1991, as a spin-off of another social cooperative called Stranidea. The initial sector of activity concerned the management and maintenance of green areas and there were five social workers in total. In 1993, the management of cemetery services was included, and so the second sector of activity was born. However, the first important development was in 1995 when Agridea was entrusted by the city of Turin with the management of urban green areas with a 2-year contract. Thanks to this first contract, the cooperative can obtain loans that it will use to buy the necessary equipment and to train its workers after this first big leap, the intention to create a more structured organization begins to manifest itself. In 2005, in collaboration with a Consortium, Agridea started to test the separated waste collection from the markets. The cooperative has grown significantly; to date it has about 70 workers and dependent members of which 30% are disadvantaged, as required by legal regulations. The governance model adopted by the cooperative is a traditional one, i.e. there is a board of directors, in this case represented by the president, vice-president and director, and a Board of Statutory Auditors, which supervises the work of the administrative body. The analysis of the organisational structure has shown that Agridea adopts a hierarchical model, which today is found almost exclusively in companies of minimum size. This model is functional thanks to the speed of transmission of orders and the transparency and clarity of relations. However, this organisation makes difficult the specialisation and the creation of "key roles".

Results and discussion

The growth of social cooperatives throughout Europe has gone hand in hand with the evolution of social problems. In Italy, too, this phenomenon has triggered a growing development of this type of enterprise. The SD approach with HD, promotes a multidisciplinary approach that brings together different stakeholders from different levels of the cooperative (managerial, operational, collaborative contacts with external bodies...) and provides the starting point to establish an innovative co-design. From the first part of the HD emerged a strong ability of Agridea to reinvent and develop itself in a quite autonomous way. In fact, since the birth of Agridea (1992), analysing its historical evolution, two years of economic loss have emerged, one in 2006 and one in 2010. The losses have always been absorbed in a maximum of two years and all sectors of activity have been maintained. This fact can be summed up in a good ability on the part of the management sector to manage difficult situations and to be able to recover. At the same time, we point out that in both years of crisis, all the workers remained in Agridea, no one resigned or was dismissed, a factor that shows a strong link on the part of the employees with the cooperative reality, which in turn contributes to strengthening the resilience of the cooperative. Another aspect that emerges is Agridea's willingness and ability to structure its office staff in a more hierarchical way and with better defined roles, in the last few years this has improved the difficulties in managing the three sectors of activity: gardeners, cemeteries an selected waste collection. While on the one hand the hierarchical approach allowed a better management of tasks and work, on the other hand it contributed to a centralisation of responsibilities especially in the sector heads. This has led the co-operative to have a strong dependence on the people who incorporate these roles and who have become "indispensable" for the proper functioning of the whole organisation. Initially, what appeared to be an already consolidated organisation, HD brought to light the most hidden criticalities (Fig.3). When looking in detail at the organisation of a single sector, critical points emerged in the various areas. For example, the sector leaders must deal with the management system and the preparation of the daily programme according to the work to be carried out. The management system requires digital skills, which the managers have acquired through training. This training has not been extended to other workers who could potentially replace the current sector managers, so the co-operative does not currently have people capable of replacing the current managers in office tasks. This leads to two others closely related problems, a managerial culture, which is not encouraged and unilateral substitutability, i.e. the heads can fill in the gaps in the operational area, but the opposite is not possible. The head of each sector must interface with the administrative area for customers and suppliers, which constitutes an additional burden of tasks for the sector heads who, especially at certain times, e.g. holiday periods, monthly closures of activities in terms of budget, have an overload of tasks to perform that sometimes forces them to stay beyond the 8-hours working time. Finally, from the analysis of the production area and therefore, of the management of the workers, a strong operational-strategic dependence between the teams of workers and the sector manager emerged. There is a lack of intermediate responsibilities among workers who are unable or unwilling to take responsibility for operational and organisational choices even when they would be able to support them thanks to previous experience. Moreover, there is no horizontal mobility between sectors, although it could be activated in some tasks.



Fig.3 Criticalities and potentialities of a sector

Among the positive aspects that emerged, there is certainly good internal communication between sectors and efficient timing in making decisions, especially in response to work emergencies.

The teams are integrated and collaborative in two sectors (gardeners and cemeteries) while the sector of selected waste collection sometimes suffers from conflicts between workers. Furthermore, among the critical aspects that emerged between the first and second phases of the analysis, there are the difficulties in communicating changes and their acceptance. Communications between the sector managers and the workers are quite efficient but there is resistance for some subjects, especially in monitoring the proposed changes at organisation and management level. Interviews with the president and the workers' members showed that of the three sectors, the selected waste collection is the one that has had the lowest growth and for which there has been no news for many years. At the organisational level, there has been a strong propensity to solve problems in the immediate future, probably thanks to the solid experience of 30 years of work. At the same time, an inability to plan solutions to problems that are repeated cyclically (i.e. at seasonal level or annual) has also emerged. This may be partly due to have mostly works through tenders with variable durations: it is difficult to apply a method for solving problems that there is no certainty of having to deal with those problems again. Based on these assumptions, we decided to deal with the transmission of information as a first step to be able to implement organisational changes in the future. Given the nature of the company and its workers, it is indispensable that all the workers of the cooperative are aware of the processes active in the organisation of work, in this way it is possible to raise awareness towards the assumption of greater responsibility and collaboration.

In this perspective, an active training course was started which involved a first group of 30 people. At the end of the training, we expect to be able to identify among the workers those who have shown greater predisposition in assuming roles of responsibility and who are evaluated by colleagues as reliable. The final intent will be to implement changes in the cooperative not only as regards the organization chart but also in the management of workflows. Moreover, the organizational changes should come through a co-design process within the workers.

Conclusion

The paper analysed through the methodology of SD the case study of the type B social cooperative, Agridea, in order to have some preliminary data and reflection on how the organizational model could be more effective in this times. The intent of mapping the growing complexity in the economic and social context that cooperative enterprises must face is to design a new organizational model concerning both the internal structure and therefore the roles and responsibilities of employees and external activities. With the new model, the aim is to develop new supply chains and new synergies, able to make the cooperative strong and resilient in the territory and in the context of action. This new type of social enterprise will be able to contribute to the development of new local economies, and the social impact will be greater as the relationships and actions undertaken increase. Above all, not only an innovative organizational model will be valuable outcomes of this research, but also the way in which this will be designed. This study aims to be the first step in the development of a project that will lead the Agridea cooperative to concretely implement the new model of organization. In addition, the paper contributes to the scientific literature by providing a deeper knowledge on the needs that social cooperatives must diversify within the national economic context. Moreover, it wants to contribute to the development of a more sustainable cooperative economy with full respect for the social mission.

References

- Arogyaswamy, B. (2017). Social entrepreneurship performance measurement: A time-based organizing framework. Business Horizons, 60(5), 603–611.
- Barr N (1992) Economic theory and the welfare state: a survey and interpretation. J Econ Literature 30:741-803
- Battistoni, C., Giraldo Nohra, C., & Barbero, S. (2019). A Systemic Design Method to Approach Future Complex Scenarios and Research Towards Sustainability: A Holistic Diagnosis Tool. Sustainability, 11(16), 4458.
- Becchetti, L., Castriota, S., & Tortia, E. C. (2013). Productivity, wages and intrinsic motivations. Small business economics, 41(2), 379-399.
- Borzaga, C. (1996). Social cooperatives and work integration in Italy. Annals of Public and Cooperative Economics, 67(2), 209-234.
- Borzaga, C., & Ianes, A. (2011). Il Sistema di Imprese della Cooperazione Sociale: Origini e Sviluppo dei Consorzi di Cooperative Sociali (Networking Among Social Cooperatives: Origins and Development of Consortia).
- Borzaga C, Santuari A (1999) L'evoluzione del terzo settore in Italia. In: Matacena A (ed) Scenari e strumenti per il terzo settore. Egea, Milano, pp 27–66.

- Carpita, M., & Golia, S. (2012). Measuring the quality of work: the case of the Italian social cooperatives. Quality & Quantity, 46(6), 1659-1685.
- Chell, E., Nicolopoulou, K., & Karataş-Özkan, M. (2010). Social entrepreneurship and enterprise: International and innovation perspectives.
- Corbie, M. (2012). The quality of work life of people with severe mental disorders working in social enterprises: a qualitative study. 1415–1423.
- https://doi.org/10.1007/s11136-011-0057-7
- Cordes, J. J. (2017). Using cost-bene fit analysis and social return on investment to evaluate the impact of social enterprise: Promises, implementation, and limitations. Evaluation and Program Planning, 64, 98–104.
- Costa, E., Andreaus, M., Carini, C., & Carpita, M. (2012). Exploring the efficiency of Italian social cooperatives by descriptive and principal component analysis. Service Business, 6(1), 117–136. https://doi.org/10.1007/s11628-011-0131-9
- Defourny, J., Nyssens, M., & Brolis, O. (2018). Mapping and Testing Social Enterprise Models Across the World: Evidence from the "International Comparative Social Enterprise Models (ICSEM) Project.
- Depedri, S. (2010). The competitive advantages of social enterprises. Borzaga C. and Becchetti L., The Economics of Social Responsibility, Routledge, London, in editing.
- Depedri, S., & Turri, S. (2015). Dalla funzione sociale alla cooperativa di comunità: un caso studio per discutere sul flebile confine. Impresa sociale, 5, 65-82. Euricse Annual Report 2011-2012
- Euricse (2015), Rilevanza, evoluzione e nuove frontiere della cooperazione italiana. Terzo Rapporto Euricse, Euricse Edizioni, Trento
- Euricse (2014), La cooperazione italiana negli anni della crisi. Secondo Rapporto Euricse, Euricse Edizioni, Trento.
- Europe, C. C. (2010). Cooperative enterprises in industry and services prove their strong resilience to the crisis. Cecop-Cicopa Europe, Brussels, available at: www. cecop. Coop (accessed 9 October 2015).
- Galera, G., & Borzaga, C. (2009). Social enterprise. Social enterprise journal.
- Gordon, K., Wilson, J., Tonner, A., & Shaw, E. (2018). How can social enterprises impact health and well-being?. International Journal of Entrepreneurial Behavior & Research.
- Kerlin, J. A. (2006). Social enterprise in the United States and Europe: Understanding and learning from the differences. Voluntas: International Journal of Voluntary and Nonprofit Organizations, 17(3), 246.
- Kohonen, M. (2012). Actor-network theory as an approach to social enterprise and social value: a case study of Ghanaian social enterprises (Doctoral dissertation, The London School of Economics and Political Science (LSE)).
- Kroeger, A., & Weber, C. (2014). Developing a conceptual framework for comparing social value creation. Academy of Management Review, 39(4), 513-540.
- Hansmann H (1980) The role of non-profit enterprise. Yale Law J 89(5):835–901
- ISTAT, Struttura e performance delle cooperative italiane anno 2015. Rapporto di ricerca
- Linzalone, R., & Lerro, A. (2014). Between solidarism and business management: assessing management factors for social enterprise: a survey in Italy. Measuring Business Excellence.
- Manoudi, A., Balourdos, D., & Marini, F. (2014). A Map of social enterprises and their ecosystems in Europe. Country Report: Greece. European Commission, Brussels.

- Olsen, S., & Galimidi, B. (2009). Managing social and environ- mental impacts: A new discipline for a new economy. The Brown Journal of World Affairs, 15(2), 43—56.
- Powell, J. L., Chen, S., Riva, E., & Garavaglia, E. (2016). The sustainability and political agency of social cooperatives in Italy during the great recession. International Journal of Sociology and Social Policy.
- Ridley-Duff, R., & Bull, M. (2015). Understanding Social Enterprise: Theory and Practice, SAGE Publications. London.
- Riva, E., & Garavaglia, E. (2016). The sustainability and political agency of social cooperativesin Italy during the great recession. International Journal of Sociology and Social Policy, 36(7–8), 435–455.
- Shaw, E., & Carter, S. (2007). Social entrepreneurship. Journal of small business and enterprise development.
- Testi, E., Bellucci, M., Franchi, S., & Biggeri, M. (2017). Italian social enterprises at the crossroads: Their role in the evolution of the welfare state. VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations, 28(6), 2403-2422.
- Thomas, A. (2004). The Rise of Social Cooperatives in Italy. 15(3).
- Vella, M. (2010). Appunti di Cooperazione. Universo Coop. Retrieved from http://www.universocoop.it/biblio/Documenti/appunti di cooperazione maria vella .pdf
- Weaver, R. L. (2019). Social enterprise and the capability approach: Exploring how social enterprises are humanizing business. Journal of Nonprofit & Public Sector Marketing, 1-
- Weisbrod B (1975) Toward a theory of the voluntary non-profit sector in a three sector economy. In: Phelps ES (ed) Altruism, morality and economic theory. Russell Sage Foundation, New York

About the Authors:

Caterina Rosini is a PhD student in Management Production and Design at the Politecnico di Torino (Department of Management and Production Engineering). Her doctoral research focuses on applying the Systemic Design in organizations, especially cooperatives, with the intent to boost the development of a sustainable enterprise model which respects the resources of our planet, both humans and materials.

Silvia Barbero, PhD, is an Associate Professor at Politecnico di Torino (Department of Architecture and Design). She is a lecturer of "Product Environmental Requirements" at the Design and Visual Communication degree and of "Open Systems" at the Systemic Design Master degree. She is also responsible for the stage & job in design curriculum. Her research mainly focuses on Systemic Design applied to territorial sustainable development. Acknowledgements: We thank the constructive comment of the reviewers. A special thank goes to the Social Cooperative Agridea as the first case study of the research project and for its willingness in data collection.