Designing ethically in a complex world

MULTIPLE CHALLENGES WITHIN DESIGN FOR PUBLIC AND SOCIAL SYSTEMS

Edited by
Elena Caratti and Laura Galluzzo

DESIGN FOR
SYSTEMIC CHANGE

FrancoAngeli
DESIGN INTERNATIONAL

Design International series

DIRECTION

Silvia Piardi

SCIENTIFIC BOARD

Alessandro Biamonti, Alba Cappellieri, Mauro Ceconello, Claudio Germak, Ezio Manzini, Carlo Martino, Promil Pande, Mario Piazza, Angelica Ponzio, Francesco Scullica, Francesca Tosi, Yingchun Zang

EDITORIAL BOARD

Alessia Brischetto, Alessio Caccamo, Barbara Camocini, Giuseppe Carmosino, Eugenia Chiara, Andrea Di Salvo, Elena Elgani, Silvia Gramegna, Shashwat M. Pande, Gustavo Alfonso Rincon, Fabiano Scherer, Daniela Selloni, Davide Spallazzo, Livia Tenuta

The Design International series was launched in 2017 as a place for cultural exchange between the different design souls.
Over the years, the series has consolidated its position as a point of reference for international research, outlining a continuously updated research map. The Scientific Committee, consisting of experts in fashion, interiors, graphics, communication, product, service, social interaction, innovation and emotional design guarantees the level of the accepted texts. The Editorial Board, consisting of young experts in the different branches of design, supports the work of the scientific committee. After an initial evaluation by the two committees, the texts undergo international double revision.

FrancoAngeli
SERIES - OPEN ACCESS CATALOG

This volume is published in open access format, i.e. the file of the entire work can be freely downloaded from the FrancoAngeli Open Access platform (http://bit.ly/francoangeli-oa).
On the FrancoAngeli Open Access platform, it is possible to publish articles and monographs, according to ethical and quality standards while ensuring open access to the content itself. It guarantees the preservation in the major international OA archives and repositories. Through the integration with its entire catalog of publications and series, FrancoAngeli also maximizes visibility, user accessibility and impact for the author.

Read more: Publish with us (francoangeli.it)

Readers who wish to find out about the books and periodicals published by us can visit our website www.francoangeli.it and subscribe to *Keep me informed* service to receive e-mail notifications.

Designing ethically in a complex world

MULTIPLE CHALLENGES WITHIN DESIGN FOR PUBLIC AND SOCIAL SYSTEMS

Edited by
Elena Caratti and Laura Galluzzo

DESIGN FOR
SYSTEMIC CHANGE

FrancoAngeli
DESIGN INTERNATIONAL

MANAGEMENT

Marzia Mortati, Alessandro Deserti, Paola Bertola

EDITORIAL COMMITEE

Marzia Mortati, Alessandro Deserti, Paola Bertola,
Marco Quaggiotto, Giuseppe Andreoni, Antonella Penati,
Luisa Collina, Maurizio Bruglieri

PRODUCTION MANAGEMENT

Eleonora De Marchi

ART DIRECTION

Marco Quaggiotto

GRAPHIC DESIGN

Giada Zoncada, Arianna Priori, Francesca Cassanelli

ISBN e-book Open Access: 9788835167907

Copyright © 2024 by FrancoAngeli s.r.l., Milano, Italy

This work, and each part thereof, is protected by copyright law
and is published in this digital version under the license
Creative Commons Attribution-NonCommercial-NoDerivatives 4.0
International (CC BY-NC-ND 4.0)

By downloading this work, the User accepts all the conditions
of the license agreement for the work as stated and set out
on the website https://creativecommons.org/licenses/by-nc-nd/4.0

Contents

7 **Preface**
Adam Nocek

13 **Designing ethically in a complex and changing world**
Elena Caratti, Laura Galluzzo

PART 1
THEORIES FOR AN ETHICS OF RESPONSIBILITY

25 **1. Exercises in alterity: nurturing alterity for a design ethic**
Salvatore Zingale

37 **2. Design as pluriversality: the translational territory where practice is plural**
Silvia Pizzocaro

55 **3. Ethical translations for social design**
Elena Caratti

67 **4. Ethical dimensions in interaction design**
James Postell

PART 2
APPLIED ETHICS IN DESIGN
FOR PUBLIC AND SOCIAL SYSTEMS

85 **5. Design for public engagement: merging the role of academics and neighbourhood communities**
Davide Fassi, Francesco Vergani

101 **6. Different voices of identity. The role of communication design for the 0-18 community**
Valeria Bucchetti

115 **7. Framing designing practices from the margins. The case of Off Campus San Vittore**
Virginia Tassinari, Francesca Piredda, Elettra Panepinto

129 **8. Design of plural public space**
Laura Galluzzo

141 **9. The accessible landscape. Sustainable narratives for empowerment**
Daniela Anna Calabi

159 **10. Care, community and reuse of places**
Anna Anzani, Ada Piselli

175 **11. Designing digital media. Towards a user-centric approach for public communication strategies**
Umberto Tolino

191 **12. When technology becomes harmful. The contribution of designers at a crossroads between fashion, digital and ethics**
Martina Motta, Rachele Didero

205 **Authors**

Preface

To say that design has always struggled with ethics is not an overstatement. This isn't because design has no ethics or that it doesn't perform ethical acts – far from it. Positive deeds abound in multidisciplinary fields like social design, and there's every reason to believe that ethical design is evident when designers work with marginalized communities; when they co-design systems that make life bearable for the sick and vulnerable; when they participate in grassroots activism; or when they struggle alongside community members to shape public policy for affordable housing. In these instances and many others, it seems clear that designers are acting ethically, and that design may even be more ethical today than it's ever been.

Instead, the observation that design struggles with ethics is meant to underscore that the meaning, scope, and application of ethics to design is neither explicit nor straightforward. Unlike bioethics or legal ethics, for example, whose genealogical and discursive boundaries are more or less discernable, design ethics, by contrast, doesn't share the same kind of clarity. To many, the ethical and moral concerns of a profession like design call to mind norms and obligations that operate like a balance sheet to determine, through an agreed upon procedure, what is and is not *ethical*. In this scenario, the language of *ought* can too often feel like a straitjacket constraining the creative process, inhibiting rather than enabling original design. It's perhaps for this reason that ethics, when it's engaged at all, functions more like a nebulous horizon than a domain of research practice with a clear remit. This dubious relation to ethics is nowhere more evident than in design fields whose stated goal is to promote *social good* and *well-being*; here, the ethical value of an action tends to be an assumed rather than an explicit objective. It's as if generalities such as goodness and well-being are agreed upon values that more or less take care of themselves.

Despite the ease with which certain fields parade their commitment to acting or designing ethically, goodness and well-being are not objective givens – they are themselves produced. Indeed, what's meant by *social good* is generated by shifting historical and political conditions, and design is embedded in the social and material fabric that reproduces these values. Design, whether the field acknowledges it or not, is always already engaged in ethical decision-making: it proposes *how one might live* (to invoke Aristotle). From graphic design to architecture and urban planning, design shapes, guides, and even prohibits ways of living, modes or community engagement, and ultimately, what one ought to value. This is precisely why Michel Foucault's works on normativity and the processes of normalization become powerful genealogical and diagnostic tools: they unearth how design institutes and normalizes certain value systems (Foucault, 2007). With some notable exceptions, the failure to interrogate the history of these normalizing practices has rendered design vulnerable to reproducing value systems that marginalize, exploit, and extract from humans and nonhumans alike.

Fortunately, in the last few decades, designers have begun to wake up to the fact that for much of the twentieth century, design has been complicit in reproducing the modern/colonial/capitalist world-system, and that the decolonization of design practices, theories, and histories is desperately needed (Escobar, 2020; Fry and Nocek, 2021). What's more, some argue that colonial modernity is itself a global design, which means that designing is as much a political and economic project as it is a professional one (Mignolo, 2011; Fry, 2011). Still, even with this reckoning, and the promised, if yet to be realized, shift in the discourse and practice of design, the ethics underlying this transition remain elusive. While the *Political* figures prominently in these discussions, the ethical dimensions of the project are largely left unanswered, and deferred yet again.

Turning to ethics would mean inquiring into the value systems and obligations that design commits itself to. What, specifically, is it undermining – the universal human subject (Sylvia Wynter, 2015)? And if so, how? What normative frameworks, if any, does it promote in its place? And how does the political project overlap, support, or even conflict with the ethical one? The Algerian-born French philosopher, Jacques Derrida, criticized Immanuel Kant for reducing the ethical to the political, insofar as the latter saw no objective conflict between our moral obligations and what's politically possible (Kant, 2006). For Derrida, however, Kant fails to recognize that the political is always already an imperfect realization of the obligation to be hospitable to the Other qua Other before any (political) designation is given (Derrida, 1999). In this context, it's worth thinking about whether *pluriversality* serves a similar function: Does the pluriversal become the new (and at the same time, ancestral) value system that underlies the decolonial political project (see Dunford, 2017)? And if so, is this the proper remit of design ethics –to promote pluriversality as a value? This would certainly give design ethics a distinct objective, but is this the goal? If it is, then this would also entail redesigning the very institutions and curricular structures that produce designers in the image of dominant values.

For all these reasons, the present volume represents an important transition in design research. What stands out about the essays included here is that they engage with what so many others dismiss or ignore: namely, the ethics of a multidisciplinary design field that aims, on the one hand, to be maximally inclusive, but on the other, does not reduce or explain away alterity of the other. In fact, the otherness of the Other figures centrally in the volume, and plays out in various ways across the disparate essays. Indeed, where other edited collections and research projects might remain content with the idea that designing for public and social systems announces its moral worth unproblematically, this volume does not fall into this trap. And for good reason: in another context, Guy Julier and Lucy Kimbell show convincingly how social design emerges in the wake of austerity measures and serves to prop up neoliberal values (Julier and Kimbell, 2019). Which means that any assumption of ethics on the part of social designers, even when good intentions abound, needs to be recast in light of the neoliberal values the field unwittingly reproduces. The essays that follow seem keenly aware of criticisms like this, and do everything in their power to resituate the field in explicitly ethical terms, replacing individualism and universality with relationality and pluriversality.

To cast the net a bit wider, this reframing of design ethics also presents a unique opportunity for multi- and trans-disciplinary research in the future. Not only does raising the question of ethics in design shift the needle in the right direction by making explicit what's remained implicit for far too long, but it also crosses over into a rich history of ethics in the tradition of continental philosophy. For its part, continental philosophy is no stranger to design and architecture, but it's typically encountered in ontological design (or adjacent fields *à la* Heidegger), or else in the heyday of deconstructive architecture (Eisenman, Tsumi *et al*.). Rarely, however, does this tradition of philosophical inquiry make its way into social and public design practice, and certainly not in the context of ethics. This volume is an exception to this rule, and paves the way for others to follow. Concerns over how the otherness of the Other affects the stability of the designer (as an autonomous subject) abound in this book, and are framed in terms that Emmanuel Lévinas, Hans Jonas, Jacques Derrida, Jean-Luc Nancy, and many others working in this tradition of philosophy have carefully and rigorously articulated. It still remains to be seen what long-term impact such a *turn to ethics* will have on research-practice, but there's little doubt that the questions raised in this volume will catalyze a new, and much-needed wave of interest in the ethics of design for public and social systems.

Adam Nocek
Arizona State University
Visiting Professor, Politecnico di Milano

References

Derrida J. (1999), *Adieu: To Emmanuel Levinas*, Trans. Pascale-Anne Brault and Michael, Stanford University Press.

Dunford R. (2017), “Toward a Decolonial Global Ethics”, *Journal of Global Ethics,* 13, 3: 380-397. DOI: https://doi.org/10.1080/17449626.2017.1373140.

Escobar A. (2020), *Pluriversal Politics: The Real and the Possible*, Duke University Press, Durham.

Foucault M. (2007), *Security, Territory, Population: Lectures at the Collège de France 1977-1978*, Trans. Graham Burchell. Palgrave Macmillan, New York.

Fry T. (2011), *Design as Politics,* Berg, London.

Fry T. and Nocek A., eds. (2021), *Design in Crisis: New Worlds, Philosophies, Practices*, Routledge, London.

Julier G. and Kimbell L. (2019), “Keeping the System Going: Social Design and the Reproduction of Inequalities in Neoliberal Times”, *Design Issues* 35, 4: 12-22. DOI: 10.1162/desi_a_00560.

Kant I. (2006), *Toward Perpetual Peace and Other Writings on Politics, Peace, and History*, Yale University Press, New Haven and London.

Mignolo W. (2011), *The Darker Side of Western Modernity: Global Futures, Decolonial Options,* Duke University Press, Durham.

Wynter, S. (2015), “Unparalleled Catastrophe for Our Species?”, in Wynter S., *On Being Human as Praxis*, McKittrick K., eds., Duke University Press, Durham.

Designing ethically in a complex and changing world

Elena Caratti, Laura Galluzzo

> ***Act in such a way that the consequences of your action are compatible with the permanence of authentic human life on earth*** **(Hans Jonas, 1990)***.*

Design for public and social systems is a systemic design approach aimed at addressing complex societal challenges of communities, small or marginalized groups of citizens, and the public sector.
Its ultimate goal is in improving the quality of life; facilitating social interactions and collaboration; and finding solutions that are environmentally, economically and socially sustainable, as well as inclusive and integrated with public policies and infrastructures.
It has a transdisciplinary dimension characterized by a multiplicity of contributions from the disciplines of sociology, psychology, economics, political science, but also from design sub-disciplines (communication, service, interaction design, design for social innovation and sustainability…), and it is also closely connected to the digital evolution and the automation of processes generated by AI.
Its material or immaterial outputs (systems of artefacts, spaces,

services, tools…) have a performative nature (in other words, they are active catalyzing agents) and are deliverers of a relational, intersubjective dimension, which is realized in different ways.
We find them in the forms of design collaboration, and in projects aimed at social inclusion; reducing inequalities; communication of public benefit, support, and care for the weakest groups; social innovation; co-design processes aimed at defining local and international policies with citizens; design for urban regeneration; design for the pluriverse; design that adopts a more-than-human approach; and post-colonial design.

This plural research dimension requires designers with the ability to connect and translate multiple knowledges in order to deal with complex realities or problems, which, as Morin argues (Morin, 2000, p. 7), are increasingly polydisciplinary, cross-cutting, multidimensional, transnational, global and planetary; but also needed are designers who are sensitive and aware of the uncertainty and changeability of the everyday circumstances in which we live.
To address this situation, according to Galimberti's thinking, it is necessary to overcome the mechanistic Cartesian paradigm, which sees humankind as the only subject in the face of an objectified nature, in order to adopt a systemic or complexity paradigm, which includes humans in the processes of nature, «because every phenomenon, including the human phenomenon, acts on the whole system, and the whole system acts on every phenomenon, including the human phenomenon» (Galimberti, 2023, p. 48). A testimony of this systemic phenomenology is the recent COVID-19 pandemic experience, which revealed a series of health, social, economic, and political emergencies on a global scale, as well as multiple ethical challenges at a general level (concerning the conduct of individuals) and at a specific level (in the exercise of everyday life within different spheres).

Therefore, introducing a reflection on the ethical dimension of design for public and social systems means addressing some questions concerning design action: What are we doing? How are we doing it? What is driving it? And for what purpose? And then, again, What must I do? Why do I do it? And why must I do it? What difference does my action make? These are, primarily, the questions of ethics (Fabris, 2014, p. 15).

Galimberti believes it is to take into consideration a threefold meaning of ethics because the models of the past no longer work. He introduced the concept of a *planetary ethics* because the existence of the entire world (animals, plants, biosphere) is at stake and it is crucial to consider those values and principles that are useful in addressing environmental problems from an ecosystem perspective; a *cosmopolitan ethics* based on the principle of kinship and in favour of cultural diversity and against all forms of discrimination; an *ethics of transcendence* which presupposes a radical cultural evolution and the overcoming the present situation to realize the possible (humans are incomplete and open to the possible) (2023, p. 56). As Galimberti asserts, quoting the thought of De Martino: the *ethos of transcendence* is the human experience par excellence as energy-transcending situations, i.e., as valorizing doing and, at the same time, operational valorization, (Galimberti, 2023, p. 436).

These reflections lead us back to the pragmatic dimension of design for public and social systems, as a field of possibilities in which the multiple dimensions of ethics constitute a challenge and an opportunity for real social, environmental, political and cultural change.

This volume tries to clarify what it means to design *ethically* in a complex world and how it can be done (according to which criteria) within a multifaceted reality where everything is interconnected and in continuous transformation.

Challenges and ethical principles

An exercise of critical reflection that takes into consideration design actions and their consequences on our social, political, environmental, technological context is not new in design. There are many scholars and designers, from different design areas, who have made highly significant contributions that are directly or indirectly connected to ethics.

To mention just a few of them, we remember Thomas Maldonado's *La speranza progettuale. Ambiente e società* (1970); Victor Papanek's *Design for the Real World: Human Ecology and Social Change* (1974); Clive Dilnot's *Ethics in Design: 10 questions*, in *Design Studies: A Reader* (2009); Donald Norman's *Living with Complexity* (2010);

Tony Fry's *Design Futuring: Sustainability, Ethics, and New Practice* (2018); Elisabeth Resnick's *Developing Citizen Designers* (2021); Ezio Manzini's *Design, When Everybody Designs: An Introduction to Design for Social Innovation* (2015), and his more recent *Fare assieme. una nuova generazione di servizi pubblici collaborative* written with Michele D'Alena (2024); and equally relevant is the volume edited by Salvatore Zingale, *Design e alterità. Conoscere l'altro pensare il possibile* (2023).

All of these contributions attempt to identify shared criteria and principles for design and its applications, and to address a variety of complex and interrelated challenges that arise from diverse needs and interests of the socio-political, technological and cultural contexts.

A first element of complexity stems from the articulation of the different segments of society: citizens, government or non-profit institutions, public or private sectors, which can express multiple requirements or priorities. There is also a problem connected to their engagement and participation in the design process, without the exclusion or underrepresentation of marginalized people. From this perspective, it's essential to design inclusive and accessible artefact systems that guarantee an active participation of all involved stakeholders.

Another significant challenge is represented by a series of factors connected to power dynamics and control (political, economic, ideological…), that can influence decision-making and design outcomes.

In addition, the ability to anticipate future changes and design systems that are sustainable over the long term (both environmentally and socially), are tasks that require the ability to foresee the impact of design interventions on public and social systems, and managerial skills for monitoring and evaluating the use of resources and funds.

Further ethical challenges involve the capability to operate across diverse cultural contexts that are characterized by their own norms, values and reference systems. The designer needs to respect and integrate these cultural differences and sensibilities, facilitating the realization of design solutions that recognize the other than oneself, without imposing the cultural system of the majority. Here, interdisciplinary collaboration is fundamental to design holistic and effective solutions that need to be scalable and adaptable

to specific or changing environments and situations.
Not to be forgotten are the tasks connected to communication and multimedia and their ethical implications. The ethical dimension concerns the content and language of communication and the communication process (how communication is done). According to Baule, communication design has a significant role in the social construction of reality. The communication project is situated (strictly connected to territory) and through translation processes it contributes to the production of meanings; facilitates access to content; and encourages dialogue and the creation of common spaces for co-participation among different stakeholders (Baule, 2017, pp. 23-32).

Together with the communicative component of the project, as Bellino asserts, there are fundamental structural and systemic issues, involving technology distribution policies (who will be informed and who will not, who will be connected and who will be excluded: the digital *divide*) and those relating to media ownership and control (Bellino, 2010, p. 5). Finally, the ethical challenge also comprises the transformations brought about by the digital revolution and AI. Floridi affirms that AI is a new form of *artificial acting* which generates important ethical challenges, regarding autonomy, bias, explicability, fairness, privacy, accountability, transparency and trust, (Floridi, 2024, p. 93).

The self-regulation and autonomy of technological apparatuses risks subordinating human action and escaping human control. As Fabris asserts, the result for the human being is, on the one hand, a reduction in responsibility, and on the other, a growing sense of powerlessness (Fabris, 2020, p. 12).

In the face of this complex framework of varying challenges, ethical reflection on human action questions what the ethical principles are that can guide the transformations taking place.
Philosophical reflection on human behaviour has identified a few shared values that we try to summarize here: the principles of *responsibility, respect and alterity, pluralism*, *dialogic confrontation.*
We think these principles that are derived from *general ethics* can contribute to collective progress, and can orient design action in many concrete and contingent situations.

- The paradigm of *responsibility*, according to Jonas, constitutes the fundamental ethical principle that should guide our collective action (Jonas, 2009, p. 233). In the face of technological change, it is crucial to refer to a new kind of action that is inspired by a universal perspective: «act in such a way that the consequences of your action are compatible with the permanence of authentic human life on earth» (Jonas, 2009, p. 727). The attention to the scale of long-term consequences and to the irreversibility of our actions is the first duty of a *planetary ethics*.
- *Respect and alterity* principles are tightly connected to the concept of respect for identity (individual and collective) and to the capability to open ourselves to people or different cultures, who, as Simonotti asserts referring to Ricoeur, with their diversity, extraneousness, and in some cases incomprehensibility, in fact make possible the creation of new worlds, new meanings, and new unexplored spaces of sense (Simonotti, 2023, p. 9).
- *Thinking in the plural* means recognizing diversities and making them parts of oneself – it's an act of hospitality. To achieve this, it is indispensable that everyone makes an effort at self-criticism, sustaining a concrete multicultural dialogue and continuous processes of integration and mutual reinforcement. Respect, alterity and pluralism are the duties of a *cosmopolitan ethics*.
- *Dialogic confrontation* takes place through translation processes. To translate is not simply to transfer or mediate contents and significances, it also means to act on a dialogical level within a cultural pluralism. As Simonotti reminds us, in the act of translation there is a fusion of horizons; the effective participation in a common sense; the comparison and integration of different perspectives, beyond one's own particularity and that of others (Simonotti, 2023, pp. 126-127). Dialogic confrontation corresponds to a valorizing action and is an expression of the *ethos of transcendence*. It is what can help the whole of humanity make what is possible become real from a planetary ecosystem perspective.

Applied ethics for the design for public and social systems

If theoretical reflections of general ethics are useful to frame the challenges and the reference principles for the design for public and social systems, referring to concrete cases and the so-called applied ethics tries to give an answer to the real questions that arise in the various fields of design action. The idea is to create a connection between general principles and applied ethics to bring out a virtuous circle between a series of reference values and their concrete experimentation within diversified contexts subjected to continuous transformations and urgent questions.

What challenges in designing ethically does design for public and social systems face? How do designers design ethically in the real world? Can designers become effective agents of transformation and social change? Who are the involved social actors? What kind of impact and effects within public and social system do they produce? How can we recognize ethical design practices that realize structural changes? How can digital environments and platforms contribute to the strengthening of an ethical approach to the design project?

If, as Silvia Pizzoccaro quotes, «A pluriversal design practice posits multiple worldviews and multiple lived experiences to inform the design field. Moreover, it advocates a relational view of situations in which the design responses to interdependent natural, social, economic, and technical systems, are specific and many forms of design practice may coexist» (Noel *et al*., 2023, p. 183). This relational nature of design and the importance of lived experiences that inform design are clearly described in the two cases of the Off Campuses of Politecnico di Milano described by Davide Fassi and Francesco Vergani, and by Virginia Tassinari, Francesca Piredda and Elettra Panepinto; and in the Wish Mi project presented by Valeria Bucchetti.

Designers' reflection with respect to the theme of otherness, as Salvatore Zingale suggests, can focus on tools and actions «we are not interested here in finding an answer, but in highlighting how to engage design research on alterity means to urge the designer's mind to reflect on what tools and what actions need to be elaborated to cultivate relations with the alterities of the contemporary world

and to grasp in this alterity universes of meaning that would otherwise not be explored». This is represented by the research on the meaning of queer city presented by Laura Galluzzo, and in the chapter by Umberto Tolino on a reflection on methods and approaches in Public Sector Communication.
In the parallelism between translation and social design offered by Elena Caratti, «similarly to social design and design for social innovation, translation is a combination of different factors: a strong cultural component connected to Humanities, operational knowledge supported by technology, creativity, within a broader context that reflects on its processes from a pragmatic point of view», one can also frame the contribution of Daniela Calabi who sees design as an interesting tool for territories to work with and through, as well as Anna Anzani and Ada Piselli's description of the meaning of care and the role of design in the conversion of abandoned spaces in a way that is not so different from translation.

And finally, following James Postell's wish that «designers, educators, and institutions should never need reminding of the need to collaboratively contribute to the cultivation of shared social responsibility. The dynamic nature of the ethical dimension in IxD urges designers, students, and institutions to remain agile and responsive to an evolving societal, technological, and cultural context», Martina Motta and Rachele Didero question the intersection of new technologies, the fashion system, and ethics.

Towards a multi-voiced practical wisdom

This book aspires to be a contribution that doesn't pretend to synthesize all aspects of the relationship between ethics and the design for public and social systems. It is a first thematic framing that helps to understand the correlation between the principles of general ethics and the complexity of applied ethics; its goal is in providing an opportunity for cultural exchange and collective dialogue.

The publication aims to submit a series of critical reflections and design projects, which translate the will to respond, from an ethical point of view, to the multidimensional aspects of our time.
The aim is not only to highlight the surface or material consistency of the devices, artefacts, and designed spaces (descriptive

hypothesis), but to offer a series of critical considerations on their substantive system-level effects, with the recognition of the importance of the Other as *Other* (Ricoeur, 2001) and the awareness of the interdependence between artefacts, individuals, societies, governments, institutions, and the planetary ecosystem (a reflexive hypothesis according to an ethics of plurality). In the current situation, the recourse to the ancient conception of *practical wisdom* (the Aristotelian concept of *phronesis*), seems to be the right direction to take. It is a virtuous circle where the principles of general ethics (theoretical-explanatory knowledge) and the practical-situational knowledge of applied ethics converge, promoting a critical dialogue in the public sphere.

Phronesis and negotiation through dialogue can help us to identify common and shared orientations of meaning in an increasingly complex world; to define possible lines of conduct; and to identify specific actions in the different contexts of design for public and social systems.

References

Baule G. (2017), "Comunicare altrimenti. Antidoti per una comunicazione civile", in Bucchetti V., edited by, *Un'interfaccia per il welfare. Le funzioni sociali del design della comunicazione*, FrancoAngeli, Milan.

Bellino F. (2010), *Per un'etica della comunicazione*, Bruno Mondadori, Milan.

Capra F. (2013), *Il punto di svolta. Scienza, società e cultura emergente*, Feltrinelli, Milan.

Cooper R. (2010), "Ethics and Altruism: What Constitutes Socially Responsible Design?", *Design Management Review*, 16: 10-18. DOI: https://doi.org/10.1111/j.1948-7169.2005.tb00197.x.

D'Agostino F. (2011), *Etica e responsabilità, a chi il primato?,* in Lo Torto F., *Etica. Riflessioni sulla pratica responsabile*, Marcianum Press, Venice.

De la Bellacasa M. P. (2017), *Matters of care: Speculative Ethics in More than Human Worlds* (Vol. 41), University of Minnesota Press, Minneapolis.

Escobar A. (2018), *Design for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*, Duke University Press, Durham.

Fabris A. (2014), *Etica della comunicazione*, Carocci, Rome.

Fabris A. (2020), *Etiche applicate. Una guida*, Carocci, Rome.

Floridi L. (2022), *Etica dell'intelligenza artificiale. Sviluppi, opportunità, sfide*, Raffaello Cortina, Milan.

Galimberti U. (2023), *L'etica del viandante*, Feltrinelli, Milan.

Haraway D. (1988), "Situated knowledges: The science question in feminism and the privilege of partial perspective", *Feminist Studies*, 14, 3: 575-599. DOI: https://doi.org/10.2307/3178066.

Haraway D. (2020), *Chthulucene: sopravvivere su un pianeta infetto,* Nero, Rome.

Jonas H. (1990), *Il principio responsabilità: Un'etica per la civiltà tecnologica,* Einaudi, Turin, 2009.

Jullien F. (2018), *L'apparizione dell'altro. Lo scarto e l'incontro*, Feltrinelli, Milan, 2020.

Koskinen I. (2016), "Agonistic, convivial, and conceptual aesthetics in new social design", *Design Issues*, 32, 3: 1829. DOI: https://doi.org/10.1162/DESI_a_00396.

Morin E. (2020), *La testa ben fatta. Riforma dell'insegnamento e riforma del pensiero*, Raffaello Cortina Editore, Milan.

Pellegrino G. and Di Paola M. (2018), *Nell'antropocene. Etica e politica alla fine di un mondo,* DeriveApprodi, Bologna.

Ricoeur P. (2001), *La traduzione: una sfida etica / Paul Ricœur*, Jervolino D., edited by, Morcelliana, Brescia.

Semplici S. (2023), *Etica post-pandemica. I principi e le circostanze*, Rubbettino Editore, Soveria Mannelli.

Simonotti E. (2023), *Comprendere sé, comprendere l'altro. Percorsi con Paul Ricœur*, Mimesis, Milan.

Zingale S., edited by (2022), *Design e alterità. Conoscere l'altro pensare il possibile*, FrancoAngeli, Milan.

PART 1

Theories for an ethics of responsibility

1. Exercises in alterity: nurturing alterity for a design ethic

Salvatore Zingale

1.1 Alterity in the project culture

The question of alterity, especially because of globalization processes, migration flows, and the push to overcome discrimination and inequality, has become fundamental for understanding multicultural societies and their possible development. The focus on alterity is increasingly present in both philosophy and the human sciences, and among the disciplines that study forms of communication and cognition that are *other* than human (Vallortigara, 2000; Marchesini, 2016b), including the debate on posthumanism (Baioni *et al*., 2021). From these fields of study, we have learned that interest in alterity lies between the *ethical* dimension (*how we should act*) and the *epistemological* dimension (*how we should know*). In the first case, alterity leads us to the encounter with subjects who are inevitably *other than us* and, for this reason, requires us to recognize each other as well as the assumption of reciprocal responsibility (Lévinas, 1961; Jonas, 1979); in the second, alterity is driven to the exploration of what lies beyond our limits, in *other territory*.

In each case, playing on the grammatical double attribution (first as a noun, then as an adjective), we define the Other as that which is *other* than what we think it is. And it is not a question of opposing *alterity* to *identity*, because the latter is a cultural construction that derives from mutual recognition: it is not the individual subject (nor even a collective subject, such as the nation or a company) that possesses an identity, because the identity of a subject derives from the network of relations in which it finds itself (cf. Remotti, 1996).

However one considers and studies it, the question of alterity presents itself as a field within which one can find unexpected resources. Its manifestations are diverse. For science, it is the unknown to be known – the universe of possibilities. For the human and social sciences, it is the progressive discovery of human complexity – of the interiority of the person and the dialogue between cultures – that cannot be rigidified in unquestionable forms of thought. For the life sciences, biological and biosemiotic, it is the realization of how much *other minds*, such as the animal world, can teach us once we abandon all pretensions to anthropocentrism.

This is particularly evident when we move from the inevitable and necessary theoretical reflection to transformative praxis, when critical thinking helps to change mental and behavioral habits, when culturally negated othernesses burst onto the social scene and, over time, undermine mental constructs and systems of ideas, even to the point of revising legal, political, and religious systems.

Today, it is legitimate to think that even the design dimension can undertake research paths that highlight the need to recognize the Other in different social and cultural contexts: from migratory flows to gender cultures, from social fragility to mental health, from cultural distances to the difficulties of social integration, etc. Design, in fact, possesses the appropriate tools to promote innovative and open visions of relations between individuals, peoples, and languages. Moreover, in the design culture, it is increasingly evident that the production of artefacts and services does not end with the satisfaction of a need; artefacts contain much more than what enables them to perform the services for which they were conceived: they are also vehicles for worldviews, including distorted or deliberately distorted images of the *Other than oneself* (Bucchetti, 2021).

The culture of the project is therefore precisely such because it can undertake research paths that involve a broader *thought of alterity*, that is, that perceive the need both to *recognize* the Other as a social and anthropological subject but also to *know* alterity as a field of inventive possibility. In other words, the ethical dimension requires a passage through the epistemological dimension to have an effect on social reality. Here the question becomes more complex: *To know how to act, how and what must we know?*

We are not interested here in finding an answer, but in highlighting how to engage design research on alterity means to urge the designer's mind to reflect on what tools and actions need to be elaborated to cultivate relations with the alterities of the contemporary world and to seize in this alterity universes of meaning that would otherwise not be explored. It is not a question of defining methodologies or drawing up guidelines, but rather of thinking about some *alterity exercises* in the training of the designer.

1.2 Exercises

I would like to focus on two topics that we can transmigrate from sign science into the design sciences. These are dialogicality and overcoming the obvious. Hence two exercises, or if we want, the acquisition of a basic awareness, i.e., a mental habit that in turn becomes a design habit.

To introduce the two exercises, let us start with a passage by the anthropologist Marco Aime, who at the end of the first chapter of his book *Classificare, separare, escludere* [To classify, separate, exclude] writes:

> **This is where racism stems from: from the unwillingness to know and the anxiety to classify, to pigeonhole, but in the simplest and most reassuring way, just as we classify plants, animals, and rocks. A preventive apartheid, which distances us without knowing us and at the same time makes us feel close and similar, equally without knowing us (Aime, 2020).**

The unwillingness to know and the anxiety to classify can be defined as two psychological blocks, even before being regarded as ideological. It is the inability to cross boundaries in defence of one's identity beliefs, the inability to overcome an obstacle that inhibits the mind, preventing it from encountering possible senses and values. Referring to other studies on the political issues that such a blockade entails, we can observe that, in many cases, what applies to the ethical field (e.g., criticism of racism or gender inequalities) also applies to the scientific and, as far as we are concerned, design fields. This is, on the one hand, a kind of *resistance to exploration*, which in design culture becomes a ruinous brake. On the other hand, it is a matter of *retreating safely* into a pseudo-classificatory order: sometimes this manifests itself in a constantly fixed gaze on the well-functioning canons of tradition; at other times, in adapting to market trends and current tastes.

Venturing into what is *other than what we know* requires an effort, a tension towards alterity. Or perhaps precisely a series of exercises, in order not to waste what the Other must show us and tell us: its explorable infinity, which instead is often reduced to a predetermined finite. The aim is to build a *design habit* that can only be formed and developed within a culture of alterity.

1.3 The exercise of dialogue

The first is the exercise of dialogue, because the disposition to dialogue constitutes the main way of accessing that which presents itself as *other* than us (Bonfantini and Ponzio, 1986; Bohm, 1996; Jullien, 2016; Zingale, 2023). Knowing how to efficiently engage in dialogue is not always a correctly employed practice. Often, the illusion of knowing how to dialogue prevails; or, rather than research, the confrontation is oriented towards dialogizing to make one's own assumptions and beliefs prevail. The will to obtain prevails over the disposition to reflect. Every dialogical act, on the other hand, should be a questioning of knowing and an exposure to not knowing (Bohm, 1996).

In his book *On Dialogue* (1996), the physicist and philosopher David Bohm observes that collective thought is larger than individual thought, and that, for this reason, everyone can only draw on collective knowledge in order to expand his/her own. Collective thought, he says, is like a vast storehouse of notions and beliefs, often contradictory and inconsistent. He calls it a *pool of knowledge*, a metaphor reminiscent of Umberto Eco's Encyclopaedia (1984). Bohm further observes that our sense of knowing is in fact the awareness that we are in relation to other minds that draw from this vast reservoir:

> **We have the sense that we "know" all sorts of things. But we could say that perhaps it is not "we", but knowledge itself, which knows all sorts of things. The suggestion is that knowledge – which is thought – is moving autonomously: it passes from one person to another. There is a whole pool of knowledge for the whole human race, like different computers that share a pool of knowledge. This pool of thought has been developing for many thousands of years, and it is full of all sorts of content (Bohm, 1996, p. 52).**

However, precisely by analogy with the concept of the Encyclopaedia, collective thought can not only be seen as a *pool* but also as a *labyrinthine thicket* – as Eco (2007) would say – where each of its elements can be seen from innumerable points of view. The problem arises when one has to decide which point of view to favour; perhaps more than one, perhaps none. It is not a question here of espousing relativistic theses on truth but of identifying the way in which we can make use of our communication tools to enter into a relationship with the Other. We repeat, however much it may instill fear or stun us with wonder, it should be considered an infinity that can be explored.

This is where Bohm's proposal, his way of understanding dialogue, comes into play. He argues that it is precisely in *bringing into dialogue* these innumerable points of view and the conflicting visions that can result from them that we have some chance of being able to clearly see the nature of a problem, or at least to have a better grasp of it.

If we are not in search of total or totalitarian truths (cf. Lévinas, 1961), and if the search by means of dialogue is conducted heuristically, dialogicality is the basic access route for the formation of all knowledge (Zingale, 2023). This is where the ethics of dialogue comes in (Fabris, 2011), i.e., the search for the most appropriate way *to act* in view of an end. Dialogicality in fact entails the assumption of certain mental habits that we can define both as *openings* towards the Other, thresholds of access that the dialoguers prearrange, and as *expectations* of what can be derived from the dialogical relationship.

Starting with Bohm, but also considering what has been said about the philosophy and semiotics of dialogue, here is a summary of some aspects of an alterity-oriented dialogical praxis (Zingale, 2023). First, one must suspend one's own assumptions and beliefs. This does not mean renouncing one's own opinions or interpretations, but that whatever one expresses, one leaves open to others without defending it or bringing it up for discussion to gain sympathy or credit: reflective dialogue does not aim to display cognitive superiority but to enter a relationship with the minds of others. Consequently, it is necessary for everyone to refrain from judging the positions of their interlocutor to grasp their points of view as deeply as possible. In this way, dialogue becomes a place of access, a place of barrier-free thresholds. Indeed, it is good to try to *enter* into the minds and interpretations of the interlocutor and to make sure that we understand the reasons for his or her points of view, even if we do not share them.

Dialogue thus becomes a space for mutual action. It may take the form of a struggle, but one where we fight for a common goal. In this space of action, the unexpected and the surprising will also have a chance to manifest themselves. If a dialogue wants to be heuristic, one must, in a certain sense, wait for the unexpected to appear. The unexpected can arise either from within the dialogue through associations of ideas or sudden new hypotheses, or from outside through accidental events that are, however, relevant to the theme of the dialogue. The unexpected and the surprising can appear at any time, by chance and in unexpected combinations. This is why dialogue – even dialogue with oneself – is fertile ground for abduction and inventiveness.

In any case, the conclusions of the dialogue must come from the dialogue itself and from the way it is conducted. No conclusion can be defined before the dialogue (for that would be a preconstructed thesis), nor can it be added after the dialogue, as if it were a shortcoming to be remedied. In both cases, the dialogical action would present itself as a pretextual fact and not as an instrument of research and knowledge of the Other.

1. 4 The exercise of seeing beyond the obvious

In the essay *The Third Meaning* (1977), Roland Barthes proposes the well-known difference between the *obvious* and the *obtuse meaning*. The essay is inspired by some stills from the film *Ivan the Terrible* by Sergej M. Ejzenštejn, but the reflections on the difference between these two *senses* can also be extended to the topic we are dealing with here. Learning to look beyond the obvious is the second exercise I want to focus on. But let us first see what Barthes means by the two adjectives – *obvious* and *obtuse* – and why he favours the third sense. Bearing in mind that the first sense is that of communication, which he understands as merely informative.

> **The symbolic meaning (the shower of gold, the power of wealth, the imperial rite) compels my recognition by a double determination. It is intentional (it is what the author has meant) and it is selected from a kind of general, common lexicon of symbols; it is a meaning which seeks me out – me, the recipient of the message, subject of the reading – a meaning which proceeds from Eisenstein and moves *ahead of me*. It is evident, of course (as the other meaning is, too), but evident in a *closed* sense, participating in a complete system of intention. I propose to call this complete sign the *obvious meaning*. *Obvious* means: *in the way*, which is precisely the case with this meaning, which seeks me out(Barthes, 1977, p. 54 eng. translation).**

Although these are very different fields and topics, a thematic consonance with the previous quotation cannot escape us: Bohm's *reservoir of knowledge* here becomes the *general lexicon* of symbols from which the symbolic meaning is *taken*. Barthes refers to the ritual of baptism by means of gold in one of the film's frames, but we can glimpse in this general lexicon every other form of signs that tend towards the stereotype: the already seen, the already codified. Much of our social life draws on this symbolic and general lexicon, but it is exactly the *obvious* recourse to it to deal with communication or innovation projects that we must learn to avoid.

The obvious sense is that which invites us, out of indolence or unreflective habit, to think of following models of reasoning already applied, like walking always and only within a furrow dug by continually passing through the same places, as if the *convention* necessary for understanding images and symbols was not itself historical and not idealistically universal. This is what happens, for example, when we associate a hue of colour with a certain value, according to the inertia of tradition, or when we expect a certain behaviour from someone according to their geographical origin.

Moreover, this automatism of convention is structurally connected with the encyclopaedic semantics we have been discussing. As Anna Maria Lorusso observes,

> **In short, with Eco semantics becomes topological and stratified: topological because it is based on "organised regions of relations", and stratified because it is based on repetitions and regularisations in time of certain associations. That of "Encyclopaedia" is, according to Eco, the best metaphor for to express this relational and stratified conception of meaning, in which the most frequent and regular associations sediment and assume a central role (Lorusso, 2022, pp. 46–47, my translation).**

The problem arises when these sedimented associations become a wall beyond which one has no intention of looking because one lacks the curiosity to expose oneself to other worlds. This is, for example, the reticence towards alterity that is spreading in several European nations because of migration flows. But one does not need to evoke racist or warlike tendencies to realize how our social life is dominated by mistrust of what appears to be foreign, as well as a slimy attention to what presents itself as exotic.

The culture of alterity, on the other hand, is a stimulus to seek a ladder to look beyond any barrier, which is, on closer inspection, a sign barrier. Psychologically, it can be difficult to detach oneself from the obvious because it is still a reassuring notion to which it is always convenient to return. For design culture, on the other hand, the obvious sense should provoke an act of healthy insolence and strategic diffidence, i.e., not giving in to the thought that the sense presented before us constitutes all possible sense.

Knowing how to see beyond the obvious also invites one to develop a vision beyond pre-understanding, which, although inevitable as an indispensable pre-structure of any interpretation (cf. Gadamer, 1960), if not questioned it becomes rigid to the point of excluding any view beyond an obstacle or problem, like the hedge in Giacomo Leopardi's poem *L'Infinito*. In the inevitable pre-understanding, it is therefore necessary to make breaches to look beyond the ramparts that obvious sense constructs, for example, through the uncritical legacy of tradition. This also means conceiving design from the perspective of abductive and inventive semiosis (Zingale, 2012; Bonfantini, 2021) to glimpse the Possible beyond mere phenomena.

1.5 Passing through alterity

In dealing with the issue of alterity, we have privileged its ethical and epistemological aspects. But the study of alterity also concerns other philosophical fields, such as the psychological and socio-historical dimensions, the dialectical and ontological dimensions, and even the theological dimension. Here we have selected the aspects that, we feel, have most to do with the idea of design seen as also responsible for the shaping of cultural beliefs and habits of behaviour, as well as leaning towards critical and inventive knowledge.

The exercise of dialogue, which certainly requires more development than the one outlined here, has more to do with the ethical dimension as well as with anthropology and semiotics; that of seeing beyond the obvious sense, instead, has aspects of a cognitive and epistemological nature. But these two dimensions are by no means separable. Dialogue is also the gateway to scientific reflection, and looking beyond the obvious is what prevents views of those outside the circle of our supposed identity from becoming fossilized: beyond the myth of the nation and the rhetoric of tradition; beyond suspicion of what is foreign and alien; beyond the inertia to accept what is deviant and transgressive, when it is nothing more than a demand for recognition of diversity.

In the course of history, the emergence of other realities, deviant and transgressive with respect to the known, has more than once reconfigured the scene of cultural and social values, also affecting legislative systems and social policies. But it also brought about extensive changes right down to taste and sensibility; one case in point is that it was the alterity of the African American slaves that gave birth to jazz and thus to all the popular music derived from it. Innovation can be found even where no one thought it could lurk, even in the pain of deported people.

This leads me to the conclusion that the passage through alterity causes thought to reach a possibility of transformation, a greater self-awareness, which necessarily translates into ethical and political praxis, affecting the conditions and life choices of social subjects.

References

Aime M. (2020), *Classificare, separare, escludere. Razzismi e identità*, Einaudi, Turin.

Baioni E., Cuadrado Payeras M. and Macelloni M., eds. (2021), *Abbecedario del postumanismo*, Mimesis, Milan.

Barthes R. (1977), *Image, music, text. Essays*, Fontana Press, London.

Bohm D. (1990), *On dialogue* (L. Nichol, ed.; Routlege classics ed.), Routledge, Abingdon.

Bonfantini M. A. (2021), *Scritti sull'inventiva. Saggi e dialoghi*, Mimesis, Milan.

Bonfantini M. A. and Ponzi A. (2010), *Dialogo sui dialoghi. Dove si parla di filosofia, scienza, utopia, semiotica, musica, poesia, ecotopia e così via discorrendo*, Esi, Naples, 1986.

Bucchetti V. (2021), *Cattive immagini. Design della comunicazione, grammatiche e parità di genere*, FrancoAngeli, Milan.

Eco U. (1984), *Semiotica e filosofia del linguaggio*, Einaudi, Turin.

Eco U. (2007), *Dall'albero al labirinto. Studi storici sul segno e l'interpretazione*, Bompiani, Milan.

Fabris A. (2011), *La scelta del dialogo. Breviario filosofico per comunicare meglio*, EMP, Padova.

Gadamer H. G. (1960), *Wahrheit und Methode. Grundzüge einer philosophischen Hermeneutik*, Mohr, Tübingen.

Jonas H. (1979), *Das Prinzip Verantwortung. Versuch einer Ethik für die technologische Zivilisation*, Suhrkamp, Frankfurt am Main.

Jullien F. (2016), *Il n'y a pas d'identité culturelle. Mais nous défendons les ressources d'une culture*, L'Herne, Paris.

Lévinas E. (1961), *Totalité et infini. Essai sur l'éxtériorité*, Kluwer Academic, Dordrecht.

Lorusso A. M. (2022), *L'utilità del senso comune*, il Mulino, Bologna.

Marchesini R. (2016a), *Alterità. L'Identità come relazione*, Mucchi, Modena.

Marchesini R. (2016b), *Etologia filosofica. Alla ricerca della soggettività animale*, Mimesis, Milan.

Remotti F. (1996), *Contro l'identità*, Laterza, Rome-Bari.

Vallortigara G. (2000), *Altre menti. Lo studio comparato della cognizione animale*, il Mulino, Bologna.

Zingale S. (2012), *Interpretazione e progetto. Semiotica dell'inventiva*, FrancoAngeli, Milan.

Zingale S. (2023), *Relazioni dialogiche. Un'indagine sulla comunicazione e la progettualità,* FrancoAngeli, Milan.

2. Design as pluriversality: the translational territory where practice is plural

Silvia Pizzocaro

2.1 A background to professional pluralism

Translating and integrating knowledge from other disciplines is, to a considerable extent, one of the crucial phases which has contributed to the building process of so-called design research, a concept that continues to remain open to many definitions.

Many forms of design research imply the translation of diverse fields of knowledge for the purposes of design implications. The general issue of giving form and validity to an inter-disciplinary or cross-disciplinary design competence, to be applicable in operational terms, is not new: however it has been only partially taken on board and to an even lesser extent resolved. The many decades of expansion of communication systems and technological innovation have generated a radical reconfiguration and widening of the baggage of design skills. An order of considerations of the greatest relevance, and one which can be referred to as refoundational, still revolves around the translation of those skills which tend to *pluri-qualify* the nature of the design profession.

It is largely agreed that – as Schön's seminal reflection anticipated – leading professionals may recognize when a new awareness of a complexity is challenging the skills and techniques of traditional expertise (1983, p. 14). There is no substantial novelty in recognizing the plural divergence of a profession. Decades ago, Schön (1983) remarked that awareness of uncertainty, complexity, instability, uniqueness, and value conflict may lead to the emergence of professional pluralism.

Over a long period the design horizon has extensively opened up to life sciences, social and behavioural sciences, in addition to more conventional intersections with creative advancements in applied arts, technology, management, and engineering.
Design can bring in some or all of these areas (and others) in accordance with the requirements of the design matter of concern. The context to be interpreted and understood for design actions has been partially losing its dense, unified, monolithic identity (i.e., the generic *market*, the generic *production system*, the generic *social milieu*). Instead, it is expected to be de-articulated into both persistent macro- systems – physical and non-physical, economic, social – and local constellations of concerned micro-contexts.

The interdisciplinary approach to design continues to require designers who are firmly rooted in their competences but equally well-equipped with the skills to synthesize, relativize, and apply extra-disciplinary know-how. As there is no unique way to practise design, the profession has largely shifted towards a relational and context-dependent practice, ready to work with different families of design knowledges. Not surprisingly, therefore, designers are facing the situation where a *habitus* qualified by malleable mindsets (Pizzocaro, 2018) is becoming a requisite to manage the multifaceted design demand, along with its internal presumptions and limitations, to effectively cope with the multiple languages of practice, fields of competence, and routes across design fields.

2.2 A matter of complexity

A recurrent statement about a designer's ability often recalls that the problem is to transform the awareness of complexity into methods to handle complexity (Boutin and Davis, 1997). Key concepts central to handling complexity may gain more clarity when they are revealed as already familiar to designers as the form of thought integrating uncertainty while activating links, contextualizing, globalizing, and recognizing both singular and general dimensions (Boutin and Davis, 1997, p. 116). To be trained as designers who make use of holistic visions then implies the ability to perceive the entwined sense of reality related to profession; to adapt and facilitate change; to be part of change itself; and to accept uncertainty as an opportunity rather than a risk or limit (Pizzocaro, 2005).

The scale of a designer's intervention may range from the level of an individual artefact to that of large technological systems, which contain messy problem-solving components; are both socially constructed and society-shaping; and include physical artefacts, organizations, scientific or legislative artefacts, and natural resources (Hughes, 1987, p. 51).

As Noel *et al.* (2023) argued, it is socio-technical systems that define much of today's design work: «They connect people in *new geographies* through digital devices and boundaryless software, yield increasing power to users, convert resource-intensive products to services, and share more information than ever before (…)» (p. 189).

Wahl and Baxter (2008) stated that many expected outcomes for «the *wicked problems of design* are more likely to be new processes, lifestyles, and changes in meaning» (p. 82), rather than mere material artefacts or technical solutions.

Dykes *et al.* (2009) were among the first to summarize that key amongst the changes designers are facing is the indeterminacy of professional boundaries. Fluid patterns of employment within and between traditional design disciplines have become commonplace, and many modern day designers have a core of designerly activity backed by other subject areas. Supported by collaborative working, many practitioners work with and within other disciplinary areas: «Designers are increasingly exposed to various disciplinary influences through diverse teams that coalesce for a project, dissolve and reform with different personnel and expertise» (p. 101).

Nelson and Stolterman (2004, p. 167) observed that organizations are challenged by levels of complexity and scale never experienced before: new demands for a constantly increasing stream of new knowledge that floods daily operations; cultural expressions that may collide with the globalization of people; ideas and markets that create an unstable and unpredictable environment: a *complexified* reality, where organizations still carry on creative and innovative activities, within ambiguous and uncertain conditions for their undertaking.

Increasingly ill-defined boundaries between artefacts, structures, and processes; large-scale social, economic, and industrial frames; complex mixes of needs, requirements, and constraints; information content that largely exceeds the value of physical substance; all of these motivate why «professional design practice today involves advanced knowledge. This knowledge isn't a higher level of professional practice. It is a qualitatively different form of professional practice» (Friedman, 2000, p. 7*)*.

2.3 The industrial designer as augmented shape giver

Valtonen (2005) has recounted a concise history of the changing role of the industrial designer during the last century. Although focussed solely on Finnish events concerning industrial designers, Valtonen's map of industrial designers' roles over six decades from the 1950s is partially generalizable. When the professional practice of industrial design first started in the 1950s, the designer was a sole product creator whose work was likened to that of the artist. With the sixties' closer cooperation with industry, the designer became a member of a team of engineers and marketing representatives asked to tackle technological complexities. With the seventies it was the turn of ergonomics when the designer embodied the user expert, and along with the eighties' popularity of design management the designer evolved into a co-ordinator. The experience creator finally absorbed brand-building and strategic design in the nineties.

Since the former roles have not disappeared with the emergence of the latter ones, designers have continued to play a part in streamlining products, but they have also collaborated in improving efficiency within organizations, to optimize processes, to automatize user experiences, and to ameliorate interfaces, systems and services at various levels. In general terms, the areas of concern for a designer have broadened and the roles multiplied. The new millennium definitively consolidated the path of the designer as *strategist* pushing innovation (Gornick, 2010).

Without entering the multifaceted, articulated debate about the pioneering, early phases of the industrial designer's role, here it suffices to recall with Valtonen (2005) that the role of the designer used to be that of «a creative and expressive person who had given form to an industrially produced product. This approach was at the time natural as the area in itself was new, and the public had hardly any knowledge of its existence». The role of shape giver was part of the broader horizon of material culture, although circumscribed to manufactured objects (Maldonado, 1976, p. 7).

To underestimate the designer as an artist and creator behind the object, and the driver of the product's appeal, sometimes based on charismatic and occasional eccentric special qualities, would not illuminate that even such an oversimplified role integrated the traits of a composite social function, based on visual sensitivity to reach the more substantial competence needed to determine materials, structure, mechanisms, shape, surface treatment and appearance of mass-produced products through industrial processes, not to mention packaging, advertising, display and marketing problems (ICSID/Unesco, 1967, p. 3). The designer's profile as a creative conceiver has frequently been inclusive enough to act as the performing agent for a practice aimed at improving the characteristics of use of products; meeting human needs through object artefacts; improving environmental quality; coining the features of products as well as giving them aesthetic quality; increasing productivity; and coordinating product development and planning (Bonsiepe, 1975, p. 20).

2.4 From the form giver to a future conceiver

Around half a century after the seminal ICSID definition (1967), the designer's profile amplified to explicitly show the traits of *innovation driver*, *negotiator, facilitator, visualizer, navigator, mediator*, and *coordinator*. With a more global economic and competitive situation, and a society emblematically marked by *The Rise of the Creative Class* (Florida, 2002), the quest for innovations leads to a change where design issues are gaining vastly greater importance. The design *ideology* then better coincides with «the idea of looking at things with a creative mind and finding new solutions» (Valtonen, 2015). Meyer and Norman remark (2020, p. 46) that «the creative and problem-finding-and-solving aspect of the profession has grown to encompass societal issues in a vast array of forms and emerging in countless different contexts – from redesigning procedures or organizations to tackling climate change». The designers may now aspire to be agents to direct the corporate visions with which forms of augmented competitiveness are to be established.

More up-to-date definitions for industrial design by the currently renamed WDO mirror the augmented role designers play when asked to bridge the gap between present and future, while not necessarily renouncing the legacy of a creative side. Industrial design now embodies «a trans-disciplinary profession that harnesses creativity to resolve problems and co-create solutions with the intent of making a product, system, service, experience or a business, better.

At its heart, Industrial Design provides a more optimistic way of looking at the future by reframing problems as opportunities» (WDO, 2023). With design increasingly being recognized as a strategic resource, the sphere of influence that designers gain in business and society is increased. Big corporations begin to see design as a critical corporate asset. The growing trend for integrating design into overall corporate strategy is also being appreciated. Consequently, designers may become increasingly entrepreneurial, now getting involved and venturing into business beyond the design of products, spaces and communications (Muratovski, 2015, p. 121).

Krippendorf largely expanded the actions that can be connected to the design professions by observing that «Design is fundamentally tied to conceiving futures that could not come about without human effort» (2007, p. 4). Along with this expansion, design has split into many different disciplines (product, interaction, graphic, communication, industrial, textile, fashion, digital, experience, packaging, multimedia) with such profound differences that they may actually be considered as separate, even though they are often housed together in education institutions (Meyer and Norman, 2020, p. 31). Bremner and Rodgers (2013, p. 6) further observed that the boundaries ruptured and dissolved of what used to be recognized as discrete design disciplines, e.g., product, graphic, textile, and fashion design.

Growing evidence suggests that a situation exists where a blurring of traditional design domains and a new capacity for collaboration is encouraging new types of design practice (Atkinson, 2010). Forms of professional hyper-specialization are offered and carried out in distinct and heterogeneous industrial sectors, *via* flexible contributions scattered on various levels of business organization (i.e., research and development departments, marketing areas, research laboratories, professional consultancy both inside and outside the company). Responsibilities further extend to use technologies; to gain understanding of social issues, human behaviour, and modern business models; to meet new ethical challenges that go along with an expansion of different sustainability issues, different cultures, and different value systems (Meyer and Norman, 2020, p. 26).

2.5 The emergence of the design innovation catalyst

As a new frontier for the design profession, the design innovation *catalysts* were coined to outline the value that novel capabilities provide organizations through employing them (Wrigley, 2016, p. 148). By increasingly becoming a vital and important strategic business asset, in contributing to successful innovations, industrial designers are entering an era when the ability to solve complex problems is expected to lie in the coupling of the project and business levels through a holistic approach to products, services, and business models, which consolidates a moving away from the solely product-centric approach.

Wrigley remarked that «the role of the *Design Innovation Catalyst* (DIC) is to translate and facilitate design observation, insight, meaning, and strategy for all facets of the organization. In this role, the DIC is called to continuously explore, instigate, challenge, and to disrupt innovation internally and externally – all from a position within the company» (Wrigley, 2016, p. 151). Engagement and involvement with many different internal and external stakeholders become vital to the design-led innovation process guided by the catalyst designer, who is expected to iteratively prototype solutions as the central value proposition of the firm. Even if it has long been stated by many authors that design can help businesses innovate through processes like design-led innovation and the generation of new business models (among the many Utterback, 1996; Walsh, 1996; Utterback *et al.*, 2006; Johnson *et al.*, 2008; Wylant, 2008; Martin, 2009; Cruick-Shank, 2010; von Stamm, 2013), a better distinction now states that the design-led innovation process «is not only about problem-solving approaches such as design thinking suggests, but it is a transformational process at the business (not product) level»(Wrigley, 2013, p. 2).

Design-led innovation may now integrate those methods which allow the designer to consider their development from multiple perspectives, typically spanning user needs, business requirements, and technology demands. The design solution is not expected as an artefact in isolation as the design profession shifts from servicing a manufacturing economy to a knowledge economy. The role of a designer is prompted «to radically change the emotional and symbolic characteristics of products through a deeper understanding of broader changes in society, culture and technology» (Wrigley and Bucolo, 2011, p. 232). If this does not imply that all designers are prompted to make this transition, it is however implied that for those embracing a position as innovation catalysts this profile embodies a role spanning both business and design knowledge domains (Wrigley, 2016, p. 149).

Managing holistic processes requires a different mindset at the start of a project than designers traditionally possess. They require different knowledge, processes and tools to crossover from the project level into the business level. Inspired by the framework established by Bucolo and Matthews (2011), stemming from

Norman (2010) and Martin (2011), and more extensively based on Wrigley and Bucolo (2012), the role of the *Transitional Engineer* was proposed to be inserted in between business and design.
Her/his function should be to translate between the abstractions of research and the realities of practice, converting design research into the language of business while also translating business insights into design problems (Wrigley, 2016, p. 149).

2.6 A kaleidoscope of roles

The designer's roles have been widely explored (e.g., Press and Cooper, 2003; Valtonen, 2005; Lee, 2008; Wahl and Baxter, 2008; Tan, 2012; Diehl and Christiaans, 2015), but with the tendency to a very broad scale (Yee *et al.*, 2009, p. 2). Especially where designing is less about artefacts and more about linking social, technological and cultural dimensions, alternative or integrative competence profiles still deserve dedicated *foci*. The many different facets of the designer as practitioner may produce a kaleidoscope effect: the many challenging new roles appear to be constatly readjusting to multidisciplinary innovation settings, and new design theories and practices mould new designer identities. Questions are constantly re-framed for the old and new roles, their coexistence and relationships.

Scanning literature systematically offers an outline on the plenty of role variants attributed to industrial designers. The study conducted by Güneş (2021) listed up to 83 designer roles (pp. 21-22), ranging from adviser to catalyst, inspirer, integrator, interpreter, intermediary, connector, coordinator, creator, mediator, facilitator, strategist. Less-frequent variants are interpreter of complex systems (Roth, 1999), core competence prospector (Seidel, 2000), social visionary (Tonkinwise, 2015), or transdisciplinary integrator (Wahl and Baxter, 2008).

The designer as *facilitator* appears very frequently in literature (Thackara, 1996; Inns, 2007; Julier, 2007; Morelli, 2007; Lee, 2008; Wahl and Baxter, 2008; Cooper *et al.* 2009; Hestad, 2009; Manzini, 2009; Tan, 2012). What the facilitator/interpreter does is to plan, guide, navigate, and manage the overall design process to ensure that objectives are effectively met, assuring participation from all the involved actors. In tune with the idea of redirective practice (Fry, 2009), Manzini (2009, p. 11) details *redirective practitioners* as connectors, *quality producers*, *visionaries,* future builders (or co-producers), promoters of new business models, and catalyzers of change.

A designer in the facilitator role may even adopt subordinate roles (Güneş, 2021, p. 30) to foster reflective practice and to enable collaboration, synergy, and participation. Güneş (2021, p. 23) pinpoints as key major clusters: those of creator/conceptor (able to see and share visions for the future and translate these visions into a concrete product rather than higher-level product policy development); conductor/coordinator (aimed at establishing cooperation and partnership among actors to provide information and ideas, to process and use the information to enable innovation and create an effectively designed product); and connector (asked to create a design network, connecting and balancing the communication of ideas and actors involved in the product-development process).

If different socio-cultural and economic environments around designers can create different role expectations, their role may vary in turn according to context conditions. Güneş (2021) remarks that the most important factor in defining the role played by a designer is information. If the information is immanent, if the designer has the necessary knowledge to work with, then the designer role tends to be atomistic (creator, artist, craftsman, functional specialist, maker, problem-solver). Conversely, the designer roles that are not atomistic (be they catalyst, synthesizer, integrator, interpreter, facilitator, mediator, agent of change, strategist, coordinator, teamwork leader, connector, intermediary) may variably depend on the acquisition, processing, and production of information, informed decision-making, and the utilization of the obtained information (Güneş, 2021, p. 30).

2.7 Steps to the *conscious* practitioner and the citizen designer

Design practice continues to have numerous forms and directions that can cross, transcend and transfigure disciplinary boundaries in a state of flux. It is currently a complex of approaches that, while competing as well as complementing, share the common goal of driving and informing design processes towards change.

Industrial designers as versatile practitioners are asked to navigate interdisciplinary domains and arrange multidisciplinary perspectives. Interdisciplinary collaboration, cross-fertilization, research interplay, vision sharing and knowledge transfer are among the recurrent expressions indicating promising paths to manage intersections among different fields of knowledge without renouncing an anchorage to more traditional designerly actions (Pizzocaro, 2016, p. 389).

Not surprisingly, designers are facing the condition where – amidst globalization and digital proliferation – the alterity of a design alter-disciplinarity or undisciplinarity has been claimed «as the most effective approach for the future of design» (Bremner and Rodgers, 2013, p. 9).

The opportunities and threads envisaged by the concepts of undisciplinarity and *alterplinarity* (Bremner and Rodgers, 2013, p. 12) are implying the definitive breakaway from a unified design practice, which is projected far beyond the limited borders of design as a once merely technical and creative discipline.

This current practice also widely exceeds the long-established intersections with engineering, architecture, art, social sciences, and economics in the previous forms they have long existed.
The design profession is expected by default to be reset on the individual design cases and issues that generate questions to heterogeneous fields of knowledge. Interdisciplinary, crossdisciplinary and transdisciplinary mindsets for designers become part of a *habitus* claimed to be functional in better shaping collaborations between areas of intervention that are generating hybrid professionalisms in design. This *habitus* may be recognized as an industrial designer able to face and manage the differences between multiple languages of professional practice, domains, and varying routes in complexity navigation in the realworld demands. *Habitus* is a latinism used in many areas other than habit or outward attitude, to indicate not only the complex of external characteristics or behaviour of an individual, but also, more generally, an attitude, a tendency.
The concept of *habitus* was used by Pierre Bourdieu (1979) to refer to the physical embodiment of cultural capital, namely the ingrained

habits, attitudes, or skills that people may possess given their personal experiences. According to Bourdieu, the *habitus* is a system of thought and action patterns acquired in a lasting manner, which integrates past experiences and acts by influencing current perceptions, evaluations, behaviours. At the same time the *habitus* makes the implementation of a great variety of tasks possible, thanks to the transfer of mental patterns that allow the framing or solving of problems sharing the same structure.

This is why the modifications to the designer's role are claimed to express conscious abilities to intertwine with operating procedures, methods, and modes extracted from heterogeneous and malleable practices. Such a transition also professes to responsibly make design knowledge circulate and be applied in the name of a disciplinary anomie, which not only means lawlessness, normlessness (in the etimology from the Greek *ανομία*, without law), but it may also imply instability resulting from a breakdown of standards and values.

In its turn, the notion of the *citizen designer* (Heller and Vienne, 2003) vividly portraits the function coined to illuminate the social and moral responsibility some designers could embrace in order to address societal issues within or in addition to their professional practice, extending their impact to such an extent to be professionally, culturally and socially responsible. Notwithstanding the persistent public identification of design with aesthetics, styles or trends, design citizenship advocates a promise and deep engagement for change, renewal, and disruption to help solve realworld wicked-problems (Resnick, 2016, p. 12). Social design, variably disseminated as design for public-interest, social-impact design, transformation design, socially responsive or humanitarian design (e.g., Papanek, 1971; Dilnot, 1982; Margolin and Margolin, 2002; Morelli, 2007; Thorpe and Gamman, 2011; Tan, 2012; Armstrong *et al*., 2014; Manzini, 2014, 2015; Tonkinwise, 2019), was coherently coined to highlight a practice of design where the primary motivation is to promote positive change within society at large.

2.8 Pluriversality's turn at taking responsibility

Appropriations of diverse knowledges are the basis for validating an inter-disciplinary or cross-disciplinary design competence to be consistent, non-reductive, rigorous, and applicable. The shift towards an in-depth appropriation of knowledges addressing the many facets of the real world is destined to further extend the responsibility of industrial designers, who are increasingly called on to understand not only processes relating to production but the contexts in which products will be used, find value and make sense.

In the vein of the contemporary design discourse which proposes macro-level schemes or visions, the concept of pluriversality (Noel *et al*., 2023) has been introduced to properly express the quality of an approach «that broadens and diversifies the contexts and methods through which design is practiced» (p. 184). Grounded in Escobar's (2018) insights on how design can be turned into an activity with a constructive imagination attuned to the needs of the Earth as well as of local communities, pluriversality also lays a path for the development of knowledge by framing design at the core of diverse human experiences and identities, where the richness of design may be practised in different epistemologies, ontologies, cultures, subcultures, global, and local places (Noel *et al*., 2023, pp.184-185).
Such a pluriversality is meant to be relational. It emphasizes the interactions among natural, social, and technical aspects of life; it implies that design may be practised everywhere and in ways that respond to differences in these relationships; it provides a deeper understanding of complex issues, such as the production of plural realities and forms of existence. «A pluriversal approach challenges the traditional view of design as a transactional practice, instead focusing on relationality» (Noel *et al*., 2023, p. 183), to come to conclude that «practice now includes participating in building communal worlds and taking responsibility for socio-cultural change, and the role of design technology in everyday life» (p. 189).

A pluriversal design practice posits multiple worldviews and multiple lived experiences to inform the design field.

Moreover, it dvocates a relational view of situations in which the design responses to interdependent natural, social, economic, and technical systems are specific, and where many forms of design practice may coexist (Noel *et al.*, 2023, p. 183). Willis (2010, p. 1) argues that this is not really a problem of complexity.
The problem arises with the assumption that all such systems and factors are to be addressed by designers. Whether serving the customer, client, or humanity, the designer's actual problem turns into one of choice (Willis, 2010, p. 1), which is a problem of judgement about priorities. Not simply synonymous with diversity and inclusion, and avoiding the simple *anything goes*, a turn to pluriversality embraces informed actions and allied approaches: this is a crucial point where the designer's responsibility tangibly embodies the ethical dimension requiring thinking beyond the sum (or residue) of professional specialisms.

References

Armstrong L., Bailey J., Julier G. and Kimbell L. (2014), *Social Design Futures: HEI Research and the AHRC*, University of Brighton. Available at https://research.brighton.ac.uk/en/publications/social-design-futures-hei-research-and-the-ahrc. Accessed March 2024.

Atkinson P. (2010), "Boundaries? What Boundaries? The Crisis of Design in a Post-Professional Era", *The Design Journal,* 13, 2: 137-155. DOI: 10.2752/175470710X12735884220817.

Bonsiepe G. (1975), *Teoria e pratica del disegno industriale,* Feltrinelli, Milan.

Bourdieu P. (1979), *La Distinction*, Éditions de Minuit, Paris.

Boutin A. M. and Davis L. (1997), "Design as a creative approach to handling complexity", in Mcgrory P., ed., *The Challenge of Complexity*, UIAH University of Art and Design Helsinki, Helsinki.

Bremner C. and Rodgers P. (2013), "Design without discipline", *Design Issues,* 29, 3: 4-13. DOI:10.1162/DESI_a_00217.

Bucolo S. and Matthews J. H. (2011), "Design led innovation: exploring the synthesis of needs, technologies and business models", *Proceedings of Participatory Interaction Conference 2011*, 13th-15th January 2011, Sønderborg, Denmark.

Cooper R., Evans M., Williams A., Hodgson L., Hall N. and Sun Q. (2009), *Design 2020 - design industry futures.* [Online] Available at https://salford-repository.worktribe.com/output/1456558/design-2020-design-industry-futures. Accessed March 2024.

Cruick-Shank L. (2010), "The Innovation Dimension: Designing in a Broader Context", *Design Issues,* 26, 2: 17-26. DOI: https:// doi.org/10.1162/DESI_a_00002.

Diehl J. C. and Christiaans H. (2015), "Product service systems: the future for designers? The changing role of the industrial designer", *Proceedings International DesignCconference of KSDS and ADADA with CUMULUS,* International Design Congress, 17th-23rd October 2015, Gwangju, Corea.

Dilnot C. (1982), "Design as a socially significant activity: An introduction", *Design Studies*, 3, 3: 139-146. DOI: https://doi.org/10.1016/0142-694X(82)90006-0.

Dykes T. A., Rodgers P. A. and Smyth M. (2009), "Towards a new disciplinary framework for contemporary creative design practice", *CoDesign,* 5, 2: 99-116. DOI:10.1080/15710880902910417.

Escobar A. (2018), *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*, Duke University Press, Durham.

Florida R. (2002), *The Rise of the Creative Class: And How it's Transforming Work, Leisure, Community, and Everyday Life,* Basic Books, New York.

Friedman K. (2000), "Design knowledge: context, content and continuity", in Durling D. and Friedman K., eds., *Doctoral Education in Design. Foundations for the Future*, *Proceedings of the La Clusaz Conference,* 8th-12th July, 2000, 5-11, Staffordshire University Press, Staffordshire, United Kingdom.

Fry T. (2009), *Design Futuring: Sustainability, Ethics and New Practice,* Berg, Oxford.

Gornick N. (2010), "A New Management Role: The Designer as Strategist", *Design Management Journal (Former Series),* 9, 2: 43-48. DOI: https://doi. org/10.1111/j.1948-7169.1998.tb00204.x.

Güneş (2021), "Exploring the Different Roles of the Designer in Practice: Creator or Others", *Journal of Engineering and Architecture,* June, 9, 1: 19-32. DOI: 10.15640/jea.v9n1a2.

Heller S. and Vienne V., eds. (2003), *Citizen Designer: Perspectives on Design Responsibility*, Allworth Press, New York.

Hestad M. (2009), "Changing assumption for the design process*", FORMakademisk,* 2, 2: 16-25. DOI:10.7577/formakademisk.82.

Hughes T. P. (1987), "The evolution of large technological systems", in Bijker W. E., Hughes T. P. and Pinch T., eds., *The social construction of technological systems. New directions in the sociology and history of technology*, MIT Press, Cambridge, MA & London, England.

ICSID, Unesco (1967), *Industrial Design: An International Survey*, published on behalf of Unesco by the ICSID, Brussels.

Inns T. (2007), "Introduction", in Inns T., ed., *Designing for the 21st Century: Interdisciplinary questions and insights,* Gover, Aldershot.

Johnson M. W., Christensen C. M. and Kagermann H. (2008), "Reinventing Your Business Model", *Harvard Business Review,* 86, 12: 1-11.

Julier G. (2007), *The culture of design*, Sage Publications, London.

Krippendorff K. (2007), "Design research, an oxymoron?", in Michel R., ed., *Design research now: Essays and selected projects*, Birkhäuser Verlag, Zürich.

Lee Y. (2008), "Design participation tactics: the challenges and new roles for designers in the co-design process", *CoDesign* 4, 1: 31-50. DOI: https://doi.org/10.1080/15710880701875613.

Maldonado T. (1976), *Disegno industriale: un riesame*, Feltrinelli, Milan.

Manzini E. (2009), “New design knowledge”, *Design Studies,* 30, 1: 4-12. DOI: https://doi.org/10.1016/j.destud.2008.10.001.

Manzini E. (2014), “Making Things Happen: Social Innovation and Design”, *Design Issues*, 30, 1: 57-66. DOI:10.1162/DESI_a_00248.

Manzini E. (2015), *Design, when Everyone Designs*, MIT Press, Cambridge, MA.

Margolin V. and Margolin S. (2002), “A Social Model of Design: Issues of Practice and Research”, *Design Issues*, 18, 4: 24-30. DOI: https://doi.org/10.1162/07479360232082740.

Martin R. L. (2009), *The Design of Business*, Harvard Business Press, Boston.

Martin R. L. (2011), “The Innovation Catalysts”, *Harvard Business Review,* 89, 6: 82-87. Available at https://hbr.org/2011/06/ the-innovation-catalysts. Accessed December 2023.

Meyer M.W. and Norman D.A. (2020), “Changing Design Education for the 21st Century”, *She Ji: The Journal of Design, Economics, and Innovation,* 6, 1: 14-49. DOI:10.1016/j.sheji.2019.12.002.

Morelli N. (2007), “Social innovation and new industrial contexts: Can designers ‘industrialize’ socially responsible solutions?”, *Design Issues,* 23, 4: 3-21. https://doi.org/10.1162/desi.2007.23.4.3.

Muratovski G. (2015), “Paradigm Shift: The New Role of Design in Business and Society”, *She Ji: The Journal of Design, Economics, and Innovation*, 1, 2: 118-139. http://dx.doi.org/10.1016/j.sheji.2015.11.002.

Nelson H. and Stolterman E. (2004), “The Abandoned Center: The Impact of Complexity and Scale on Organizational Systems; Making the Case for a Design Approach”, in Redmond J., Durling D. and de Bono A., eds., *Futureground – DRS International Conference 2004*, 17th-21st November, Melbourne, Australia. Available at https://dl.designresearchsociety.org/drs-conference-papers/drs2004/researchpapers/86. Accessed December 2023.

Noel L. A., Ruiz A., van Amstel F. M. C., Udoewa V., Verma N., Botchway N. K., Lodaya A. and Agrawal S. (2023), “Pluriversal Futures for Design Education”, *She Ji: The Journal of Design, Economics, and Innovation,* 9, 2: 179-196. https://doi.org/10.1016/j.sheji.2023.04.002.

Norman D. A. (2010), “The Research-Practice Gap: The Need for Translational Developers”, *Interactions,* July+August 17, 4: 9-12. DOI: 10.1145/1806491.1806494.

Papanek V. (1971), *Design for the Real World: Human Ecology and Social Change*, Pantheon Books, New York.

Pizzocaro S. (2004), “Grounding Design in Complexity”, in Redmond J., Durling D. and de Bono A., eds., *Futureground – DRS International Conference 2004*, 17th-21st November, Melbourne, Australia. Available at https://dl.designresearchsociety.org/drs-conference-papers/drs2004/researchpapers/95/. Accessed March 2024.

Pizzocaro S. (2016), “Ri-fondamenti del design: interpretare saperi”, in Riccini R., edited by, *Fare ricerca in design,* Forum dei dottorati di ricerca in design, 2nd edition, Il Poligrafo, Padova.

Pizzocaro S. (2018), “Theory as *habitus* for scholarly design research”, *Artifact: Journal of Design Practice*, 5, 2: 1.1-1.16. DOI: https://doi.org/10.1386/art_00001_1.

Press M. and Cooper R. (2003), *The design experience: The role of design and designers in the twenty-first century,* Ashgate Publishing, Farnham.

Resnick E. (2016), *Developing Citizen Designers*, Bloomsbury Academics, New York.

Roth S. (1999), "The state of design research", *Design Issues,* 15, 2: 18-26. DOI: https://doi.org/10.2307/1511839.

Schön D. (1983), *The Reflective Practitioner. How professionals think in action*, Basic Books, New York.

Seidel V. (2000), "Moving from design to strategy: The four roles of design-led strategy", *Design Management Journal,* 11, 2: 35-40. DOI: 10.1111/j.1948-7169.2000.tb00017.x.

von Stamm B. (2013), "The Role of Design in Innovation: A Status Report", in Cooper R., Junginger S. and Lockwood T., eds., *The Handbook of Design Management*, Bloomsbury Academic, London.

Tan L. (2012), *Understanding the different roles of the designer in design for social good. A study of design methodology in the DOTT 07 (Designs of the Time 2007) Projects*, Doctoral dissertation, Northumbria University, Newcastle.

Thackara J. (1996), *In the bubble: Designing in a complex world*, MIT Press, Cambridge.

Thorpe A. and Gamman L. (2011), "Design with society: why socially responsive design is good enough", *CoDesign*, 7, 3-4: 217-230. DOI: 10.1080/15710882.2011.630477.

Tonkinwise C. (2015), "Design for transitions – from and to what?", *Design Philosophy Papers,* 13, 1: 85-92. http://dx.doi.org/10.1080/14487136.2015.1085686.

Tonkinwise C. (2019), *Is social design a thing?*, in Resnick E., ed. *The social design reader*, Bloomsbury Publishing, London, pp. 9-16.

Utterback J. M. (1996), *Mastering the Dynamics of Innovation*, Harvard Business School Press, Cambridge.

Utterback J. M., Vedin B. A., Alvarez E., Ekman S., Walsh Sanderson S., Tether B. and Verganti R. (2006), *Design-Inspired Innovation,* World Scientific Publishing Company, Singapore.

Valtonen A. (2005), "Six decades – and six different roles for the industrial designer", *NORDES Nordic Design Research*, 1. Available online at https://archive.nordes.org/index.php/n13/article/view/233. Accessed November 2023.

Walsh V. (1996), "Design, Innovation and the Boundaries of the Firm", *Research Policy,* 25, 4: 509-529. DOI: https://doi.org/10.1016/0048- 7333(95)00847-0.

Wahl D. C. and Baxter S. (2008), "The designer's role in facilitating sustainable solutions", *Design Issues,* 24, 2: 72-83. doi.org/10.1162/desi.2008.24.2.72.

Willis A. M. (2010), "Opening Design to the Complexity of Complexity", Summary of keynote paper to be delivered at 2010 *Design Research Society international conference Design & Complexity*, 7th-9th July, 2010, Montreal (Quebec), Canada, School of Industrial Design, Université de Montréal. Available online at https://www.drs2010.umontreal.ca/data/AMW_keynote_summary.pdf. Accessed June 2024.

World Design Organization (2023), *Glossary*. Available online at https://wdo.org/glossary/industrial-design/. Accessed November 2023.

Wrigley C. (2013), "Educating the 'Design Innovation Catalyst' for change", in Sugiyama K, ed., *Consilience and Innovation in Design Proceedings and Program vol. 1*, Shibaura Institute of Technology, Tokyo, Japan.

Wrigley C. (2016), "Design Innovation Catalysts: Education and Impact", She JI: *The Journal of Design, Economics, and Innovation,* 2, 2: 148-165. https://doi.org/10.1016/j.sheji.2016.10.001.

Wrigley C. and Bucolo S. (2011), "Teaching design-led innovation: The future of industrial design", *Design Principles and Practices,* 5, 2: 231-240. doi:10.18848/1833-1874/CGP/v05i02/38037.

Wrigley C. and Bucolo S. (2012), "New Organisational Leadership Capabilities: Transitional Engineer the New Designer?", *Leading Innovation Through Design: Proceedings of the DMI 2012 International Research Conference*, Design Management Institute, Boston.

Wylant B. (2008), "Design Thinking and the Experience of Innovation", *Design Issues,* 24, 2: 3-14. DOI: https://doi.org/10.1162/ desi.2008.24.2.3.

Yee J., Tan L. and Meredith P. (2009), "The emergent roles of a designer in the development of an e-learning service", *First Nordic Service Design Conference*, 24th-26th November 2009, School of Architecture and Design, Oslo. Available at https://nrl.northumbria.ac.uk/id/eprint/8824/1/yee_tan_meredith.pdf. Accessed March 2024.

3. Ethical translations for social design

Elena Caratti

3.1 The being of translation

> ***The being of translation is to be openness, dialogue, cross-fertilisation, decentralisation. It is to relate, or it is nothing*** **(Antoine Berman, 1997).**

Translation is everywhere, it is the foundation of every form of cultural and social interaction in the globalized world. We find it within the global sphere of culture and social exchanges, in that multiform and dynamic space that Lotman calls the semiosphere (1994). As Anna Maria Lorusso specifies, this space is an eventful universe, with internal frictions, external pressures, destabilizing inventions, and difficult contacts (Lorusso, 2010, p. 83).

Within this constantly changing context, translation (and its processes) is traceable inside our cultural production processes; in the transfer of content through language and its codes; but also when we question the meaning and finalities of things; when we wonder about cultural identities; when we correlate content to media and vice versa;

when we search the link between ideas and their material realizations; when we try to identify a link between different types of designed artefacts, or between different individuals, or between individuals and designed artefacts.

Translation can be interpreted beyond the common interlinguistic translation. As Piotr Blumczynki points out, through the translation paradigm we consider the relationship between different communities, between artefacts and communities, between different times and places; between what is fixed and what is dynamic; between exercising force and experiencing influence and so on (Blumczynki, 2016, p. 9).

According to the author, translation is *ubiquitous* (Blumczynki, 2016, p. 13) and strongly intertwined with other disciplines.
From this perspective, translation provides a basis for a genuine, exciting, serious, innovative, and meaningful exchange between various areas of the humanities (semiotics, linguistics, anthropology, sociology, and philosophy), through both a concept (what) and a method (how) (Blumczynki, 2016, p. 4). This transdisciplinary dimension is also present in design. The contribution of the humanities has generated new visions and new design paradigms, which, in their turn, have produced new knowledge, new meanings, new methodologies, new ways of conceiving designers and users, new design projects, and new visions for the future.

In this chapter we state that translation and social design are both ascribable to transfer processes in which communication, interpretation, negotiation, collaboration, service, exchange with, and for the Other, all come into play through an ethical aptitude.

We affirm that translation studies share some issues and ideals with social design (some assumptions and principles we would like to highlight); the aim is to bring out the importance of an ethical dimension in design practice because its values can inspire and guide design itself.
Social design is defined by Elisabeth Resnick as

> **the practice of design where the primary motivation is to promote positive social change within society. […] The term “social design” highlights the concepts and activities enacted within participatory**

> **approaches to researching, generating and realizing new ways to make change happen towards collective and social ends, rather than predominantly commercial objectives. Social design can therefore be understood to encompass a broad set of motivations, approaches, audiences and impacts. For instance, these may be embedded within government policies or public services extremely critical of divergent from these (Resnick, 2019. pp. 3-5).**

Looking at the relationship between translation and social design allows us to understand how they are not only empirical activities, but they can also be reflective practices with a deep ethical vocation.

3.2 Translation is a metaphor transferable to social design

As George Lakoff and Mark Johnson affirm, our common conceptual system, on the basis of which we think and act, is essentially metaphorical in nature (Lakoff and Johnson, 1998, p. 77).

Considering translation through different metaphorical associations allows us to explicate its internal and external relationships, its meaning, its processes, its values, and its connections with social design that can be reinforced.

Translation as a crossroads of disciplines

Translation studies are a transdisciplinary research area that is defined in terms of a reflective and praxeological discipline: it is a science of and for practice, which reflects on a form of practice and offers it elements of clarification and orientation (Jervolino, 2007, p. 12).

Translation is rooted within the humanities (semiotics, linguistics, anthropology, social sciences, psychology, history, philosophy etc.), but it’s also connected with disciplines concerning new technologies (computer assisted translation, or systems for automated translation through AI), economy, and strategic competences. Similarly to social design and design for social innovation, translation is a combination of different factors: a strong cultural component connected to the humanities, operational knowledge supported by technology, and creativity, within a broader context that reflects on its processes from a pragmatic point of view. As Manzini asserts,

> **in practical terms, design for social innovation is a blend of different components: original ideas and visions (from design culture), design tools, and creativity (which is a personal gift), within the frameworks of a design approach (deriving from previous reflexive design experience) (Manzini, 2015, p. 63).**

Translation as transfer of texts

The concept of text constitutes for translators and semioticians a formal tool useful for describing all human, social and cultural phenomena found in the semiosphere. Design outputs can be considered as texts capable of conveying certain content, with its specific features, recognizable boundaries, internal processivity and so on (Marrone, 2010, p. 5).

They are created and negotiated within cultural dynamics fostering the relationships with other texts (other design projects), other discourses and other languages. From this perspective the process of transformation of texts into other textual configurations can be associated with translation processes, in other words they are the basis of the conformation of every type of text or design project. More specifically, they are achieved through the passage from a source text to a target text (Jakobson, 1959), or, according to Torop (1995), through the transfer which takes place from a prototext (text of the sender's culture) to a metatext (text of the recipient's culture) (Osimo, 2007-2014, p. 7). This transfer between prototext and metatext is analogous to the transformation of the design brief in the design output.

Salvatore Zingale has described the translation process in design through a model that essentially envisages two phases: the first, pre-translative, which, on the basis of problematic content and instances, preludes the generation of an instruction-text that determines the start of the project; the second, translative, which envisages the transition from instruction-text to artefact-text in which expression and content merge and are made usable to the final recipient (Zingale, 2016, pp. 85-88).

Translation as a creative process

The translation process, like the design process, is a creative procedure that has a concrete impact. It does not obey purely expressive research; texts, like designs, condition behaviour, enter people's lives and modify them. According to Torop's definition of Total Translation, (and successive reworkings), we can identify different translation processes which we can also find in design practices:

- *Mental translation*: corresponds to the process of conceptualization (that also includes the processes of reading and writing);
- *Meta-textual translation*: is the equivalent to the use of meta-texts to facilitate the decoding of the main text by highlighting relevant aspects of it (e.g., presentations or summaries of a project, teasers or deconstructions of a project to identify its structural and content components);
- *Intra-linguistic translation*: consists of reformulations, rewritings, redesignings within the same semiotic system (for example from visualizations to other forms of visualization);
- *Interlinguistic translation*: is the linguistic transfer between two different languages;
- *Intersemiotic translation* (which includes synesthetic translation and intermodal translation): implies the transfer between different semiotic systems (e.g., between verbal and visual, from verbal to film, from verbal to sound, from visual to sound, and vice versa);
- *Intextual translation*: is based on the transfer of text fragments, quotations, allusions, reminiscences, details;
- *Intertextual translation* (Intermedial translation): is an expansion of content, referencing of content and prior knowledge (text to text), extension of the project into neighbouring areas (intermediality, transmediality, crossmediality);
- *Cultural translation*: is a mediation of meanings between different cultural systems (cultural meanings are conditioned by the cultural code that generated them, the temporal, geographical, social and ideological location of issuers and recipients cannot be disregarded);

- *Automated translation*: consists of the AI-mediated translation processes in which intersemiotic (from verbal text to visual or filmic text) and intrasemiotic (rewritings) translations take place;
- *Ethical translation*: is an ethical-practical mediation that does not aspire to the *perfect translation* (to the perfect project), but acts in the name of a common good, of respect for the other than oneself, according to a concept of plural humanity.

Translation as directional decision

When we design and when we translate, we define an outcome (the metatext) that is different from the starting text (the prototext).

The final solution of a translation (or a design process) is the result of an interpretation, which is conditioned by the culture of the translator/designer, but also from the interpretation and culture of the final beneficiary of the translation/design project. It is therefore essential to study the relationship of texts/design projects with their addressee (or with other texts), and to reflect on the behaviours or the overall value system they generate within society.

From this perspective, it's important to be aware that translation, and at the same time social design, are the result of a series of active decisions that are not reversible and that can be imperfect.

Translating and designing are never neutral, they cannot disregard the temporal, geographical, social, and ideological locations of the people involved.

Translation as cultural bridge

Translation can create a cultural bridge between a starting cultural system and an arrival cultural system. At the same time, the design project is a sort of compromise between the culture of the designer and that of its target audience.

The translator and the designer have a double responsibility of decoding/interpreting reality for themselves and for their addresses. They face a creative process, rich in difficulties and complexities, that involves a continuous choice of meanings they want to actualize in the final metatext/design output. They make connections between different cultures with the significant risk of producing prejudices or stereotyped visions that create divisions and exclusions of the most fragile people.

Translation as otherness and hospitality

Translation can be considered as one of the most significant intercultural phenomena. The real challenge of translating, in fact, is to welcome the Other by giving him hospitality in one's own language and culture. This happens without the translator's language and culture denying the Other, but by assimilating the foreign element into one's own culture (Cavagnoli, 2019, p. 8).

As Arduini asserts, translating brings into play the relationship with the Other and the question of diversity, and it makes us reflect on who we are (Arduini, 2020, p. 62). It means to act in welcoming the foreigner as such, and recognizing his creativity and expressiveness without giving in to an assimilating and ethnocentric translation.

This is a challenge that social design should embrace. As Zingale argues, it means moving within a space of possibilities, to refocus into that missing part of experience that is neither normal nor neutral. He also states that within design, otherness nurtures inventive thinking and at the same time helps to advance the degree of human awareness, self-awareness and responsibility (Zingale, 2022, p. 40).

Social design is itself a social activity with a strong collaborative and participative dimension that is open to the Other; it presupposes a continuous exchange *with*, on *behalf of*, and *in the interest of* the Other (designing is inseparable from negotiations), (Zingale, 2022, p. 25). This exchange takes place not only pragmatically, but also through an ability to make ethical decisions, and to have insights into possible futures with an open gaze at the Other, beyond oneself.

3.3 For an ethics of otherness

The ethical act of translation and the ethical act of social design consist in recognizing and receiving the Other as Other. It means acting in the name of difference against cultural homogeneity, beyond economic and political needs, and in opposition to any hegemonic pretension of cultural domestication. Based on this this assumption, translation and social design are interpretable as political acts aimed at encountering the Other through translation processes.

In social design, or in design for social innovation, the encountering with the Other happens through collaboration.

Ezio Manzini pointed out the importance of *collaborative encounter*: collaboration take place when people encounter each other and exchange something (time, care, experiences, expertise, etc.) in order to receive a benefit; as Manzini highlights, they create a *shared value* (Manzini, 2015, pp. 92-93). Starting from these premises, the encounter with the Other becomes real when there is a concrete *active* and *collaborative involvement* that starts from the *ethos* (the ethics) of otherness. All social intervention projects are inseparable from communication, discourses, and therefore, from translative practices, which should be based on the ethics of otherness.

According to Jaques Rhéaume, it is possible to distinguish four different forms of ethics, based on the relationship between ethics and otherness (Rhéaume, 2007, pp. 19-38).

- The first form is defined in term of *ethics of conviction,* and is represented by scientific reasoning, by the reference to be validated, by demonstrated knowledge which is universal in scope. The ethics of conviction can rely for example on professional knowledge, itself conferred by scientific knowledge. It is ideally suited to a kind of transferring or asserting of certain truths that need to be known or applied to others. The translation project can be finalized to convince the Other by a prescriptive or seductive language. From this perspective the Other is subject to the same basic principles, only based on strategic thinking.
- The second category is described as *ethics of responsibility*, which assumes that human behaviour is determined solely and exclusively by individual choices. As Maiello observes, it is an ethics that pays great attention to analyzing the consequences of behaviour and, therefore, of the

restorative actions that result (Maiello, 2015, p. 16). Rhèaume refers in even more detail to the principle in terms of *act as you would want others to act with you*, (this can be connected to the translation concept of hospitality that means to be open and accept the foreigner). This is the universal rule underlying the social contract the individual enters with his/her peers within society (Rhèaume, 2007, p. 23). Translated into its communicative dimension, this form of ethics is less focussed on the transmission of convictions or acquired truths than on the active response of the Other. It's less about convincing than about helping the Other to autonomously discover the direction for his/her action.

- The third form of ethics concerns the *ethics of discussion* (definable also as ethics of negotiation that is the core of translation processes). According to Rhèaume, to understand its traits, it's useful to recall Jürgen Habermas's affirmation that only through discussion, debate and negotiation will a community be able to establish rational norms of civil living and common action. This varies from restricted groups (micro-social entities), to the democratic functioning targeted in many organizations or associations, or even social movements. Shared information, debate and collective decision-making on important issues are all part of this general framework. Ethics is not disconnected from the political dimension of translation and social design. In this case, the Other is the citizen as an equal subject, able to participate in the social innovation process through collaboration and co-participation.
- The fourth and final category is defined as *ethics of the finitude* that is strictly connected to the living human being, for whom emotions, health and death are guiding dimensions of conduct at least as much as reason and will. It is the result of a search into the most advantageous actions for society, and of a social participation based on a shared awareness that reality is mutable; that human reason is limited; and that actions can be unpredictable and uncertain. The ethics of the finitude introduces more indefinite, more open, and at the same time, more limited actions

centered on the consciousness of the finitude of the human being but also of the presence of unequal human relationships. This is a kind of ethics where translation as design practice is conceived in term of praxis, a reflexive action with the Other.

In the real world these categories are flexible, they can intertwine, different forms of ethics can be predominant at the same time in some geographical areas or in some historical periods. As Rhèaume affirms, these categories express the various moments of a necessary dialectic between the universal and the singular, the individual and the collective, the subjective identity and the relationship with Others in search of meaning and direction in human life (Rhèaume, 2007, p. 25).

3.4 The ethics of the translator-designer

This contribution was finalized to create a relationship between translation (as act and process), and social design through an ethics of otherness. Being a social translator-designer means having a special ethical sensitivity, which enables him/her to face the challenges of our complex times. He/she needs to have multiple capabilities which are of support in his/her choices and actions:

1. from an endodisciplinary point of view, the attitude of self-criticism and the ability to search for the meaning of things with an aptitude for decoding their languages, even if the totality is elusive;
2. the ability to work beyond disciplinary fences, in order to address social issues from a transdisciplinary perspective facilitating the creation of interconnections amongst different research areas, cultures and design skills.
3. a sensibility which facilitates negotiation processes among humans, beyond prejudices or stereotypes, with an openness to multiple cultures, against all forms of ethnocentrism and in favour of a cosmopolitan ethic (Galimberti, 2023, p. 50) and cultural plurality;
4. a critical gaze toward any form of automatisms generated by new technologies or AI, with the acceptance that responsibility doesn't only concern the pure production of results or

the proper execution of an algorithmic process beyond any horizon of meaning;
5. the capacity of making appropriate economical choices according to an ecosystem logic, remembering that there is an interdependence between the well-being of the individual and that of the planetary ecosystem. As Capra reminds us «the needs of the planet are the needs of the person… the rights of the person are the rights of the planet» (Capra, 2013, p. 327);
6. a consciousness that we must now move from an anthropocentric ethics to a planetary ethics according to a systemic paradigm, because, as Galimberti argues, the subsistence of the entire human species is at stake (Galimberti, 2023, p. 49);
7. the ability to operate and cooperate recognizing the power of language and translation, (and thus the linguistic hospitality), as the basis of human evolution and interaction.
   Only through discourse is collaboration realized, and only through collaboration is it possible to find unexpected solutions within an ever-changing context.

As Hannah Arendt suggests in her essays, we need to return to rethink the meaning and value of our actions, to rediscover a dimension of action that makes us truly human and open to interact with others for the good of humanity and the whole world; we think that translation (as an act and as a process) can work alongside social design in the pursuit of these objectives.

References

Arduini S. (2020), *Con gli occhi dell'altro. Tradurre*, Jaca Book, Milan.

Arendt H. (2012), *Vita activa. La condizione umana*, Bompiani, Milan, 1958.

Baule G. and Caratti E., edited by, *Design è traduzione: il paradigma traduttivo per la cultura del progetto*, FrancoAngeli, Milan.

Berman A. (1997), *La prova dell'estraneo. Cultura e traduzione nella Germania romantica,* Quodlibet, Macerata.

Blumczynski P. (2016), *Ubiquitous Translation*, Routledge, New York and London.

Capra F. (2013), *Il punto di svolta. Scienza, società e cultura emergente,* Feltrinelli, Milan.

Cavagnoli F. (2019), *Tradurre come ospitalità*, Alfabeta2. Available at http://www.francacavagnoli.com/2019/10/11/traduzione-come-ospitalita/. Accessed May 2024.

Clarke A. J. (2019), *Émigré culture and the origins of Social Design*, in Resnick E., ed., *The Social Design Reader,* Bloomsbury, London, New York.

Galimberti U. (2023), *L'etica del viandante,* Feltrinelli, Milan.

Jakobson R. (1959), On linguistic aspects of translation, in Brower R. A., ed., *On Translation,* Harvard University Press, Cambridge.

Lakoff G. and Johnson M. (1998), *Metafora e vita quotidiana*, Bompiani, Milan.

Lorusso A. M. (2010), *Semiotica della cultura*, Laterza, Rome-Bari.

Lotman J. (1994), *Cercare la strada. Modelli di cultura*, Marsilio, Venice.

Maiello G. (2015), *Etica e traduzione nel XXI secolo*, Edizioni Scientifiche Italiane, Naples.

Manzini E. (2015), *Design, When Everybody Designs. An Introduction to Design for Social Innovation*, The MIT Press, Cambridge.

Marrone G. (2010), *L'invenzione del testo,* Laterza, Rome.

Osimo B. (2014), *La traduzione totale: spunti per lo sviluppo della scienza della traduzione*, Kindle Direct Publishing: Osimo Bruno.

Osimo B. (2021), *Traduzione come metafora, traduttore come antropologo. La semiotica ci fa capire*, Kindle Direct Publishing: Osimo Bruno.

Resnick E. (2019), *Introduction,* in Resnick E., ed., *The Social Design Reader,* Bloomsbury, London, New York.

Rhéaume J. (2007), *Étique et alterité, de quelle étique et de quelle alterité?,* in Cognet M., Montgomery C., edited by, *Étique de alterité. La question de la culture dans le champ de la santé et des services sociaux,* Les Presses de L'université Laval, Laval.

Ricoeur P. (2001), *La traduzione. Una sfida etica,* Morcelliana, Brescia.

Tonkinwise C. (2019), *Is Social Design a Thing?,* in Resnick E., edited by, *The Social Design Reader,* Bloomsbury, London, New York.

Torop P. (1995), *Toytal'nyj perevod*, Tartuskogo Universiteta, Tartu: IZD.

Zingale S. (2016), "Come una traduzione. La traduzione del senso nel design", in Baule G. and Caratti E., edited by, *Design è traduzione: il paradigma traduttivo per la cultura del progetto*, FrancoAngeli, Milan.

Zingale S. (2022), "Attraverso l'alterità. L'Altro nella cultura del progetto", in Zingale S., edited by, *Design e alterità. Conoscere l'altro, pensare il Possibile*, FrancoAngeli, Milan.

4. Ethical dimensions in interaction design

James Postell

4.1 Areas of concentration in interaction design

> ***Interaction Design (IxD) is the design of interactive products and services in which a designer's focus goes beyond the item in development to include the way users will interact with it*** **(Interaction Design Foundation, 2024).**

By the 21st century, designers, researchers, and university programmes began exploring the design of user interfaces (UIs) for computers and digital systems which led to pioneering work in graphical user interfaces (GUIs). This background is a basis for one area of concentration in IxD. Let's consider, both briefly and broadly, other areas of concentration to establish a contextual boundary and focus for examining the ethical dimension in IxD.

- *User Interface* (*UI*) was collaboratively developed by Microsoft and IBM to replace DOS in the 1980s. At the current moment UI centres on the study and design of digital interfaces and systems, focussing on *human interface, learnability*, *accessibility, ethical data handling, user privacy, user-adaptability,* and *user empowerment*. UI needs to be *accessible* and *learnable* by diverse populations and those with disabilities.

- *Human Computer Interaction* (*HCI*) is a study and practice to improve the quality of user-interaction with computers, and it embraces ethical themes of *accessibility* and *learnability*. HCI was made popular by Stuart K. Card, Allen Newell and Thomas P. Moran in their 1983 book *The Psychology of Human–Computer Interaction* presenting benchmarks and *empathetic perspectives* that include behaviour concepts of *interaction*.
- *Digital Interaction Design* (*DIxD*) is a subsection of IxD that focusses on designing experiences within digital platforms, including websites, apps, dashboards, software, and user interfaces related to digital interactions, information architecture, and user flows. Ethics specific to DIxD include *conviviality, ethical usage of AI,* and *digital user-experience*.
- *Interaction Design* (IxD) coined by Bill Moggridge and Bill Verplank in the 1980s, has received contributions from many thinkers, authors and designers including Dan Saffer, Brenda Laurel, Helen Sharp and Alan Cooper in promoting the research and design of user-interaction themes and furthering the craft and tools for IxD designers to be better equipped to make appropriate connections between people.
- *User Experience* (*UX*) coined by Don Norman in 1995 examines broad ethical values and focusses on the study of how people behave regarding their interaction with projects (Norman, 2009). UX primarily concerns itself with designing human experiences, creating *intuitive, user-friendly systems* and *interfaces* where people interact with technology.
- *Visual Communication and Design* (*VCAD*) is an area of concentration in IxD that requires knowledge in *visual theory*. Areas include visual theory, typography, graphic communication, and digital media.
- *Service Design* (*SD*) is a field where designers create sustainable solutions and optimal experiences for both customers in

unique contexts and any service providers involved (Interaction Design Foundation, 2022). SD was influenced by the work of Phil Kotler in the early 1990s, to improve *productivity, user experience, and quality of services*. *Conviviality*, *social and environmental sustainability*, and *user-satisfaction* are ethical values in SD.

- *Performance Design* (*PD*) is a multidisciplinary area that focusses on the study and design of interactive performances, exhibits, and objects. Tethered to PD are *user-experience values*.
- *Participatory Design* (*PD*) is an inclusive area of concentration that broadly embraces HCI and is influenced by the work of Susanne Bødker among others. At the current time, PD extends into themes of research and offers a toolbox for designers and users in IxD.
- *Human Factors* (*HF*) research embraces scientific studies focussing on human attributes, capabilities, and performance which include anthropometrics, physiological systems, ergonomics, behaviour psychology, and more.

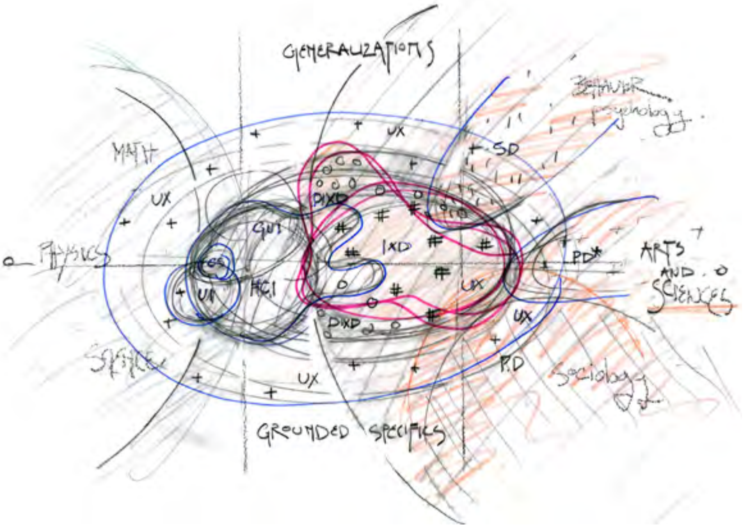
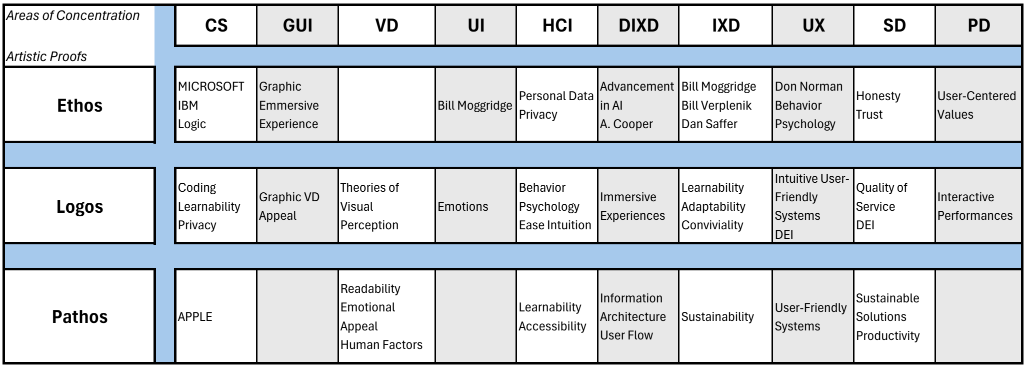


Figure 1.
Areas of concentration and overlapping relations in IxD.

IxD utilizes goal-oriented design methods concerned with satisfying the needs and desires of the users of a product or service (Cooper, 2007). IxD embodies physical and spatial works, as well as smart and digitally interactive projects. It is not surprising that publications, webinars, designed output, and academic programmes are diverse and that clustered areas of concentration and applications of ethics in practice are equally diverse.

4.2 Ethical thinking

Ethical thinking is rooted in the *actions, values* and *aspirations* of designers, makers, and users committed to ethical *doing*. *Ethics* in a professional or disciplinary realm refers broadly to *a code of conduct* or *correct behaviour* within a relatively narrow scope of activity. A definition of *ethics* that aligns well with the thesis of this chapter comes from the Oxford Dictionary of Philosophy «ethics is a branch of philosophy and tethered to concepts involved in practical reasoning, which include good, right, duty, obligation, virtue, freedom, rationality, choice» (Oxford Dictionary, 2024).
Ethical dimensions have broad, external relations in diverse fields. Some dimensions have internal relations within specific disciplines. We refer to those linked to IxD as internal to the discipline and embodying shared strategies, services, systems, and products aimed at reducing social inequalities, promoting social democracy, well-being, and public benefits. Many themes are dependent upon concepts of accessibility and learnability, supportive of DEI, and promote conviviality by connecting local and global users through IoT and digital software. Ethical themes (external and internal) constitute a framework that shapes values and principles in IxD. Mapping the framework can visualize overlapping and autonomous concentration areas and networks. Figure 2 presents a personal and reflective diagram offering disciplinary renditions of ethical dimensions in CS, UI, HCI, IxD, DIxD, UX, PD and SD. As one can imagine, this exercise could be visualized differently by others to draw different conclusions. To this point, the diagram stands as an example in mapping ethical thinking and discinary renditions in IxD.



Areas of Concentration *Artistic Proofs*	CS	GUI	VD	UI	HCI	DIXD	IXD	UX	SD	PD
Ethos	MICROSOFT IBM Logic	Graphic Emmersive Experience		Bill Moggridge	Personal Data Privacy	Advancement in AI A. Cooper	Bill Moggridge Bill Verplenik Dan Saffer	Don Norman Behavior Psychology	Honesty Trust	User-Centered Values
Logos	Coding Learnability Privacy	Graphic VD Appeal	Theories of Visual Perception	Emotions	Behavior Psychology Ease Intuition	Immersive Experiences	Learnability Adaptability Conviviality	Intuitive User-Friendly Systems DEI	Quality of Service DEI	Interactive Performances
Pathos	APPLE		Readability Emotional Appeal Human Factors		Learnability Accessibility	Information Architecture User Flow	Sustainability	User-Friendly Systems	Sustainable Solutions Productivity	

Figure 2. Disciplinary renditions through the lens of *ethos*, *pathos*, and *logos*.

4.3 Ethical dimensions shaped by areas of concentration

Areas of concentration in IxD serve as contextual boundaries in which *ethical principles* are applied to address what may be broadly considered *right* and *virtuous*. Ethical dimensions surface through the operations and procedures in disciplinary practice and shape the following disciplinary lexicon:

- *Accessibility:* promotes access and open systems integration, inclusion, and user-accessibility for diverse and disabled populations;
- *Adaptability:* embraces concepts of open platform design and include user-adoptability. Unique to DIxD are continuous system updates (ver. 2.12) based on user feedback loops and technological advancements. This promotes an evolving scenario minimizing concerns related to learning completely new applications which enables continuity of use through technological updates in digital software;
- *Conviviality*: embodies strategies and solutions that encourage *social interaction*, *inclusivity*, and *a sense of community*. Conviviality is a concept that refers to *creating positive social and collective experiences*;
- *Learnability:* user interface is directly tethered *to learnability.* The ethic is to maximize the *ease of learning* and create *intuitive UI, without complexity or disruption;*

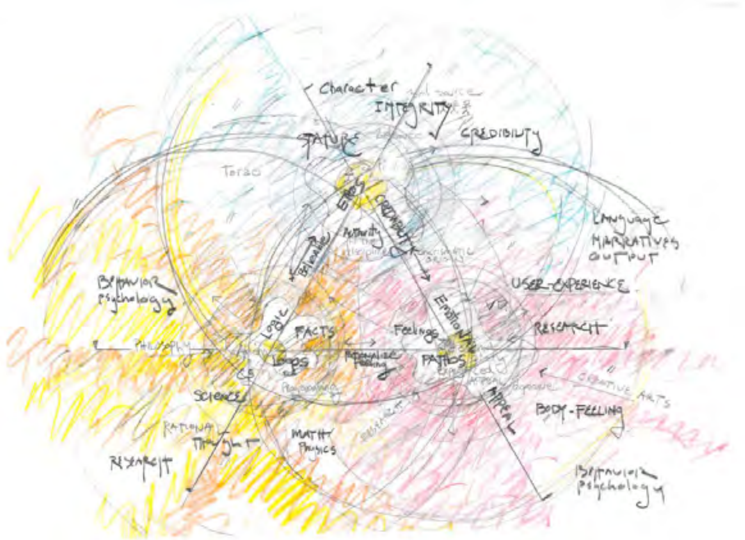
- *Personal Data, Security, and Privacy*: protection of personal data and privacy are obligatory in IxD, while the collection of data is often built into the system. Ethical dimensions include *privacy rights, user-consent,* and *user control* in the collection, use, and protection of personal data within digital systems;
- *Sustainability*: IxD considers *environmentally conscious practices* in broad, new ways. Designers strive to use eco-friendly materials, reduce waste, and consider works that minimize environmental impact and, equally importantly, *social sustainability* and *community*;
- *Honesty and Transparency:* designers strive to maintain *honesty* and *transparency* in their interactions with clients, other users, and suppliers. This includes providing information regarding the shared use of personal data, embedded cookies, and regulating efforts to protect intellectual rights and avoid dark matter, hacking, and misleading information;
- *Diversity, Equity, and Inclusion*: DEI in IxD embraces inclusive values and works to create *safe, inclusive, accessible,* and *accommodating spaces* for people of different cultural perspectives, abilities, needs, and ages;
- *Well-being and Safety*: designers have a responsibility to prioritize the safety, health, and well-being of their clients and users. Specific to IxD, this involves considering safeguards, personal settings, reporting mechanisms, and more.

Exploring ethical dimensions in IxD is challenging because the areas of concentration are diverse, and the discipline is not yet impartial to subjective constraints, sub-disciplinary nuances, and rhetorical influence. Due to these reasons, it is important to consider how rigorous rhetoric can influence IxD. «Rhetoric may be defined as the faculty of observing in any given case the available means of persuasion» (Aristotle, n.d).

4.4 Aristotle's artistic proofs: *ethos*, *pathos* and *logos*

Artistic proofs are persuasive tools used by someone to convince others regarding the validity of an argument or point of view (Aristotle, n.d.). The *proofs* are considered *artistic* because they were originally conceived as the result of *human skill* in making a persuasive argument, comprising three components. Aristotle understood that effective persuasion involves a combination of artistic proofs, referred to as the *Rhetorical Triangle*. By utilizing the *rhetorical triangle* in a persuasive manner, a speaker or writer might enhance their ability to influence an audience to accept a particular viewpoint.

Figure 3. Artistic proofs and Aristotle's rhetorical triangle.


Character
INTEGRITY
STATURE
CREDIBILITY
ETHOS
CREDIBILITY
Authority
Believable
Language
NARRATIVES
OUTPUT
BEHAVIOR
Psychology
USER-EXPERIENCE
Logic
FACTS
Feelings
Emotion
RESEARCH
PHILOSOPHY
LOGOS
PATHOS
SCIENCE
CREATIVE ARTS
APPEAL
BODY-FEELING
RATIONAL THOUGHT
MATH Physics
RESEARCH
Behavior psychology

- *Ethos* refers to the ethical appeal, credibility, trustworthiness, and authority projected by the communicator. It aims to persuade others based on the perceived character, competence and integrity of the communicator.
- *Pathos* refers to the emotional appeal of rhetoric, aiming to evoke specific feelings or sentiments through persuasion using language, narratives, or design output. Pieter Desmet wrote in *700+ Product Emotions* «there are more than 50 different human emotions each with unique qualities and experiences. All of these can be felt when using consumer

products and there are an infinite number of reasons why products evoke emotions» (2018).
- *Logos* focusses on rational thought processes supported by evidence, and facts to persuade others. Logical reasoning is an essential *skill* for guiding arguments to anticipate or affirm agreement with a conclusion.

4.5 Influencers and influences in IxD

In IxD, well-known contributors include Dan Saffer, Gillian Smith, Jerod Spool, Bill Verplank, Alan Cooper, and Alma Leora Culén. In HCI, Jodi Forlizzi, Kim Goodwin, Jeff Gothelf, Bill Moggridge, Ron Wakkary, and in CS, Mark Weiser, are among the influencers renowned for their knowledge, leadership, and publications in IxD and are, among many others, responsible, for shaping its areas of concentration and disciplinary trajectory. Words of wisdom from earlier influencers remind us that there is significant impact on the development of a discipline due to the authority and status of the communicator (*ethos*); the emotional appeal received by the audience (*pathos*); and the logic and reasoning in the argument (*logos*). The following serve as example*s*.
«There are professions more harmful than industrial design, but only a few of them» (Papanek, 1971). Papanek emphasizes that an ethical responsibility lies within the field of industrial design, highlighting the potential harm that poorly designed products can cause. He calls for designers to be conscious about the consequences of their work, to prioritize sustainability, and to design for the well-being of people and the planet. «We must design for the way people behave, not for how we would wish them to behave» (Norman, 2010). Don Norman argues the importance of designing around the actions, attitudes and behaviours of people. The data gathered through feedback and user testing should not be wasted. Another quote sums up the practice of IxD and UX: «If a design is focused on the tasks the users have to perform and the way they behave, it will, indeed, be beneficial in the real world» (Norman, 2010).

> **Interaction design isn't about interaction with computers (that's the discipline of human-computer interaction) or interaction with machines (that's industrial design). It's about making connections between people through these products, not connecting to the product itself (Saffer, 2010).**

These quotes remind us that there is an ethical, societal duty in all design disciplines, including IxD. Let's now look to the academic programmes, associations, foundations, and publications in IxD and seek to understand their influence in the emergent discipline.

4.6 Diversity in academic programmes

The first academic programme to utilize IxD in a Master of Design degree was the School of Design at Carnegie Mellon University in 1994. Currently, there are approximately fifty two-year graduate IxD programmes throughout the world, many of which focus on HCI and IxD, while many others focus on DIxD, SD, PD, UX, UI, CS, digital media, and business management (Keystone).

Due to the challenges in highlighting one programme over another in such a diverse field, one might begin with the top *10 Design Schools in 2023* (QS World University Rankings, 2023). These include the Royal College of Art; University of the Arts London; Rhode Island School of Design; Parsons School of Design; Massachusetts Institute of Technology; Aalto; Pratt; Politecnico di Milano; Design Academy Eindhoven, and Tongji University. Interestingly, prominent IxD programmes do not parallel the top ranked design schools. However, they are diverse, stand independently, and include Simon-Fraser University (HCI) – which has contributed significantly to HCI/IxD with leadership from Ron Wakkary – as well as other prominent IxD programmes include Berkeley's MIMS; Georgia Tech's (MS-HCI) or MS in Digital Media (MS-DM); and MIT's Media Arts & Sciences (MAS) which began in 1984, and offers a range of options, such as a Master of Design-Interaction Design (MDes), Master of Human-Computer Interaction (MHCI), Master of Educational Technology and Applied Learning Science (METALS), and PhD in HCI. Clearly, graduate programmes in IxD are distinct and housed in specialized areas of study with varied foci and curricula. Such a wide array of academic options and areas of concentration makes generalizing about disciplinary learning and concepts of ethical values difficult to study or conclude.

4.7 Influential IxD associations and foundations

The Interaction Design Association (IxDA) was created in 2003 and today has over 80,000 members. The association is composed mostly of designers, and promotes emerging IxD work. Each year, a celebration for designers, technologists, and community leaders is organized to discuss and explore themes in design, and to promote ethics by bringing thinkers together to concentrate on emerging issues. The theme of IxDA's World Interaction Design Day 2023 was *Ethics, Equity, and Responsibility.*

The Foundation of Interaction Design, created in 2002, is essentially an online resource with an academic focus that offers accredited instruction modules and open-access articles in IxD focussing in diverse areas of concentration that include UI, HCI, IxD, UX and more. The Foundation of IxD has had over 169,305 graduates to date (Carnegie Mellon University).

4.8 Design ethics in published works

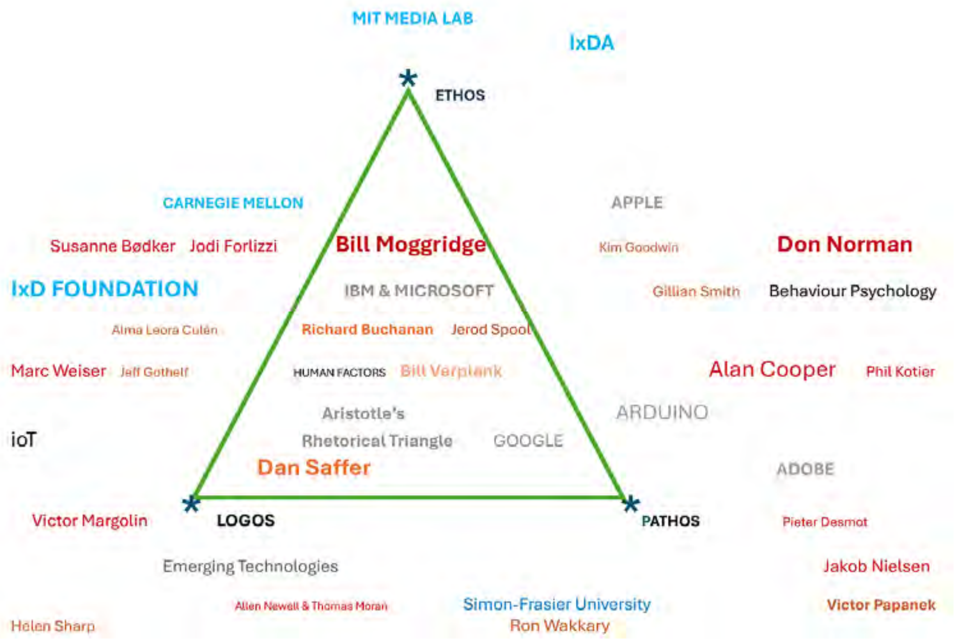
Victor Margolin's *Ethics and the Design Professions* (2007) provides critical insights into the ethical challenges and considerations in design practices. Publications that address ethical values centred specifically on the discipline of product design include *Design for the Real World* by Victor Papanek (1971), and *The Design of Everyday Things* by Don Norman (2014). *About Face 3* by Cooper, Reimann, and Cronin *(2007)* is considered by many a seminal publication that presents the tools and values in IxD and DIxD. *Interaction Design: beyond human-computer interaction* (Sharp, Preece and Rogers, 2019), *and Ethical Issues in Interaction Design* (Robertson, 2005) are examples of publications and papers that contribute to the trending discourse in ethics and values in design. Without going into specifics, they contribute to a deeper understanding of the ethical dimensions of IxD, which can be further categorized into areas of concentration.

4.9 What does ethics look like in IxD?

Challenges abound in referencing external and internal ethical dimensions in an emergent discipline where disciplinary knowledge is clustered and ethical dimensions of *accessibility, adaptability, conviviality, learnability, privacy* and *data security,* and societal implications are not yet fully understood. Applications of ethical dimensions as well as concepts of *conviviality*, *emotional design* and *transparency* are currently trending with the aim of improving human conditions in the public and private spheres, CS UI, HCI, VD, IxD, DIxD, SD, PD, PD and UX are studied and practised in less autonomous structures and in more interdisciplinary, multidisciplinary, and transdisciplinary ways, thus blurring the lines of disciplinary ethics.

Using *ethos, pathos* and *logos* as a lens or framework to study the ethical dimension offers theoretical insight to the ethics of responsibility (Jonas, 2002); the roles of ethics in manufacturing, design activism, new materialism (Fox and Alldred, 2019); and newly discovered ethical challenges in the rapid emergence of digitalization and AI. Examining persuasive arguments is an important *first step* in learning IxD and examining its *areas of concentration*. It is necessary to generate a clearer understanding of the ethical dimensions, for instance, who is framing the arguments and how are they being delivered. Using the aforementioned definitions can be helpful to unify approaches across the spectrum of influencers and build solid knowledge throughout the ecosystem of IxD.

If influencers practise the application of Aristotle's rhetorical triangle, the collective discourse can be traced throughout the evolution of the ethical dimension found within the IxD disciplines. Conflicts can be identified, omissions and lack of considerations be questioned, and collective directions can be championed. Without surety of discernment towards an ethical dimension now, future technological


MIT MEDIA LAB
IxDA
ETHOS
CARNEGIE MELLON
APPLE
Susanne Bødker
Jodi Forlizzi
Bill Moggridge
Kim Goodwin
Don Norman
IxD FOUNDATION
IBM & MICROSOFT
Gillian Smith
Behaviour Psychology
Alma Leora Culén
Richard Buchanan
Jerod Spool
Marc Weiser
Jeff Gothelf
HUMAN FACTORS
Bill Verplank
Alan Cooper
Phil Kotler
Aristotle's
Rhetorical Triangle
ARDUINO
ioT
GOOGLE
Dan Saffer
ADOBE
Victor Margolin
LOGOS
PATHOS
Pieter Desmot
Emerging Technologies
Jakob Nielsen
Allen Newell & Thomas Moran
Simon-Frasier University
Ron Wakkary
Victor Papanek
Helen Sharp

and design developments are sure to become scrutinized, as we currently see with the advancement of Artificial Intelligence (AI) and its ethical impact.

Figure 4.
Testing Aristotle's rhetorical triangle mapping of influencers.

4.10 Challenges for the future

The ethical dimension of a discipline is not an absolute condition nor is it based upon individual motivations or a higher truth (*poesis*). Rather, the ethical dimension of IxD is dependent upon the institutionalization of principles and values delivered through rational thought processes (*logos*), conveyed through influential communicators (*ethos*) and resonated in how it has been received by the audience (*pathos*). The influence of digital technologies, AI, and interconnected digital systems have brought unprecedented change to IxD transforming traditional paradigms of *good design* into new applications and operations that utilize apps, dashboards, agencies, personal data, cookies, and widgets in many processes and operations invoking unique interactions and ethical considerations. Designers, educators, and institutions should never need reminding of the necessity to collaboratively contribute to the cultivation of shared social responsibility. The dynamic nature of the ethical dimension in IxD urges designers, students, and institutions to remain agile and responsive to an evolving societal, technological, and cultural context.

References

Aristotle, *Rhetoric*. Available at http://classics.mit.edu/Aristotle/rhetoric.html. Accessed February 2024.

Bødker S. (2000), "Scenarios in user-centred design – setting the stage for reflection and action", *Interacting with Computers*, Volume 13, 1, 9: 61–75. DOI: https://doi.org/10.1016/S0953-5438(00)00024-2.

Bødker S., Dindler C., Iversen O. and Smith R. (2021), *Participatory Design. Synthesis Lectures on HCI*, Aarhus University, Denmark. Available at https://www.researchgate.net/publication/356485769_Participatory_Design. Accessed February 2024.

Buchanan R. (2001), "Design Research and the New Learning", *Design Issues*, 17, 4: 3–23. DOI: https://doi.org/10.1162/07479360152681056. Accessed February 2024.

Buchanan R. and Margolin V., eds., (1995), *Discovering Design Explorations in Design Studies*, University of Chicago Press, Chicago.

Bürdek B. (2015), *Design: History, Theory and Practice of Product Design*, Birkhäuser, Basel.

Buxton B. (2007), *Sketching User Experiences: Getting the Design Right and the Right Design*, Morgan Kaufmann Publishers Inc., Burlington.

Capra F. (2013), *Il punto di svolta. Scienza, società e cultura emergente*, Feltrinelli, Milan.

Card S., Moran T. and Newell A. (1983), *The Psychology of Human-Computer Interaction*, Lawrence Erlbaum, Mahwah.

Carnegie Mellon University Human Computer Interaction Institute. Available at https://dynomapper.com/resources/information-architecture-schools/383-carnegie-mellon-university. Accessed February 2024.

Cooper R. (2005), "Ethics and Altruism: What Constitutes Socially Responsible Design?", *Design Management Review*, 16, 3: 10-18. DOI: https://doi.org/10.1111/j.1948-7169.2005.tb00197.x.

Cooper A., Reimann R. and Cronin D. (2007), *About Face 3: The Essentials of Interaction Design*, Wiley, Indianapolis.

Cross N. (2007), "Designerly ways of knowing". *Design Management Review*, 16: 10-18. Available at https://link.springer.com/chapter/10.1007/1-84628-301-9_1. Accessed February 2023.

Culén A. L. and Karahasanovic A. (2022), "Towards responsible interaction design education", in Lockton D., Lenzi S., Hekkert P., Oak A., Sádaba J. and Lloyd P., eds., DRS2022: Bilbao, 25th June - 3rd July, Bilbao, Spain. DOI: https://doi.org/10.21606/drs.2022.465.

Desmet P., ed., (2018), *700+ Product Emotions*, Delft University of Technology, Delft. Available at https://creativecommons.org/licenses/by-nc-nd/4.0/. Accessed February 2024.

Dindler C., Krogh P., Tikær K. and Nørregaard P. (2022), “Engagements and Articulations of Ethics in Design Practice”, *International Journal of Design* [Online] 16: 2. Available at https://www.ijdesign.org/index.php/IJDesign/article/view/4547. Accessed February 2024.

Einaudi J. F. (2018), *L’apparizione dell’altro. Lo scarto e l’incontro*, Feltrinelli, Milan.

Emanuel B., Rodrigues C. and Martins M. (2011), *Rhetoric of Interaction: analysis of pathos*, Springer, Berlin.

Escobar A. (2018), *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*, Duke University Press, Durham.

Findeli A. and Bousbaci R. (2005), “L’Eclipse de L’Objet dans les Théories du Projet en Design (The Eclipse of the Object in Design Project Theories)”, *The Design Journal* 8, 3: 35-49. DOI: https://doi.org/10.2752/146069205789331574.

Floridi L. (2022), *Etica dell’intelligenza artificiale. Sviluppi, opportunità, sfide*, Raffaello Cortina Editore, Milan.

Fox N. J. and Alldred P. (2019), “New materialism”, in Atkinson P. A., Delamont S., Cernat A., Sakshaug J. W. and Williams M., eds., *SAGE Research Methods Foundations. Sage*, London. Available at https://methods.sagepub.com/foundations/new-materialism. Accessed February 2024.

Haraway D. (1988), “Situated knowledges: The science question in feminism and the privilege of partial perspective”, *Feminist Studies*, 14, 3: 575-599. DOI: https://doi.org/10.2307/3178066.

Haraway D. (2019), *Chthulucene: sopravvivere su un pianeta infetto,* Nero, Rome.

Interaction Design Foundation(2016), *What is Interaction Design?*. Available at https://www.interaction-design.org/literature/topics/interaction-design. Accessed February 2024.

Jonas H. (2002), *Il principio responsabilità. Un’etica per la civiltà tecnologica,* Einaudi, Turin.

Jullien F. (2020), *L’apparizione dell’altro. Lo scarto e l’incontro*, Feltrinelli, Milan.

Koskinen I. (2016), “Agonistic, Convivial, and Conceptual Aesthetics in New Social Design”, *Design Issues*, 32, 18-29. DOI: https://doi.org/10.1162/DESI_a_00396.

Margolin V. (2007), *Design Ethics and the Design Professions*, The MIT Press, Cambridge.

Moggridge B. (2006), *Designing Interactions,* The MIT Press, Cambridge.

Morrell K. (2020), *Applying Aristotle’s Three Ancient Rhetorical Appeals to Modern Business Communication*, Sage Publications, London.

Norman D. (2009), *The Design of Future Things*, Hachette, London.

Norman D. (2010), *Living with Complexity*, The MIT Press, Cambridge.

Norman D. (2014), *The Design of Everyday Things*, The MIT Press, Cambridge.

Oxford Reference (2024), *Ethics.* Available at https://www.oxfordreference.com/display/10.1093/oi/authority.20110803095759319. Accessed February 2024.

Papanek V. (1971), *Design for the Real World*, Bantam Books, New York.

Pellegrino G. and Di Paola M. (2018), *Nell'antropocene. Etica e politica alla fine di un mondo,* DeriveApprodi, Bologna.

Poster C. (1997), "Aristotle's Rhetoric against rhetoric: Unitarian reading and esoteric hermeneutics", *American Journal of Philology,* 118, 2: 219-249. Available at https://philarchive.org/citations/POSARA. Accessed February 2024.

Puig M. (2017), *Matters of care: Speculative ethics in more than human worlds* (Vol. 41), University of Minnesota Press, Minneapolis.

Robertson T. (2006), "Ethical issues in interaction design", *Ethics and Information Technology*, 8: 49-59. DOI: https://doi.org/10.1007/s10676-005-8308-3.

Saffer D. (2010), *Designing for Interaction: Creating Innovative Applications and Devices, Voices That Matter*, 2nd Edition, New Riders, Berkeley.

PART 2

Applied ethics in design for public and social systems

5. Design for public engagement: merging the role of academics and neighbourhood communities

Davide Fassi, Francesco Vergani

5.1 Participatory design and community engagement

Design emerges as a pivotal driver in fostering social cohesion, providing the public realm with the tools to face the intricacies of urban living, and conceiving novel pathways for the future. Its influence extends to the creation of spaces and experiences that are not only inclusive but also accessible, fostering community engagement and supporting people to actively shape the environments that surround them (Huybrechts *et al.*, 2017). In fact, citizens bear a moral responsibility to establish physical spaces that nurture civic involvement and communal exchange (Deshpande, 2016). Their participation in the design processes stands as a fundamental part of the journey, acting as the linchpin for effecting transformative changes an inclusive and democratic way.

In this framework, participatory design stands out as a key approach steering this transformative process (Smith *et al.*, 2016), and playing a pivotal role in expanding the democratic arena by

embracing diverse perspectives of the people involved.
However, engaging the public sphere in participatory design while upholding an inclusive and ecosystemic viewpoint may raise some thorny issues as it is difficult to maintain a wider perspective in including all the different *voices* (human as well as non-human). Additionally, orchestrating meaningful changes on a broader scale during the collaborative process of co-designing and co-producing sustainable and equitable futures represents a complex task.

In this context, neighbourhoods, with their relatively confined dimensions, offer not only more opportunities for interaction but also serve as catalysts for meaningful conversations and the ideation of projects of any kind (Manzini, 2021). Neighbourhood communities, being convergent points for various *voices*, create a *pluralistic* context in which *agonism* (Mouffe, 2000; DiSalvo, 2010) comes to the fore (Tassinari and Vergani, 2023). Indeed, the active involvement of local stakeholders not only leads to the creation of tailor-made solutions but also fosters environmental, economic, and social transformations that inclusively and democratically benefit the community. However, to foster transformation on a neighbourhood scale requires engagement at multiple levels, ranging from grassroots initiatives boosted by the local community to top-down interventions supported by institutional bodies (Fassi and Manzini, 2021; Fassi and Vergani, 2022).

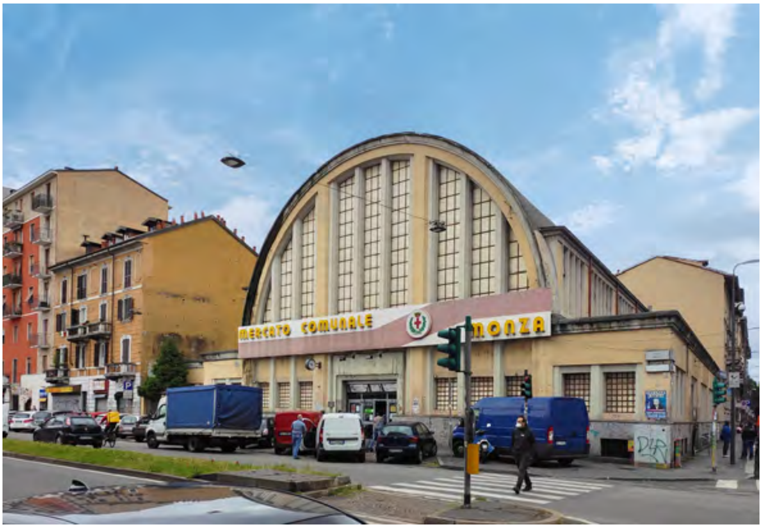
This is exactly the aim of Off Campus Nolo, a neighbourhood living lab promoted by Polisocial – the social engagement and responsibility programme of the Politecnico di Milano. Since 2020, the academic community of the Polimi DESIS Lab, the research group to which the authors belong, has been immersed in a series of projects, actions, and events within the dynamic neighbourhood of Nolo, located in the north-east part of Milan.

This chapter highlights the Off Campus Nolo ecosystem, prompting reflections on the dynamic and intricate relationship between academics and the local community, as well as the impact they have on knowledge co-production.

5.2 Nolo neighbourhood and Off Campus Nolo

Nolo, acronym for *North of Loreto*, is a neighbourhood that lies just beyond Milan's city centre. It has experienced an impressive transformation over the last 10 years, driven by its proactive community (Fassi and Manzini, 2021; Fassi and Vergani, 2022). Over the years, this community has cultivated a network of initiatives, activities, and projects that have breathed new life into the area. At the heart of this revitalization stands the *Nolo Social District*, a Facebook group launched in 2016 and managed by residents with over 13,000 online members, which played a pivotal role in connecting neighbours both online and in physical spaces, fostering anything from shared breakfasts to design projects aimed at shaping and transforming new urban areas (Fassi and Manzini, 2021; Fassi and Vergani, 2022). While, on the one hand, the virtuous and rapid transformation prompted by the citizens themselves is benefiting the context, on the other hand, it is creating challenges for the more vulnerable segments of the population who, over the years, have moved to the neighbourhood for its opportunities and housing prices. Nolo's evolution has indeed triggered a significant gentrification process (Coppola, 2019; Citroni and Coppola, 2021), inevitably raising concerns in the social fabric about issues such as the right to housing, inclusion, and accessibility.

Figure 1.
The iconic covered municipal market at Viale Monza 54.

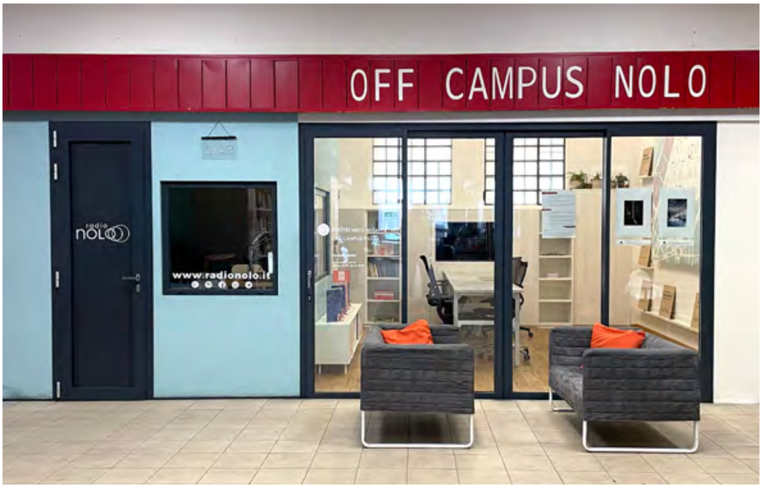


Within Nolo stands the iconic covered municipal market at Viale Monza 54 (Figure 1), a landmark in the neighbourhood's transformation. Built in 1933 and designed by engineers Secchi and Massari, it was one of Milan's first concrete-covered markets. While it has performed its social and economic purpose for the community throughout the previous century, unfortunately, it is currently facing challenges owing to large-scale commercialization, with many of its commercial spaces remaining unused. Over the years, such facilities have lost their appeal for urban communities, partly due to the rise of supermarkets and online offerings, and leading to a gradual and inevitable shift in citizens' habits.

It was in this dual-speed context that in 2020, Politecnico di Milano (Polimi) decided to open Off Campus Nolo (OCN).
OCN is part of *Off Campus. Il Cantiere delle Periferie*, an initiative promoted by Polisocial – the social engagement and responsibility programme of Politecnico di Milano – to make the university more responsible, open and attentive to social challenges, and closer to territories and marginalized communities, by activating and facilitating inclusive projects and processes with existing local communities. Polisocial promotes, on one hand, the Polisocial Award – funding and support for high-impact socially responsible research, and on the other, the Off Campus initiative. Off Campus currently involves four spaces in as many critical and fragile territorial contexts in the city of Milan. The initiative aligns with the eleventh Sustainable Development Goal (SDG) of the United Nations' 2030 Agenda as it plays a significant role in making the city of Milan more inclusive, safe, resilient, and sustainable by working directly with local communities and seeking to design solutions to urgent issues. In Nolo the living lab is located in one of the unused spaces of the market, granted free of charge to the university through an agreement between Politecnico di Milano and the Municipality of Milan (the owner of the building) with the aim of revitalizing and diversifying the purpose of the historic structure (for now only for commercial use) and acting as a catalyst for social innovation in the local community. However, the space provided required a complete restructuring, as it was totally unsuitable to host research and work activities for daily use. In this context, the research team Polimi DESIS Lab completely redesigned the space,

bringing it back to the magnificent and original architecture while also showing eventual ways to renovate other spaces in the market. Since its establishment in 2020, the space has undergone a large expansion and currently includes Off Campus Nolo +, which has become the primary venue for community/Polimi activities in the neighbourhood. Prior to this most recent opening, the lack of available space proved to be limiting in relation to the planned schedule of events. Not only did the size of the space itself (a commercial stall of approximately 30m^2) present a configuration rigidity, but, above all, it did not allow the management of separate activities at the same time, significantly limiting the continuous exchange between the groups of people in Nolo and the university community (Figure 2).

Figure 2.
The original space of Off Campus Nolo as seen today from the market corridor.



5.3 The challenges of OCN

On a broader scale, the OC project has invited academics from Architecture, Urban Planning, Engineering, and Design – those disciplines included in the Polimi offer – to supervise specific places with activities and projects, asking them to be physically present on a weekly basis.

Working at OC spaces means carrying out research and teaching activities while at the same time being open to continuous dialogue with local communities, who pass by the OCN while shopping at the market. This outlines an initial task for the university community, which is to consistently engage with the society for whom knowledge is being generated. This process requires taking on a role of continuous mediation, as well as an ability to translate issues primarily related to scientific contexts for an external audience. The hybrid role of the Polimi community working at OC – the so-called *offcampusers* (Fassi and Vergani, 2022) – over the years has imagined new ways of co-producing knowledge as well as the conditions for circulating and making it available to a varied audience composed of both academics and non-academics. In this perspective, the challenge of achieving the initiative's main goal (co-production of knowledge in marginal contexts) necessitated a rethinking of the organization and action methods of its process, with the subsequent deployment of significant design, economic, and, most importantly, social resources.

On the individual space of OCN, however, despite the years preceding its opening during which the community of researchers worked with local actors in a series of laboratory activities (Fassi and Vergani, 2023), the challenges in entering a situated context like the Nolo district have been multiple from the beginning.

First, the presence of a university at a municipal market proved to be particularly challenging, especially in communicating the mission of the OC project, which is to bring the university into close contact with the dynamics of change in society, extending the university's mission to themes and social needs that arise from the context.

The same entry into social dynamics and stratifications proved to be problematic since the university is often perceived an *ivory tower* (Perondi, 2020), distant and disconnected from social issues and tensions within these fragile contexts. Consequently, in the early stages of the opening, the working group focused more on research, expanding and strengthening the network of *situated stakeholders* (Fassi and Vergani, 2022), which includes various actors in the context (citizens, associations, public institutions, foundations and companies, universities, schools, other local entities), as well as general mapping activities of the context and its characteristics (Fassi and Vergani, 2022, 2023; Tassinari and Vergani, 2023).

In this challenging process, OCN has transformed from a *presiding space* into a *collaborative platform* (Huybrechts *et al*., 2017), that is, a place to enable continuous exchange, promoting the circulation and birth of projects and situated knowledge. However, the hybrid nature of the space, and the lack of guidelines and a standard methodology for achieving the goal, led the *offcampusers* to question the ways in which knowledge is co-created, identifying a procedural strategy understood as an *ecosystem* developed entirely organically in relation to the context. In this framework, the following section presents the current OCN ecosystem that allows the flourishing of this type of hybrid knowledge, which is still conditioned by the close relationship between the context and academic community.

5.4 The OCN ecosystem

In imagining and developing new transformative actions with tailor-made projects and processes for the community, the dimension of *proximity* – understood as a system of close functions and relationships (Manzini, 2022) – is essential. Therefore, looking at the experience of OCN means entering an ecosystem composed of spaces (*platforms*), actors (or *agents*), and activities.
This structure promotes a continuous cycle of activities that generate (and are themselves generated by) a type of knowledge produced in the situated context. Like all OC spaces, the one in Nolo is primarily activated thanks to the contribution of *situated stakeholders*, and draws on knowledge that, while similar to other Western contexts, is produced through on-site exchange (both in the physical space of the neighbourhood and the market, and in the digital space, such as that supported by the social district).

Spaces (the *platforms*)

In the co-production of knowledge directly in a local context, the spatial dimension emerges as an indispensable condition.
Also, due to the COVID-19 emergency and the subsequent lockdown, the demand for physical meeting places has increased compared to the situation during the opening of the living lab. In describing the spatial and instrumental component of the space, we use the term *platform* to denote a space «to bring together a diversity of actors to exchange knowledge and dynamically generate a collec-

tive form of intelligence» (Huybrechts *et al*., 2022). The term used in this context is not strictly tied to technological and digital systems (Graham, 2020). In this perspective, OCN is composed of:

- *Off Campus Nolo* (*OCN*): the original space opened in 2020;
- *OUT. Il Cortile Sociale* (*OUT*): the public space located in the outdoor area of the covered municipal market, funded by the Fondazione Claudio De Albertis and Fondazione di Comunità Milano, and designed by the *offcampusers*;
- *Off Campus Nolo +* (*OCN+*): the expansion of the original area, opened in November 2023.

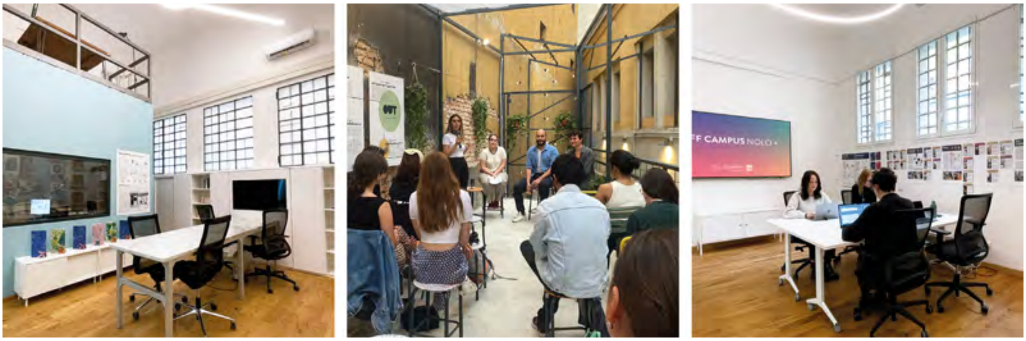


Figure 3.
The main 3 platforms: (from the left) OCN, OUT and OCN+.

All three spaces provide constant support for project development, research, events, training sessions, educational classes, and many other activities. Every day, a wide variety of actors join OCN and participate in an assortment of activities that give life to the place from morning to late evening.

However, since OCN is an ongoing endeavour with the neighbourhood community, its actions have a long-term influence on wider dimensions. Hence, we also identify both the market and the neighbourhood as *platforms*.

Actors

The spatial dimension, though essential, thrives thanks to the continuous support from a strong network of actors contributing to the co-creation of situated knowledge. Working together for the Nolo context and envisioning design concepts and solutions means involving *situated stakeholders* in all phases of the process, opening a transformative discourse that touches all different levels and scales of the community, from individual citizens to public bodies. This process embraces all the previously described platforms and is constantly promoted using participatory approaches that foster the community's agonism (Arendt, 1958; Mouffe, 2007) in engaging and subsequently envisioning various projects (Tassinari and Vergani, 2023). OCN plays a significant role in fostering new forms of social innovation by laying the groundwork for a more inclusive and ecosystemic bottom-up approach, aimed at making the neighbourhood more proactive, sustainable, innovative, and resilient.

The activities are mostly co-designed with *situated stakeholders* to best meet the needs and expectations of the people involved. Specifically, the actors revolving around OCN are:

- *Offcampusers*: the Polimi community, consisting of professors, researchers, PhD candidates, interns, and postgraduate students;
- *Citizens*: primarily beneficiaries of targeted services and participants in cultural/educational events, but also contributors to research. Their engagement has enhanced the focus of inquiries, understanding the context and its features, and the effectiveness of resulting actions;
- *Retailers and shopkeepers*: engaged in commercial activities from both the covered market and the neighbourhood. They have become partners and supporters for events and voluntary work, helping disseminate knowledge produced at OCN in the neighbourhood;
- *Informal groups, associations, and citizen committees*: groups of *situated stakeholders* co-designing activities and collaborating beyond the duration of single projects;
- *Extra local partners*: public bodies (such as the Municipality), companies, foundations, and private entities. The main benefit of their involvement is attracting attention and resources toward critical contexts and issues often neglected by policy agendas;
- *Other universities*, *schools*, *educational agencies*: working in the context of Nolo and the wider Milanese area;
- *External contributors*: over 200 post-graduate students from the Politecnico di Milano, using creativity and skills to design more than 30 projects for the market and the neighbourhood.

Furthermore, more than 80 experts from various disciplines (writers, linguists, artists, designers, activists, scientists, etc.) have been involved in the projects, injecting unique perspectives from outside the design world.

Activities

Since its opening, OCN and the academic community of Polimi have developed research projects, educational activities, community-making practices, and volunteer activities, giving voice to the local community, collecting stories and experiences to imagine and design new solutions for the neighbourhood (Fassi and Vergani, 2022, 2023).

The activities provided by OCN include four primary research topics which, both due to their connection to the research group and project opportunities, form the thematic backbone of OCN's work:

- *Proximity*: projects promoting and preserving proximity in all its forms (public space, neighbourhood networks, mobility, social relations, etc.), addressing critical issues and potentialities in close collaboration with Nolo's stakeholders;
- *Food*: projects focusing on equitable access to food that highlight the problems of managing, processing, and distributing food products, and promote the creation of new spaces and services to support the food supply chain in the neighbourhood;
- *Circularity*: projects and collaborations with associations and informal groups promoting a vision of transformation and regeneration, raising awareness in the community about reducing waste in an educational and creative way;
- *More-than-human*: projects that explore and challenge the concept of urban cohabitation amongst different lifeforms, including plants, animals, and viruses, in order to expand beyond the limits of human-centred design.

In terms of activities, in addition to research projects connected to more academic realms, the expansion of the living lab has had a significant impact in implementing new community activities with a rich schedule of cultural, musical, artistic, and recreational events. The activities carried out at OCN include:

- Teaching and Training: activities including innovative teaching proposals, activating educational contexts such as courses,

labs, workshops, internships, and theses, involving professors and students from Polimi;
- Services: OCN promotes the incubation of services to support the community, such as *SOSpesa*, a service for creating a network of local solidarity actors enabling the mapping of food-product flows and fundraising to provide 20 free packages per week with an appropriate combination of food (Fassi and Meroni, 2023);
- Events (solidarity, scientific, educational, socio-cultural): over the years, OCN has hosted a rich programme of events and cultural, artistic, and recreational initiatives open to the neighbourhood and the public (seminars and debates; participation in week-long events organized by the Municipality of Milan; initiatives promoted by student associations of Politecnico di Milano, etc.).

5.5 Knowledge co-production in Nolo

In the ecosystem of *platforms*, actors, and activities, the exchange and subsequent generation of new knowledge occur through *collisions* (encounters). At OCN, knowledge comes from the academic community, which, driven by multidisciplinary projects attentive to human and social development, brings forth themes and, above all, approaches directly into the context. Nonetheless, the creation of new knowledge does not follow *scientific* or strictly academic paths but arises from cues, ideas, and social movements. In this case, OCN's role lies in mediating and intercepting the potential of what happens in the face of a *collision*. The evolution of society is almost always based on an alternating relationship between issues emerging from society and ideas and guidelines introduced by politics, and the answer to a grassroots demand and requirement is met by top-down research and legislation.

However, what occurs at OCN is a medium level of involvement. A *middle-out engagement* (Tomitsch *et al*., 2021) that brings together representatives from bottom-up and top-down initiatives. Working at this level entails largely acting as a mediator, assisting local communities in exploring new ideas on one side while intercepting top-down demands on the other. In fact, the *situatedness* of OCN plays a crucial role in shaping the knowledge generation process. Being physically present, and thus, becoming part of the community, means being touched by the impacts produced. Everything activated in the context of OCN has a daily impact on the *offcampusers* – not only in terms of personal satisfaction but also in terms of responsibility towards the community. For this reason, being an *offcampuser* means also developing a set of social soft skills as a mediator. Throughout this ongoing experimentation, this case constantly raises questions on the very fundamental position of being a researcher in design. While being constantly and physically present in a specific context of application on a weekly basis, the nuanced interplay between being expert, facilitator, activist, and provocateur (Mogensen, 1992) comes to the fore. Furthermore, the potential benefits – or pitfalls – of projects being immersed in the context of application become evident.

From the academic side, this experience demonstrates how synergic work between the scientific community and the social community can bring forth new forms of knowledge that are more accessible and not confined to a university context, which is often perceived as inaccessible (Perondi, 2020). It also emerges how there may not be a particular desire on the part of the scientific community to work in situated contexts but, instead, allows itself to be *contaminated* by working in a continuous loop, aiming to discover, prototype, and disseminate projects directly on-site with the help of those who can daily collect the aspirations and difficulties of the community. In this perspective, it is necessary to work in the university's third mission: promoting entrepreneurial skills, innovation, social well-being, and human capital development (Cognetti, 2013; Compagnucci and Spigarelli, 2020; Auad Proenca *et al*., 2022); and producing social values to promote well-being and civic awareness through methods of effective cultural, social, and educational impact (Fassi and Vergani, 2020). Creating a bridge to transfer academic skills on a neighbourhood-community scale can improve the quality of actions to be developed, exploring new ways of creating and disseminating knowledge and encouraging new forms of social innovation with those communities (Fassi and Vergani, 2020).

In contexts such as OCN, a high *liquidity* in knowledge-production emerges, which is no longer solely tied to the university's first two missions (education and research).

5.6 Summing up

Over the past three years, the OCN experience has committed to building a bridge for transferring academic expertise on a neighbourhood scale: improving the quality of design actions to be developed; exploring new ways of knowledge dissemination; and stimulating new forms of social innovation with local realities and local communities. OCN managed to integrate into the neighbourhood after years of experiments, research, and educational activities carried out by the research group and the wider university, carving out a space for action through small interventions over time.

The research group, by getting into the dynamics of a transforming neighbourhood, has taken on a hybrid role – the *offcampusers* – that required the acquisition of social skills in addition to purely academic ones. Engaging with the day-to-day local dynamics allows for a better understanding of the context and can be useful in defining increasingly effective strategies.

Off Campus Nolo underscores the importance and responsibility of the university in knowledge co-production in situated contexts, addressing this experience as an ecosystem of three main components:

- spaces supporting knowledge should be understood as *platforms* rather than physical infrastructures. Their design has to be efficient and flexible enough to accommodate a wide range of activities;
- considering a context like Nolo means highlighting the complexity of the various actors that revolve around the spaces. Thinking of a neighbourhood as a network of *situated stakeholders* might be useful for imagining new coalitions to address challenges and projects on the neighbourhood scale;
- the actions to be implemented, although also driven by the expertise of the research groups involved, must be

guided by the needs of the local community and must be prompted by a continuous process of co-design.

References

Arendt H. (2018), *The human condition*, IL: University of Chicago Press, Chicago, 1958.

Auad Proenca M., Balducci A. and Cognetti De Martiis F. (2022), “The role of universities on forming social inclusive and sustainable environments”, *Proceedings of Plea Stgo 2022: Will cities survive? The future of sustainable buildings and urbanism in the age of emergency 2022*, 22nd-25th November 2022, Santiago de Chile, Chile.

Citroni S. and Coppola A. (2021), “The emerging civil society. Governing through leisure activism in Milan”, *Leisure Studies*, 40, 1: 121-133. DOI: https://doi.org/10.1080/02614367.2020.1795228.

Cognetti F. (2013), “La third mission dell’università. Lo spazio di soglia tra città e accademia”, *TERRITORIO*, 66, *3*: 18-22. DOI: 10.3280/TR2013-066003.

Compagnucci L. and Spigarelli F. (2020), “The Third Mission of the university: A systematic literature review on potentials and constraints”, *Technological Forecasting and Social Change*, 161: 120-284. DOI: https://doi.org/10.1016/j.techfore.2020.120284.

Coppola A. (2019), “The differentiation of the trivial. The bars in NoLo (Milan) as micro-publics in the age of urban super-diversification”, *Lo Squaderno*, 53, 9: 41-44. Available at http://www.losquaderno.net/?cat=189. Accessed February 2023.

Deshpande P. (2016), “On Potential Application of Interaction Design for Placemaking”, in Dalton N., Schnädelbach H., Wiberg M., Varoudis T., eds., *Architecture and Interaction. Human–Computer Interaction Series*, Springer, Cham. DOI: https://doi.org/10.1007/978-3-319-30028-3_15.

DiSalvo C. (2010), “Design, democracy and agonistic pluralism”, in Durling D., Bousbaci R., Chen L, Gauthier P., Poldma T., Roworth-Stokes S. and Stolterman E. eds., in Proceedings of *DRS International Conference 2010: Design and Complexity*, 7th-9th July, 2010, Montreal, Canada. Available at https://www.drs2010.umontreal.ca. Accessed December 2023.

Fassi D. and Manzini E. (2021), “Project-based communities: Lessons learned from collaborative city-making experiences”, *CoDesign*, 18, 1: 4-15. DOI: https://doi.org/10.1080/15710882.2021.2001535.

Fassi D. and Meroni A. (2023), “SOSpesa–Neighbourhood solidarity networks for the recovery, distribution, and valorisation of food surplus”, *Proceedings of conference ServDes. 2023: Entanglements and Flows. Service Encounters and Meanings*, 11th-14th July 2023, Rio de Janeiro, Brazil. DOI: DOI: https://doi.org/10.3384/ecp203.

Fassi D. and Vergani F. (2020), “Designing Solutions for the Commons”, in Issa T., Issa T., Issa T. B., Isaias P., eds., *Sustainability Awareness and Green Information Technologies*, Springer, Cham. Available at https://content.e-bookshelf.de/media/reading/L-13904383-4f4ddcad80.pdf. Accessed on January 2024.

Fassi D. and Vergani F. (2022), "Designing proximity with situated stakeholders", Proceedings of *DRS2022: Design research Society,* Bilbao, 25th June - 3rd July, Bilbao, Spain. DOI: DOI:10.21606/drs.2022.cv001.

Fassi D. and Vergani F. (2023), "Co-designing Contents With Situated Stakeholders: An In-Field Process in Nolo (Milan)", *Diid Disegno Industriale Industrial Design*. 1, 10: 810-819. DOI: https://doi.org/10.30682/diiddsi23t5v.

Graham M. (2020), "Regulate, replicate, and resist–the conjunctural geographies of platform urbanism", *Urban Geography*, 41, 3: 453-457. DOI: https://doi.org/10.1080/02723638.2020.1717028.

Huybrechts L., Benesch H. and Geib J. (2017), "Institutioning: Participatory Design, Co-Design and the public realm", *CoDesign*, 13, 3: 148-159. DOI: https://doi.org/10.1080/15710882.2017.1355006.

Huybrechts L., Devisch O. and Tassinari V. (2022), "Beyond polarisation: Reimagining communities through the imperfect act of ontologizing", *CoDesign*, 18, 1: 63-77. DOI: https://doi.org/10.1080/15710882.2021.2001537.

Manzini E. (2021), *Abitare la prossimità. Idee per la città dei 15 minuti*, EGEA, Milan.

Manzini E. (2022), *Livable Proximity: Ideas for the City that Cares*, EGEA, Milan.

Mogensen P. (1992), "Towards a Prototyping Approach in Systems Development", Scand. J. Inf. Syst., 4, 1: 5. Avaiable at https://citeseerx.ist.psu.edu/document?repid=per1&type=pdf&doi=859e3255bfb8e7ab1e9fc07a6248e27f6a73. Accessed February 2024.

Mouffe C. (2000), *The Democratic Paradox*, Verso, London.

Mouffe C. (2007), "Artistic activism and agonistic spaces", *Art & Re-search*, 1, 2: 1-5. Available at https://sites.utexas.edu/mchovanec/2018/05/08/artistic-activism-and-agonistic-spaces-chantal-mouffe/. Accessed February 2024.

Perondi E. (2020), "The Role of the University Campus in the Local Sustainable Economic Development", Universities as Drivers of Social Innovation: Theoretical Overview and Lessons from the 'campUS' Research, 49–65. DOI:10.1007/978-3-030-31117-9_4.

Smith R. C., Vangkilde K. T., Otto T., Kjaersgaard M. G., Halse J. and Binder T. (2016), *Design Anthropological Futures*, Bloomsbury Publishing, London.

Tassinari V. and Vergani F. (2023), "Designing Situated Vocabularies to Counter Social Polarizations: A Case Study of Nolo Neighbour-hood, Milan", *Urban Planning*, 8, 2: 322-334. DOI: https://doi.org/10.17645/up.v8i2.6420.

Tomitsch M., Fredericks J., Vo D., Frawley J. and Foth M. (2021), "Non-human Personas: Including Nature in the Participatory Design of Smart Cities", *Interaction Design and Architecture (s)*, 50: 102-130. Available at https://ixdea.org/wp-content/uploads/IxDEA_art/50/50_7.pdf. Accessed February 2024.

6. Different voices of identity. The role of communication design for the 0-18 community

Valeria Bucchetti

6.1 Communication design for society

The relationship between communication design and society is profoundly deep-rooted and touches on what pertains to the ontological dimension of communication design, implicitly inviting us to maintain the reflection on the objectives, priorities and responsibilities of our design actions. This is a particularly complex area in which the communication designer is the subject who acts in the community for the community and who feels responsible for the signs and traces he/she leaves in the semiosphere, as well as for the quality of the communicative act itself from which the access to content derives.

It is an area that recognizes its founding ethical core in the dimension of what traditionally belongs to public utility or social-graphic design (Anceschi, 1984; Pignotti, 1984). This is an area of the project that has deep roots and well-charted paths (Steiner, 1973) and which, although within different lines of work, has periodically reaffirmed the idea of communication designer as a profession open to dialogue and to the tensions of society. Such an idea is capable of supporting an alternative to the ideology of professionalization, a field exerting its influence on the designer to summon up *ethical* courage and reconsider objectives and contents into which to pour their *talent*.

It is around this axis that reflections and experiences have developed, allowing the emergence of accents and facets that design disciplines have favoured by intersecting the fields of communication design for social responsibility, access design (Baule, 2012); social design; design for social communication (Galbiati and Piredda, 2012); communication design for welfare (Bucchetti, 2017), and their values.

What is at stake here is the performative role of the communication project when it supports the transformations which social policies in particular are carrying out (Rosina and Sorgi, 2016), when it must accompany change and provide tools to support relations between the public administration and the citizens. And also when we find at the centre communicative actions concerning socially relevant services (Mancini 2002, p. 7), those having to do with the well-being and living conditions of the people and with the resources and the opportunities available to them in the various phases of their existence, i.e., project areas crucial to the improvement of the quality of life.

Communication design therefore becomes an instrument. It becomes the interpreter of a will, a process for the implementation of policies by the public administration and its bodies. It designs artefacts to speak to citizens; it gives visibility to innovation processes; it becomes a facilitator, but also an ally – and sometimes an accomplice – of the process of change. And it is in this role that it is called to redesign its priorities on the scale of design values in balance between humanistic values and technical knowledge in a careful and conscious critical process aiming at the improvement of social and environmental living conditions (Branzaglia and Bollini, 2003; Baule, 2015; Piscitelli, 2019).

6.2 A project aimed at young citizens and the role of communication design

The Milan 0-18 project is part of this framework, developed within the policy plan of the Metropolitan City of Milan, which represents an opportunity to develop a disciplinary reflection in the field of communication design called upon to make its own contribution and play its own role on multiple levels. Milan 0-18 is the main output of the *WISH MI: Well-being Integrated System of Milan* project, one of the 20 projects selected by Urban Innovative Actions (UIA), a call for bids from the European Union which provides resources to European urban areas in order to test innovative solutions to face the challenges confronting our cities today.

The project stems from the assumption summarized very well in the saying: *it takes a village to raise a child but, more importantly, it takes children to create a village*. Milan 0-18, which originates from the acknowledgement of the growing plurality of phenomena reshaping the Milanese social fabric and its needs, sets itself a daunting challenge: to promote the multidimensional and integrated well-being of all minors (0-18) living in the city of Milan, guaranteeing them full access to quality educational, cultural and social services.
The City is called to face this challenge through a holistic and integrated approach which, as such, involves not only the public sector, but also the private social sector and the entire city community in the co-design of an integrated system of policies, programmes, services and opportunities promoting the well-being of all the children and all the young boys and girls in the City.

The basic idea that inspired the project consists in the belief that together we can improve our ability to read the needs of the territory, design responses and new policies, services, and opportunities promoting well-being. The aim, therefore, is to build a city with a strong and cohesive social fabric in which young citizens and their families are at the heart of the construction of the Milan of tomorrow; that is, a City in which their needs, desires and resources are adequately acknowledged and no one is left behind. It is therefore a project with an innovative scope and of an interdisciplinary nature, whose objectives and purposes are based on a concept of welfare that is no longer exclusively devoted to the resolution of primary needs, but capable of spreading the culture of personal well-being.

Having set these objectives, communication design makes its contribution on multiple levels with a duty to accompany young citizens, but also the various actors belonging to the system, on this course of transformation: change of viewpoint of ways to contact the services, request them, conceive them and share them; transformation of mental models relating to the citizen-institutions relationship.

The figure of the communication designer is called upon to support this entire process, thus including his/her disciplinary point of view during the development of the action, fuelling the comparison and enriching the dialogue with the other subjects involved in the decision-making process.

Thanks to this role, communicative actions are not conceived downstream, as frequently happens, but matured in progress, translating the different requests communicatively, accompanying the decision-making processes along a path that facilitates and makes the implications entailed by scenarios and gradually outlined hypotheses (providing notational tools, forms of schematization of data and knowledge), more comprehensible (visible) on a communicative level. Hence, the designer's ability to frame and guide their own research and orient it towards the desired events by bringing it into the future perfect is put into practice (Celaschi, 2016). The tools they designed are at the service of the entire group to give a visual form to a system in progress and to facilitate decisions and processes of anticipation or strategic forecasting.

The communication designer therefore extends her/his role as a translator between the sender and the receiver (Anceschi, 1981; Baule and Caratti, 2016) to play simultaneously that of actor within a system of subjects and of facilitator of relationships within the working group.

A second level concerns the design of communicative products responding to the communicative needs of the system itself, and which include: the identification function (the design of visual identity elements, identity of spaces in the urban context); the informational-promotional function (the design of communication and exhibition tools capable of conveying information about the system in order to spread its peculiarities); the phatic function (the design of a set of tools capable of activating and renewing relationships and of keeping channels of exchange with citizens alive by implementing direct and indirect methods of listening).

A final level involves the systemic sphere and not only the definition of rules and grammars, but also of tools to facilitate and guarantee the directorial management and the control of the products so that over time their creation and articulation are kept in line with the subject and traceable to it.

6.3 A participatory and generative open system

Singularity-plurality, listening, inclusion, accessibility are some of the key words that outline the Milan 0-18 system, and which have been pivotal in directing the design choices for the construction of the communication system.

Due to its nature, it is a system that is thought of as variable; open; able to modify itself because it is constantly listening; capable of welcoming different voices and signs in relation to the plurality of profiles characterized by specific interests and vocations; and which finds its reference model in dynamic and kinetic identities. Such dynamic or post-logo identities, as we know, (Ferrara, 2007; Felsing, 2009; Chiappini and Sfligiotti, 2010; Van Nes, 2013; Sinni, Ruggeri and Varini, 2018), are «often defined as *fluid* (Lapentino, 2011), in which the adoption of more fluid and expressive languages is characterized by variability, reference to the context and processuality is preferred to the sedimented and conventional repetitive application of a recognizable visual element such as brand, performability, non-linearity, coherence and variety» (Guida, 2014, pp. 114-115, author's translation).

Communication design thus responds to the need to enhance the multiplicity of the subjects, their distinctive traits and the potential of the relationship between them in order to foster relationship of interdependence with the subjects of the community.
It does so through a system capable of meeting the requirements of flexibility, upgradeability, customization and with tools, which, thanks to computational visual design, can generate variety according to the demands of dynamism.

The identity system is thought of as an open container which can accommodate and coherently interpret the idea of multidimensionality. From the point of view of the conceptual model it is important to un-

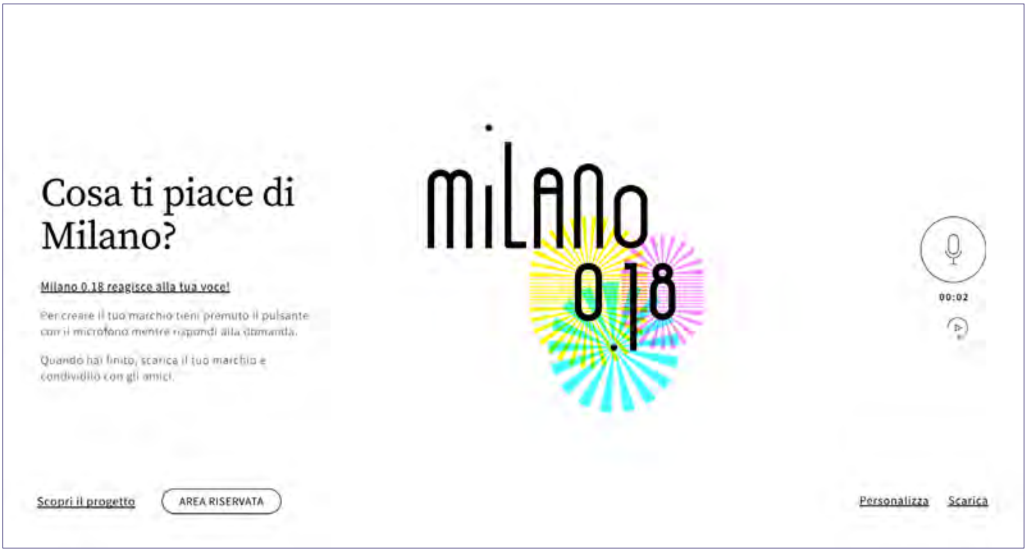
derline the definition of the variations through a directorial approach for which the centrality taken on by the process and the design of the process itself are determined according to its role as orchestrator. It is through systemic design that we can predict the virtuous effects that the individual pieces will have on the system, to prefigure how the system is able to generate them, welcome them, interpret them and re-introduce them into its communication circuit.
For example, I plan a certain process because I know that I want to obtain some particular functional results both for the activation of certain 'communicative behaviours' and for the representation of an overall idea drawn up *ex-ante* (Ciuccarelli, 2007).

In the case of Milan 0-18 it is not just an adaptive and flexible identity system, made easily applicable by the logo-generator (*generative tool* on the website dcxw-milano018.org), but also a participatory one (Bartoli, 2013; Bucchetti, 2017) with the task of giving voice to the subjects it addresses, a task it performs by acting on two distinct levels: the first in which the sound register is the protagonist, the second anchored to iconic-figurative testimonies instead.

Drawing with the voice

The voice of the young represents, not only metaphorically but also strictly speaking, the direct means of making their thoughts explicit. Because Milano 0.18 intends to promote a plural community in which each subject is an expression of their own individuality and, at the same time, plays an active and generative part, the promise of giving voice to identities was chosen as the focus of the project. To this purpose, the correlation between phonation and visual configuration was enhanced. It is a communicative move aimed at promoting the relationship between subject and system based on a playful component that leverages the friendly dimension and which, through it, opens up to the dimension of trust.

The resulting dynamic logotype can react to sound inputs entered through a digital application (generative tool) which converts the audio parameters into graphic parameters, thus giving life to unique and personal variations which express the visual translation of the individual subject's vocal print. It is the audio parameters that influence the conformation of the logo by acting on specific



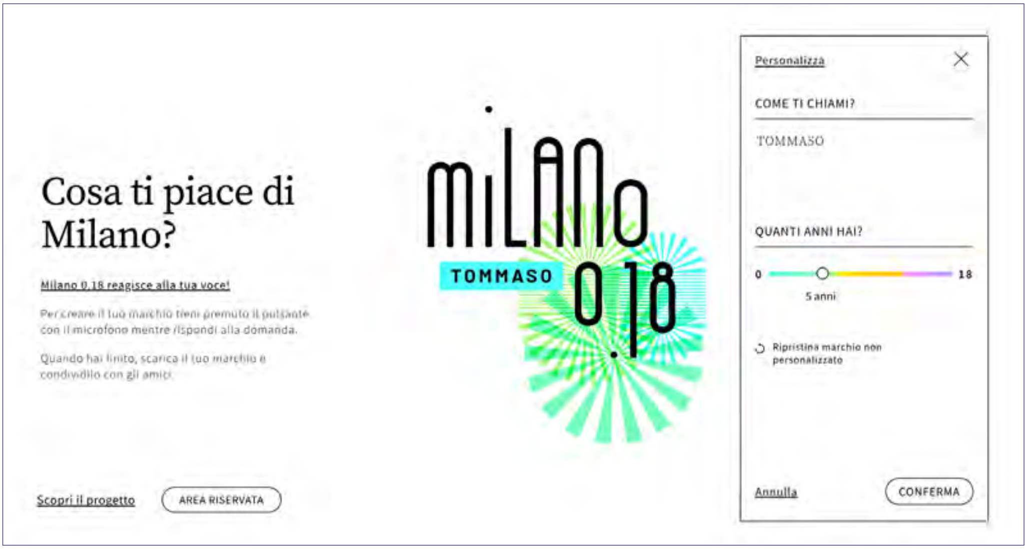
Cosa ti piace di Milano?

Milano 0.18 reagisce alla tua voce!

Per creare il tuo marchio tieni premuto il pulsante con il microfono mentre rispondi alla domanda.

Quando hai finito, scarica il tuo marchio e condividilo con gli amici.

MILANO 0.18
00:02
Scopri il progetto
AREA RISERVATA
Personalizza
Scarica



Cosa ti piace di Milano?

Milano 0.18 reagisce alla tua voce!

Per creare il tuo marchio tieni premuto il pulsante con il microfono mentre rispondi alla domanda.

Quando hai finito, scarica il tuo marchio e condividilo con gli amici.

Personalizza

COME TI CHIAMI?
TOMMASO

QUANTI ANNI HAI?
0 — 5 anni — 18

MILANO 0.18
TOMMASO
Ripristina marchio non personalizzato
Annulla
CONFERMA
Scopri il progetto
AREA RISERVATA

Figure 1.
Generative tool interface that allows voice interaction with the logo. It enables the generation of potentially unlimited versions of the identity sign that can be recognized as expressions of the same system.

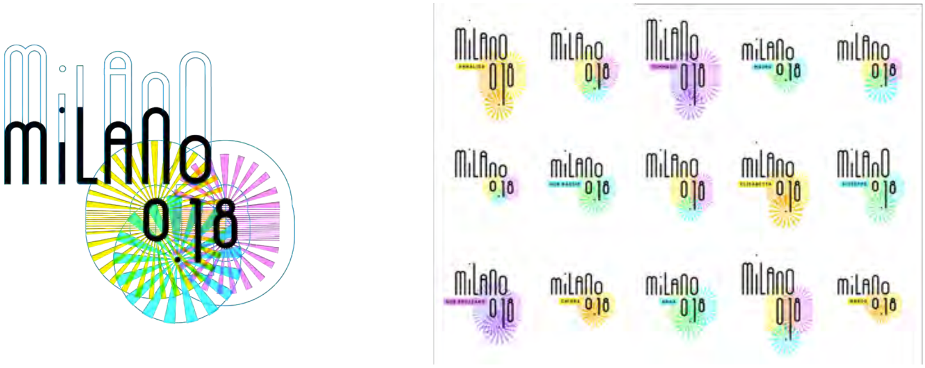


Figure 2. Overview of the generative characteristics of the sign: elasticity, expansion, radiation, and chromorhythmia.

behavioural qualities of the basic lettering: elasticity, expansion, radiation, chroma. When interfacing vocally with the tool and the phonation corresponds a transformation of the logo that reacts to the given impulse.

Testify through images

The second level on which the open system is based focusses in particular on the role of the sign-logotype, an integral part of the Milano 0-18 logo, and develops around the idea of knowing how to accommodate other iconic elements resulting from a participatory process.

Some methods have been designed which allow us to achieve a recognizable visual configuration and *behaviour*, but it is no longer something rigid and *pre-fixed* (Shaughnessy, 2008; Guida, 2014). At the centre there is no longer just the sign, but the formal behaviour dictated by the compositional rules: the stratification, multi-layer, and chromatic palette organize the heterogeneity of the figures, i.e., the traces left by the different subjects making up the community unified by a common graphic language which harmonizes, integrates, and intersects them.

With this in view, translation paths were designed from communication design practices for the different age groups of children and young people through creative workshop activities with the sign-logotype at their centre. Each workshop, characterized by a specific graphic technique (collage, three-dimensional papercut, linocut print), activated a process of self-reflection in the participants in relation to the city, their desires and rights, and represented

an opportunity for each of them to talk about themselves and build a first level of knowledge and relationship with the system.
The results of these activities and the exploratory course adopted have generated an alphabet of signs consistent with the compositional rules of the identity system and with the formal behaviour dictated by them, thus giving life to brand configurations which introduce new semantic levels ascribable to the values of the Milan 0.18 system.

The one described is a dynamic and open identity system which has also been extended to the design of spaces, both in terms of participatory model and communicative grammars.
That is, the generative principle is the foundation of the design of the community hubs present in different neighbourhoods of the city, seen as spaces constituting the physical counterparts of the digital artefacts – the digital platform designed to allow dissemination and interaction with dedicated services – and whose task is to guarantee physical access to the system, promote the recomposition of the different opportunities at local level, and experiment with innovative services for minors and their families.

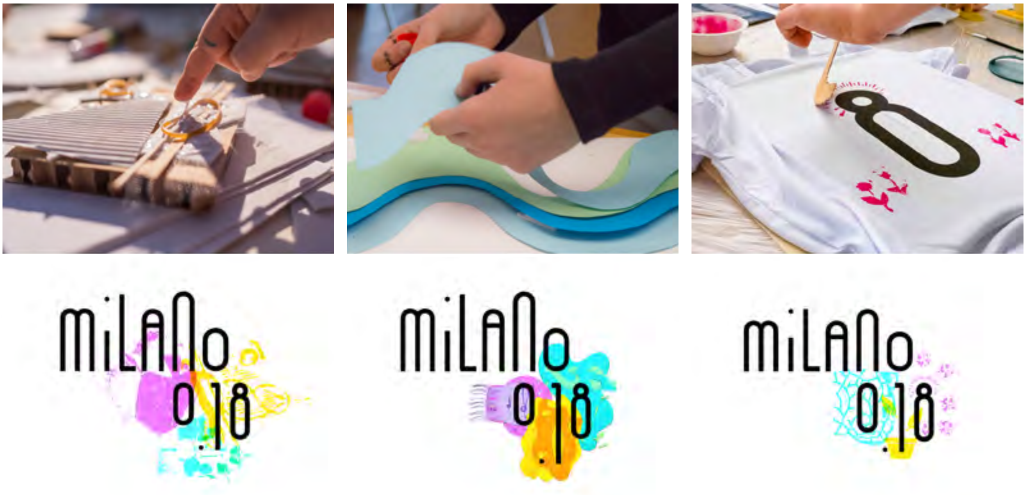


Figure 3.
The artistic techniques explored during the workshops. Over 3000 new logo configurations can be created by combining the individual contributions from each experience.

6.4 An ethical commitment to the community

The challenge posed by the identity project described is formidable; it is connected to the growth and development phase of the system, which will have to deal with the consumption of images (and its acceleration) and which, every time it welcomes a new subject, will have to test its ability to remodulate itself with gradually distinct expressive forms and with heterogeneous qualities of detail, welcoming contamination and hybrid form as integral parts of its being (Bucchetti, 2017; Consalez, 2017). The stability of the identity system will therefore be verified every time the system entrusts itself to those who live it, put it into action, and make it their own, accepting that everyone – since it belongs to everyone – can enrich it with their own *intonation* and that any *imperfections*, any discrepancies, can be reabsorbed by its own cohesive force and be perceived as values.
In this way, the directorial function shifts its focus within the design process, to one of anticipation. That is, new directorial perspectives are tested, which have the task of increasing their prefigurative abilities: foreseeing, welcoming and orchestrating the results of a process characterized by open phases without betraying the objectives of control over the overall identity in the process.

The work being carried out in the area of communication design for welfare (the communication design research group of the Department of Design – Politecnico di Milano – has been focussing on the topics of social responsibility for many years, bringing these issues into development and devoting educational experiments to welfare themes) has therefore offered a field of experimentation and an opportunity to question itself on the merits.

The analyzed project allows us, in fact, to reflect on its performative functions, on its qualities as facilitator and aggregator of multiple identities, and at the same time it allows us to bring out the role of the project as a producer of theory; to consider design «both as a planning ability and as a predisposition to think design-wise», i.e., as a theory and at the same time practice of an *inventive habit* (Zingale, 2020, p. 55) and which, as Giovanni Anceschi recalled during his lessons, refers to the model virtuous praxis-theory-praxis which considers the project, to all intents and purposes, as an agent that allows the production of theory which, in turn, will impact on new design actions.

In particular, the Milan 0-18 project allowed us to directly reflect on the identity system and on the role of the sign-brand as an active image capable of building consensus and participation, while broadening the gaze. This is a process started by the Municipality of Milan with the Wemi system (wemi.comune.milano.it) which constituted a first pilot project to provide services to citizens (Bucchetti, 2017).

The assumption of a design paradigm based on a form of open-design at the service of the community, in which the participants are active actors bringing their improving contributions, does not, in fact, only concern the tasks of design but, more broadly, the way of understanding every aspect of our social life, including and reinterpreting, in the design perspective, the axis of relational design (Lorenz, 2017). It is therefore a question of not giving up on getting closer to that condensation of *high quality of public affairs* which in the 1980s, in the field of public utility graphics, was believed to be a prerequisite of graphic artefacts, a quality which not only must involve the formal or compositional solution, the aesthetics of the figure, but which also must put the content of the representation at the centre, and which requires communication designers and public institutions (in an ideal perspective) to meet on the level of common political and cultural responsibilities .

Through the design process the communication designer becomes, as we said, the translator of a will and also an ally of those who express it. And it is precisely because of this role that it assumes a co-responsibility on an ethical level, every time – remaining within the Milan 0-18 project and moving from the metaphorical to the factual – that the brand which listens to the voice of young citizens and reacts to it as the dynamic identity system prescribes, will represent a public administration, an entity or a subject which in fact ignores or disregards the demands of citizens and thus proves to be a communication system aimed at mere appearance.

References

Aime M. (2019), *Comunità*, Il Mulino, Bologna.

Anceschi G. (1981), *Progettazione visiva: convenzioni e procedimenti di rappresentazioni,* Edizioni Officina Immagine, Budrio.

Anceschi G. (1984), *Circostanze e istituzioni della grafica di pubblica utilità*, in Anceschi G., ed., *Prima Biennale della Grafica*, Arnoldo Mondadori Editore, Milan.

Bartoli M. (2013), *è Bologna*, Available at http://www.matteobartoli.com/portfolio/e-bologna/. Accessed February 2023.

Baule G. (2012), "Interfacce di riconfigurazione. L'accesso comunicativo ai luoghi del sapere", in Quaggiotto M., *Cartografie del sapere*, FrancoAngeli, Milan.

Baule G. (2015), "C'è design e design. A proposito di design critico", in Bucchetti V., ed., *Design e dimensione di genere. Un campo ricerca e riflessione tra culture del progetto e culture di genere*, FrancoAngeli, Milan.

Baule G. and Caratti E., eds., (2016), *Design è traduzione. Il paradigma traduttivo per la cultura del progetto. 'Design e Traduzione': un manifesto,* FrancoAngeli, Milan.

Bollini L. and Branzaglia C., eds. (2003), *Etica e comunicazione*, AIAP Edizioni, Milan.

Brovelli S., Farrauto L. and Sfligiotti S., eds., (2012), "Spazio comune", *Progetto Grafico*, 22 (fall), Aiap Edizioni, Milan. Available at https://aiap.it/prodotto/progetto-grafico-22-edizione-digitale/. Accessed January 2024.

Bucchetti V., ed., (2017), *Un'interfaccia per il welfare. Le funzioni sociali del design della comunicazione*, FrancoAngeli, Milan.

Bucchetti V., Rossi M., Tolino U., Verrotti di Pianella B. and Visconti P., (2023), "Communication Design for Welfare, the Challenge of Preserving Human Interactions in Remote Participation. Rethinking and Redefining Collaborative Activities for a Virtual Environment", in Zanella F., Bosoni G. *et al.,* eds., *Multidisciplinary Aspects of Design Objects, Processes, Experiences and Narratives*, Springer, 475-484.

Celaschi F. (2016), *Non industrial design. Contributi al discorso progettuale*, Luca Sossella, Vignate.

Chiappini C. and Cioffi A. (2006), "Identità cinetiche", *Progetto Grafico*, 9: 96-109.

Chiappini C. and Sfligiotti S. (2010), *Open projects: Des Identités Non Standard*, Pyramyd, Paris.

Ciuccarelli P. (2007), "La marca come sistema complesso e le ragioni del mataprogetto", *Sistema Design Italia Magazine*, 5. Available at https://www.researchgate.net/publication/320083299_La_marca_come_sistema_complesso_e_le_ragioni_del_metaprogetto_-_Brand_as_a_complex_system_calls_for_a_metadesign_approach. Accessed December 2023.

Consalez L. (2017), "La costruzione di uno spazio ibrido: RAB-WeMi San Gottardo", *Territorio*, 83: 88-98. DOI:10.3280/TR2017-083013.

Felsing U. (2010), *Dynamic identities in cultural and public contexts*, Lars Müller Publishers, Baden.

Ferrara C. (2007), *La comunicazione dei beni culturali. Il progetto dell'identità visiva di musei, siti archeologici, luoghi della cultura*, Fausto Lupetti Editore, Bologna.

Galbiati M. and Piredda F. (2012), *Visioni urbane. Narrazioni per il design della città sostenibile*, FrancoAngeli, Milan.

Gouldner A. W. (1960), "The Norm of Reciprocity: A Preliminary Statement", *American Sociological Review* 25, 161-178. DOI: https://doi.org/10.2307/2092623.

Guida F. E. (2014), "Identità generative. Programmare la corporate identity", in Coletta C., Colombo S. *et al.*, eds., *A matter of Design. Making Society through Science and Technology*, Proceedings of the 5th STS Italia Conference 2014, Milan, Italy. Available at https://www.researchgate.net/publication/273440076_Identita_visive_generative_Programmare_la_corporate_identity. Accessed January 2024.

Lapetino T. (2011), *The Future is Fluid: Inside Dynamic Logos*. Available at http://www.hexanine.com/zeroside/the-future-is-fluid-inside-dynamic-logos/. Accessed March 2024.

Lorenz M. (2017), "Des identités visuelles statiques aux identités visuelles flexibles", *Graphisme en France 2017. Logos & identités visuelles*, Centre national des arts plastiques, Paris, 1: 27-55. Available at https://www.culture.gouv.fr/Espace-documentation/Documentation-scientifique-et-technique/Graphisme-en-France-2017-logos-identites-visuelles. Accessed February 2024.

Mancini P. (2002), "Perché comunicazione pubblica? Le ragioni sociali di uno sviluppo impetuoso", *Quaderni di sociologia*, 30: 5-15, Rosenberg & Sellier, Torino. DOI: https://doi.org/10.4000/qds.1232.

van Nes I. (2012), *Dynamic Identities. How to create a living brand*, BIS Publishers, Amsterdam.

Pignotti L. (1984), "Appunti per una grammatica e una identificazione della grafica di pubblica utilità", in Anceschi G. ed., *Prima Biennale della Grafica*, Arnoldo Mondadori Editore, Milan.

Piscitelli D. (2019), *First Things First.Comunicare le emergenze. Il design per una contemporaneità fragile*, LIStLab, Trento.

Rosina A. and Sorgi S. (2016), *Il futuro che (non) c'è*, Università Bocconi Editore, Milan.

Resnick E., edited by (2019), *The Social Design Reader*, Bloomsbury Publishing, London.

Sagmeister S. (2007), *Casa da Musica Identity*. Available at http://www.sagmeisterwalsh.com/work/project/casa-da-musica-identity/. Accessed March 2024.

Shaughnessy A. (2008), *Wolff Olins' intuitive branding. Business Week*. Available at http://www.businessweek.com/stories/2008-02-06/wolff-olins-intuitive-brandingbusinessweek-business-news-stock-market-and-financial-advice. Accessed March 2024.

Sinni G. ed. (2019). *Design Civic Consciousness / ABC per la ricostruzione della coscienza civile,* Quodlibet, Macerata.

Sinni G., Ruggeri I. and Varini R. (2018). "L'identità autorevole. Il progetto d'identità visiva degli Istituti culturali di San Marino", *Md Journal*, 5, 152-163. Available at https://issuu.com/materialdesign/docs/mdj_10_pagine_singole_issu. Accessed January 2024.

Steiner A. (1973), "La grafica degli Enti Pubblici", *Linea grafica*, 1, 2, 3.

Zingale S. (2020), "Design o progettualità? Osservazioni critiche", *Ocula*, vol. 21: 51-72, ottobre. DOI: 10.12977/ocula2020-41.

7. Framing designing practices from the margins. The case of Off Campus San Vittore

Virginia Tassinari, Francesca Piredda, Elettra Panepinto

This chapter discusses the original contribution coming out of the research activities we, as part of the ImagisLab research group, are conducting in dialogue between prison and society, proposing designing as a collaborative generative practice towards the shaping and sharing of brand-new language out of the pluriverse pushing calls from the margins of society. According to Hannah Arendt (1958), storytelling paves the way to the construction of the public space, considered as a space of inquiry, of identification of common interests, and of (public) discourse building. This practice-based contribution offers both a phenomenological and theoretical framework to the ethical design dimension for public and social systems, and it represents a prototype of designing that does not aim to resolve, but to make sense of, critical, pluriverse and transactional perspectives. It highlights key issues and potentialities in an increasingly polarized society of which prison is a reflection. We aim here to provide further meanings to support design agonism (DiSalvo, 2015) and social transformation by design, overturning marginalization as a problem to marginality as a site of resistance (hooks, 1984), and showing how design can help generate new narratives, informed by the courage and contradictions of human conditions emerging from the margins of society.

Specifically, we address here our ongoing activities within Off Campus San Vittore (SV), a space of the Politecnico di Milano opened within the SV jail, where we are currently working at the production of participatory narratives to connect the inside to the outside world, putting them in a virtuous relation, identifying potentials (also for society at large) within the prison but also questioning prison's intersectional power dynamics (hooks, 1989; Quijano, 2020 and Mignolo, 2021) that trigger prison's social dynamics and exacerbate societal polarizations. Moreover, the *heterotopia* (Foucault, 1995) of prison functions as a *state of exception* (Agamben, 2003) evidencing societal (*bio*)*power* (Foucault, 2003, 2010) dynamics. Foucault (2003) identifies *biopolitics* as a kind of statification of the biological, working on a demographic scale.
The scientific, socio/political technologies and developments achieved between the seventeenth and the nineteenth centuries have made it possible to have an effect on the population, acting on issues such as epidemics, environmental conditions, and birth rates. Matters of natural life have become politically regulated.
Following Foucault's work on the birth of imprisonment as a punitive method, it could be argued that prison is a biopolitical invention, and that biopolitical tensions are reproduced on different scales and to different degrees on the various actors that live within the jail system.

By means of our exploration with a San Vittore Situated Vocabulary (SVSV) – an infrastructuring (Karasti, 2014) activity involving inmates, police officers in prison, educators, sanitary operators and volunteers, in generating a vocabulary of concepts key for those living/working/volunteering in prison – we aim to bring together pluriversal (Escobar, 2018) and agonistic (Mouffe, 2013; DiSalvo, 2015) points of view on common subject matters. This enables us to explore how marginality can be considered *a site of resistance* (hooks, 1984), where language can hold a regenerative potential for society at large.
The SVSV keywords become entry points to the stories of oppression often to be found behind criminal biographies. These stories emerge

spontaneously in the StoryLab, a weekly workshop of collaborative storytelling and biographical stories collection with inmates.
In fact, by collecting inmates' stories, we are investigating how these fragments make sense of one's own human condition (Arendt, 1958) eliciting a collective reflection about contemporary society's injustices and issues of biopower. If the SVSV can be considered an *agora* (Arendt, 1958) for identifying/questioning or contesting understandings of common interests, StoryLab can be understood as the *theatre* (Arendt, 1958) where stories are enacted, enabling the identification of *heroes* (Arendt, 1958; Bertolotti *et al.*, 2016), addressing common interests, and contributing to the construction of the common realm (of which the prison is an example).
These stories reveal an entanglement of bodies and politics, whose depictions are to be considered inherently biopolitical.

After a close exploration of the philosophical framework from which we depart (hooks, 1989; Foucault, 1990, 1995, 2003, 2010; Hartman, 2008; Freire, 2017), we will address how those key theoretical contributions are currently serving as a basis for our own experimentation, where the SVSV and the StoryLab interact to generate a critical discourse on prison's (and, conversely, societal) biopower dynamics, exploring how the narratives created from these *margins* (hooks, 1984) can work in both critical and affirmative ways, and function as an engine of societal transformation. Starting from this case study, the paper (re)assesses the political role of designers beyond a solutionist approach, as story listeners and facilitators of social transformations from the margins.

7.1 The theoretical framework

In Off Campus SV, we are currently exploring the potential of philosophical frameworks to enable reflective, critical and affirmative forms of designing practices in a prison environment. One of the philosophical insights we are using as a conceptual framework of our designing experimentations is Foucault's understanding of the prison as the place of the biopolitical *par excellence*.
A place whose violence needs to be unmasked and addressed:

> **The real political task in a society such as ours is to criticize the workings of institutions that appear to be both neutral and independent, to criticize and attack them in such a manner that the political violence that has always exercised itself obscurely through them will be unmasked, so that one can fight against them (Chomsky and Foucault, 2006, p. 41).**

In his seminal work *Discipline and Punish: The Birth of the Prison* (1995), Foucault explores story's ability to act as a counter-narrative to prevailing hegemonic narratives that perpetuate the *biopolitical process of inmates* (1995) dehumanization and marginalization. Through the act of telling their own stories, inmates experience their (under)explored potential to disrupt mainstream representations of criminality and punishment. In Foucault's understanding, stories possess the ability to re-assert humanity in contexts – such as prisons – where humanity, together with responsibility and freedom of self-determination, is often denied. In this sense, they can help to re-discover the denied, insulted humanity of those called by Paulo Freire (2017) the *oppressed*. This process of *liberation* (Freire, 2017) and self-emancipation can work in transformative ways, where the oppressed is not only freed from oppression, but in this act of self-determination also frees the oppressor, in a dialectic interplay between oppressor and oppressed:

> **[...] dehumanization, although a concrete historical fact, is not a given destiny but the result of an unjust order that engenders violence in the oppressors, which in turn dehumanizes the oppressed. Because it is a distortion of being more fully human, sooner or later being less human leads the oppressed to struggle against those who made them so. In order for this struggle to have meaning, the oppressed must not, in seeking to regain their humanity (which is a way to create it), become in turn oppressors of the oppressors, but rather restorers of the humanity of both (Freire, 2017, p. 13).**

Freire's method identifies key issues such as power dynamics underpinning social oppression in situated contexts (Haraway, 1988). It explores how they resonate with diverse publics and questions them. His method uses language's potential to address and name oppression, functioning as a dispositive of self-determination and re-affirmation of humanity (of both the oppressed and, dialectically, of the oppressors).

Foucault's idea of biopower and Freire's cathartic power of language intersects with Hartman's concept of *critical fabulation* (Hartman, 2008), articulating the empowering potential inherent in narratives of the past within oppressive contexts. In detail, it involves the reimagination of marginalized histories to challenge dominant narratives justifying prisoners' confinement, their *punishment* (Foucault, 1995), and to unveil hidden power dynamics. Critical fabulations offer a powerful lens through which to understand and engage with inmates' stories, often silenced or distorted by prevailing stereotypes, revealing the complexities of human lives entangled within the justice system. Through the fabulation of oppressed pasts – and, particularly, the narration of the unsayable, of the gaps in history retaining stories of violence and oppression – unexpressed disruptive, transformative potential can finally come to the surface. In the prison context, critical fabulation can help to both challenge hegemonic narratives as well enable inmates' self-determination, together with the re-affirmation of their own humanity, paving the way for identify in the past underseen potentials, which can function as sparks of future *roads to justice* (Staszowski and Tassinari, 2020). As such, it can work in prefigurative ways, supporting the envisioning of a future society (inside and outside prison), where humanity is more fully recognized, respected, and valued. By supporting processes of self-determination, critical fabulations work as acts of resistance from the *margins*. As such, they offer a method for resistance and subversion within the prison's system of control, surveillance, and biopower (Foucault, 1995), enabling inmates to rediscover agency over their own narratives, and to reclaim ownership of their own identities and agencies within an often disempowering, de-humanizing environment. Fabulations of an oppressed past holds a dialectic of *radical resistance* (hooks, 1987) against oppressive power structures. They can foster spaces for resistance coming from the *margins* of hegemonic, stigmatizing narratives, not allowing prisoners to have access to a *fuller humanity* (Freire, 2017) and right of self-determination.

7.2 The case study: Off Campus San Vittore

This theoretical framework is currently serving as a base for our experimentation at the SV prison in Milan. This prison stands as a symbol of Italian prison system, encapsulating a complex history and contemporary challenges. In 2022, Politecnico di Milano and SV jointly opened a space within the prison's walls, from which to re-frame design's role and responsibility in such a polarized and challenging context.
We are currently exploring the potential of our philosophical framework in the interplay between the two projects StoryLab and SVSV.

StoryLab is a weekly participatory storytelling workshop, held with the young-adult inmates (aged 18-27). Its main goals are to empower participants through the production of stories and to foster dialogues about detention within and outside the walls. The activity is carried out using a toolkit composed of a mix of visual and textual prompts, which was developed during previous research experiences (Ciancia, Piredda, 2022; Piredda *et al*., 2022).

Inspired by the narrative-based design framework *Collecting-Crafting-Reframing* (Venditti, 2017; Ciancia *et al*., 2021; Piredda, 2021; Piredda and Ciancia, 2022), the design activities are structured in three main phases:

1. collection of fragments: the participants are invited to choose from the toolkit images representing actions, places, characters, emotions, etc.;
2. story-telling: the participants narrate slices of life, anecdotes of their personal stories, mostly biographical issues elicited by the fragments selected;
3. content production and output realization: starting from the stories, participants create artefacts (for example, booklets), and the researchers further elaborate them into digital outputs. This process is implemented within the limits imposed by law and regulations in terms of privacy and the willingness to respect and protect the participants who are awaiting trial.

The narrative material collected is processed in different outputs, with the intention of both giving back to the participants as well as communicating the collected stories to the outside world. Even more important is the relationship of trust that this weekly and enduring workshop allows us to build with the participants. Thanks to StoryLab, it finally becomes possible to speak, to be listened to, and to listen to others. This storytelling activity brings the participants closer to one another, enabling more personal, intimate forms of conversations. SVSV is an infrastructuring activity aimed at building a shared vocabulary between inmates, prison officers and operators, bringing together points of view in a shared, agonistic, collective discourse that is both dissensual (Mouffe, 2013) and pluriversal (Escobar, 2018).

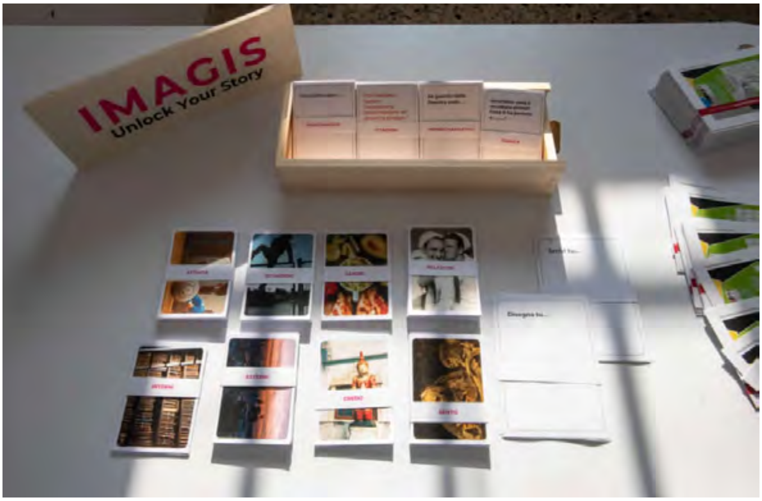

IMAGIS
Unlock Your Story

Figure 1.
StoryLab. The toolkit. Picture by Lab Immagine, Design Department, Politecnico di Milano.

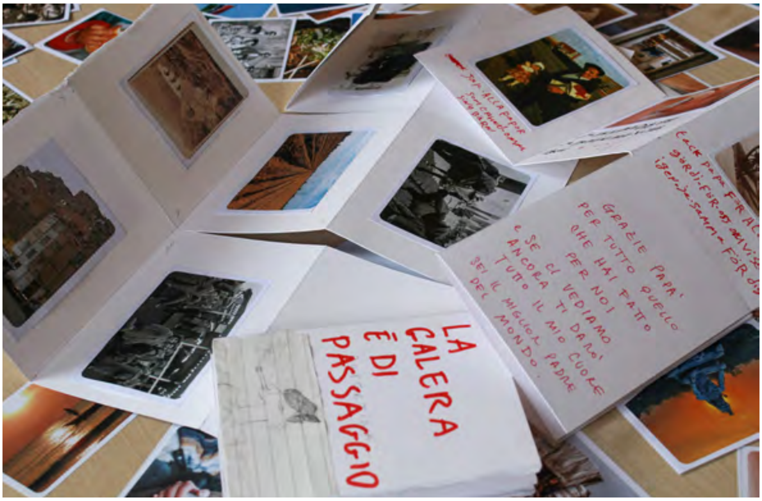

LA GALERA È DI PASSAGGIO
GRAZIE PAPÀ PER TUTTO QUELLO CHE HAI FATTO PER NOI

Figure 2.
StoryLab. The booklet.

The SVSV revolves around a set of four words, chosen by the young adults in a participatory workshop. The meanings of these words are then discussed amongst them and with other key actors, to find new definitions filtered through their diverse experiences in the prison. These definitions compose together a situated vocabulary and are used to develop different kinds of outputs to be agonistically proposed and further discussed within public events, seminars, and wider panels of experts and civil society representatives. Arendt's conceptual framework can here help us to further articulate the political potential of words (Staszoswki and Tassinari, 2020).

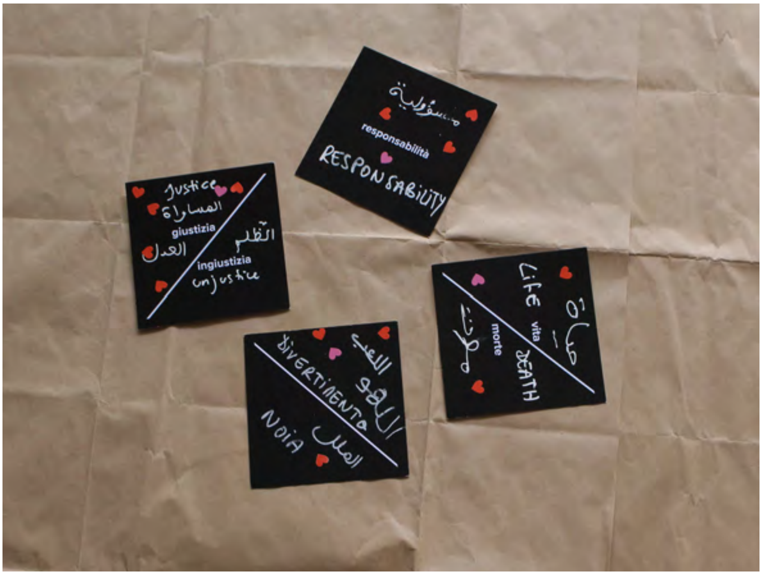

Justice
المساواة
giustizia
العدل
الظلم
ingiustizia
unjustice
مسؤولية
responsabilità
RESPONSABiLiTY
Life
vita
morte
DEATH
حياة
موت
DiVERTiMENTO
NOiA
اللهو
الملل

Figure 3.
Situated Vocabulary of San Vittore (SVSV).
The words.

According to her (2017), human identity unfolds through action and speech and every personal manifestation of identity is enacted in an already existing web of human relationships, contributing to shape not only the personal identity, but also the life of those to come. In this light, identity is both relational and narrative. Drawing on Bruner's (1990) notion of agency as intentional states and Holzkamp's (1992) grounds for action, Jens Brockheimer (2009) proposes a view of narrative imagination as a practice of agency. Storymaking not only uses established cultural patterns, but also involves experiences, ideas that can reinterpret or break these patterns. Through the construction of meaning and the reworking of one's experience as a storytelling subject, StoryLab and SVSV in their interplay hold the potential to bring the individual to reframe one's own experience by more clearly identifying one's own agency, taking accountability of one's own past and future.

The biopolitical power to be read in inmates' stories and bodies is currently questioning our role as designers, together with its (bio) political implications. Biopower in prisons manifests for instance through brutalization of prisoners' bodies by interiorized forms of control as self-punishment/self-inflicted harm, but also through prisoners' hierarchization, based on the social markers of race, gender and class, thanks to which the already existing intersectional power structures are eventually reinforced. As designers, we can work here in identifying and questioning these intersectional power structures, within and outside the prison's walls.

When looking at the political implications of our work in SV, we acknowledge there is a careful balancing of the *politics of translation* (Spivak, 1982) involved in the act of listening to/translating inmates' stories. This is currently helping us to *re-vision* (hooks, 1984) our role and its political responsibility, re-framing it from being problem-solvers to mediators between contesting actors, infrastructuring forms of (re)humanizing common discourse, where transformative potentials can finally be envisioned.

By telling their own stories (StoryLab) and finding their own words (SVSV), prisoners are currently emerging as individuals, with rich inner lives, struggles and aspirations, revealing them to be more than just offenders who need to be punished.

They are reaffirming their own humanity and exploring possibilities of self-determination within the histories of oppression hiding behind their own histories of crime. By actively engaging with a process of (re)humanization (Freire, 2017), the oppressors, for the first time, discover the custodial system and how it is to be oppressed, by acknowledging that to somehow oppress de-humanizes the inmates, and so have the possibility to experience a re-humanizing, caring way of dealing with inmates, enabling their self-determination beyond crime, without falling back into mechanics of biopower and punishment (Foucault, 1995, 2003).

This process of re-humanization is pivotal for re-discovering human dignity and worth - even in histories of crimes - and therefore foster a more compassionate and just society. By regarding SV as a laboratory of a more just future society, we aim here to disarticulate prison's hegemonic narrative polarizing the *good* and the *bad*, those who are inside from those outside, and to envision a radical transformative possibility from the *margins*, highlighting the potential of prisoners' points of views and stories to illuminate our society's contradictions and possibly envision a fairer society.

7.3 Towards a re-visioning of design practices

In their interplay, SVSV and StoryLab act as infrastructuring projects drawing on the potential of language and storytelling (Foucault 1995; Hartman, 2008) to contest prevailing narratives perpetuating prisoners' de-humanization and marginalization. By questioning the idea of punishment and its biopolitical implications (Foucault, 1995), they open possibilities to re-assert humanity where it is mostly negated, and to envision a transformative potential in the untold, unacknowledged histories of oppression. Concrete narrative practices of resistance manifest the transformative potential of stories in de-humanizing, oppressive contexts, highlighting matrixes of power (Quijano and Ennis, 2000) underpinning histories of oppression. Critical fabulations can enable processes of self-determination, where prisoners can liberate themselves from oppression and, dialectically, at the same time, from the oppressors' oppression (Césaire, 2001; Freire, 2017), emancipating themselves from prevailing narratives of confinement and punishment.

By infrastructuring *spaces of exception* (Agamben, 2003), we are working towards the generation of counter-narratives that function as collective resistance against the disciplinary mechanisms inherent within the custodial apparatus. Languages' and stories' counter-hegemonic potential to design from the margins as spaces of *radical openness* (hooks, 1984) become tangible here.
To generate a common language without forcing what is at the fringes into a consensus (Rancière, 2010; Mouffe, 2013), but rather exploring

forms of agonistic, democratic, dissensual discourse-building (Keshavarz and Mazè, 2013; DiSalvo, 2015), is currently enabling a collective process of (re)alphabetization (Freire, 2017), self-determination, and identification of social injustices underpinning one's own histories of violence, laying the ground for more just futures.

Foucault's idea of storytelling as a means of promoting healing and resilience (Foucault, 1984), enters into interplay with both hooks as well as Freire's understanding of self-determination of the oppressed experienced as a form of pedagogy. With this current experimentation, we assume the stance of *critical* (Freire, 2017), *radical pedagogies* (hooks, 1994, Fazzolari, 2022), where words and stories can support inmates in engaging in processes of critical self-assessment and identification of power structures underpinning their histories of violence. *Situated* (Haraway, 1988) vocabularies and stories can help enhance design's capacity to heal and *care* (Puig de la Bellacasa, 2017), reaffirming humanity and self-determination. On the other hand, by means of generating common vocabularies and stories, prisoners are currently navigating the discursive structures of confinement, forging pathways towards self-determination and re-humanization, even in the biopolitical mechanisms of the prison apparatus (Foucault, 1995, 2003).

Prison is serving as a magnifying lens, through which the need to reassess design beyond solutionism becomes more visible. Our current exploration is revealing designing practices beyond colonial, modern underpinnings (Vázquez, 2020) as a form of reflective praxis of the oppressed, a praxis of liberation, regeneration, and reciprocal care. In this sense, we can consider Off Campus SV as a laboratory for society at large, from which to *re-vision* design's practices beyond the disciplinary (Foucault, 1995), modern/colonial framework (Quijano and Ennis, 2000; Mignolo, 2021), towards a pluriversal perspective.

References

Agamben G. (2003), *Lo Stato di Eccezione*, Bollati Boringhieri, Turin.

Arendt H. (1958), *The Human Condition*, University of Chicago Press, Chicago.

Bertolotti E., Daam H., Piredda F. and Tassinari V., eds (2016), *The Pearl Diver. The Designer as Storyteller*, DESIS Network, Milan. Available at https://hdl.handle.net/11311/1008790. Accessed February 2024.

Brockmeier J. (2009), "Reaching for Meaning: Human Agency and the Narrative Imagination", *Theory & Psychology,* 19, 2: 213-233. DOI: https://doi.org/10.1177/095935430910.

Bruner J. (1990), *Acts of meaning*, Harvard University Press, Cambridge.

Césaire, A. (2001), *Discourse on Colonialism*, Monthly Review Press, New York.

Ciancia M. and Piredda F. (2024), "Worldbuilding Practice as a Collaborative and Inclusive Design Process. The Case of ACTS-A Chance Through Sport", in Zanella, F., *et al., Multidisciplinary Aspects of Design. Design! OPEN 2022*, Springer Series in Design and Innovation, vol 37, Springer, Cham. DOI: https://doi.org/10.1007/978-3-031-49811-4_59.

Ciancia M., Piredda F. and Venditti, S. (2021), "Shaping and Sharing Imagination: Designers and the Transformative Power of Stories", *Interactive Film & Media Journal*, 1, 1: 19-40. DOI: https://doi.org/10.32920/ifmj.v1i1.1492.

Chomsky N. and Foucault M. (2006), *The Chomsky-Foucault debate: On Human Nature*, The New Press, New York.

DiSalvo C. (2015), *Adversarial Design*, The MIT Press, Cambridge.

Fazzolari B. (2022), *Bell Hooks & Paulo Freire: A Critique of Transgressive Teaching & Critical Pedagogy,* Tarija Sur Publishing, Tarija.

Foucault M. (1990), *The History of Sexuality: An Introduction*, Vintage, London.

Foucault M. (1995), *Discipline and Punish: The Birth of the Prison*, Vintage, London.

Foucault M. (2003), *Society Must be Defended: Lectures at the Collège de France, 1975-1976*, Macmillan, London.

Foucault, M. (2010), *The birth of biopolitics: Lectures at the Collège de France, 1978-1979*, Macmillan, London.

Freire P. (2017), *The Pedagogy of the Oppressed,* Penguin Books, London.

Haraway D. (1988), "Situated Knowledges: The Science Question. Feminism and the Privilege of Partial Perspective", *Feminist Studies,* 14, 3: 575-599. DOI: https://doi.org/10.2307/3178066.

Hartman S. (2008), "Venus in Two Acts", *Small Axe* 12, 2: 1-14. Available at https://warwick.ac.uk/fac/arts/history/research/centres/blackstudies/venus_in_two_acts.pdf. Accessed January 2024.

Holzkamp K. (1992), "On Doing Psychology Critically", *Theory & Psychology*, 2, 2: 193-204. DOI: https://doi.org/10.1177/0959354392022007.

hooks B. (1984), *Feminist Theory: From Margin to Center*, South End, Boston.

hooks B. (1989), "Choosing the Margin as a Space of Radical Openness", *Framework: The Journal of Cinema and Media*, 36: 15-23. Available at https://www.jstor.org/stable/44111660. Accessed February 2024.

hooks B. (1994), *Teaching to Transgress*, Routledge, New York.

Karasti H. (2014), “Infrastructuring in Participatory Design”, *PDC ‘14: Proceedings of the 13th Participatory Design Conference: Research Papers,* Vol. 1, 141-150. DOI: https://doi.org/10.1145/2661435.2661450.

Keshavarz M. and Mazè R. (2013), “Design and Dissensus: Framing and Staging Participation”, *Design Research, Design Philosophy Papers*, 11, 1: 7-3. DOI:10.2752/089279313X13968799815994.

Mignolo W. (2021), *The Politics of Decolonial Investigations,* Duke University Press, Durham.

Mouffe C. (2013), *Agonistics. Thinking the World Politically*, Verso, New York.

Piredda F. (2021), “Comunicare Significa Mettere in Comune. Il Design della Comunicazione come Processo Narrativo per l’Inclusione Sociale”, *Graphicus*, 10: 24-29. Available at https://graphicusmag.it/archivio/Graphicus_1078_0010.pdf. Accessed March 2024.

Piredda F. and Ciancia M. (2022), “Challenging Hegemonic Narratives: Power of Story-Based Design Strategies” in Moloney K., ed., *Transmedia Change. Pedagogy and Practice for Socially-Concerned Transmedia Stories*, Routledge, London.

Piredda F., Ciancia M. and Ligi C. (2022), “Ascoltare e Raccontare: Co-Progettare l’Immaginario dello Sport in Carcere”, *Territorio*, 102, 3: 35-40. DOI: 10.3280/TR2022-102006.

Puig de la Bellacasa M. (2017), *Matters of Care,* University of Minnesota Press, Minneapolis.

Quijano A. and Ennis M. (2000), “Coloniality of Power, Eurocentrism, and Latin America”, *Nepantla: Views from South*, 1, 3: 533-580. Available at https://www.researchgate.net/publication/265445599_Coloniality_of_Power_Eurocentrism_and_Latin_America. Accessed February 2024.

Rancière J. (2010), *Dissensus: On Politics and Aesthetics*, Bloomsbury, London.

Spivak G. C. (2021), *The politics of translation*, in Venuti L., edited by, *The translation studies reader*, Routledge, London.

Staszowski E. and Tassinari V. (2020), *Designing in Dark Times: An Arendtian Lexicon*, Bloomsbury, London.

Vázquez R. (2020), *Vistas of Modernity. Decolonial Aesthesis and the End of the Contemporary*, Jap Sam Books, Prisenbeek.

Venditti S. (2017), *Social media fiction. A framework for designing narrativity on social media*, Doctoral dissertation, Politecnico di Milano. Available at https://hdl.handle.net/10589/132153. Accessed January 2024.

8. Design of plural public space

Laura Galluzzo

8.1 The context

Within the research carried out by the Polimi DESIS Lab (Design for Social Innovation and Sustainability), there has always been ample opportunity for design experimentation and research in the public arena, attempting to intersect the design skills of spaces with those of service design, working on the overlap between the two sub-disciplines (Fassi, Galluzzo and De Rosa, 2018).

Within the broader design framework for social innovation, design is intended as an activator, guide, and facilitator of societal transformations and changes to improve the current situation. In these processes, it seeks to support, strengthen, and make the ongoing transformations more impactful using the discipline's tools.

The methodology adopted in these cases is that of action research, working on specific situated contexts (Haraway, 1988), and mainly founded on extensive involvement of stakeholders active in that specific territory. The structure of our collaborations always involves strong engagement with residents and local associations interested in improving that particular place, our group of researchers, often our students, and almost always the participation of the public administration governing the territory in an attempt to build a stronger dialogue between bottom-up and top-down processes.

The strong involvement of local actors is often ensured by a series of co-design workshops (Sanders and Stappers, 2008), usually based on the following:

- observation of the place subject to possible transformation;
- Analysis of the uses made by urban populations (Martinotti, 1993) passing through it daily and of the activities hosted there;
- sharing and discussion of the sensations and feelings that residents experience in those places;
- selection of some inspirational examples of best practices to look at with interest but also with a critical eye;
- envisioning work on possible future scenarios;
- grounding some desired outcomes developed through shared mood boards and floor plans;
- staging some aspects of the project through spatial and service prototyping (Galluzzo *et al.*, 2019).

These workshops generally involve a small group of participants who represent, to some extent, a diversity of perspectives, but naturally this cannot be exhaustive and often fails to capture and represent everyone's experience fully.

Hence, the initial question arises: Who participates in the proposed participatory processes? Consequently, is there a way to make these processes more inclusive?

8.2 The design of public space

The design of public space operates within an intriguing interstice between the disciplines of urban planning, architecture, and design. Over the past decades, interior or spatial design has increasingly focussed on urban interiors (Attiwill *et al.*, 2015), and public interiors (Pimlott, 2007), advancing the idea that looking at a smaller scale – not only at domestic or service spaces, but also at public space –

could bring an improved quality to our cities. Additionally, the designer's perspective, enriched by a focus on the human being, the inhabitant, the user, and the community, inherently leads to greater care in public space design.

In recent decades, design has increasingly engaged with cities through a multidisciplinary lens, akin to that of humanities and social science developments. Designers endeavour to adopt a cross-pollinated approach, strengthening interventions in complex and intricate systems such as contemporary cities.

Feminist urban planning has in the past (and also in the present) emphasized how the gaze of planners and architects has been predominantly male-centric; this stems not only from the fact that designers, planners, and administrators have predominantly been white, cisgender, able-bodied, and economically privileged men, but also because the target demographic in design has often aligned with these characteristics.While there is an increasing body of research on this topic (still not enough), it typically operates at the scale of the city as a whole, reflecting the perspective of urban planners. The results often highlight deficiencies such as inadequate activities in parks, absence of spaces for *light sports*, lack of public services, and inconvenient accessibility features for those engaged in caregiving activities (in Italy, women undertake 74% of unpaid caregiving activities) (International Labour Organization, 2023).

Some of these insights have informed public space policies in Scandinavian countries, Vienna and Barcelona, occasionally adopting a gender mainstreaming perspective. There is still a significant delay in addressing these issues in Italy, with only sporadic interest from governing institutions in aligning with research findings. However, there is undoubtedly a growing awakening among more active citizens regarding these issues.

Even at a smaller scale, public spaces are never neutral, as they have historically been designed, conceived and administered according to a *norm* that coincides with the concept of *masculine universal* thus ending up supporting and facilitating traditional gender roles, erroneously assuming that this represents a neutral universality. More importantly, it does not offer a plural and richer view of multiple perspectives on public space, its design and use.

The role of design is central for there to be reflection on the accessibility and accommodation of urban space at a small, detailed scale.

An appropriate urban environment should instead be accessible, plural, inclusive, safe, and able to accommodate all the different forms of life that inhabit it, promoting social cohesion among the city's inhabitants. This leads to the second question: How can public space be designed to consider a plurality of perspectives?

8.3 The queer city

These reflections have given rise to the need to explore the dimension of public space as a space of political presence, a meeting platform where differences become possible and stimulating points of encounter, not isolated and erased but emphasized and valued as elements of richness in our urban ecosystems, remembering the importance of the presence of bodies in public space, and not just bodies conforming to a uniform model dictated by others' norms. The heteronormative, macho, and patriarchal culture of violence, which allows for little tolerance and acceptance of diversity and minorities, undermines the ability to coexist within cities, which are traversed daily by a wide variety of different people.

For queer individuals, occupying physical space in cities, claiming it, and reclaiming it, both metaphorically and physically, is a crucial theme in political debates, media, academia, design, urban planning and its streets, in order to move beyond the closet of heteronormativity and the gender binary system where queer individuals feel on the one hand invisible and on the other too *bulky*.

The shift from the concept of inclusive space to coexistent space (Ye, 2019) is crucial in this new vision of public space: the word *inclusive* always implies that someone is including someone else, whereas in the meaning of coexisting or co-habiting, there is greater reciprocity and emphasis on collective action, particularly on the sharing of existences, spaces, and experiences of all and each individual.

Moreover, the approach to coexistence should be taken in an intersectional way (Crenshaw, 1989), without forgetting the layers and intersections between the different facets that make up citizens' identities: class, origin, religion, sexual and gender orientation, and skin colour. This can happen primarily through a cultural paradigm shift, as well as through the creation of public consensus on these issues even in parts of the city that are less *literate* in these kinds of instances, providing spaces for individuals and LGBTQIA+ associations to express themselves, and contributing to the education of future designers who can design with a more plural, transfeminist, queer, and inclusive perspective.

From here, we have decided to undertake a doctoral research project on the theme of the Queer City, in collaboration with the Participation Department of the Municipality of Milan, some educational experiments, and an action research project funded through Bando 57 by the Fondazione di Comunità Milano in the public spaces of the 9 municipalities of the city of Milan, together with 10 LGBTQIA+ community associations.

The desire to act on these issues stems from some unfortunate premises. According to the Rainbow Map & Index 2023, Italy ranks only 34th out of 49 European countries in terms of safety and rights for LGBTQIA+ people, a position that is dropping every year. Furthermore, according to data from 2019 elaborated by the European Union Agency for Fundamental Rights on the condition of LGBTQIA+ people in Europe, regarding Italy specifically, in 48% of cases, homolesbotransphobic hate attacks occur in public spaces such as streets, squares, parking lots; This is not only a matter of safety but also of knowledge, sharing, and dissemination of these issues.

Specifically, these projects aim to promote greater awareness of the values and demands of the queer community, as well as concepts of inclusion and identity through interactive and luminous installations, urban games, sports events, and workshops; activities that aim to raise awareness and sometimes also to educate citizens who live in those places.

These various activities allow us to explore possible responses and the many questions about the plural design of public space.

One can speak of a queer city when, both in its centre and its margins, it can be considered plural and accessible, leaving no one behind. Moving beyond the idea of gaybourhoods that characterize contemporary cities, and above all, not thinking of designing public spaces for the LGBTQIA+ community or with the same community, but rather questioning the more intrinsic meanings of a plural approach to public space design. An approach that is based on the intersection between queer studies and design studies, which is in search of a new epistemology, hybridization of methodologies, a queerization of participatory processes, and particularly in questioning the centrality of perspective, accepting error and failure even in the design process itself, and naturally moving beyond a binary logic in favour of a plural logic.

To better understand this, let us introduce the term *queer*, which was initially used in Anglophone countries to indicate something odd, negatively weird, and then as a harmful slur for LGBTQIA+ people, as the opposite of *straight*. It was then claimed by activists in the US at the beginning of the 1990s to encapsulate the experiences of those who exist beyond conventional norms.

Nowadays, we could try to define queer as an umbrella term, fluid and ambiguous, that describes any sexual orientation or gender identity that is not heterosexual or cisgender.

What is the relationship between queerness and space, and mainly urban public space? Moreover, why is it interesting to study queerness in relation to cities?

In academia, the topic of queer space has been dealt with primarily by geographers and sociologists, who have been open to a connection with Queer Studies for several decades. However, the intersection between the latter and the world of design and planning remains to be explored, particularly in the context of the urban spatial dimension. What is the state of the art, what good practices exist, and what are the challenges for the future?

8.4 The pluriversal public space

Starting from these premises, one can easily push oneself to reflect on who truly inhabits public space from a non-anthropocentric perspective, considering how non-human agents that inhabit the urban ecosystem have never been taken into consideration in the design and participatory processes. The one-world paradigm, or the assumption of a single reality that aims to subjugate all other worlds to itself or non-existence, is challenged by the idea of the pluriverse. While acknowledging the existence of multiple realities living in complex and interconnected ways, the pluriverse does not validate any one reality as the only one.

This viewpoint seeks to provide new ways of thinking and behaving that value multispecies diversity, in contrast to Eurocentrism and intellectual colonialism, by recognizing cultural, ecological, and ontological diversity (Escobar, 2016).

According to the philosopher Coccia (2022), the city is just a simple group of people living steadily in a section of the Earth where everything considered alive (apart from pets and decorative plants) is confined to the outside world. This idea feeds the perception that civilization, technology, and humanity are absent from areas outside cities. As a result, the myth of the natural and wild is produced due to what the city is not – that is, what opposes the notion of the citizen.

As Escobar (2019) says, it is urgent to approach the city with a pluriversal perspective, characterized by a fixed attention to the relationships and interdependencies between the different beings that inhabit it. When designing a space, it is essential to ask what type of inhabitants are there, how they live there, and how they interact with each other, trying to neutralize the power dynamics.

It is challenging to accomplish this perspective change since, historically, people have learned to feel that they are morally and ethically superior to other creatures. They now perceive themselves as *moral agents* who impose their decisions on *moral patients*, that are described as mute.

The idea is to comprehend that there is another way to live in a city that reduces the anthropocentric division between the natural and urban worlds, treating people as mere occupants of the land with which they share an interaction *ethos* of complementarity and reciprocity.

Cities must become pluriverses; they cannot *belong* to people; instead, they should be extensions of the terrestrial ecosystems they currently are. Recognizing all living things as fellow citizens is essential to breaking down the mental barrier separating humans from the Earth's basic nature.

How can a public space centred on a new paradigm be designed with these premises in mind? What can pluriversal public space mean?

8.5 Between queer and multispecies approaches

The paradigm shift also leads to questions about the relationship between designing the city with a more plural, transfeminist, queer and inclusive perspective and pluriverse design. What is the relationship between an inter-species approach to urban ecosystem design and the queer city?

At this point, having presented both the queer city theme and the theme of pluriversal public space the relationship between the two themes seems clear.

One constant is surely the desire to overcome an exclusive vision of public space that takes into account the needs of the most fragile groups and is far removed from design to date. The premises of *designing with* and overcoming *designing for* also lead to the question of how to involve the most vulnerable groups that have not participated in city planning and design to date.

The central theme of *the right to the city* naturally arises (Lefebvre, 1969) and through this lens children, animals, sex workers, migrants, the homeless, adolescents, and so many more are united by an alienation from public space: it remains still for the few and of the few. The role of design is also central in terms of the participation that human and non-human agents can bring to bear on the co-construction of public space as a political platform, characterized by the presence of bodies, as a physical and mental occupation of the public thing.

This relational dimension of design has aesthetic value but also countless ethical repercussions that the discipline itself must place at the centre of the design, starting from the initial questions: Who inhabits public space? Who participates in its design? Do those who occupy it with their bodies have the right to express themselves about it? Inspiring group discussion about prospective futures, speculative design has the ability to «highlight the re/creation of worlds based on the horizontal relation with all forms of life, respecting the human embeddedness in the natural world» (Escobar, 2018). By proposing fictitious scenarios that have the potential to fundamentally alter our perception of reality, design-speculative thinking can stimulate the imagination and inspire new ways of being. Thinking of design as a way to extend the potential of who we can be through our materials, locations and bodies, is one way to approach the subject. In particular, the object of speculative design in this case is plural public space: meaning, future scenarios, and possible definitions. Design not only has the capabilities but, also and most importantly, has the ethical responsibility to tackle issues related to inclusivity, coexistence, alterity, otherness, differences and queerness, since it influences the contexts, cities, places and, more generally, the entire world in which we live.

References

Andreola F. and Muzzonigro A. (2021), *Milan Gender Atlas*, LetteraVentidue Edizioni, Syracuse.

Arup (2021), *Queering Public Space. Exploring the relationship between queer communities and public spaces,* University of Westminster, London.

Attiwill S., Giunta E., Fassi D., Crespi L. and Hermida B. (2024), “Urban+interior”, *Idea Journal*, 15, 1: 2-11. DOI: https://doi.org/10.37113/ideaj.vi0.266.

Bernini L. (2018), *Le Teorie Queer. Un’introduzione*, Mimesis, Milan.

Butler J. (2005), *Giving an Account of Oneself*, Fordham University Press, New York.

De la Bellacasa M. P. (2017), *Matters of care: Speculative ethics in more than human worlds* (Vol. 41), University of Minnesota Press, Minneapolis.

Coccia E. (2022), *Metamorfosi,* Einaudi, Turin.

Crenshaw K. (1989), “Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics”, *University of Chicago Legal Forum*, 1989,8: 139-167. Available at https://chicagounbound.uchicago.edu/uclf/vol1989/iss1/8. Accessed January 2024.

De Leo M. (2021), *Queer. Storia Culturale Della Comunità LGBT+*, Einaudi, Turin.

Escobar A. (2016), “Thinking-feeling with the Earth: Territorial Struggles and the Ontological Dimension of the Epistemologies of the South”, *AIBR: Revista de Antropología Iberoamericana*, 11, 1: 11-32. DOI:10.11156/aibr.110102e.

Escobar A. (2018), *Design for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds,* Duke University Press, Durham.

Escobar A. (2019), "Thinking-feeling with the Earth: Territorial Struggles and the Ontological Dimension of the Epistemologies of the South", in Boaventura de Sousa Santos M. M., ed., *Knowledges Born in the Struggle. Constructing the epistemologies of the Global South,* Routledge, London. DOI: https://doi.org/10.4324/9780429344596.

European Union Agency for Fundamental Rights (2022), *LGBTI Survey Data Explorer*. Available at https://fra.europa.eu/en/data-and-maps/2020/lgbti-survey-data-explorer. Accessed June 2024.

Fassi D., Galluzzo L. and De Rosa A. (2018), "Service + Spatial design: Introducing the fundamentals of a transdisciplinary approach", *Proceedings of the ServDes 2018 Conference: Service Design Proof of Concept,* 19th-20th June 2018*,* Vol. 150, pp. 847-862, Linköping University Electronic Press. Available at https://servdes.org/wp/wp-content/uploads/2018/07/71.pdf. Accessed March 2024.

Furman A. N. and Joshua M. (2022), *Queer Spaces: An Atlas of LGBTQIA+ Places and Stories*, RIBA Publishing, London.

Galluzzo L., Mastrantoni C., Borin A. and Jiang J. (2019), "Prototyping Temporary Urban Solutions in Milan"*, Proceedings of 4D Conference: Meanings of Design in the Next Era*, Osaka, 21st - 23rd October 2019. Available at http://4d-conference.com/wp-content/uploads/2019/12/4D_Proceedings_Osaka019_04122019.pdf. Accessed January 2024.

Granata E. (2023), *Il senso delle donne per la città*, Einaudi, Milan.

Haraway D. (1988), "Situated Knowledges: The Science Question. Feminism and the Privilege of Partial Perspective", *Feminist Studies,* 14, 3: 575-599. DOI: https://doi.org/10.2307/3178066.

Haraway D. (2020), *Chthulucene: sopravvivere su un pianeta infetto,* Nero, Rome.

Ilga Europe (2023), "Rainbow Europe | ILGA-Europe", ILGA-Europe | *We Stay on Top of What LGBTI Activists and Organisations in Europe and Central Asia Need and Prioritise*. Available at https://www.ilga-europe.org/report/rainbow-europe-2023/. Accessed January 2024.

International Labour Organization (2023), "World Employment and Social Outlook. Trends 2023", *ILO Flagship Report,* ILO, Geneve. DOI: https://doi.org/10.54394/sncp1637.

Kern L. (2021), *La città femminista. La lotta per lo spazio in un mondo disegnato da uomini*, Treccani, Rome.

Koskinen I. (2016), "Agonistic, Convivial, and Conceptual Aesthetics in New Social Design", *Design Issues*, 32, 3 :18-29. Available at http://www.jstor.org/stable/24916443. Accessed February 2024.

LaRochelle L. (2020), "Queering the map: On designing digital queer space", *Queer sites in global contexts*, Routledge, London.

Lefebvre H. (1969), "Les paradoxes d'Althusser", *L'Homme et la société*, 13, 1: 3-37. DOI : https://doi.org/10.3406/homso.1969.1227.

Lefebvre H. (1992), *The Production of Space*, Wiley-Blackwell, Hoboken.

Mancuso S. (2020), *La pianta del mondo*, Laterza & Figli, Bari.

Martinotti G. (1993), *Metropoli. La nuova morfologia sociale della città,* Il Mulino, Bologna.

Miccichè M. (2024), *Femminismo di Periferia*, Edizioni Sonda, Milan.

Pavka E. (2020), “What Do You Mean By Queer Space?”, *Azure Magazine*. Available at: https://www.azuremagazine.com/article/what-do-we-mean-by-queer-space. Accessed December 2023.

Perez C. C. (2019), *Invisible Women: Data Bias in a World Designed for Men*, Abrams, New York.

Pimlott M. (2007), *Without and within: Essays on territory and the interior*, Episode publishers, Rotterdam.

Puwar N. (2004), *Space Invaders: Race, Gender and Bodies out of Place*, Berg, Oxford-New York.

Sanders E. B. N. and Stappers, P. J. (2008), “Co-creation and the new landscapes of design”, *Co-design*, 4, 1: 5-18. DOI: https://doi.org/10.1080/15710880701875068.

Ye J. (2019), “Re-orienting geographies of urban diversity and coexistence: Analyzing inclusion and difference in public space”, *Progress in Human Geography*, 43, 3: 478-495. DOI: https://doi.org/10.1177/0309132518768405.

9. The accessible landscape. Sustainable narratives for empowerment

Daniela Anna Calabi

9.1 Communication design and landscape

> ***It's not about expanding the menu of our communicative options: also because the ethical problem of which of these options to choose in the different situations in which we might find ourselves would arise again. Instead, we must identify a specific form of communication, a different general idea that underlies the standard theory [...]. To communicate means to open up a common space of relationship between interlocutors*** **(Adriano Fabris, 2018).**

Communication design for the territory is configured in a complex system of disciplinary convergences in design studies. Contributions from disciplines such as geography, ethnography, sociology, ecology, history, and anthropology outline viewpoints and interpretations of the meanings of the term *landscape*, emphasizing the need for a multi-level communicative system capable of considering interconnected layers of meaning.
The territory can thus be regarded as a special *palimpsest of plots*,

encompassing disciplinary, thematic, and narrative layers that are not always accessible. Even the semantic (and linguistic) codes of historical narratives are not always shared, with documents belonging to specific social and cultural structures either *locked* in archives or the preserve of a few.

When *translative* communicative systems (Baule, 2016) are lacking, it is often difficult to make accessible areas of meaning and references that constitute the heritage of collective knowledge, whether environmental, mnemonic, political, cultural, or social.

The design of communication, whose paradigm is relational and multidimensional, where identities gain value through their relationship with the other (Floch, 1997, p. 54), takes as its primary content the territorial relations that intertwine the physical, digital, and extra-physical dimensions of narratives, memories, information, and representation. The analysis of environmental and cultural characteristics, as well as the exploration and practice of places, and the study of perceptual values, allow for the selection of content, communicative formats, and expressive languages of value for communication.

In the reflections that follow, the communicative project of relationships between civilizations and places is considered, with the aim of fostering responsibility through verbal codes and forms of representation - traditional or hybrid - to share and enhance the sense of belonging to a community.

Changes in the territory always reflect social, cultural, technological, and environmental ones, which are often significant and rapid changes in the structure of communities. These changes have repercussions on the perception of quality and well-being associated with places, as well as on the ways in which relationships between community and nature are established and maintained.

In the concept of *territory* there are geographical, cultural, social, and spatial values, as well as historical, symbolic, and political ones, which configure it as a *complex* and adaptive system, characterized by dynamics that continually regenerate its properties (Bretagnolle *et al*., 2003): «a *surprise* for the observer» (Batty and Torrens, 2001, p. 3), which may correspond to interpretative difficulties.
Therefore, the territory is naturally a space of relationships: it is

a point of access to cultural varieties and environmental concerns, where the contribution of design highlights the challenge of choosing a sustainable, inclusive, and shareable narrative framework. The aim of communication is to identify content that portrays the intricate characteristics of a complex landscape, encompassing explicit and implicit environmental and cultural features that are more or less visible and layered.

Communication design for the territory makes explicit the relationships between people and places. The causal link between landscape and communication becomes clear: the territory becomes a place of meeting and correspondence between thoughts (Liotta, 2005); design makes visible the connections between human beings, reality, and history (Maldonado, 1971). Considering the territory as a landscape of relationships means emphasizing the value of identities and differences to ensure cultural access to diversity.

Every territory is a container of aspirations and realities that, in order to be understood and shared, require conscious sensitivity and a certain culture of responsibility, which for communication design means embodying a clear ethical dimension.

The idea of ethical communication for landscapes and cultures defines a communicative action that creates common spaces. Acknowledging the ethical instance in communication generates the search for choices consistent with values such as inclusiveness, sustainability, cultural respect and, in general, determines the search for alternative ideas for content, formats, languages and devices, so that they return that consistency.

In communication design, the ethical perspective not only promotes and generates sustainable purposes, but also expressive values and innovation. The design gaze analytically values the depth and richness of details and information, preferring them to a stylistic and impactful narrative disconnected from territorial reality. Ethical communication (Fabris, 2006) defines an action that creates a responsible vision; all the more so when the territory is at the centre.

The definition of *ethical communication*, which implicitly addresses the social dimension, adds value to the act of sharing; it creates a bond, an objective commitment, a shared and accessible dimension; it deals with cultural landscapes and increases its transformative impact through interconnection with other disciplinary fields.

While identifying the creative potential offered by the hybridization of design methodologies and design formats, ethical communicative action defines a field of experimentation that emphasizes specific inclusive strategies (Calabi *et al.* 2022), going beyond the transformative influence of new technologies and experimental representations.

It can be asserted that ethical communication promotes a paradigm shift: it focusses on accessibility to unorganized content, through unconventional and hybrid forms, breaking down barriers and stereotypes to assert community empowerment (Rappaport, 1987). Empowerment is understood as the process through which one acquires knowledge and resources on fundamental issues, moving from a position of disadvantage to access knowledge, skills, material or conceptual resources, thus participating in society.

Communication design that reflects on environmental and social issues highlights a genuine ethical vocation aimed at addressing territorial and environmental problems.

The relationship between design and ideologies characterizes a large part of the history of Italian design, with a dialectical and dialogical dimension that interprets individual and collective events.

Communication design has often directly related also to the political dimension, shaping images of institutions and contestations, stimulating civic consciousness.

It is recalled that the First International Biennale of Global Design Methodology *The Forms of the Human Environment* opened in 1970 at the Rimini Fair, with the Pio Manzù Centre for Environmental Structures Research presiding over the proceedings, coordinated by an international steering committee, which included Giulio Carlo Argan. The exhibition section documented the developments in environmental design, which was at the core of the work of three interdisciplinary groups; one of the themes of the interdisciplinary research delved into reflections on *Organizzazione e comunicazione dello spazio operativo* (Organization and Communication of the Operational Space, translation by the author) and showcased research on advertising language as a semiotic process. The research involved the participation and curation of the Art Directors Club of Milan, then directed by Giancarlo Iliprandi, who promoted the exhibition

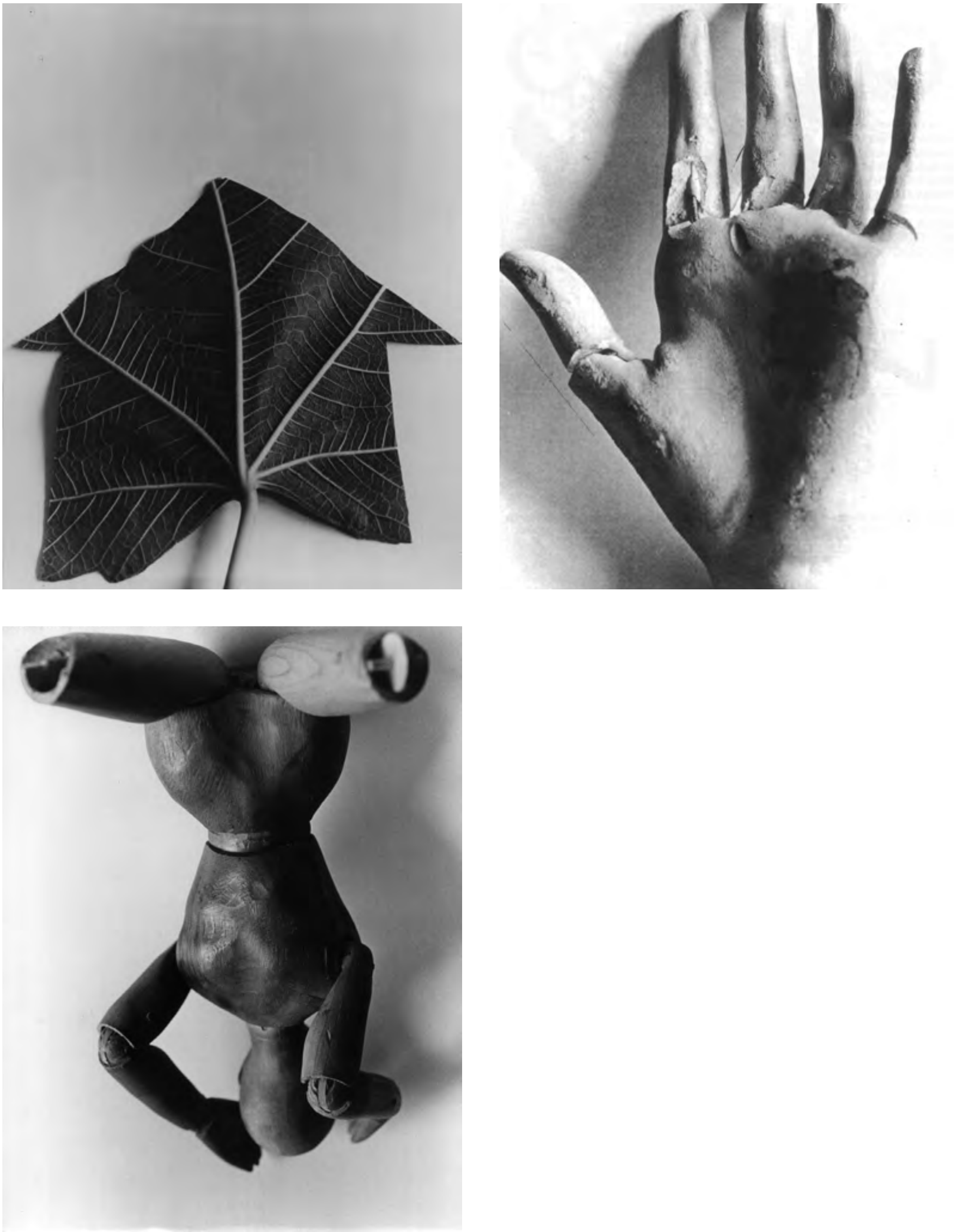


Figure 1.
Giancarlo Iliprandi, 1970. Poster fotografici. By Associazione Giancarlo Iliprandi, Milano.

Aggressività e violenza dell'uomo nei confronti dell'ambiente (Aggressiveness and Violence of Man towards the Environment).

The exhibition highlighted the role of graphic design in the development of public service communication, addressing issues of broad social impact. It also denounced the critical aspects

of the relationship with natural resources when they become a source of degradation and violence against cultural heritage, and a source of injustice (Mimmo Castellano) or incivility (Ilio Negri).

Posters anticipated the values and concepts expressed by Albe Steiner in his 1978 book *The Craft of the Graphic Designer* (Formia 2020, pp. 254, 256).

The subsequent communication campaigns consolidated the ethical function of communication: these are the public service advertisements launched in 1971, following the profound inequalities and social contradictions that, in Italy, came after the economic boom of the 1960s, giving an impressive form to crises and proposing an incisive political narrative.

Unfortunately, despite the meticulous organization and the shared importance of the environmentalist theme, the Rimini Biennale did not see further editions, transforming the event into International Study Days (Formia, 2020, p. 261). The value of interdisciplinary thinking intertwined with design cultures remains foundational; especially for visual cultures and communication, which since then have seen the construction of the future as a moral commitment (Ferraro, 1973).

On issues related to the identities of places, communication design for the territory makes it possible to reconnect content to spaces, communicating relationships and identities. On the one hand, the ethical content that structures communication obliges the designer to relate to values and needs, developing communicative formats capable of representing the complexity of territorial relationships, whether hybrid, visible, or invisible. On the other hand, the complexity of the network of relationships fosters multiple points of view and georeferenced connections.

9.2 Sustainable narratives

Territories are the result of the coexistence of nature and civilization (European Landscape Convention, Florence, 2000): it must be considered that the landscape is the sensitive and perceived manifestation, in an aesthetic sense, of the system of relationships that occur between the natural and inhabited environments. These relationships intertwine the connection of human societies and individuals with the places where they live and work. (Calzolari, 1999, p. 56).

Whenever land becomes a *place of exchange* it becomes territory (Magnaghi, 1998), that is, an instrument of work, cooperation, and communication; whereas landscapes define the aesthetic form of the relationships between the environment and the built space, where physical traces correspond to digital networks that support hybrid, physical, and extra-physical relationships (Cairncross, 1997).

The representation of a territory's relationships is as important as its geographical representation; it is a matter of making visible understandings, dialectics, and strategies of enhancement, which become aesthetic practices when the needs are functional to social *ethos*, public participation, and respect for place and environment.

The many breaks in the aesthetics of landscapes often correspond to points of rupture in the social fabric, where naturalistic ontology and a sense of interdependence and understanding of social facts are lacking. Many collective contexts are in crisis because of the speed with which spaces of relationships change, because there is a lack of communications that make changes comprehensible while maintaining memories, and identities, of past events.

Design can be an instrument of cultural encounter when it returns to the community the knowledge and information interconnected to places, when it interfaces isolated contexts with the aim of overcoming referential differences and incurrences and promoting the production of devices of orientation and exchange, for an ethical and aesthetic communicative relationship with places and the identities of landscapes. Ethical in that it is sustainable and oriented towards the development of methodologies essential to a broad horizon of social purpose (Marcolli 1968, p. 218); aesthetic because it makes perceptual and atmospheric the exchange of knowledge and ethical immersion in contexts, while creating access to engaging and memorable content.

The correspondence between perceptually fragmented places and identities pulverized by sociocultural transference forces one to imagine communicative paradigms clearly aimed at ethical systems of relationship. It is not enough to communicate and share; the context of relationships must be communicated in order for engagement to occur, beyond the mere exchange of news: to communicate means to disclose a space of relationship between interlocutors (Fabris, 2006, p. 42).

To design a bridging element between realities - linguistic, cultural, social, environmental, etc. - and history (Maldonado, 1971), it is important to recognize the connective role. For the landscape, which is culturally concentrated and multidimensional (physical and extra-physical), the deployment of inclusive communicative devices, which aim to make quality content accessible, is a fundamental fact.

A number of experimental communication design projects for the territory make it possible to imagine access to the opportunities for dialogue and knowledge present in places and, at the same time, propose innovation in formats and languages. Reflections on the role of design in that sphere have clarified its centrality, which concerns not only that of translator between issuer and receiver, but above all that of expert capable of *simplifying* access to memory and identities.

Having defined the role of communication design of the territory facilitator of access and connector of relationships, we then consider landscape as an *implicit network* of knowledge and identities.

Communication design research addresses territorial complexity by considering the close relationship between cultural landscapes and networks, including when it comes to health and well-being.

The urgent need for an *explicit network* of health identifies the construction of essential, transparent and diffuse, accessible and recognizable relationships in the territory as an essential component of the collective system.

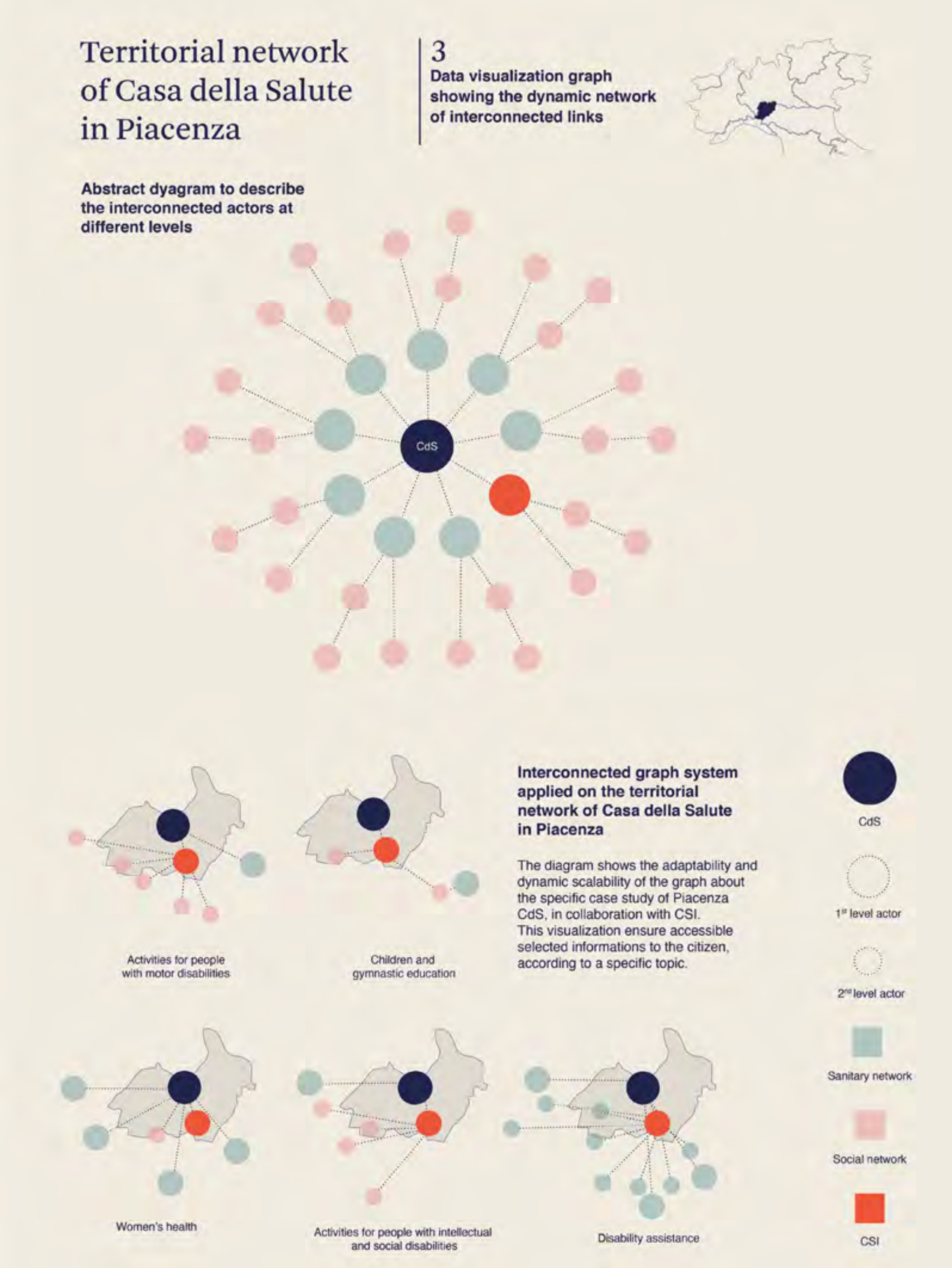
The *health networks project* is an experimental example of territorial communication design and *apomediation*, theorized on the city of Piacenza. Health, prevention, and community well-being are the key principles of the Polisocial Award 2020 initiative, which awarded and supported the development of scientific research with a high social impact. Among the winning projects was *Coltivare_Salute.com. Cities and Health Centres for Resilient Communities. Health Centres as builders of urbanity and widespread sociality in the post-COVID-19 era: new peripheral centralities in healthy and integrated cities*. The project aimed to create synergies between various University Departments (DASTU - Architecture and Urban Studies, proposer; DABC - Architecture, Built Environment and Construction Engineering; DIG - Department of Management, Economics and Industrial Engineering; DESIGN) and external partners interested in the outcomes of the project, operating in the Emilia-Romagna region and particularly in the districts of the city of Piacenza (Local Health Authority, Municipality, Associations, Emilia-Romagna Region, Territorial Committees).

The contribution of Communication Design for Territories (DCxT research group of the Design Department of the Politecnico di Milano) was to foster the development of widespread communication capable of influencing community lifestyles. The methodology was based on the assumption that in order to promote healthy lifestyles and prevention, a design approach involving the actors of the urban territorial network and the relationships already in place in the territory is essential. Having defined for design the role of *facilitator of access* to health and wellness opportunities, as well as connector of the network of relationships, territorial relationships between public, private and contracted healthcare actors were analyzed (Calabi *et al.*, 2023).

The representation of relationships structured a narrative on a cartographic basis, highlights physical, digital and hybrid connections (Quaggiotto, 2017). This made possible the procedure of reconstructing (and representing) the main relationships, which were then made accessible in the relationships of proximity, affinity, and medical and preventive procedures, so they could become supportive to the community of people and actors, proposing orientation and informational devices for citizen empowerment, with appropriate visual languages, photographic itineraries, and insights through dedicated social networks.

Finally, the maieutic aspects in communication design for the territory deserve a last look. The development of hybrid and innovative communicative artefacts for complex territories that offer layered content involves a preliminary activity of in-depth analysis, to be developed with territorial practice (thus on the physical and perceptual level), but also through the study of the mnestic, representation, and narrative and cultural dimensions.

Considering places ethically and, in particular, formulating communicative proposals for tourist destinations (Corrado Del Bò, 2017) also promotes responsible narratives and sustainable behaviour. Here are examples of experimental projects that hybridize formats and languages, making use of metaphors and audiovisual representations that, from the point of view of sense-making, bring out themes such as those of the Anthropocene, cultural memories, abandoned sites, and overtourism. Beginning with the themes, it is possible to extend the concept of ethics of individual-community relations to the soil, water, plants and animals, for an ethical engagement that can understand and interact with the major transformations brought about by changes that cause human and natural conflicts. Determining a new landscape aesthetic means recognizing instances of new communicative and narrative needs.



Territorial network of Casa della Salute in Piacenza

3
Data visualization graph showing the dynamic network of interconnected links

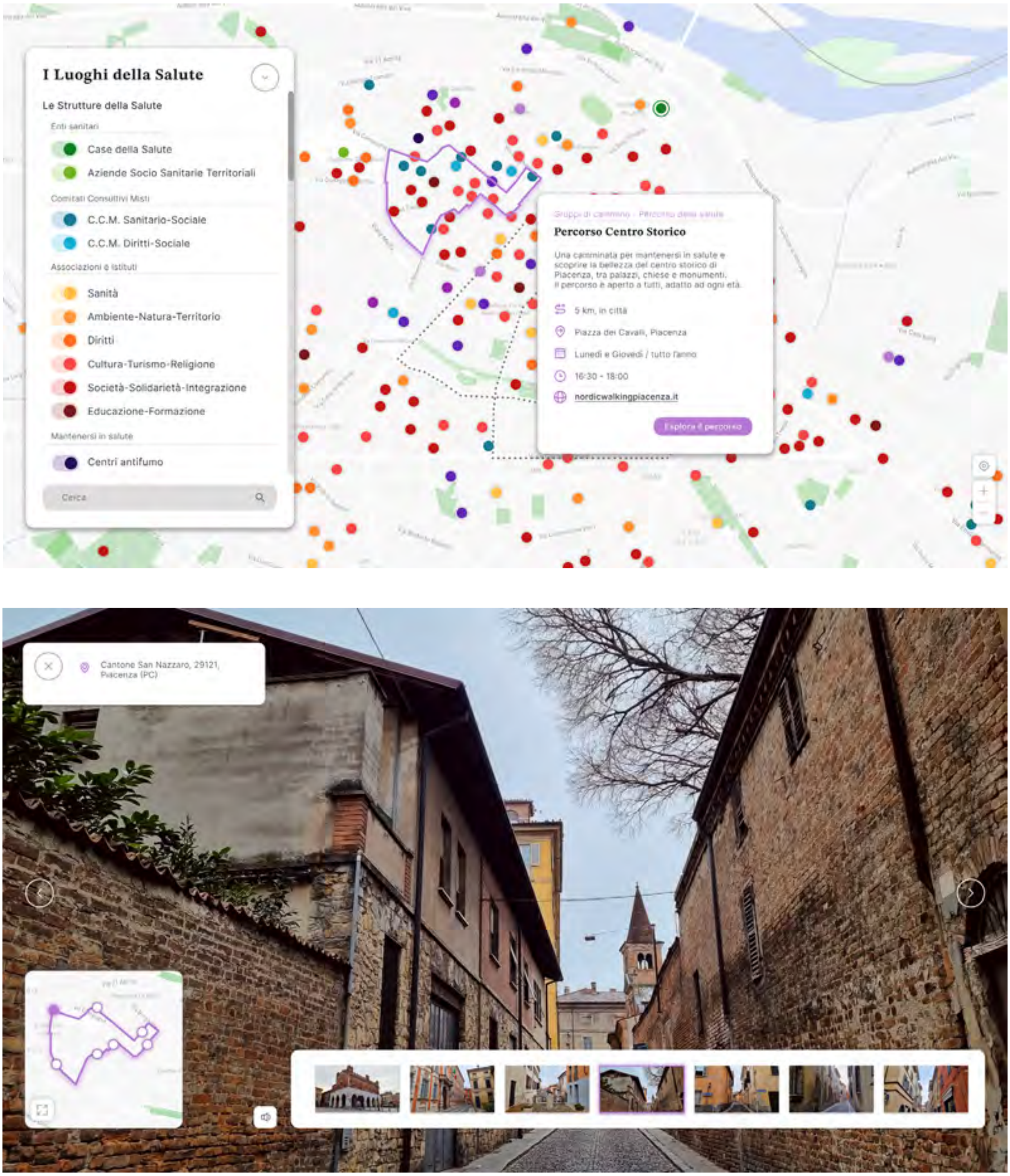
Abstract dyagram to describe the interconnected actors at different levels

Interconnected graph system applied on the territorial network of Casa della Salute in Piacenza

The diagram shows the adaptability and dynamic scalability of the graph about the specific case study of Piacenza CdS, in collaboration with CSI. This visualization ensure accessible selected informations to the citizen, according to a specific topic.

CdS
Activities for people with motor disabilities
Children and gymnastic education
Women's health
Activities for people with intellectual and social disabilities
Disability assistance
CdS
1st level actor
2nd level actor
Sanitary network
Social network
CSI

Figure 2A.
Calabi, Maturo (2023). Web interface by Dr. Giada Zoncada, Design Department, Politecnico di Milano.



I Luoghi della Salute
Le Strutture della Salute
Enti sanitari
Case della Salute
Aziende Socio Sanitarie Territoriali
Comitati Consultivi Misti
C.C.M. Sanitario-Sociale
C.C.M. Diritti-Sociale
Associazioni e istituti
Sanità
Ambiente-Natura-Territorio
Diritti
Cultura-Turismo-Religione
Società-Solidarietà-Integrazione
Educazione-Formazione
Mantenersi in salute
Centri antifumo
Cerca
Gruppi di cammino · Percorso della salute
Explora il percorso
Cantone San Nazzaro, 29121, Piacenza (PC)

Percorso Centro Storico

Una camminata per mantenersi in salute e scoprire la bellezza del centro storico di Piacenza, tra palazzi, chiese e monumenti. Il percorso è aperto a tutti, adatto ad ogni età.

5 km, in città

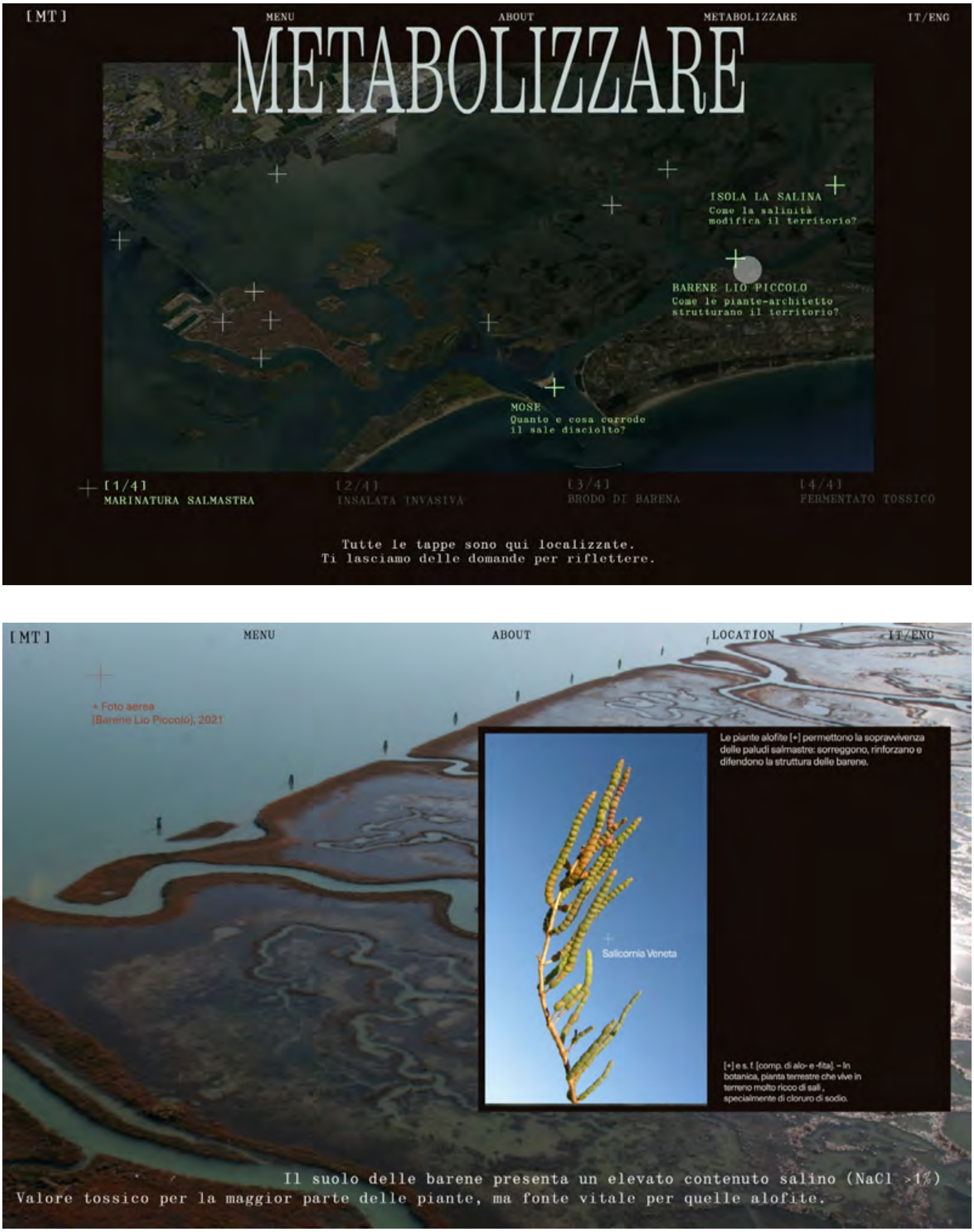
Piazza dei Cavalli, Piacenza

Lunedì e Giovedì / tutto l'anno

16:30 - 18:00

nordicwalkingpiacenza.it

Figure 2B.
Calabi, Maturo (2023). Web interface by Dr. Giada Zoncada, Design Department, Politecnico di Milano.


[MT]
MENU
ABOUT
METABOLIZZARE
IT/ENG
METABOLIZZARE
[1/4]
MARINATURA SALMASTRA
[2/4]
INSALATA INVASIVA
[3/4]
BRODO DI BARENA
[4/4]
FERMENTATO TOSSICO

ISOLA LA SALINA
Come la salinità
modifica il territorio?

BARENE LIO PICCOLO
Come le piante-architetto
strutturano il territorio?

MOSE
Quanto e cosa corrode
il sale disciolto?

Tutte le tappe sono qui localizzate.
Ti lasciamo delle domande per riflettere.

[MT]
MENU
ABOUT
LOCATION
IT/ENG
+ Foto aerea
[Barene Lio Piccolo], 2021
Salicornia Veneta

Le piante alofite [+] permettono la sopravvivenza delle paludi salmastre: sorreggono, rinforzano e difendono la struttura delle barene.

[+] e s. f. [comp. di alo- e -fita]. – In botanica, pianta terrestre che vive in terreno molto ricco di sali , specialmente di cloruro di sodio.

Il suolo delle barene presenta un elevato contenuto salino (NaCl >1%)
Valore tossico per la maggior parte delle piante, ma fonte vitale per quelle alofite.

Figure 3.
Final Synthesis Workshop 2023/24, Master's Degree Programme in Communication Design, School of Design, Politecnico di Milano - Professors D. A. Calabi, M. Quaggiotto, C. Galasso, S. Scuri. Students: Asia Andreanelli, Greta Gallingani, Annachiara Terrone, Margherita Villani. Experimental format: Territorial Metabolism.
A post-anthropocentric digital metarecipe book. Communication design and territorial overtourism: Venice.

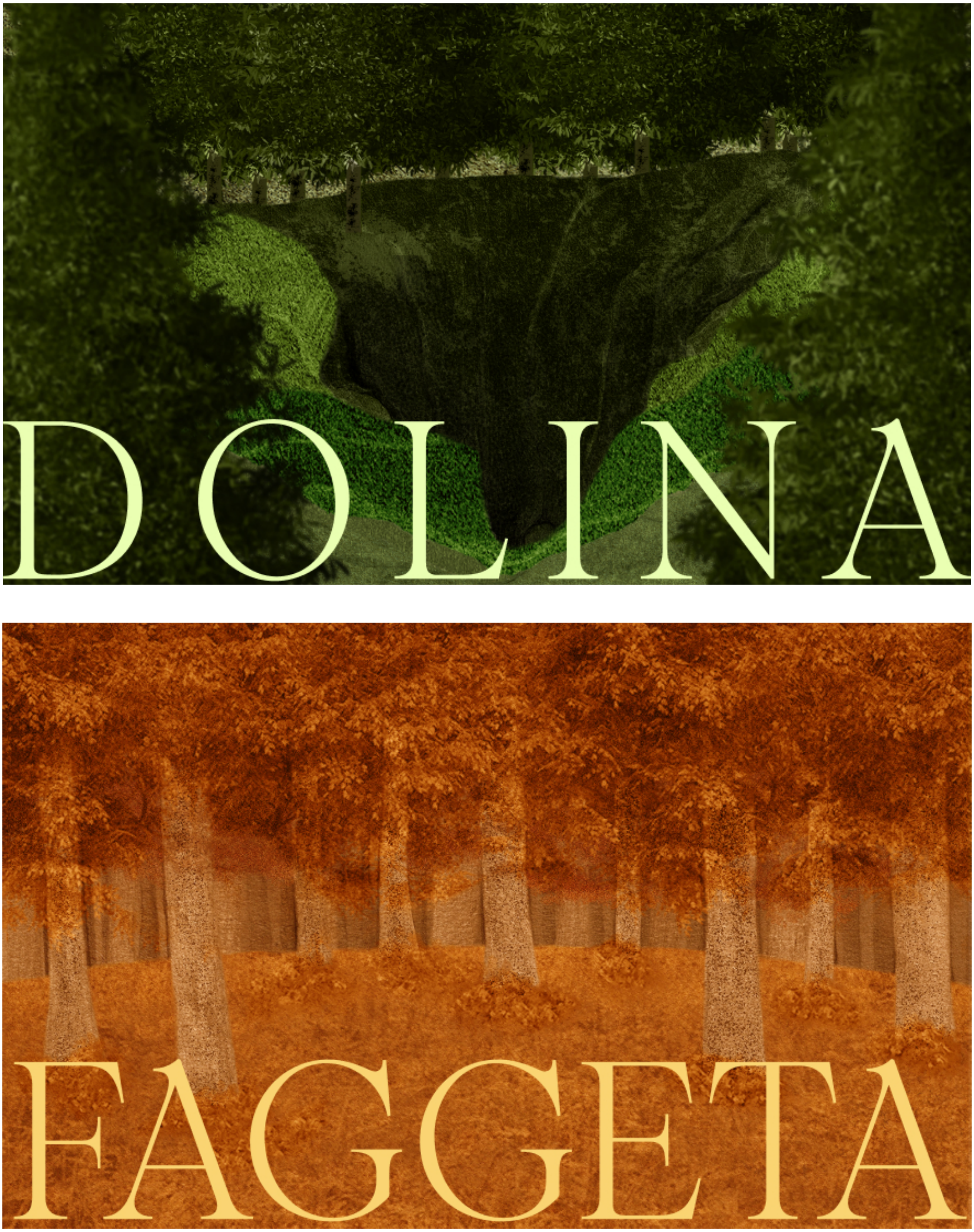


Figure 4.
Final Synthesis Workshop 2023/24, Master's Degree Programme in Communication Design, School of Design, Politecnico di Milano - Professors D. A. Calabi, M. Quaggiotto, C. Galasso, S. Scuri. Students: Gianmarco Ballestrieri, Benedetta Bellucci, Giacomo Bozzato, Claudia Pezzini, Beatrice Ulivi. Experimental format: Encyclopaedic virtual tour for territories of natural interest. The Cansiglio as a case study for the dissemination of complex ecosystems. Communication design and natural territories: Cansiglio Forest.

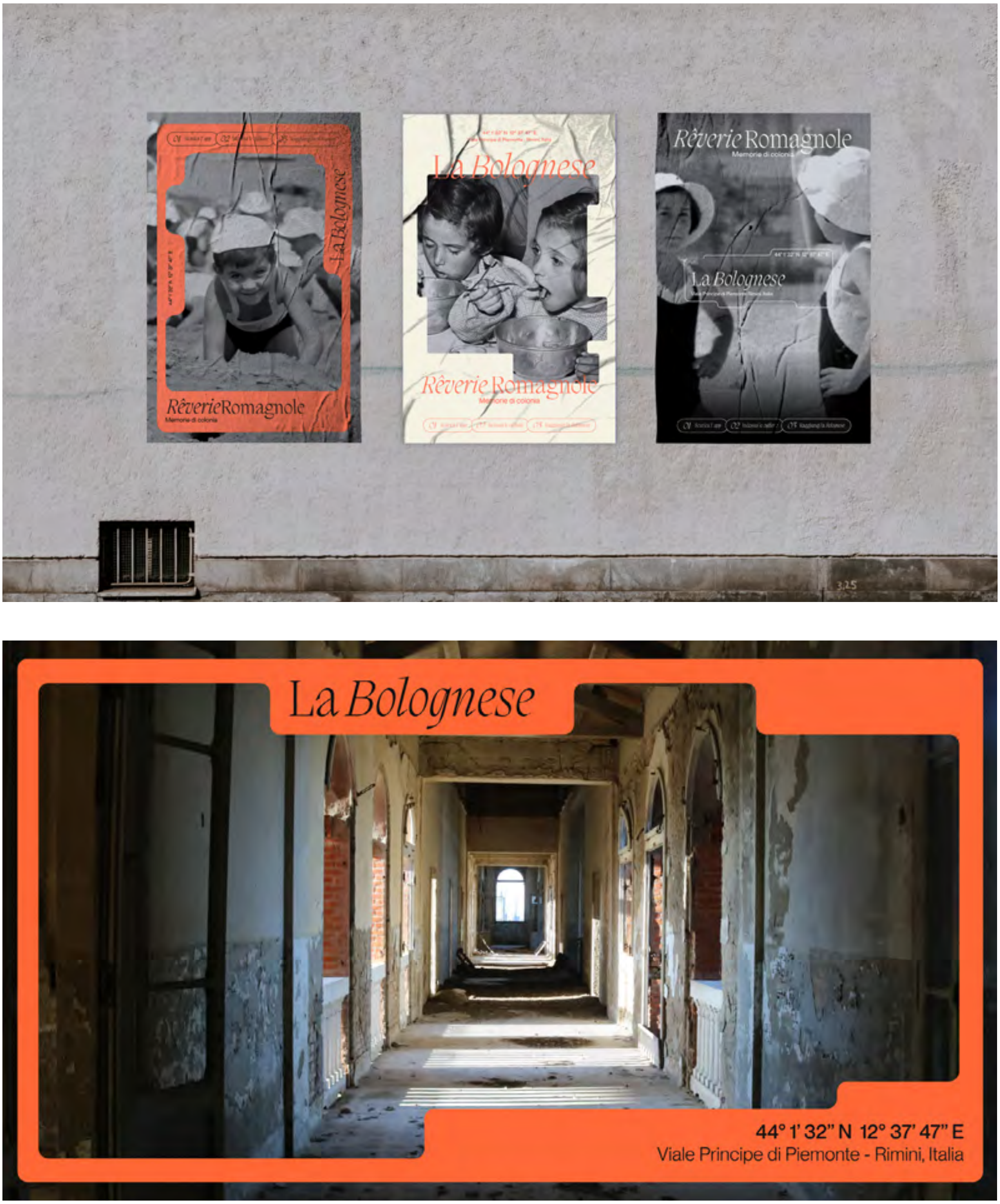

La Bolognese
Rêverie Romagnole
Memorie di colonia
La Bolognese
44° 1' 32" N 12° 37' 47" E
Viale Principe di Piemonte - Rimini, Italia

Figure 5.
Final Synthesis Workshop 2023/24, Master's Degree Programme in Communication Design, School of Design, Politecnico di Milano - Professors D. A. Calabi, M. Quaggiotto, C. Galasso, S. Scuri. Students: Giovanna Bisconti, Giulia Scala, Lucrezia Trevisan, Maira Allievi. Experimental format: Hybrid immersive audio-journey for the communication of heterotopias. The memories of *colonia* (summer camps) in Romagna. Communication design and mnemotopes: colonia Miramare in Rimini.

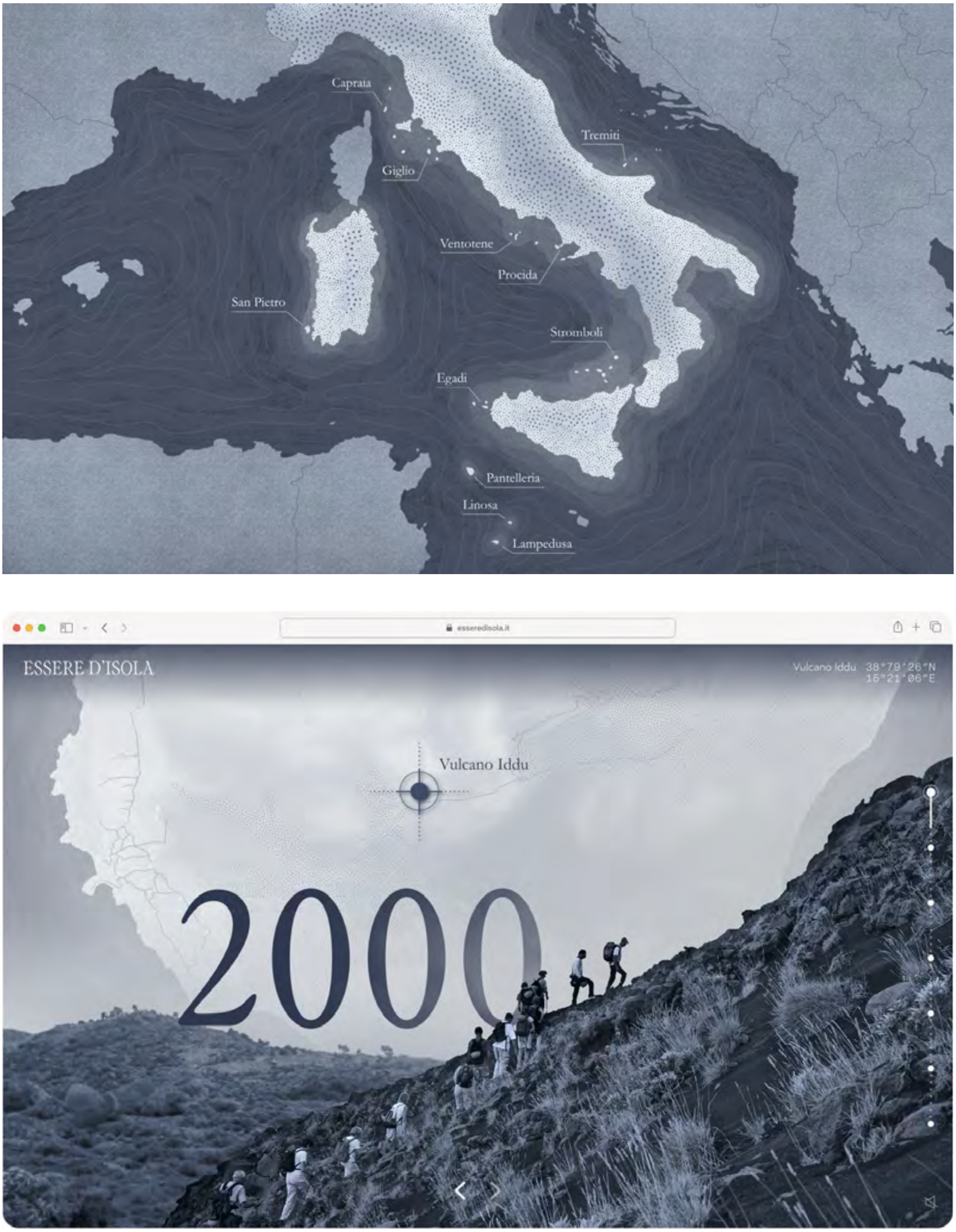

Capraia
Tremiti
Giglio
Ventotene
Procida
San Pietro
Stromboli
Egadi
Pantelleria
Linosa
Lampedusa
esseredisola.it
ESSERE D'ISOLA
Vulcano Iddu 38°79'26"N 15°21'06"E
Vulcano Iddu
2000

Figure 6.
Final Synthesis Workshop 2023/24, Master's Degree Programme in Communication Design, School of Design, Politecnico di Milano - Professors D. A. Calabi, M. Quaggiotto, C. Galasso, S. Scuri. Students: Carola Gaulli, Miriam Macchi, Giorgia Nizzolini, Federica Russino. Experimental format: Audio-cartographic narrative: the smaller Italian islands in winter. Communication design and climatic challenges: tourist stereotypes.

References

Batty M. and Torrens P. M. (2001), “Modelling complexity. The limits to prediction”, *Cybergeo: European Journal of Geography,* Dossiers, document 201. DOI: https://doi.org/10.4000/cybergeo.1035.

Baule G. (2016), “Lo sguardo traduttore. Design e traduzione per il campo editoriale”, in Baule G. and Caratti E., edited by, *Design è Traduzione. Il paradigma traduttivo per la cultura del progetto. Design e Traduzione: un manifesto*, FrancoAngeli, Milan.

Bretagnolle A., Daudéand É. and Pumain D. (2003), “From theory to modelling: urbansystems as complex systems. La complexité dans les systèmes urbains: de la théorie au modèle”, *Cybergeo: European Journal of Geography,* Topics, document 335. Avaiable at https://journals.openedition.org/cybergeo/. Accessed February 2024.

Calabi D. A. and Maturo A. (2023), “Communication Design as a Relational Mediation Approach for Territorial Networks”, *DIID*, 79, 12: 158-168. DOI: https://doi.org/10.30682/diid7923n.

Calabi D. A., Maturo A. and Quaggiotto M. (2022), “Communication Design for Health. Territorial and digital networks”, *Project Essays and Researches*, 7, 15: 270-287. DOI: doi.org/10.19229/978-88-5509-446-7/7152022.

Calzolari V. (2023), “Vittoria Calzolari”, *A. A. V. V. Ministero per i Beni e le Attività Culturali, 1ª Conferenza Nazionale per il Paesaggio 14th-15th-16th ottobre 1999, Atti del convegno Conferenza nazionale per il paesaggio. Lavori preparatori*, Roma, Gangemi, 56-58. Available at https://www.unirc.it/documentazione/materiale_didattico/597_2010_256_9345.pdf. Accessed January 2024.

Cairncross F. (1997), *The Death of Distance: How the Communications Revolution is Changing Our Lives*, Business School Press, Harvard.

Del Bò C. (2017), *Etica del turismo, Responsabilità, sostenibilità, equità*, Carocci, Rome.

Fabris A. (2021), *Etica della comunicazione*, Carocci, Bologna, 2006.

Ferraro P. (2018), *La costruzione del futuro come impegno morale*, Armando Editore, Rome.

Floch J. M. (1995), *Identities visuelles,* Presses Universitaires de France, Paris.

Formia E. (2020), “Design e denuncia. Convergenze tra ecologia politica e comunicazione visiva a partire dalla mostra Aggressività e violenza dell’uomo nei confronti dell’ambiente (Rimini, 1970)”, in Dellapiana E., Gunetti L., Scodeller D., ed., *Italia: design, politica e democrazia nel XX secolo*, *atti del IV Convegno AIS/Design Associazione Italiana Storici del Design*, Politecnico di Torino, 251-262, Torino. Available at https://issuu.com/darioscodeller/docs/aisdesign_2019_design_politica_e_de_3e0017116e384f. Accessed February 2024.

Liotta E. (2005), *Su anima e terra. Il valore psichico del luogo*, Edizioni Magi, Rome.

Magnaghi A. (1998), “Il patrimonio territoriale: un codice genetico per lo sviluppo locale autosostenibile”, in Magnaghi A., edited by, *Il territorio degli abitanti: società locali e autosostenibilità*, Dunod, Milan.

Maldonado T. (1971), *La speranza progettuale: ambiente e società*, Nuovo Politecnico 35, Einaudi, Turin.

Marcolli A. (1967), *Topos, Khora e Architettura*, Silva, Rome.

Quaggiotto M. (2017), “Servizi digitali per il territorio urbano. Progettazione integrata per spazi ibridi”, in Bucchetti V., edited by, *Un’interfaccia per il welfare. Le funzioni sociali del design della comunicazione*, FrancoAngeli, Milan.

Rappaport J. (1987), “Terms of empowerment/exemplars of prevention: Toward a theory of community psychology”, *American Journal of Community Psychology*, 15, 2: 121-148. DOI: 10.1007/BF00919275.

10. Care, community and reuse of places

Anna Anzani, Ada Piselli

10.1 A transition paradigm

It takes a whole village to educate a child. According to Manzini, the meaning of this African proverb can be expanded considering that it also takes a village – or a neighbourhood –to care for an elderly or particularly frail person. Ultimately, it takes a community to take care for each other. Therefore, the proverb refers to a strong connection between caring and the village, understood both as a relational and a physical place, where we are close to one another. Using a more recent term, closeness in the village that cares is defined as *proximity* (Manzini, 2021).

Although the village of last century cannot be recreated, there is a deep connection between the dimension of proximity, the presence of a community, and a physical place, which in different experiments is starting to be practised in present urban contexts. Our contemporaneity is profoundly influenced by abuse of nature; space obsolescence and abandonment (Dal Borgo *et al*., 2016); mass migration; questioning how we can live together, sharing places, and taking care of each other. In addition to urban density, soil consumption, abandoned places and interrupted landscapes, the recent COVID-19 pandemic has proved megacities to be particularly inadequate in preventing contagion diffusion and providing healthy psychophysical conditions (Anzani, 2021). As a result, the discussion on how to understand and promote a more-than-human proximity has expanded and deepened, bringing to the forefront the fact that what we have hitherto called nature can become an extraordinarily powerful agent in human affairs, at all levels, from the global to everyday life. This should drive us to change our ways of being and thinking, to adopt a systemic point of view, recognizing that we are part of something bigger and deeply interconnected (Bateson, 1972), and that a new wave of social innovations motivated by democracy and social justice should also give voice to non-human entities (animals, forests, rivers...) and regenerate the web of life (Manzini, 2021).

Conversely, ahead of the climate crisis and the pandemic, which have increased the vulnerability of the weakest sectors of the population, the most vital lesson learned is the need for the application of the ethics of care as a transition paradigm to a healthier, more resilient, and more sustainable world. In this conceptual framework, the discussion on the meaning to be given to the condition of physical and relational proximity becomes fundamental for the construction of a culture of sustainability adequate to the dimension of the multiple crises in which we find ourselves (Manzini, 2021).

The existence of a link between sustainability, well-being, public space and care seems to be recognized in different spheres and by different actors: the World Health Organization (WHO) promotes a holistic and ecological concept of health; the ethics of care in its traditionally female voice (Tronto, 1993; Farè, 2013; Morini, 2021) prefigures a relationship between sustainability and the urban dimension; placemaking implies a psychological and social dimension of mental well-being.

The extraordinariness of the situation is imposing an indispensable and inescapable change to our priorities, through the use of a framework capable of increasing the intelligence of our surroundings, based on consciousness, culture and creativity, promoting a development founded on the reduction of resources waste, a sense of belonging, proximity, mutualism and inclusivity.

10.2 Care

The concept of care is rich with different, sometimes controversial, meanings: besides indicating work done with skill and commitment, but also with fatigue and concern, it has been used in the past to indicate a set of domestic activities traditionally carried out by women. Marinelli calls it *domestic intelligence* (2002).

But while the (only) role of women in society was to be a caretaker and a nurturer, the idea of care itself was undervalued. In classical studies from development psychology, female morality actually appears to be more immature than that of men. In fact, those theories put the focus on individuation and separation as essential steps towards adulthood, which corresponds to autonomy, meant as not depending on anyone or anything. In Hartmann's language we could say that, for a certain classic psychology, the purpose of development is to set thick boundaries between *me* and the world outside and, inside my own mind, thick boundaries that differentiate good from evil by law and rights. Opposite to these traditionally masculine thick boundaries we find thin ones, the ones involving dependence, closeness and intimacy, which historically, biologically and culturally are related to women. As a consequence of this point of view, women's traditional concern for relationship looks like a weakness rather than a potential human strength. It is only in the past forty years that the voice of women has been listened to and valued as a different voice (Gilligan, 1982, 1993) – not as a childish version of men's, but as a voice that can tell another truth. The ethics of care has feminine and feminist roots, but its potential importance has a universal appeal. In fact, the ethics of care deals profoundly with acting with responsibility towards self and others, and leans on the implicit awareness and understanding of the systemic and relational nature of human beings. It enables a shift from a morality of rights (Gilligan, 1982, 1993), based on equality and focussed on fairness, to an ethic of responsibility that is committed to equity and to the recognition of the differences in need. So, caring for relationship can finally become a source for moral strength.

Articulate reflections by Joan Tronto redefine the ethics of care, regardless of a strict distinction between genders, repositioning it and combining it with the spaces of democracy and the idea of a fully understood citizenship. Entering into the debate on the struggle against discrimination and the promotion of equal opportunities, Tronto not only focusses on the female gender, but addresses all so-called *vulnerable* subjects. She obviously considers women, but also those who find themselves living in societies that consider them strangers or foreigners, people we refer to as *migrants* (Naga, 2023) and are increasingly involved in caring work that is very often belittled, undervalued or even exploited, as it has been women's work for centuries. Vulnerability, that we have unexpectedly experienced during pandemic, is an aspect several subjects share: people with disabilities, individuals with specific needs, communities, territories and ecosystems. But ultimately vulnerability is an inescapable aspect of the whole human experience and denying it means denying a significant part of humanity, ours and other's. According to Arno Gruen (2007), true autonomy is not being independent and separate from others, but rather consists in feeling free to experience vulnerability, pain, loneliness, but also joy, hope, love – all the human feelings and needs, all equally dignified, and seeing them welcomed and embraced by others. This allows a bridge to be built between the internal and external worlds, that makes proximity, compassion, and then care possible; in essence an authentic relationship with another human being. The ethic of care is interwoven with this awareness of human frailty and vitality, of the inescapability of dependence and relationships, and in the end of the systemic nature of life on earth.
Far from being a weakness, the concern for relationships can became the foundation for new ways of living together, more oriented to proximity and care.

The potential of the ethics of care resides in its capacity to deal with the relevance of relationships, and the connectedness of local and global, individual and community, cities and planet. Outside the logic of productivity or individual sovereignty, the formidable knowledge that women have handed down over the centuries can be related with the infinitely sensitive notion of *dependence* and *vulnerability*, as an inescapable element of the human condition. It can become a competence accessible to all, men and women, useful to understand and convey the complexity of our time.

10.3 Community

In past centuries, communities were smaller than today, and their dwellers shared strong boundaries, related to common roots and often to blood, that conveyed identity, common purpose, mutual care and a deep feeling of belonging. But at the same time, those boundaries generated wariness and even closure to the outside, often ending with the exclusion of outsiders. In Ernest Hartmann's language (2011) boundaries were thin within the small community and very thick towards the outside world.

Since the 19th century, with their organization based on rational socio-technical criteria, modern cities profoundly changed the relations between citizens and places and also among dwellers of the same spaces. Boundaries between spaces became stronger, conveyed by purposes (a place to sleep, a place to work, a place to shop and so on), while boundaries between citizens became weaker and weaker, suggesting the idea that people were losing the very sense of community they had known in ancient villages. At the same time, modern cities developed as places made up of differences (Jacobs, 1961), between people, events and social forms. But the rapid political, social and economic changes over the last forty years have led to social fragmentation and even discrimination and it has become difficult to consider differences as a resource rather than a threat. In Hartmann's language, boundaries within people thickened, deeply separating *me* and *my family* from the rest of the neighbourhood.

Over the last twenty years, the rapid spread of available technology like the Internet and connected devices once again changed the rules of living together, allowing and encouraging connections with people, jobs, commodities without moving from home – thinning boundaries. This change brought with it new and exciting opportunities, but also widespread concerns about the risk of increasing loneliness and isolation from *real* (physical) relationships; social marginalization for those who aren't connected; damage to the local economy; and in the end the final death of communities as an important asset for life.

The recent COVID-19 pandemic forced Western societies into a huge social experiment in this sense, having to step up and improve the use of the new technologies to work, learn, shop and keep in touch with others, but also widening the social and economic gaps between those who had access to connections and could manage them and those who hadn't and couldn't, making the former more and more connected and suited for the new emerging community and the latter more and more lonely and isolated, even neglected. Moreover, the pandemic showed in the most dramatic way the serious inefficiency of the megacity in taking care of its citizens, making it literally a matter of life or death, of access to primary health services, but also of mental and social health, as we are now seeing.

So, it seems we have two different scenarios in front of us. On the one hand what Manzini (2021) names the *all at/from home* city, in which the dwellers don't need to move from home and from their very close relationships for many of the essential activities of life like working, studying, getting food or other things, like most of us (the lucky ones) did during the pandemic. The social, political and economic risks of a city like that, with the unavoidable outcome of social injustice, are right before our eyes. On the other hand, we can see appeals being raised for a *return to the past*, to the good old communities of the good old times. This scenario, besides being impracticable, is even more dangerous: those communities weren't good for everyone (primarily women), with their thick boundaries, very rigid social and familiar roles and regressive, more than often violent, social practices that are unacceptable nowadays.

Manzini (2021) suggests a third, new way with his idea of proximity. The author's proximity is a hybrid one that considers the physical and relational dimensions of community and at the same time includes the digital connections as a channel of information not to be cut away (Bateson, 1972). There is one thing we know for sure about communities and living systems at large: they cannot be engineered top-down in a theoretical and rational way (Bateson, 1972; La Cecla, 2000). The dream (that on some occasions revealed itself as a nightmare) of designing the ideal city for ideal people living in an ideal harmony missed the target or even led to failures from Le Corbusier to the most recent attempts, even if they were well-intentioned. The real limit of these projects is the hubris of not considering the complexity and the very systemic nature of human systems.

What can be done instead is to create the circumstances, both relational and physical, in which relationships can emerge and grow, easing the spontaneous birth of a community from the bottom to the top.

But how can we draw a line and define what *proximity* and consequently community are? Manzini's idea of the 15-minute city is evocative, but of course we cannot use a compass to outline a community. At the same time, to define a boundary, a perimeter, is the first crucial step if one wants to observe, describe and intervene in a system. Of course, boundaries do exist in external reality and the physical ones are usually easier to recognize and detect than the relational ones, which are less visible, but have tangible impacts on systems. Reality is complex and made of sub-systems (nature, human systems, physical spaces, channels of information…) deeply interconnected with each other, but we can see and deal only with arcs of a bigger circuit, which can involve the whole of life on earth. The *systemic wisdom* (Bateson, 1972) is about the recognition of the occurrence of the bigger circuit, with all its vital connections with the sub-system we are observing. Not all boundaries are the same (Bateson, 1972; Morin, 1992) or have the same relevance compared to the matter one is observing (individual or community); it depends on what one wants to understand, and on the purpose one wants to achieve. It takes care, awareness and expertise to recognize the relevant boundaries for an existing group of dwellers, because drawing outlines can ease the development and the strengthening of a community but can also weaken the current relationships or even hinder the formation of a neighbourhood. Such an eventuality could happen when one fails to recognize the existing boundaries and all the relevant channels of information for a system, covering the physical ones, related to places, and the relational ones, related both to the current web of institutional services and social actors and to the informal network of relationships present throughout. The authorities of big cities like Paris or Barcelona (Manzini, 2021) are using existing blocks to outline new forms of community, in a top-down decision process that is actively engaging social actors from the boroughs involved.

Besides physical and relational aspects, it is vital to also consider the immaterial, emotional aspects that bond dwellers to the places they live in, like all the feelings, memories, and stories about individual buildings or their districts (Anzani and Schinco, 2022).

Drawing outlines is an essential, necessary act for the wise and for the mad (Bateson, 1972; Piselli, 2020), but it is most of all an act that should entail a huge assumption of responsibility, supported, sustained and strengthened by a profound ethic of care and by a systemic and ecological epistemology.

10.4 Reuse of places

Today, some 56% of the world's inhabitants live in cities, with the urban population expected to more than double its current size by 2050. Though more than 80% of global GDP is generated in cities, which contribute to growth through increased productivity and innovation, the speed and scale of urbanization also brings many challenges, including pressure on land and natural resources. The expansion of urban land consumption outpaces population growth by as much as 50%, which is expected to add 1.2 million km² of new urban built-up area to the world by 2030. Building green, resilient and inclusive cities requires intensive policy coordination and investment choices by national and local governments (World Bank, 2023). Dealing with existing buildings has brought to the architectural and design discipline new, creative and fascinating challenges which have considered the adaptive reuse and urban regeneration approach as a valuable strategic alternative to our ever-increasing throw-away society. Within a framework of limited resources, the reuse strategy has answered the contemporary world's need for sustainable development patterns, raising the awareness of the benefits of repurposing abandoned buildings and underutilized areas, their environment and landscape.

A great number of these buildings (former hospitals, military barracks, churches, railway depots, schools etc.) are situated in central parts of cities and can accommodate valuable contemporary functions (Figs. 1-4). Besides, they also represent important cultural values to be maintained for the collective identity and the communities' sense of belonging. Starting from the need to give value not only to a functional but also to an experiential use of spaces, significant inspiration can be gained from the memory layered in complex historical spaces, implementing innovation with individual and collective well-being, favouring physical and psychological comfort of a community.

While the idea of adapting existing architecture represented for a long time the guiding value of the reuse projects, today the principle is the idea of accepting the current state as a condition to set up a modern point of view. The state of abandonment in which the buildings find themselves, with their material alterations, distortions, colour shades or scars can be seen as an essential factor of their uniqueness, as a fundamental aspect of the places' atmosphere and character.

Abandoned or underutilized buildings represent an extraordinary resource, not only because they are places capable of carrying out new functions but also because they can assume a high symbolic value, as custodians of human memories and stories that are otherwise destined to disappear. Through an interdisciplinary approach, these abandoned spaces can be reinvented by attributing to them a representative character through a moderate use of resources; use of reversible interventions; enhancement of the traces of deterioration; the use of low-cost, lightweight materials; and solutions that can be implemented quickly. The act of reuse is not limited to modifying the functions, or to creating new forms, but also involves the resignification of the past. The challenge is returning discarded areas to new use possibilities, relying on temporary and reversible strategies, consistent with the places' nature and soul, aimed at their reintegration into the living social fabric and the enhancement of their symbolic significance. Designers have a great responsibility in identifying quality solutions for the project of spaces, service and technology which could allow that welcoming and hybrid dimension of proximity to be built, which includes the physical, digital and relational community described above. Indeed, besides being tools for taking care of people and the planet, reuse and reinvention are a strategy of mind and life, not only an opportunity to exploit the potential of existing buildings but also that of existing relationships, and human and relational materials.

10.5 A new urban ecology

The chapter has explored care as a female knowledge, to be extracted from its traditionally domestic perimeter, reinvented and made accessible to all in relationships, places and communities.
The issue intercepts the complexity of contemporary city at different levels, where the needs of creating caring communities to improve individual well-being cannot be dealt with by disregarding a systemic approach. In this framework, the reuse of places turns out to be a form of care towards an individual and community dimension of dwelling, which can enhance urban proximity and safeguard the planet. Interior architecture and design can reverse the appetite for overproduction; foster the reuse of existing assets and enhance their stratified memory; acknowledge that urban and natural spaces are part of a whole ecosystem; and promote a new urban ecology.

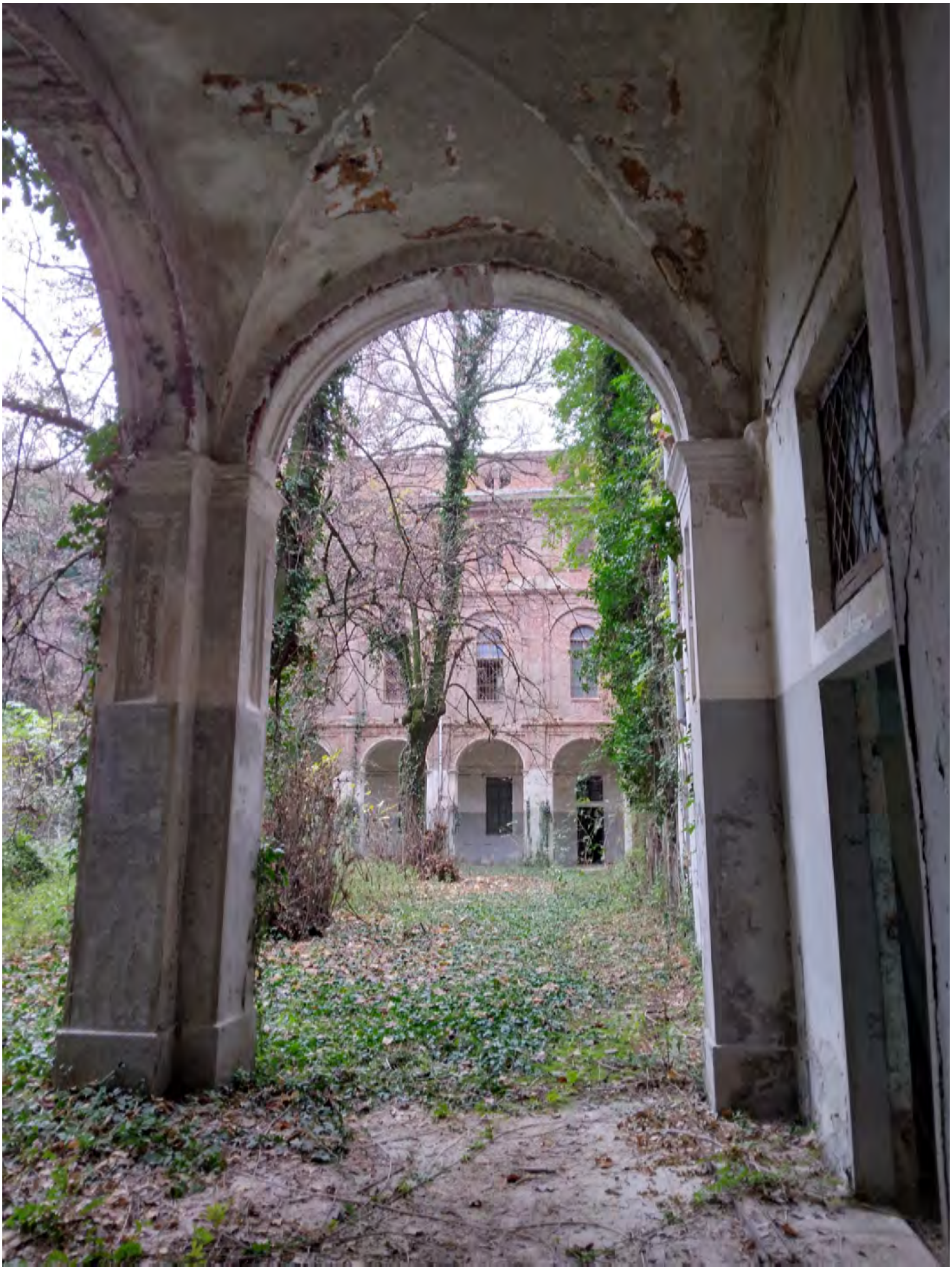


Figure 1.
Former psychiatric hospital in Racconigi. Photo by A. Anzani, 2023.

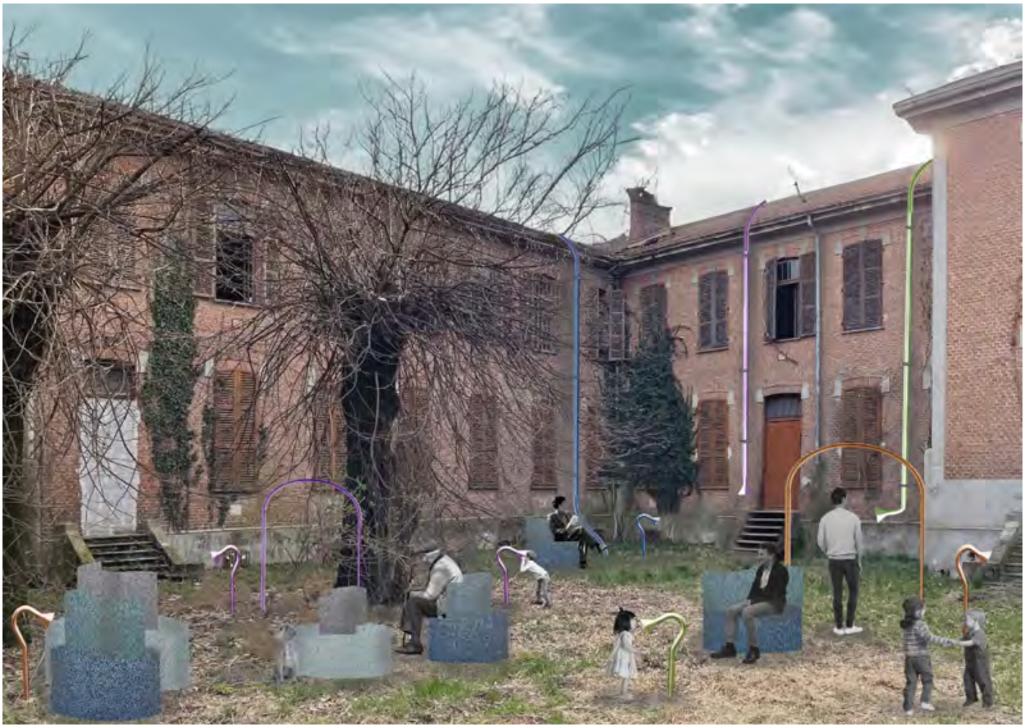


Figure 2.
Concept for the reuse design of the former psychiatric hospital in Racconigi, by E. Andriani, C. Antonutti, B. Bravi, G. De Salvo, G. Lamera, F. Paolino, F. Pappalardo, 2023.

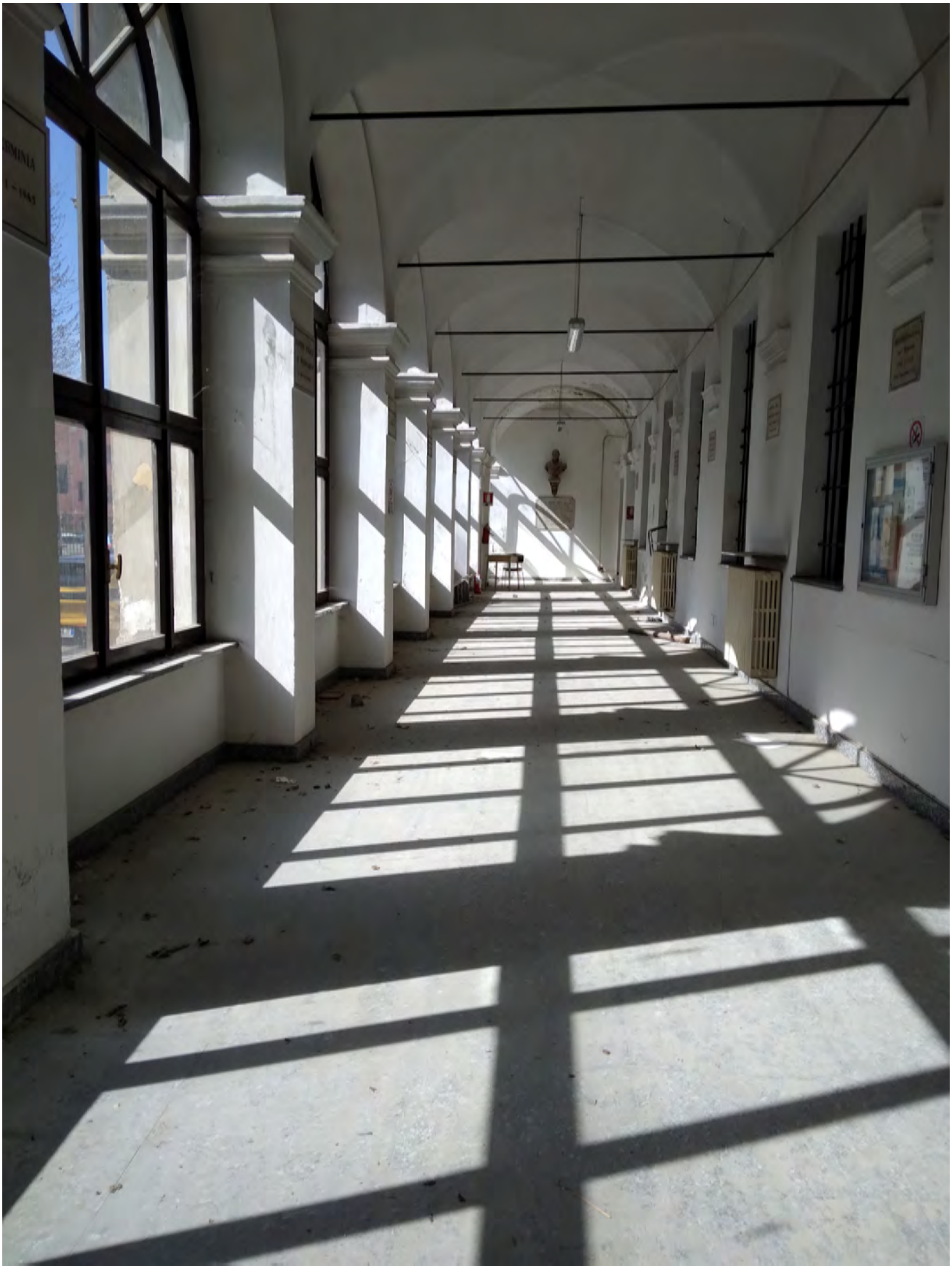


Figure 3.
Former civic hospital in Racconigi. Photo by A. Anzani, 2023.

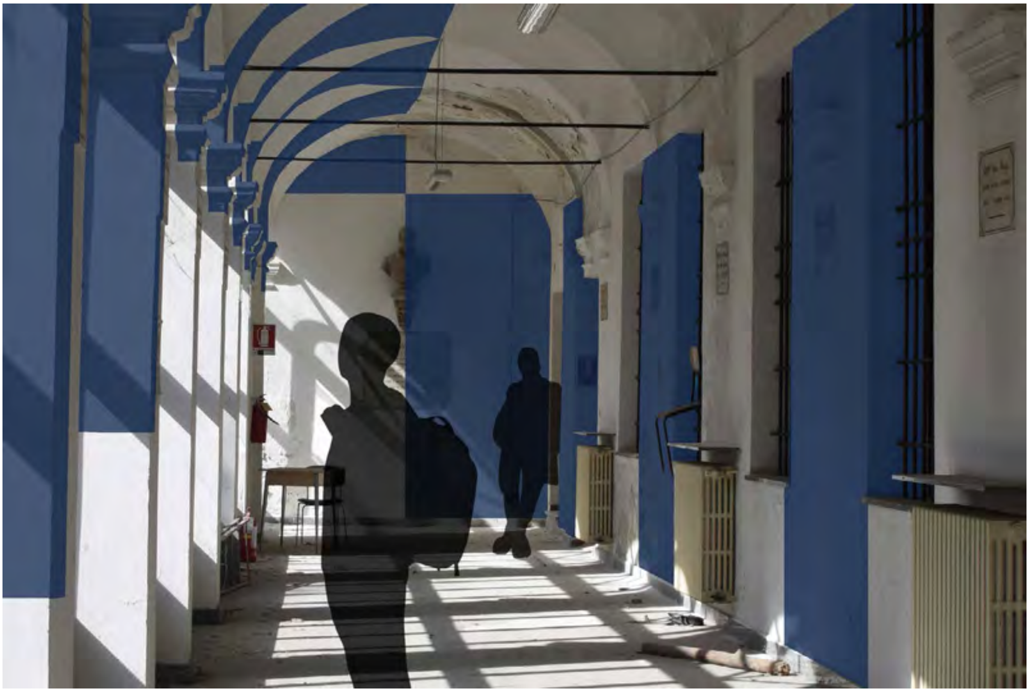


Figure 4.
Concept for the reuse design of the former civic hospital in Racconigi, by M. H. Berg Kanika, M. Calì, D. German Zubiaurre, J. Godard, A. S. Lopes Amorim, L. Minciotti, A. Spinola, 2023.

References

Anzani A. (2021), “Reusing Leftovers: corporeity and empathy of places”, in Crespi L., edited by, *Design of the Unfinished. A New Way of Designing Leftovers Regeneration*, The Urban Book Series, Springer Nature, Cham.

Anzani A. and Capitani G. (2023), “Ethics of care and reuse of urban space”, in Anzani A., Scullica F., edited by, *The city of care. Strategies to design healthier places*, Springer Series in Design and Innovation, Springer Nature, Cham.

Anzani A. and Schinco M. (2022), “Il riuso come approccio ecologico al design dell’alterità”, in Zingale S., edited by, *Design e alterità. Comprendere l’Altro, pensare il possible*, FrancoAngeli, Milan.

Bateson G. (1972), *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology*, University of Chicago Press, Chicago.

Dal Borgo A., Garda E. and Marini A. (2016), *Sguardi tra i residui. I luoghi dell’abbandono tra rovine, utopie ed eterotopie*, Mimesis, Milan.

Faré I. (2013), “Female knowledge and care of the city”, *Territorio della Ricerca su Insediamenti e Ambiente,* 6, 10: 85-92. Available at https://archive.wikiwix.com/cache/display2.php/attachment.pdf?url=http%3A%2F%2Fwww.serena.unina.it%2Findex.php%2Ftria%2Farticle%2Fdownload%2F1603%2F1697. Accessed January 2024.

Gilligan C. (1993), *In a different voice. Psychological Theory and Woman’s development,* Harvard University Press, Cambridge.

Gruen A. (2007), *The betrayal of the Self: The fear of autonomy in Men and Women*, Human Development Books, Berkeley.

Jacobs J. (1961), *The death and Life of the Great American City*, Vintage, New York.

Hartmann E. (2011), *Boundaries, A New Way to Look at the World,* CIRCC EverPress, Summerland.

La Cecla F. (2000), *Perdersi. L’uomo senza ambiente*, Editori Laterza, Bari.

Manzini E. (2021), *Abitare la prossimità. Idee per la città dei 15 minuti*, Egea, Milan.

Morin E. (1992), *The Method. Volume 1: the Nature of Nature*, Peter Lang, New York.

Morini C. (2021), “A Critique of Care Politics. An interview”, *Who cares, engagée,* 10: 6-7, London, Berlin, Vienna. Available at https://www.engagee.org/journal.html. Accessed February 2024.

Naga (2023), “A place of the possible”, in Anzani A., Scullica F., eds., *The city of care. Strategies to design healthier places,* Springer Series in Design and Innovation, Springer Nature, Cham.

Piselli A. (2020), “Borders. Dwelling in the borders”, in Anzani A., edited by, *Mind and Places – A Multidisciplinary Approach to the Design of Contemporary City*, Springer Series in Design and Innovation, Springer Nature Cham.

Schinco M. (2022), “Reinventing Relations: Healing Wounded Spaces and Times”, in Anzani A., edited by, *Conscious Dwelling for Transdisciplinary Cityscapes*, Springer Nature, Cham.

Tronto J. (1993), *Moral boundaries. A Political Argument for an Ethic of Care,* Routledge, London/New York.

WHO (1986), *The 1st International Conference on Health Promotion*, Ottawa, 1986, 21st November Ottawa, Canada. Available at https://www.who.int/teams/health-promotion/enhanced-wellbeing/first-global-conference. Accessed July 2024.

World Bank Group (2023), *Urban Development*. Available at https://www.worldbank.org/en/topic/urbandevelopment. Accessed July 2024.

11. Designing digital media. Towards a user-centric approach for public communication strategies

Umberto Tolino

11.1 The digital landscape of public communication

The study described in this contribution explores the public dimension of communication design, focussing on how digital media can enhance social awareness. It discusses the multifaceted role of digital tools and methods in creating social value, considering the design process together with its outcomes. It delves into the research process for the design of a digital media strategy for a public sector organization (PSOs), highlighting how the engagement of stakeholders and citizens can contribute to the development.

The current and constantly evolving digital landscape implies a shift toward more inclusive and interactive paradigms. Such a transition towards a user-centric approach also highlights the importance of accessibility, inclusivity, and engagement (Bonsón *et al.*, 2012; Mergel, 2013; Lovari and Valentini, 2020), facilitated by the adoption of new digital communication models that support multidirectional dialogue and community-building. These models highlight the participatory nature of generative practices in the design space (Sinni, 2018, p. 21), as a dialogical dimension between providers and users. As a consequence, the need emerges for well-structured and effective communicative elements that are designed to facilitate direct interaction among various stakeholders while allowing them to express and share their identity (Visconti, 2017, p. 73).

The role of the user has shifted from one of passive observer to an active community member, with platforms like YouTube, Facebook, Instagram, X, LinkedIn, and TikTok contributing uniquely to this new landscape (Shahbaznezhad *et al.*, 2021, p. 48). The evolving context of digital media and their language emphasizes the role of visual identities in connecting individuals and creating emotional bonds.

In response to these changes, the public sector is increasingly leveraging digital media to connect with citizens and facilitate meaningful public engagement, aiming at developing and sustaining relationships with citizens through bidirectional information exchange and multifaceted communication processes.

The results of the study range from insights to inform strategies to the generation of original content as well as amplifying social awareness. Despite having encountered new challenges such as the digital divide (Haro-de-Rosario *et al.*, 2018; Lee *et al.*, 2021), this study advocates for innovative engagement methods that address the needs of various audiences and encourage public engagement and feedback mechanisms. This marks a departure from traditional top-down communication methods (Kent, 2013, p. 341), while underpinning efforts to enhance inclusivity, equity, and public trust (Park *et al.*, 2016; Lovari and Materassi, 2021). Principles and practices of user-centric digital media design are explored to define how PSOs can communicate and take on the ethical responsibility in accurately translating and representing the values and narratives of communities through digital campaigns. In particular, the study reflects on how digital media communication can be designed to better resonate with the diverse identities and needs of the community, thus contributing to a more informed and engaged society and authentically reflecting their needs.

11.2 Theoretical background

The integration of digital media into PSOs is significantly influenced by the ongoing overall digitization and modernization of societal frameworks (Bertot *et al.*, 2012; Bonsón *et al.*, 2012). This transformation has prompted discussions on ways to improve democratic participation and engagement through mechanisms like co-production, and crowdsourcing. The theoretical background of digital communication within public organizations and its strategic design highlights various areas, among which is the transformative role of social media and Information and Communication Technologies (ICTs) in enhancing engagement and interaction between public sector organizations and citizens.

Social media platforms offer PSOs the opportunity to reach wider audiences quickly, facilitate knowledge-sharing (Gálvez-Rodríguez *et al.*, 2018, p. 269), and encourage a participatory dialogue. The division of social media into expressive and collaborative forms can serve as a framework for understanding its potential application, suggesting a strategic approach to digital media design aligned with the objectives of PSOs. The movement towards digital communication within the public sector, as detailed in the works of Lovari and Valentini (2020) and Haro-de-Rosario and colleagues (2018), underscores the importance of selecting appropriate platforms and strategies to effectively engage citizens. The adoption stages of social media by PSOs' social media adoption reflect a progression from experimentation to institutionalization that evolves in response to internal and external feedback.

Notwithstanding the opportunities that the use of social media represents for the enhancement of public communication, its potential impact needs to be carefully taken into account considering factors such as online transparency, ethical considerations, data management, and the participation gap encouraging young people to engage more in discussions in the public sphere. Moreover, the unique challenges faced by public organizations in branding and communication, as discussed by Leijerholt *et al.* (2019) and Chapleo (2015), necessitate an adapted approach that considers the distinct operational environment and societal goals of the public organization, and effectively manages diverse stakeholder interests.

This inquiry suggests integrating traditional and modern communication models to develop diverse communication styles that resonate with various social and cultural groups. McLuhan's finding (1964) that media only gain significance through their interrelationships stresses the importance in using contemporary social media. Furthermore, it is crucial to enhance the quality of graphic design and storytelling used on such platforms, as their engagement rates depend strongly on visual appeal and originality.

Table 1 provides an overview of the theoretical dimensions that were primarily taken into account in this study. Although not exhaustive, they outline key critical areas and provide insights regarding the strategic use of digital media. Collectively, these dimensions determined a starting point for opportunities, challenges, and strategic considerations involved in PSOs' communication, and served as guidance for the analysis of the presented case and its findings.

	Dimension	**Sub-dimensions**	**Related Authors**
D01	Transformation of PSOs Communication	Digitization and modernization	Bertot et al., 2012; Bonsón *et al*., 2012
D02	Role of Social Media and ICTs	Enhancing engagement, co-production, crowdsourcing	Gálvez-Rodríguez et al., 2018; Lovari and Valentini, 2020; Haro-de-Rosario *et al*., 2018
D03	Engagement and Interaction	Wider audience reach, participatory dialogue	Gálvez-Rodríguez *et al*., 2018; Mergel & Bretschneider, 2013
D04	Digital Strategy and Communication	Selection of platforms, online transparency, emotional tone	Lovari and Valentini, 2020; Haro-de-Rosario *et al*., 2018
D05	Branding and Communication	Adapted branding strategies, managing stakeholder interests	Leijerholt *et al*., 2019; Chapleo, 2015
D06	Ethical Considerations and Data Management	Participation gap, leveraging data for strategy	Irfan *et al*., 2019; Manovich, 2020

Table 1.
Key theoretical dimensions and authors considered for informing the strategic use of digital media in public sector communication.

The strategic design of digital communication in the public sector requires a comprehensive understanding of the theoretical underpinnings of digital media's role; the challenges of digital divide and engagement; and the adaptation of branding strategies to the context of public organizations. Within this framework, the inclusion and diversity of perspectives, accessibility, adaptation to technological changes, strategic management, and the specific utilization of social media are leveraged to enhance citizen engagement.

Future research should continue to look into these aspects to further explore the effectiveness and inclusivity of public sector digital communication strategies.

11.3 Study approach and methods

The study adopts a mixed-method approach combining the analysis of the scientific discourse on visual identity and digital media strategies applied by PSOs (Mergel and Bretschneider, 2013; Irfan *et al.*, 2019; Leijerholt, Biedenbach *et al.*, 2019; Ihsaniyati *et al.*, 2023). It does so via an applied case study that gathers specific insights into the use of digital tools and methods in generating social value and investigates the application of the discussed theoretical concepts in a real context. The study furthermore explores the complexity in formulating a digital media strategy grounded in active engagement of stakeholders and citizens through co-creation and co-design of digital media contents specifically for PSOs. Bridging the theoretical constructs and empirical findings, it contributes to a better understanding of the current and potential future roles of citizen- and stakeholder-engagement in shaping digital media strategies that resonate with people’s values and experiences.

Key learnings and outcomes are presented following the dimensions identified in the theoretical framework (Table 1), showcasing how engagement can be effectively leveraged and operationalized in the digital communication strategy of a PSO.

11.4 Case Study: Enhancing the cultural and environmental heritage of a natural park through digital communication channels

Bosco delle Querce is a regional protected area and natural park in the province of Monza and Brianza around 25 km north of Milan. It was established as a reforestation project on the site contaminated by a dioxin-laden toxic cloud from an incident at the ICMESA factory in 1976. The research group from the Department of Design at Politecnico di Milano was given the opportunity by Fondazione Politecnico di Milano to investigate the qualities and values of this natural site through field research. As an outcome, digital materials were produced from the perspective of communication design for dissemination across the digital channels of the public body. The approach explores how the engagement of users and stakeholders can enhance the quality of communication materials in the public sector and increase social awareness through digital tools and methodologies. As such, this case represents a relevant initiative to discuss the (need for) transformation of PSOs' communication (D01).

Digital media is seen as an opportunity to create social value, both in the design process and in distributing its outcomes with the goal of promoting the historical, cultural, and environmental heritage of the natural reserve. The promotion activities extend the research scope by exploring new modes and opportunities of how new and existing users can engage with content, changing from passive into active figures. This shift, facilitated by social media platforms, transforms the traditional one-way information delivery into a more stratified and richer personal experience marked by relationships that develops throughout the engagement process.

Three main work phases with corresponding actions were set up to deepen the understanding of the site itself, the actors involved in the management, and the users who spend their free time there.

A fundamental premise concerns the ethical considerations and data management dimension (D06) as the study addresses such considerations not merely in terms of informed data-collection but also in how data are processed and translated into meaningful visual representations and narratives. This dimension is relevant in ensuring the ethical alignment with the values and meanings of those providing their stories and knowledge as data for the generation of insights and material, thus respecting the integrity and intentions of the community members and stakeholders involved.

Preliminary investigation

This phase outlines the research framework, instituting a methodology for participatory investigation with the park's stakeholders and users through field activities and mechanisms for gathering and amplifying content. As such, it leverages knowledge from effective stakeholder engagement and consistent participatory dialogue (D03). Initial meetings were conducted, mapping the diverse interests of stakeholders and delving into the values and initiatives they represent (Chapleo, 2011; Gromark and Melin, 2013). This was critical in ensuring the relevance and inclusivity of developed strategies and improving their acceptance by involving stakeholders early in the process.

The definition of a lens for observation steers the identification of specific narrative scopes, informs the fine-tuning and refinement of analytical tools for implementing the designated actions and provides insights for the design and development of the outputs. The research uses *harmony* as its guiding principle, understood as both the consonance of voices or instruments and the proportion and holistic interplay among various elements. This approach and its investigative filter result in three narrative scopes as trajectories guiding the observation and the overall project:

- *asynchronous harmonies*: stories related to the stigma of the environmental disaster;
- *polymorphic harmonies*: variations of nature and the voices of the park;
- *singular harmonies*: narratives of the community *living* the park.

Field research

This phase focusses on conceiving the communicative profile of *Bosco delle Querce*. Activities as observation and stakeholder- and user-engagement provided a plurality of knowledge, elements,

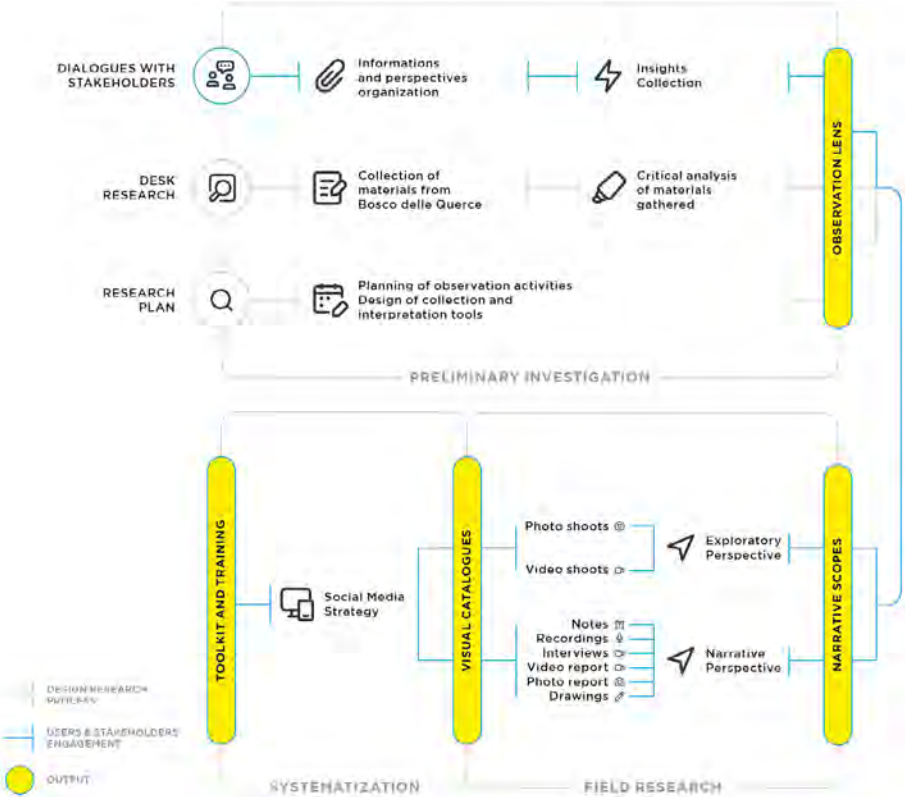

DIALOGUES WITH STAKEHOLDERS
Informations and perspectives organization
Insights Collection
DESK RESEARCH
Collection of materials from Bosco delle Querce
Critical analysis of materials gathered
RESEARCH PLAN
Planning of observation activities
Design of collection and interpretation tools
OBSERVATION LENS
PRELIMINARY INVESTIGATION
TOOLKIT AND TRAINING
Social Media Strategy
VISUAL CATALOGUES
Photo shoots
Video shoots
Notes
Recordings
Interviews
Video report
Photo report
Drawings
Exploratory Perspective
Narrative Perspective
NARRATIVE SCOPES
DESIGN RESEARCH PHASES
USERS & STAKEHOLDERS ENGAGEMENT
OUTPUT
SYSTEMATIZATION
FIELD RESEARCH

Figure 1.
Research process of the project flow and phases.

evidence, and testimonials. The identification and documentation of diverse points of view laid the groundwork for the creation of maps and visual catalogues (Veca, 2007, p. 210), systematically organizing potential narrative elements. The photographic field research adhered to a structured methodology for capturing images (subject, framing, viewpoint, composition), culminating in a multifaceted portrayal of the park's morphology and aesthetics (Anceschi, 1992; Bucchetti, 2017). It included 20 days of on-site data collection and 14 days of post-production, yielding approximately 800 curated photographs and 120 minutes of video content. These assets shaped a thematic digital archive, coherently and comprehensively presenting the park and its users from varied perspectives. The narrative scopes previously identified influence the observation in the field, offering two distinct observation perspectives: the exploratory perspective seeks to capture the essence of the context through uncommon and unexpected viewpoints and narratives by assembling voices, experiences, relationships, and subjective and collective memories to portray fragments of the park's tangible identity. An audiovisual documentation portrays the videos and recordings of the park categorised into eight distinct categories: *Pathways*, *Patterns*, *Symmetries*, *Horizons*, *Gazes*, *Profiles*, *Contrasts*, and *Transformations*.

Conversely, the narrative perspective explores the ecosystem with detailed descriptions of its natural elements (flora and fauna) across the various areas of the park (wetlands, meadow areas, shrublands, deciduous forests), distinguishing eight categories: *Ecosystem*, *History*, *Interpretations*, *Stories*, *Intercepts*, *Actions*, *Bench,* and *Park Life*.

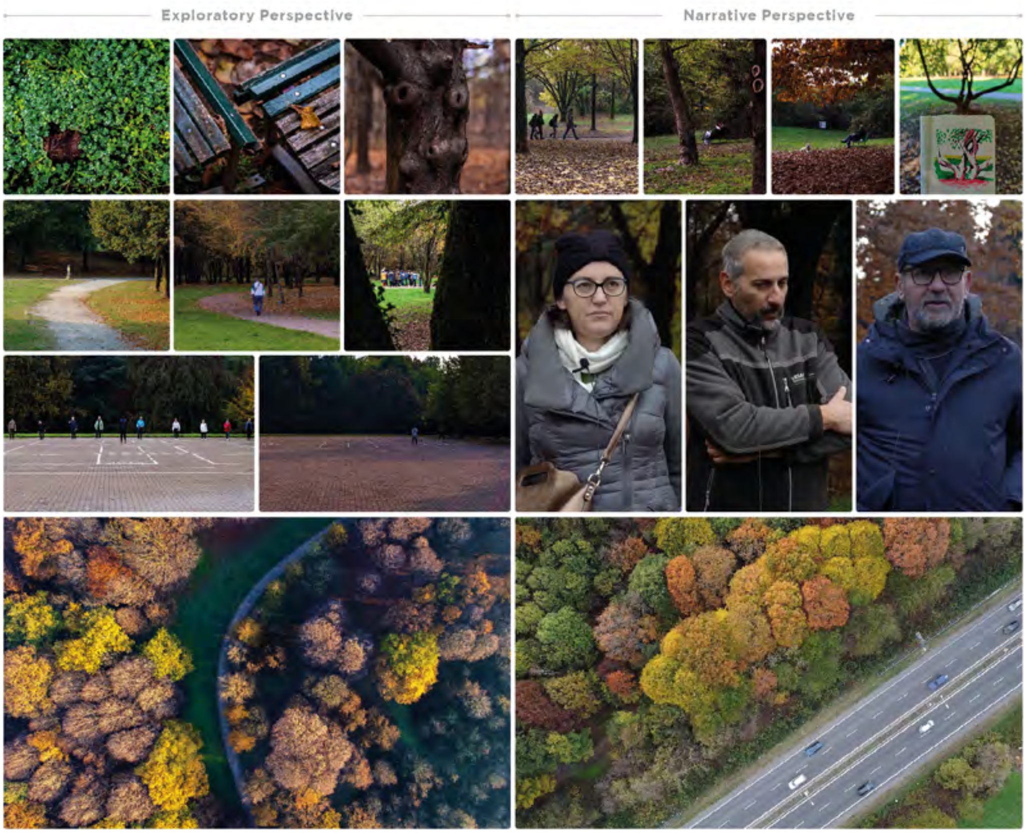


Figure 2. Composite of visual outcomes of the field research.

Each intermediate artefact collected during this phase of research, whether a photo, video, text, or audio, became part of the park's discursive identity, elevating it from its instrumental function of device for inquiry and contributing to the final outputs as part of the produced content. This dual approach fostered both a rich and complete understanding of the park while contributing to a holistic and nuanced digital design strategy (D04).

Systematization

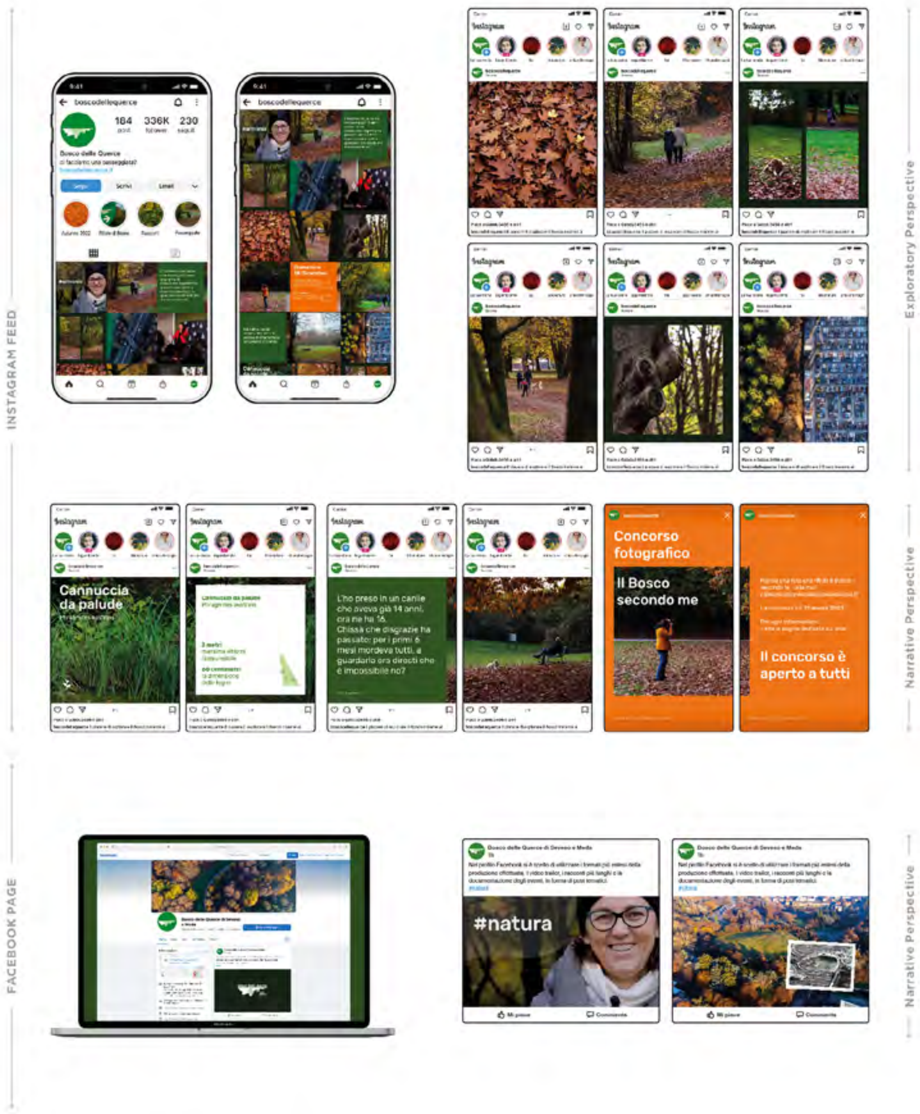
The collected raw material was further developed into digital artefacts for the social channels of *Bosco delle Querce*.
The material aims to reflect the park's qualities through its digital channels, ranging from social media to other applications that emphasize videos and images as core subjects of communication. The intervention adopts a participatory approach, valuing the uniqueness of the involved subjects and constructing a collective vision thorugh moments of listening and engagement.
It seeks harmony between the historical and the contemporary, intertwining memories and visions, environmental qualities and shared imaginaries. The approach emphasizes how branding and communication (D05) are consistently built from the insights and values of the local community.

Initial activities refined the brand image of *Bosco delle Querce,* streamlining its visual elements and adopting a geometric approach to reinterpret the park's aesthetics, thus enhancing the readability and accessibility of digital content. Intermediate products generated during the field research nurture the clusterization of the materials co-produced with stakeholders and users of the park across the different types of digital content presented above.

The study applied digital media (D02) to showcase the values and meanings of the park, building on its rich stories and heritage. As such, social media platforms and ICTs are transformed from mere tools for the dissemination of information into dynamic mediums that narrate the park's unique environmental and cultural narratives.

The editorial plan, its content, and a toolkit of editable digital formats (on *Canva.com*) were designed for customization, accessibility, and user adaptability, regardless of graphic design expertise. Training sessions were organized for social media operators, offering up-skilling in digital content management and introducing them to the use of the newly released tools.

This design research contributes to a broader conversation recognizing the dual function of digital media: on the one hand,


INSTAGRAM FEED
FACEBOOK PAGE
Exploratory Perspective
Narrative Perspective
Narrative Perspective
boscodellequerce
184
336K
230
Bosco delle Querce
Cannuccia da palude
Concorso fotografico
Il Bosco secondo me
Il concorso è aperto a tutti
#natura
Bosco delle Querce di Seveso e Meda

L'ho preso in un canile che aveva già 14 anni, ora ne ha 16. Chissà che disgrazie ha passato: per i primi 6 mesi mordeva tutti, a guardarlo ora diresti che è impossibile no?

Figure 3. Digital strategy across media: posts, carousels, videos, stories, and calls to action for user engagement, on Instagram and Facebook profiles of Bosco delle Querce.

it functions as a platform for individual expression and a mechanism for achieving collective objectives, spotlighting its multifaceted and inclusive engagement with communities (Bertot *et al*., 2012; Lovari and Valentini, 2020). On the other, it seeks to contribute to the development of communication language that not only mirrors the institutional intentions of a PSO but rather genuinely resonates and addresses what truly engages the public, thus answering an ongoing significant challenge in public-sector communication (Irfan *et al*., 2019; Leijerholt, Biedenbach, *et al*., 2019; Ihsaniyati *et al*., 2023).

This challenge, however, demands a transition from institution-centric information flows to more engaging and user-focussed dialogues driven by a process of collaboration and attentiveness to community feedback. This approach necessitates the conceptualization of a usage scenario where the adoption of a location-based community model (Carroll, 2012, p. 185) favours a sense of belonging through the sharing of values and experiences.

11.5 Discussing a comprehensive approach to public sector communication

This chapter critically examines the use of a *people-centred* framework within the design process for digital media and its assets by transforming the traditional, often unidirectional, top-down design practices frequently used by PSOs into more interactive and engaging ones (D01). It outlines strategies that transcend established communication models entrenched within institutions, aligning with the dimension of digital strategy and communication (D04).

The use of a case study provided insights into the practical implications of involving citizens and key stakeholders in the co-design of digital media contents. This collaborative process, central to the reasoning about the role of social media and ICTs (D02), and engagement and interaction (D03), reflects how such collaborative processes can significantly impact the effectiveness and relevance of communication strategies. It emphasizes the strategic engagement of users and stakeholders in the design of digital media content, highlighting its importance in enhancing interest, visibility, and accountability. The study advocates for a participatory process methodology informed by user engagement, which leads to better framing, designing and directing communication assets. In this way, legitimacy and reputation are built (Sataøen & Wæraas, 2015; Karens *et al.*, 2016) touching upon ethical considerations and data management (D06).

Literature indicates that while large private organizations predominantly invest in complex and elaborate communication strategies, communication practices of public organizations are significantly different and often less engaged in the topic. The study addressed the need for branding and communication (D05) by exploring new practices and languages, and developing visual systems that are consistent with the operational context. It positioned communication design in close relation to strategic planning and carefully selected appropriate tools. To fully leverage the opportunities of these platforms, a process that fosters a virtuous correlation between visual culture, planning, organization of adopted media, and constant monitoring of results is recommended. Moreover, it is shown how digital technology should go beyond its role of activating interaction online, but needs to enhance participation throughout the design process, with designers acting as mediators and translators (Anceschi, 1981; Baule and Caratti, 2017) carefully considering ethical dimensions and data management (D06).

Strategic alignment and inclusive design are key factors for the design of content and strategies for digital media shaping public communication that aligns with significant content and topics for society, ultimately enhancing the public's eagerness to participate in the creation of public value.

Acknowledgements

The project scouted by Federica Auteri for Fondazione Politecnico di Milano, led in the Department of Design by Umberto Tolino with scientific supervision of Valeria Bucchetti and the participation of: Pamela Visconti and Maria Tasca as senior researchers; Francesco Nozza and Tommaso Ripani as photographers for visual documentation; Marco Gabriele and Roberto Redondi for motion and sound design. All individuals mentioned above are part of the research group DCxW – Communication Design for Welfare.

References

Anceschi G. (1981), *Monogrammi e figure*, La Casa Usher, Florence.

Anceschi G. (1992), *L'oggetto della raffigurazione*, ETAS libri, Milan.

Baule G. and Caratti E., edited by (2017), *Design is Translation,* FrancoAngeli, Milan.

Bertot J. C., Jaeger P. T. and Hansen D. (2012), "The impact of polices on government social media usage: Issues, challenges, and recommendations", *Government Information Quarterly*, 29, 1: 30-40. Avaiable at https://www.sciencedirect.com/science/article/pii/S0740624X11000992. Accessed March 2024.

Bonsón E., Torres L., Royo S. and Flores F. (2012), "Local e-government 2.0: Social media and corporate transparency in municipalities", *Government Information Quarterly*, 29, 2: 123-132. Available at https://www.sciencedirect.com/science/article/abs/pii/S0740624X1200010X. Accessed February 2024.

Bucchetti V., eds. (2017), *Un'interfaccia per il welfare: Le funzioni sociali del design della comunicazione*, FrancoAngeli, Milan.

Carroll J. M. (2012), *The neighborhood in the Internet: Design research projects in community informatics*, Routledge, London.

Chapleo C. (2011), "Exploring rationales for branding a university: Should we be seeking to measure branding in UK universities?", *Journal of Brand Management*, 18, 1: 411-422. DOI: https://doi.org/10.1057/bm.2010.53.

Chapleo C. (2015), "An exploration of branding approaches in UK universities", *International Journal of Nonprofit and Voluntary Sector Marketing,* 20, 1: 1-13. DOI: https://doi.org/10.1002/nvsm.1513.

Gálvez-Rodríguez M., Del M., Sáez-Martín A., García-Tabuyo M. and Caba-Pérez C. (2018), "Exploring dialogic strategies in social media for fostering citizens' interactions with Latin American local governments", *Public Relations Review*, 44, 2: 265-276. DOI:10.1016/j.pubrev.2018.03.003.

Gromark J. and Melin F. (2013), "From market orientation to brand orientation in the public sector", *Journal of Marketing Management*, 29, 10: 1099-1123. DOI:10.1080/0267257X.2013.812134.

Hargittai E. and Walejko G. (2008), "The participation divide: Content creation and sharing in the digital age 1", *Information, Communication & Society*, 11, 2: 239-256. DOI: https://doi.org/10.1080/13691180801946150.

Haro-de-Rosario A., Sáez-Martín A. and Del Carmen Caba-Pérez M. (2018), "Using social media to enhance citizen engagement with local government: Twitter or Facebook?", *New Media & Society*, 20, 1: 29-49. DOI: https://doi.org/10.1177/1461444816645.

Ihsaniyati H., Sarwoprasodjo S., Muljono P. and Gandasari D. (2023), "The Use of Social Media for Development Communication and Social Change: A Review", *Sustainability,* 15, 3: 1-35. Available at https://ideas.repec.org/a/gam/jsusta/v15y2023i3p2283-d1047391.html. Accessed January 2024.

Irfan A., Rasli A., Sulaiman Z., Sami A. and Qureshi M. I. (2019), "The influence of social media on public value: A systematic review of past decade", *Journal of Public Value and Administrative Insight,* 2, 1: 1-6. DOI:10.31580/jpvai.v2i1.481.

Karens R., Eshuis J., Klijn E. H. and Voets J. (2016), "The Impact of Public Branding: An Experimental Study on the Effects of Branding Policy on Citizen Trust", *Public Administration Review*, 76, 3: 486-494. DOI:10.1111/puar.12501.

Kent M. L. (2013), "Using social media dialogically: Public relations role in reviving democracy", *Public Relations and Democracy*, 39, 4: 337-345. DOI: 10.1016/j.pubrev.2013.07.024.

Lee H. Y., Kanthawala S., Choi E. Y. and Kim Y. S. (2021), "Rural and non-rural digital divide persists in older adults: Internet access, usage, and attitudes toward technology", *Gerontechnology,* 20, 2: 1-9. https://doi.org/10.4017/GT.2021.20.2.32-472.12.

Leijerholt U., Biedenbach G. and Hultén P. (2019), "Branding in the public sector: A systematic literature review and directions for future research", *Journal of Brand Management,* 26, 2: 126-140. DOI: 10.1057/s41262-018-0116-2.

Leijerholt U., Chapleo C. and O'Sullivan H. (2019), "A brand within a brand: An integrated understanding of internal brand management and brand architecture in the public sector", *Journal of Brand Management,* 26, 3: 277-290. DOI: 10.1057/s41262-018-0128-y.

Lovari A. and Materassi L. (2021), "Trust me, I am the social media manager! Public sector communication's trust work in municipality social media channels", *Corporate Communications: An International Journal,* 26, 1: 55-69. DOI: https://doi.org/10.1108/CCIJ-01-2020-0027.

Lovari A. and Valentini C. (2020), "Public Sector Communication and Social Media", *The Handbook of Public Sector Communication*, Wiley, Hoboken. DOI: https://doi.org/10.1002/9781119263203.ch21.

McLuhan M. (1964), *Understanding Media: The Extensions of Man*, The New American Library, New York.

Mergel I. and Bretschneider S. I. (2013). "A Three-Stage Adoption Process for Social Media Use in Government", *Public Administration Review*, 73 (3), 390-400. DOI: https://doi.org/10.1111/puar.12021.

Park M. J., Kang D., Rho J. J. and Lee D. H. (2016), "Policy Role of Social Media in Developing Public Trust: Twitter communication with government leaders", *Public Management Review,* 18, 9: 1265-1288. DOI: https://doi.org/10.1080/14719037.2015.1066418.

Sataøen H. L. and Wæraas A. (2015), "Branding without Unique Brands: Managing similarity and difference in a public sector context", *Public Management Review,* 17, 3: 443-461. DOI: https://doi.org/10.1080/14719037.2013.841976.

Shahbaznezhad H., Dolan R. and Rashidirad M. (2021), "The Role of Social Media Content Format and Platform in Users' Engagement Behavior", *Journal of Interactive Marketing,* 53, 1: 47-65. DOI: https://doi.org/10.1016/j.intmar.2020.05.0.

Sinni G. (2018), *Una, nessuna, centomila: l'identità pubblica da logo a piattaforma*, Quodlibet, Rome.

Veca A. (2007), "Figure di argomentazione", in Bucchetti V., edited by, *Culture visive. Contributi per il design della comunicazione*, POLI.design, Milan.

Visconti P. (2017), "Comunicare il welfare. Segni e grammatiche visive", in Bucchetti V., edited by, *Un'interfaccia per il welfare: Le funzioni sociali del design della comunicazione*, FrancoAngeli, Milan.

12. When technology becomes harmful. The contribution of designers at a crossroads between fashion, digital and ethics

Martina Motta, Rachele Didero

12.1 The power of AI

When facing the latest advancements of digital technologies, we often feel divided between the excitement of exploring unprecedented innovations and the fear of being overtaken by the technologies themselves. As one of many, Artificial Intelligence (AI) today ignites alively debate between scholars and a diffused enthusiasm in the technological business world. After the inital theorization and field experiments with AI in the 1950s (McCarthy *et al.*, 1955), for decades it was just considered a possibility of the future, alternating moments of euphoric optimism to others of disillusion and research stasis. Today, the high calculation capacity of computers has allowed governments and companies to extensively leverage on AI to develop systems, services and products.

AIs are defined as non-biological entities that are capable of learning independently, thinking in a simple way, and consequently acting without being supervised (Holmquist, 2017; Crawford, 2021; Kieslich *et al.*, 2020). They can operate in a wide variety of urban spaces and domains (Crawford, 2021), taking the most diverse forms and effects, and consequently leading to unprecedented opportunities and challenges (Verganti *et al.*, 2020), but also to risks and unpredictable implications (Bertolaso and Marcos, 2023; Roco, 2016). This makes them perceived by most human beings still as opaque and out of control (Kieslich *et al.*, 2020), and they generate a complex set of expectations, ideologies, desires, and fears (Crawford, 2021).

The way AIs work is, however, easily understandable: they collect data, then iteratively analyze and classify them through models and parameters given as initial input by humans. From the data they build algorithms used to process more data. The more data AIs take, the more performative the algorithm and the more precise the outcome.

Thus, data used to train AIs and perfect the algorithms became a primary resource of economy (Fuad-Luke, 2009; Zuboff, 2019) and are used by companies as a market lever to make money from bets on the behaviour of future users. What is demanded for people is where and how data are retrieved: the answer is they are usually stored in publicly accessible datasets, built with images collected in public spaces or uploaded by people on social media feeds (Crawford, 2021). When they get old, Crawford continues, these collections of data are seen merely as infrastructure, and no attention is paid to the fact they can contain personal or potentially damaging data.

Moreover, AI systems classify data with labels that are biased by the categories provided by humans. These flawed labels are used to recognize human identity, gender, and race, but they result in being racist and discriminatory, as they leave behind the complexity of subjectivity while they build biased hierarchies and boundaries for our society.

This would be enough to raise ethical concerns, but there is more: among the several applications of AI are facial recognition and the collection of biometric data. Biometric data are personal data resulting from specific technical processing relating to the physical, physiological, or behavioural characteristics of a person (e.g., facial images or fingerprint data), which allows or confirms the unique identification of that person (Privacy Plan, 2021). Cameras can capture the facial signature and collect data in public spaces or private spaces open to the public, without any form of consent or dissent (Kohnstamm, 2012). With institutions not yet offering sufficient guidance and regulations in the field, most people don't know when and where data are collected: the result is a tendency not to protect our uniqueness and little awareness of the deployment of this technology (Ada Lovelace Institute, 2019; Pew Research Center, 2019), which becomes discriminatory and harmful for a number of human rights (Amnesty International, 2020).

Rooted in the first military applications of AI which had the logic to find and punish offenders, this raises strong legal and ethical concerns on the privacy and autonomy of people when this enters everyday life automatic identification, together with fear and urgent need for protection (Quintarelli, 2020).

However, this is not AI's responsibility. If it is true that in AI what is intelligent is not artificial and what is artificial is not intelligent (Bertolaso and Marcos, 2023, p. 10), machines do not act neutrally and autonomously without human directions, and human intention is at the center of the debate. To Crawford, AI systems are «embedded in social, political, cultural, and economic worlds, shaped by humans, institutions, and imperatives that determine what they do and how they do it» (Crawford, 2021, p. 211). For Quintarelli (2020), AI does not behave ethically or unethically as it has no idea what ethics is: humans must oversee whether its results are aligned or conflicting with ethical principles. This vision is strongly challenged by the fact that AI systems are designed to benefit the institutions and corporations they serve, and in this sense, they are «expressions of power that emerge from wider economic and political forces, created to increase profits and centralize control» (Crawford, 2021, p. 211).

If, as human beings, we see the concrete risk as lying in weakness, and we rely on legislation to protect ourselves or on philosophy to understand the ongoing changes, how do we position ourselves as designers? How could we contribute to the typical human-centric approach when technologies are so harmful for our human identity?

12.2 The role of design

Privacy is such an urgent issue that legislators and scholars have investigated it extensively, and the protection of personal data today is discussed in terms of human dignity and personal identity, with citizens described as interested parties (Floridi, 2022). The contribution of design in the context has, however, received much less attention (Wong and Mulligan, 2019). Privacy protection is a strongly technology-based field, in which dominant engineering approaches assume that privacy is predefined and does not need to be challenged at the design level. Only in recent times has design – especially critical design and partially service and UX design – started to explore the topic, more in a dimension of social-political activism and criticism against *surveillance capitalism* (Zuboff, 2019) than in the design of producible solutions.

Privacy by Design (PbD), theorized by Cavoukian (2009) in the 1990s as a set of principles to guide companies in adopting privacy protection in an integrative way, has recently been included in the General Data Protection Regulations (GDPR) (ART. 25). This introduces the human-centred design approach in the field of personal data protection and requires EU organizations and system developers to include all the principles of data protection in their design processes. To Felzmann *et al.* (2020), the legal legitimation of PbD opens space for inclusion of other design principles guided by values in the field of computer science and AI, as Friedman *et al.*'s (2008) Value-Sensitive Design (VSD) methodology, or the envisioned concept of Trasparency by Design (Felzmann *et al.*, 2020).

Floridi (2022), a professor of philosophy and ethics of information, believes that our era is, more than any other, the age of design, since digital is providing immense freedom to restructure and organize the world in a multitude of new ways. This is a promising statement if we follow Simon's definition of design where to design is to «devise courses of action aimed at changing existing situations into preferred ones» (1982, p. 129). We, designers, could have a multitude of opportunities and tools to realize our purpose.

If we still seem to lack a collective human project for our digital age (Floridi, 2022), from the standpoint of designers we see design itself as one of the critical drivers of innovation when navigating the ongoing transition (Bertola *et al*., 2021). This is due to its capacity to link technological systems with cultural and societal evolution and to its approaches based on users' and societal values. Indeed, design has always been a human-centric discipline, which is good guidance for a twin transition where digital goes together with sustainability that includes human beings and the rights of humans and non-humans.

Given these premises, in the next sections we question the possibility of designing in the anti-surveillance field, combining the critical part with the pragmatic-functional dimension.

To address the ethical concept of individual privacy, the presented research adopts a multi-layered systemic approach, framed at a crossroad between fashion and textile-knitwear design with engineering for AI, computer vision and machine learning. In such complexity, the human-centric approach is contaminated by the contribution of other disciplines in an advanced co-design process that uses digital technologies to generate a fashion product that protects the identity of the wearer from harmful digital surveillance.

The cultural assets of fashion, that shape individual and social identities through the material and immaterial values of its products (Crane & Bovone, 2006; Crane, 2012; Bertola, 2021), are combined with the high precision of machines and the acute complexity of technology in the textile-knitwear field, that open perspectives on innovative technical performances for the development of advanced products, also in fields other than fashion.

Through this combination of fashion and knitwear design, and a collaborative effort with engineering for AI, the research developed an adversarial textile made with computerized knitting machines and resulted in Cap_able, a collection of clothes that embed algorithm-generated adversarial images, able to deceive facial recognition systems. These are garments that protect people from AI while making them aware, and at the same time visible to other human beings (Didero and Conti, 2022).

By reading the methods, process and the results of the research, we reflect on how designers work in handling the expertise of engineering researchers, experts in ethics, policies, and knitting technologies, and in combining them with the contribution of machines not just in the development of a fashion product, but in the search of a multifaceted solution to such a complex global issue.

We observe and question how much space is left for design thinking if a part of the creation is left to algorithms? What is the object of design? And how does the process itself still lie in the hand of designers with so many external inputs to deal with?

The ultimate goal is to observe how the methodologies of design foreground the ethics of design practice, and how such research can potentially reveal hidden agendas and values, and explore alternative design values (Bardzell and Bardzell, 2013). We explore possible directions for designers to place themselves at the boundary between AI engineering, fashion design and textile-knitwear technical knowledge, without forgetting the ethical aspects, and to think of themselves as «an essential creative engine real-time informed about the impacts, actions and reactions of its surrounding cyber-physical ecosystem» (Bertola *et al.*, 2020, p. 61).

12.3 Exploring the boundaries of fashion and AI collaboration

Fashion design and AI engineering are combined systematically to create an adversarial textile that can fool facial recognition systems. This intersection between fashion and engineering indissolubly weaves the indulgent domain of design and the logical savvy of Artificial Intelligence, orchestrating the genesis of an original breed of adversarial textile-sartorial engineering for cloaking individuals against their surveillance. As William Gibson aptly prophesied with *Zero History's* Ugly T-shirt, Cap_able seeks such an effect; that is, visibility-disruptive garments whose already problematic registry and retention by surveillance systems efface them (Gibson, 2010). Cap_able epitomizes this vision by seamlessly blending design, technology, and ethics.

Central to this fusion is the potential integration of Jacquard technology, a pivotal step that transcends adversarial digital images into tangible, physical solutions. This marks a significant shift, emphasizing the importance of the Cap_able design process – a journey orchestrated collaboratively by designers, engineers, and textile technologists.

The process unfolds in ten distinctive phases, each revealing the intricacies of how this collaborative effort navigates the realms of creativity, innovation, and functionality.

1. Image Creation: computer science engineers create generative adversarial networks (Didero and Conti, 2022) to obtain digital images. These images form the first phase in the adversarial textile that is being designed to fool facial recognition.
2. Testing Digital Images: digital images are rigorously tested by using masks to round out colour and photographic detail. Ultimately, the goal is to have a digitized textile that outsmarts facial recognition algorithms.
3. Boosting Adversarial Images: from the digital test results, the team identified areas that need improvement. The objective is to fine-tune algorithms such as YOLO, among other versions, to ensure the adversarial images are compelling (Didero and Conti, 2022).
4. Image Transfer on Fabric: once an optimal digital image is achieved, designers transfer it onto fabric. This phase is accomplished through different fabric types and scales of the digital image, which requires careful consideration to produce the desired effect (Figure 1).
5. Designers' Fabric Elaboration: in that case, designers adapt and transform the adversarial digital image to suit the fabric they selected for their garments. Their creative input ensures that the concept depicted digitally can be transformed into something wearable and tangible.
6. Involvement of Fabric Technicians: fabric technicians utilize Jacquard technology and computerized knitting machines, producing complex textiles that enhance the adversarial image's depth and texture (Figure 2).
7. Pattern Placement and Optimization: strategic placement of the modified textile on patterns or knitting machines allows for efficient use of materials, while optimization techniques help increase cost-effectiveness and reduce material wastage.
8. Garment Manufacturing: the changed cloth enters the garment- manufacturing stage. The clothing pro-

duction occurs along predetermined lines, seamlessly merging with the adversarial fabric (Figure 3).

9. Real-time Object Recognition Testing: complete testing is done under real-life scenarios using object recognition software (Figure 4).
10. Data Collection and Iterative Refinement: data are collected depending on test findings and how effective adversarial textile was in protecting the wearer from facial recognition attacks. This enables experts to refine and improve inputs made into models. This cycle is aimed at constantly improving robustness within a digital environment.

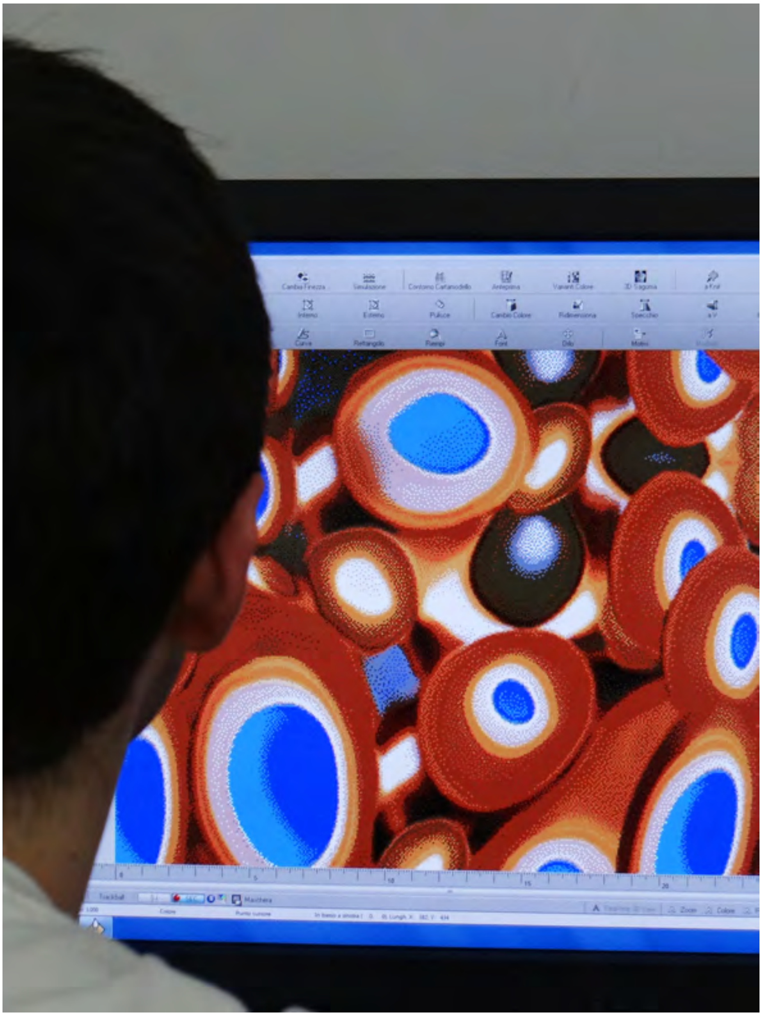


Figure 1.
Technician working on transferring the digital adversarial attack into a Jacquard fabric.

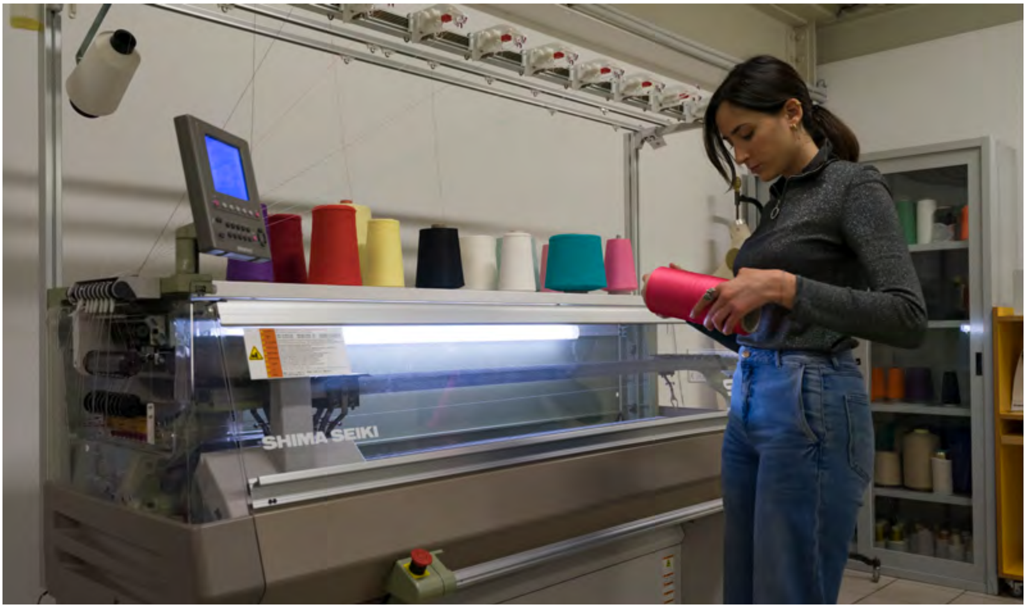


Figure 2. Shima Seiki computerized knitting machine, used for prototyping.

What we notice in this process is how, through creative and cooperative methods, Cap_able positions designers as essential contributors to the relationship between design, technology, and ethics. It signals a shift in the paradigm where designers go beyond their traditional roles and become sense-makers in a technology-saturated environment. This role extends beyond controlling the aesthetics of garments or their practical use as objects to cover our bodies. Designers now navigate through algorithmic iterative loops that orchestrate collaborative human and digital expertise networks. Cap_able debunks traditional design practices by introducing new modalities into established textile-knitwear design processes.

In this renewed scenario, designers maintain control of the cultural and communicative power of fashion: the bright colours and the shapes of the garments generated by AI serve a practical purpose in telling how the collection is a physical capsule of intangible technological achievements, and how it is meant to be significantly visible to human eyes but hidden to the eye of facial recognition cameras.

It is provocatively an *AI camouflage, generated by AI*, and this adds another layer of complexity: designers can play with such a metaphorical mirror, reflecting the potential pitfalls of technology left unchecked. It underscores the neutrality of technology itself

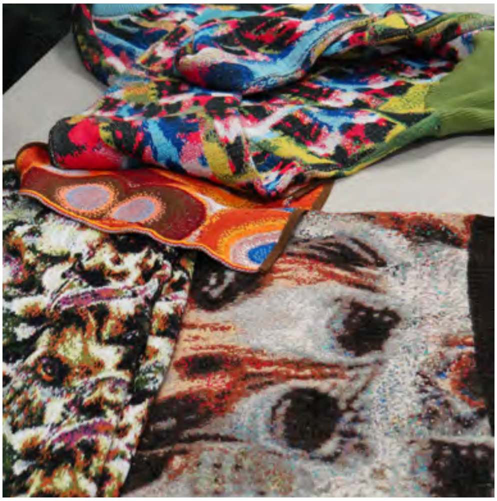


Figure 3.
Knitted panels and Cap_able garments.

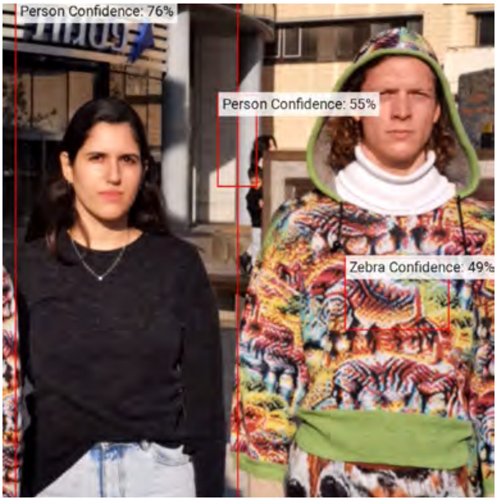


Figure 4.
Technology Test with YOLO (You Only Look Once).

and emphasizes the critical role of human decision-making in anticipating and mitigating its impacts. The action of designers through a fashion-forward approach, makes the collection more than a product; it transforms it into a dynamic statement, urging thoughtful consideration of technology's role in our lives. In an era dominated by digital progress, this transparency captures and encompasses the current state of technological progress. It is a testament to the convergence of fashion and AI, and it shows the extent to which these fields have converged.

Moreover, the research puts designers at the forefront of ethical issues, as in this case, human-centredness in a world in which AI replaces the human essence. AI, just like any technological advancement, should be used consciously; never should it operate outside human agency (Buolamwini, 2023). This is precisely where Cap_able's project stands: using AI and technology as a tool to coordinate a product designed by people for people, it envisions a future where designers play a pivotal role in shaping ethical technology and asserts the importance of human control amid ongoing technological advancements.

12.4 From sense-makers to ethical guides: design practices redefined in the era of AI revolution

As we see, the research initiates reflection on multiple levels: touching the combination of disparate expertise; challenging the fashion and textile design process with the extensive use of technologies; questioning the balance between ideas generated by humans and solutions generated by AI; and, lastly, requiring ethical awareness.

The first question raised is the collaborative design process that combines the human-centric approach with other disciplines. In this case, designers are no longer the main actors in creating 'the new' but their intervention is combined with those of engineers, of knitting technologists, and of AI algorithms that produce adversarial images.

We can, though, say that designers assume a leading role in framing the problem; in connecting different expertise to address it; and in exploiting the folds of technologies to answer it. This is where designers become sense-makers (Verganti *et al*., 2020) and, as coordinators, guide interdisciplinary teams through sophisticated co-design procedures, demonstrating the discipline's strategic development.

Second, to design in these unprecedented conditions, at the boundary of computer engineering, fashion design, ethics and knitting technologies, means to challenge the practices (object and process of design) and the principles (being human-centric, abductive and iterative) of design (Verganti *et al*., 2020) and to do it with the massive presence of AI.

While Verganti *et al.* (2020) confirm that the principles of design are reinforced by the presence of AI, when we regard the practice we see a first shift in the object of design: in Cap_able, the designer is not designing the garment, or the texture, or at least is not designing it alone. The details of the pattern are defined by AI, and so is the functional aspect of the pattern in being adversarial. Designers are apparently losing control of the final aesthetic of the garment; but, as sense-makers, they are in charge of the resulting colours and shape of meaning, leveraging the cultural and communicative traits of fashion.

The second shift concerns the process, namely *how* design decisions are made in terms of phases, methods, tools, or collaborative practices (Verganti *et al.* 2020, p. 214). With Cap_able, the known phases and methods of knitting design are influenced by the presence of AI, and designers become the ones who control the iterative loops of the algorithms and the collaborative network of expertise, both human and digital. As said before, it is an evolution of the established textile and fashion design processes through the introduction of new modalities.

Third comes the ethical reflection. As evidenced above, acting in a human-centric way when dealing with AI systems undeniably requires an ethical approach. If the ethics of AI (Quintarelli, 2021) must align algorithms with relevant values; critically evaluate their moral impacts; raise awareness on a conscious take on the challenges posed; and make the potential of good use visible, Cap_able brings the role of designers to the center in answering these requirements, as it uses AI to generate a new solution that prevents the harmfulness of AI systems themselves. By keeping its people-centeredness it puts human beings and the rights of humans at the center of the problem to be solved.

Conscious of the potential dangers of AI, as designers we do not feel the rivalry of the algorithms in generating the new: strong in the ability to handle complex problems holistically with a systemic perspective, we are capable of acting responsibly in guiding the algorithms toward a meaningful, ethical direction.

If the future is a cultural fact (Appadurai, 2014), with countless revolutions underway, it is not the technology itself that writes the history of humanity, but it is the ability to direct it, and direct it ethically. The ultimate purpose should be the *technological humanism* theorized by Bertolaso and Marcos (2023), where humans do not crushed under the functionalities of machines they have been so smart in modelling, and technology serves individuals and the common good, reconciling the subjects and the collective.

In this scenario, the research is a concrete example of how designers are essential contributors in the relationship between design, technology, and ethics, and of how creative, cooperative design methods may shape technology, guaranteeing a more moral and sustainable future.

References

Ada Lovelace Institute (2019), *Beyond face value: public attitudes to facial recognition technology*. Available at https://www.adalovelaceinstitute.org/wp-content/uploads/2019/09/Public-attitudes-to-facial-recognition-technology_v.FINAL_.pdf. Accessed May 2023.

Amnesty International (2020), *Amnesty International and more than 170 organisations call for a ban on biometric surveillance*. Available at https://www.amnesty.org/en/latest/news/2021/06/amnesty-international-and-more-than-170-organisations-call-for-a-ban-on-biometric-surveillance/. Accessed December 2023.

Bardzell J. and Bardzell S. (2013), "What is 'critical' about critical design?", *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems,* pp. 3297-3306. DOI: https://doi.org/10.1145/2470654.2466451.

Bertola P. (2021), "Fashion Within the Big Data Society: How can data enable fashion transition towards a more meaningful and sustainable paradigm?", *Proceedings CHItaly 2021*: *14th Biannual Conference of the Italian SIGCHI Chapter (CHItaly '21)*, 11th–13th July, 2021, Bolzano, Italy. ACM, New York, NY, USA. DOI: https://doi.org/10.1145/3464385.3468146.

Bertola P., Mortati M. and Vandi A. (2020), *Future Capabilities for Creativity and Design*, Mandragora, Florence.

Bertolaso M. and Marcos A. (2023), *Umanesimo Tecnologico. Una riflessione filosofica sull'intelligenza artificiale*, Carocci Editore, Rome.

Buolamwini J. (2023), *Unmasking AI: My Mission to Protect What Is Human in a World of Machines*, Penguin Random House, New York.

Crane D. (2012), *Fashion and its social agendas: Class, gender, and identity in clothing*, University of Chicago Press, Chicago.

Crane D. and Bovone L. (2006), "Approaches to material culture: The sociology of fashion and clothing", *Poetics* 34, 6: 319–333. Available at https://www.sciencedirect.com/science/article/pii/S0304422X06000428. Accessed February 2024.

Crawford K. (2021), *Atlas of AI*, Yale University Press, New Haven/London.

Didero R. and Conti G. (2022), "CAPABLE: Engineering, textile, and fashion Collaboration, for citizens' Awareness and Privacy Protection", in Montagna G. and Carvalho C., eds., *Human Factors for Apparel and Textile Engineering*, *Proceedings AHFE International Conference*, 24th-28th July, AHFE Open Access, vol 32: 39-45. DOI: http://doi.org/10.54941/ahfe1001536.

Felzmann H., Fosch-Villaronga E., Lutz C. *et al.* (2020), "Towards Transparency by Design for Artificial Intelligence", *Sci Eng Ethics,* 26: 3333-3361. DOI: https://doi.org/10.1007/s11948-020-00276-4.

Floridi L. (2022), *Etica dell'intelligenza artificiale. Sviluppi, opportunità, sfide*, Raffaello Cortina Editore, Milan.

Gibson W. (2010), *Zero History*. Tor, New York.

Holmquist L. E. (2017), "Intelligence on tap: Artificial intelligence as a new design material", *Interactions*, July-August 2017. DOI: https://doi.org/10.1145/308557.

Kieslich K., Starke C., Došenović P. *et al.* (2020), "Artificial Intelligence and Discrimination. How does the German public think about the discrimination potential of artificial intelligence?". Available at https://www.researchgate.net/publication/349883030_Artificial_Intelligence_and_Discrimination_How_does_the_German_public_think_about_the_discrimination_potential_of_artificial_intelligence. Accessed March 2024.

Kohnstamm J. (2012), "Opinion 3/2012 on developments in biometric technologies", *Article 29 data protection working party*.

Matković V. M. P. (2010), "The Power of Fashion: The Influence of Knitting Design on the Development of Knitting Technology", *TEXTILE*, 8, 2: 122-146. DOI: https://doi.org/10.2752/175183510X12791896965493.

McCarthy J., Minsky M., Rochester N. and Shannon C. E. (1955), "A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence". Available at http://raysolomonoff.com/dartmouth/boxa/dart564props.pdf. Accessed February 2024.

Pew Research Center (2019), *More Than Half of U.S. Adults Trust Law Enforcement to Use Facial Recognition Responsibly*. Available at https://www.pewinternet.org/wpcontent/uploads/sites/9/2019/09/09.05.19.facial_ recognition_FULLREPORT_update.pdf. Accesed on January 2024.

Quintarelli S. (2020), *Intelligenza Artificiale. Cos'è davvero, come funziona, che effetti avrà*, Bollati Boringhieri, Turin.

Roco M. C. (2016), *Handbook of Science and Technology Convergence*, Springer, New York.

Simon H. A. (1982), *The Sciences of the Artificial*, The MIT Press, Cambridge.

Verganti R., Vendraminelli L. and Iansiti M. (2020), "Innovation and design in the age of artificial intelligence", in *Journal of Product Innovation Management*, vol. 37, 3: 212–227. DOI: https://doi.org/10.1111/jpim.12523.

Wong R. Y. and Mulligan D. K. (2019), "Bringing Design to the Privacy Table: Broadening 'Design' in 'Privacy by Design' Through the Lens of HCI", *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*, 4th-9th May 2019, Association for Computing Machinery, New York, Paper 262, 1-17. DOI: https://doi.org/10.1145/3290605.3300492.

Yan Y. (2022), "Designer's perspective of digital knitting: from fashion design to wearable technology", *Proceedings of the 24th IFFTI Conference*, 5th-8th April 2022, Nottingham Trent University. Available at http://iffti.org/downloads/iffti-publication/annual-proceedings/ntu/365-377.pdf. Accessed January 2024.

Zuboff S. (2019), "Surveillance Capitalism and the Challenge of Collective Action", *New Labor Forum*, 28, 1: 10-29. DOI:https://doi.org/10.1177/ 1095796018819461.

Authors

Anna Anzani: Associate Professor at the Design Department of Politecnico di Milano. She works on the re-use of historical heritage, focusing on the conservation of beauty and its psychological and anthropological implications, the relationship between material and immaterial aspects of cultural heritage, and memory in creative and design terms, from an ecological and transdisciplinary perspective.

Valeria Bucchetti: Full Professor at the Design Department of Politecnico di Milano; she is Chair BSc + MSc Communication Design. She teaches Communication Design and Gender Culture in the Design Master Degree. She is member of the PhD Design board and she is member of the Centro di Ricerca interuniversitario Culture di Genere board. She won the Compasso d'Oro Design Award (1998). Her research field concerns the theoretical aspects of identity systems and their communicative components and gender identities in the communication design domain, in which she has developed basic and applied research projects.

Daniela Anna Calabi: Architect and Researcher with a Master's in Multimedia Communication, is currently an Associate Professor at the Department of Design at Politecnico di Milano.
She is a member of the research group in Communication Design, focusing on the articulation of Communication Design for the Territory (DCxT). Her primary research interests include design theory and visual cultures, with particular attention to perception and communication, the atmosphere, and the identity of places.
She extensively explores the fields of publishing and the communication of heritage, with educational and applied research perspectives.
She participates in international conferences and develops experimental communication design projects within the scope of applied research contracts. Additionally, she is an expert in Basic Design and has made significant contributions to foundational design education.

Elena Caratti: PhD and Associate Professor at the Department of Design, Politecnico di Milano. She teaches at the Bachelor's and Master's degree courses in Communication Design of the Design School and at the PhD School in Design, Politecnico di Milano. For years she has been researching in the field of design education and visual cultures, with a particular interest in editorial design reinterpreted through the translation paradigm. Author of the book *Rimediazioni gender sensitive* (FrancoAngeli, 2015), she was co-editor of the book *Design is translation* (FrancoAngeli, 2017), which received an honourable mention at the 25th edition of the Compasso d'Oro ADI.

Rachele Didero: She is a fashion designer specializing in tech textiles. During her studies in Milan, New York, and Tel Aviv, she developed and patented a textile that shields against facial recognition. Her ongoing research, as part of her PhD at Politecnico di Milano's Knit Lab and MIT Media Lab's Tangible Media Group, focuses on creating innovative products that are technologically advanced and ethically sound. Her work aims to address contemporary challenges that will influence the future. Central to her mission is the *Cap_able* project, which merges engineering, textile, and fashion to enhance public awareness and identity protection.

Davide Fassi: Full professor in design at Politecnico di Milano. He published *Temporary Urban Solutions* (2012) and *In the neighborhood* (2017). His research is about the relationship between space and service with a community centred approach. Awarded with XXV Compasso d'Oro in 2018 for the project *campUS – incubation and settings for social practices*, Ambrogino d'Oro (2022) and Seoul Design Award (2023) for Off Campus Nolo, a neighborhood living lab of the Politecnico di Milano. Coordinator of the Polimi Desis Lab a research lab on design for social innovation and sustainability and member of the DESIS network international coordination committee. Rector's delegate for cultural activities and public engagement.

Laura Galluzzo: PhD in Design, she is Associate Professor at the Design Department of Politecnico di Milano. She is operational manager of POLIMI DESIS Lab within the international DESIS Network (Design for Social Innovation and Sustainability). Her research focus is on participative projects of (public) Spaces and Services. She has a specific expertise in the co-design of spaces as activators of collaborative actions, community hub, incubators of social practices. She has been a researcher in various national and international research programmes on this topic. She works on the relationship between Spaces and Services (S+S) design with a focus on temporary interventions, domestic and urban transformations.

Martina Motta: PhD cum laude in Design, Assistant Professor at the Design Department of Politecnico di Milano. Faculty member at the School of Design of Politecnico di Milano, and in the FIT in Milan program of the Fashion Institute of Technology (NY). Her teaching and research activity on contemporary fashion have a particular focus on knitwear and textile design: on the convergence of traditional manual techniques with advanced technologies, on the evolution of digital representation of textile products, on the enhancement of sustainable design, processes and products within this specific industrial sector.

Elettra Panepinto: Communication Designer, graduated at the School of Design, Politecnico di Milano. She is especially interested in the social applications of design and the world of research.

Since June 2023, she has worked in Off-Campus San Vittore, participating in research activities with the Department of Design, Politecnico di Milano. Within this context, she is particularly involved in Storylab, a permanent participatory storytelling workshop for detainees. This experience informed her research thesis, focusing on humanitarian communication in the context of incarceration, surrounding the representation of detainees as subjects of humanitarian attention and delving into the themes of biopolitics and agency.

Francesca Piredda: PhD, Associate Professor at the Department of Design, Politecnico di Milano. Member of ImagisLab research group, collaborates with DESIS Network. Being committed to the transformative power of stories, she leads projects and educational activities on communication design, audiovisual language, digital media and the narratives. Being interested in action-research and participative design approaches, she experiments with participatory video and narrative-driven processes for co-design. In 2017 she received the XXV ADI Compasso D'Oro award. She's scientific director of the masters Brand Communication, Design the Digital Strategy, Art Direction & Copywriting at POLI.design, Politecnico di Milano.

Ada Piselli: Systemic therapist since 2008, she works as a private practitioner with individuals, couples and families. She is a trainer in psychotherapy at Centro Studi Eteropoiesi. During the last years, the willing systemic focus on context and the attitude toward transdisciplinarity materialize themselves in reflections about the complex relations between identities, memories and places. As a therapist, she is specifically interested in healing processes, and in how places can promote recovery from collective wounds. She published on these topics and she gave lectures about at the School of Design, Politecnico di Milano.

Silvia Pizzocaro: Full Professor of Industrial design at Politecnico di Milano. She holds a Master of Science in Architecture and a PhD in Industrial design. Her research activity is embedded in the Department of Design, section Design and cultures. Over the years she has worked at the intersection of product design theory, design research culture, and doctoral education in design. Her study interests include design theory and research methods for product design. She has written and edited a number of books, including *Introduzione agli studi sull'utente* (2015) and *Artefatti concreti. Temi di fondamento per il design di prodotto* (2016).

James Postell: Architect and Associate Professor of product design, School of Design, Politecnico di Milano and Professor Emeritus of the College of DAAP, University of Cincinnati. He has taught architecture, interior design and product design at: Texas Tech University, University of Cincinnati, DIS in Copenhagen, and Politecnico di Milano. His research focuses on the links between design, theory, and technology with emphasis placed on furniture, products, and interior design. He has designed many interior projects and furniture pieces and currently researches and writes on interiors, furniture, craftsmanship and materiality.

Virginia Tassinari: Her research focuses on how philosophy can contribute to the contemporary design research discourse. Previously a lecturer and researcher at Politecnico di Milano (IT) and LUCA School of Arts (BE), she is currently Assistant Professor at TU Delft (NL). She is a visiting scholar at Parsons, the New School of Design (USA), visiting lecturer at Université de Nîmes (FR) and design researcher at foresight and design studio Pantopicon (BE). Virginia is currently a member of the International Coordination Committee of DESIS Network, within which she is also co-initiator with Ezio Manzini of the DESIS Philosophy Talks, a series of discussions on design for social innovation & philosophy. She recently published *Designing in Dark Times. An Arendtian Lexicon* (Bloomsbury, 2020, with Eduardo Staszowski) (for which they won the Compasso d'Oro 2022 Design Prize) and *Re-framing the Politics of Design* (Public Space, 2022, with Liesbeth Huybrechts and Oswald Devisch).

Umberto Tolino: Associate professor and Designer, he conducts research and practice in the fields of Communication and Interaction Design. His works have been included in four ADI Compasso d'Oro Design Index and he was awarded a Compasso d'Oro honorable mention

(2018) and a Red Dot Design Award (2019). He has more than twenty years of teaching experience at the School of Design, Politecnico di Milano, holding lectures on digital communication and advanced visual design studios. Currently, he is Vice-Rector for Communication and Cultural events of Politecnico di Milano.

Francesco Vergani: PhD, Post-Doc Research Fellow at the Department of Design of the Politecnico di Milano. He is member of Polimi DESIS Lab where he collaborates in research activities focused on the reactivation of local communities in urban contexts such as *Vocabolario di Quartiere* (2019-ongoing), a situated vocabulary in the Nolo neighborhood (Milan), developed within the living lab *Off Campus Nolo*. He is currently Adjunct Professor at Politecnico di Milano.

Salvatore Zingale: Associate Professor at the Department of Design of Politecnico di Milano and teaches Design Semiotics at the School of Design. He is particularly interested in the cognitive and inventive processes of design activity and dialogicity in cultural interactions. On the relationship between design and alterity, he has edited *Design e alterità*. *Conoscere l'Altro, pensare il Possibile* (FrancoAngeli, 2022) and *Design meets Alterity. Case Studies, Project Experiences, Communication Criticism* (FrancoAngeli, 2024). He is author of the volume *Relazioni dialogiche. Un'indagine sulla comunicazione e la progettualità* (FrancoAngeli, 2023).

This volume focuses on the ethical challenges of design for public and social systems, attempting to clarify what it means to design *ethically* in a complex world and how it is possible to do so, within a multifaceted reality in which everything is interconnected and constantly changing. The first section of the book introduces some theoretical aspects, principles and values underlying ethical design. The second part is aimed at reflecting on the relationship between ethics and design from a phenomenological perspective. Ethics, in the philosophical sense of the term, pertains to the whole range of behaviors that individuals adopt to conduct their existence without causing damage to themselves or others, what challenges does design for public and social systems face in designing ethically? Can designers become real agents of social transformation? What kind of impact and effects do designers produce within the public and social system? How can we recognize those ethical design practices that bring about real structural change? What is the role of digital technologies? Our aim is to offer a series of critical reflections and concrete examples of the substantial effects of an ethical approach to design, with recognition of the value of otherness and the awareness of the interdependence between artifacts, individuals, societies, governments, institutions, and the planetary ecosystem.

FrancoAngeli
La passione per le conoscenze