

edited by

GIOVANNA PICCINNO

DUALISM MANIFESTO

/ DESIGN CHALLENGES FOR THE XXI CENTURY /

CONTRIBUTORS

Anna Barbara . Marco Barsottini . Alessandro Biamonti . Franco Bolelli . Andrea Branzi . Elisa C. Cattaneo
Raffaella Colombo . Michele De Lucchi . Barbara Di Prete . Giulia Gerosa . Andrea Granitzio . Markus Jatsch
Stavros Katsanevas . Pietro C. Marani . Stefano Mirti . Cristina Morbi . Vincenzo Napolano . Margherita Palli
Lorenzo Palmeri . Alessandro Papetti . Giovanna Piccinno . Quiet Ensemble . Medhat Shafik . Susan Yelavich
Bruno Zamborlin . Alice Zingales



DUALISM MANIFESTO

Design Challenges for the XXI Century

This open access book intends to present a speculative, emergent and often radical approach to designing that draws on **interdisciplinary research to explore the boundaries of design for contemporary and future spaces**, observing reality through the critical lens of opposing dualisms which, **precisely in their interval**, define the value of the incredible versatility of being able to design between **space and time, local and global, nature and artifice, science and art, technological and humanistic knowledge**. The work gathers also experimental teaching and learning results collected during the six-year coordination period of the Master of Science in *Interior and Spatial Design* at the Politecnico di Milano | School of Design – from 2016 to 2021 – which saw the Coordinator Board, together with colleagues and experts, **draw a parallel and alternative line of study of design**.

MASTER of SCIENCE in INTERIOR and SPATIAL DESIGN_ Coordinator Board:

Giovanna Piccinno, *Programme Board Coordinator* (2016/2021)

Davide Fassi, *Programme Board Secretary* (2016/17)

Giulia Gerosa, *Programme Board Secretary* (2017/2021)

Bardara Di Prete, *Programme Board Secretary* (2019/2021)



<https://www.theplan.it/politecnica-university-press/dualism-manifesto-design-challenges-for-the-xxi-century>

DESIGN& International Scientific Series

Design& is an international scientific books series focused on design, its intradisciplinary declination and contaminations with other disciplines.

International Scientific Committee:

Venanzio Arquilla - *Politecnico di Milano, Department of Design, Italy*

Suzie Attiwill - *RMIT, Melbourne, Australia*

Graeme Brooker - *Royal College of Art, London, UK*

Angus Campbell - *University of Johannesburg, South Africa*

Carla Cipolla - *Universidade Federal do Rio de Janeiro, Brazil*

Teresa Franqueira - *Universidade de Aveiro, Portugal*

Francesca Murialdo - *Middlesex University London, UK*

Francesca Piredda - *Politecnico di Milano, Department of Design, Italy*

Eduardo Staszowsky - *Parsons School of Design, New York, USA*

Zhu Xiaocun - *Tongji University, Shanghai, China*

Co-directors: Davide Fassi, Giovanna Piccinno

Politecnico di Milano - Department of Design

Giovanna Piccinno (*edited by*)

DUALISM MANIFESTO_ *Design challenges for the XXI Century*

Graphic design and layout: Alice Zingales

Editing: Alice Zingales

Sketches: Giovanna Piccinno

Photos: © Claudio Scaccini - *if not differently stated on the credits section*

Other photographs, renders, images, drawings and texts: © their authors

This work in *open access* is a scientific publication produced as part of the research activity of the Department of Design - Politecnico di Milano.
The text was subjected to the double peer review process

ISBN 978-88-916-5589-9

DOI 10.30448/UNI.916.55899

<https://doi.org/10.30448/UNI.916.55899>

Publishing Series POLITECNICA

© Copyright 2023 by Authors

Published by Maggioli Editore April 2023

Open Access Creative Commons license

CC BY-NC-ND 4.0 International Attribution - Noncommercial - No Derivative



Maggioli Editore is part of Maggioli S.p.A

ISO 9001: 2015 Certified Company

47822 Santarcangelo di Romagna (RN) • Via del Carpino, 8

Tel. 0541/628111 • Fax 0541/622595

www.maggiolieditore.it

e-mail: clienti.editore@maggioli.it

INDEX

#time #space #local #global #nature #artifice

Foreword

- # **Giovanna Piccinno** *Dualism Manifesto* 06
Event pills *Ouverture, Final Symposium and Workshops* 08

1 | TIME | SPACE

- Giovanna Piccinno** *Chronotopes design* 22
Focus on topic *Timespace pixels* 28
- 01 # **Alessandro Biamonti, Raffaella Colombo** *Learning from Franco* 36
> essay and comment to:
Franco Bolelli *Instant Future*
- 02 # **Andrea Branzi** *A new pedagogy* 44
- 03 # **Elisa C. Cattaneo, Giovanna Piccinno** *Neoprimitive modernity* 48
> essay and comment to:
Andrea Branzi *A new conception of urban planning*
- 04 # **Stefano Mirti** *A generative Chronotype* 56
- 05 # **Anna Barbara** *Time revolution of spaces in the Digital Era* 58
- 06 # **Pietro C. Marani** *Interior/Exterior Space* 64
> essay and comment to:
Alessandro Papetti *Impossible to define* 72
Medhat Shafik *Flashback as a memory* 74
- 07 # **Barbara Di Prete** *The chronotope of the contemporary spatial project* 76
- 08 # **Susan Yelavich** *East and West temporality* 86

2 | LOCAL | GLOBAL

- Giovanna Piccinno** *Geographies of the Earth* 90
- 01 # **Michele De Lucchi** *AMD Circle* *Earth stations. Future Sharing Architectures* 98
- 02 # **Markus Jatsch** *MSP with Cristina Morbi* *Climate Performance* 106
Focus on topic *Extraction Places_scapes Workshop* 114
- 03 # **Markus Jatsch** *MSP* *Performative time-space* 118
- 04 # **Margherita Palli** *Lectio magistralis* *Half Cuisine, half Theatre* 120
- 05 # **Alice C. J. Zingales** *On/offline urban scenarios* 124
- 06 # **Campari Italia** *In the Global scene* 134

3 | NATURE | ARTIFICE

Giovanna Piccinno _The Cyborg-Scape vision	142
01 # Stavros Katsanevas _Marco Barsottini_ <i>The Virgo gravitational wave detector</i>	154
> essay and comment to:	
# Vincenzo Napolano _The artistic spatial expression in Tomàs Saraceno's work	
02 # Cristina Morbi _Augmented Territories	164
> essay and comment to:	
# Bruno Zamborlin _Hypersurfaces	
03 # Alice C. J. Zingales _Soundscape interactive scenarios	174
> essay and comment to:	
# Quiet Ensemble _Natural Elements as spatial actors	
# Lorenzo Palmeri _Natural Sound and Technology	182
04 # Giulia Gerosa _Interiors in-between Nature and Artifice - Space and Sound	188
05 # Andrea Granitzio _Rooms to explore	198
# Focus on topic _Spatial Soundscape	204
# Thanks to all the students _1 st year MSc in Interior and Spatial Design Academic Years 2017-22	210

Giovanna Piccinno

DUALISM MANIFESTO

Design challenges for the XXI Century

This *open access book* intends to present a speculative, emergent and often radical approach to designing that draws on **interdisciplinary research to explore the boundaries of design for contemporary and future spaces**, observing reality through the critical lens of opposing dualisms which, **precisely in their interval**, define the value of the incredible versatility of being able to design between **space and time, local and global, nature and artifice, science and art, technological and humanistic knowledge**. The work gathers also experimental teaching and learning results collected during the six-year coordination period of the Master of Science in *Interior and Spatial Design* at the Politecnico di Milano | School of Design – from 2016 to 2021– which saw the Coordinator Board, together with colleagues and experts, **draw a parallel and alternative line of study of spatial design**.

It defines a working method for innovative training and research, which challenges the formal boundaries of Academia by including in its research/ educational process the organization of events, workshops, open calls, conferences, peer-to-peer comparisons, music, art, and full-immersion design actions, both in person and online.

Experts from the most diverse fields, like scientists, musicians, agronomists, philosophers, art theorists, entrepreneurs, set designers, physicists, artists and performers – together with master's students and professors, have confronted each other with the more varied and innovative practices and methods of meeting and exchanging perspectives to mature a creative process.

As the text index proposes, **each chapter introduces a different dualistic theme** [time/space; local/global; nature/artifice], embracing each the many and necessary viewpoints: from designing for the ecological improvement of the environment to using speculative design and art as tools to teaching and solving multipart problems, to exploring complex landscapes and cyborg environments. Taken together, the projects and visions presented in the various dualism, reflect a necessary shift in society towards more sustainable approaches and **the definition of a new taxonomy of contemporary design, which finds its reasons in today's delicate and urgent global conditions** and that reposition the world of design in a line of renewed responsibility, towards emergencies that cannot be postponed.

The numerous contributions organized in essays, abstracts, comments, speeches, focus on topics, and a large number of images relating to the various design experiences, define an incredibly rich ensemble of visions and opportunities created by seniors and juniors, in an authentic peer-to-peer effort to recognize and incoming opportunities, between the real and the virtual, the natural and the hyper-technological.

This text therefore wishes to highlight the effort required **to design the fundamental principles of value generation, growth and sustainability necessary to reach different geographies of the Earth,** thanks to new approaches to ecology in combination with new technologies, while **encouraging interdisciplinary collaborations.**

The skills of the spatial designer thus expand and integrate into the multi-scale passages of the project, defining an essential strategic function of the design-driven “direction” with a humanistic, polytechnic and interdisciplinary vision.

I want to thank all those who have believed in the innovative power of *design-thinking* and have contributed both to the various training opportunities and events proposed and to the content of this *open access* book. I also thank the Coordinator Board who accompanied, advised and supported me in the various strategies over the years.



2/

LOCAL

GLOBAL



Giovanna Piccinno

GEOGRAPHIES OF THE EARTH

Spatial design strategies for other Earth narratives

#context
#multiscalar
#extrapaces
#patterns

Local-global duality began to appear in scientific debate and on the media scene during the 1980s and became more established after the fall of the Berlin Wall in 1989. Since the 1990s it has defined a complex, multi-scalar economic and social dynamic, which is still evolving. Initially, the local-global relationship had a predominantly economic dimension. The dissolution of the communist world removed the physical and virtual barriers to international trade, commerce and finance. The ensuing internationalisation of the markets, also driven by the digitisation of economic and social exchanges, has led to the progressive confrontation of consumer lifestyles, which in some cases have become heavily standardised despite originally being profoundly diverse. The process of *globalisation* has thus led to cultural and social uprooting and the flattening of behaviours. In counterpoint, on an evolutionary level this has fuelled the gradual rediscovery of “*the local*”, and of the value (including the economic value) of the *diversity and uniqueness of knowledge* and its application in specific geo-economic contexts. “*Location*”, with its own stratifications, historical complexities, cultural traditions, countless legacies both artistic and imaginative, and with centuries-old technical knowledge – has become a real competitive resource on the global market and has triggered local development processes which leverage the typical and unique characteristics of the local networks.

With borders now more permeable (in some cases, they have crumbled entirely) and with the expansion in commerce and in the movement of capital, the circulation of people and ideas, the diffusion and internationalisation of information and the generalised raising of knowledge and technologies, the way is now open for an important and hitherto unprecedented, even ruthless confrontation between the local dimension and the global one. Between the *short-distance networks* of relations between people in the same local neighbourhood or between people in nearby communities, and their *long-distance* counterparts, namely the “*networks of circulation and cumulative reproduction of financial and transnational information capital through which a strategic control is exercised on the economy, society and culture*”.¹ In this sense, globalisation has forced – also in a positive sense – the local dimension to show its value, often driving it towards new strategic levels of planning.

In the knowledge economy and networked capitalism, in what is thus a multi-scalar context, the ability to forge inter-territorial relationships that go beyond the local physical proximity of cities, districts and regions is one of the main competitive advantages in place marketing. Increasingly, the wellbeing of different national communities now depends on the interactions between the medium-sized local territorial systems – of which

¹ Farrell, G. [et al.], (1999). *La competitività territoriale. Costruire una strategia di sviluppo territoriale alla luce dell'esperienza LEADER*, in *Innovazione in ambiente rurale*, v. 6, no. 1

those communities' economic, social and environmental fabric are made – and the global system they must draw on in order to communicate their values. Place marketing can thus help to define strategies which can be deployed to induce the people utilising these systems – residents, tourists, local or external businesses – to work together for their sustainable development in local-global multi-scalar terms.

To guide the decisions that underpin the development of a location, a strongly design-centred approach is necessary in order to create a system to express the potentials of the place, then use those potentials to develop strategies for growth that is coherent with the temporal aspect (durable, sustainable development) and also with the spatial aspect, so that the growth takes account of the new geographical dimension concerning the confrontation between areas and systems of different sizes.

In a famous lecture held in 1999 on “*Globalization and Indigenous Culture*”, the sociologist Roland Robertson used the conceptual word **glocal** (global + local), arguing that **glocalization** “*means the simultaneity – the co-presence – of both universalizing and particularizing tendencies*”.² “*Glocal*” refers to the phenomena, register, device, or information capable of resonating with the local and transferring to the global, and of being a system and place at the same time. Glocal is any event that responds to the particular and interconnects with the general.

The complex of these factors has therefore shifted the axis of reflection from the purely **economic and financial aspects** of globalisation to those more broadly **cultural**. This has led to a radical change of perspective at a conceptual, instrumental and normative level. The cultural element that was only unexpressed or to a great extent subordinate in the economic and financial scenario of globalisation has now become dominant, but has supported rather than supplanted the economic element traditionally linked to the principle of ‘interest’. This rediscovered element asserts the primacy of a complex of values linked to religion, language, myths, historical memory, landscapes and local heritage in general. Today, the debate is thus a lively one, and alternative models of development are now taking shape, mediating the economic and cultural aspects of the relationship between local and global. The interpretative and strategic capacities of the design-thinking approach, when applied in areas such as service design and the planning of complex, diverse environments, landscapes, spaces and their outfitting – even including the virtual spatial dimension – are now part of the process of developing multiscalar contemporary contexts, between local and global.

² Kumaravadivelu, B. (2008). *Cultural Globalization and Language Education*, Yale University Press, p. 45

In the immediate future, we will have to take account of a different evolution of globalisation at economic level (which will also influence the socio-cultural aspects). This will in all probability materialise in the form of **macro-regional multipoles**.

Indeed, from a macroeconomic perspective, the economist O'Sullivan in his recent book *"The Levelling: What's Next After Globalization"* (2019)³, argues that total world globalisation is already outdated and that we need to look towards the **emerging multipolar world**. *"This will be dominated by at least three large regions (perhaps four, depending on how India develops): America, the European Union, and a China-centric Asia. They will increasingly take different approaches to economic policy, liberty, warfare, technology, and society. Mid-sized countries like Russia, Britain, Australia, and Japan will struggle to find their place in the world. At the same time, new coalitions will emerge, such as a "Hanseatic League 2.0" of small, advanced states like those of Scandinavia and the Baltics."*⁴

Multipolarity is based on two fundamental aspects; first, the poles in the multipolar world must be significant in terms of economic, financial, and geopolitical power; secondly, the essence of multipolarity is not only that the poles are large and powerful but also that they can develop original and distinct ways of doing things.

NEW GEOGRAPHIES OF THE EARTH_EXTRASPACE

The geographer Franco Farinelli⁵ recently observed that Modernity has been a driving force behind a radical and structural positioning, with the functional transformation of the terrestrial globe into a flat map. This reduction (to a two-dimensional geo-political representation) has been useful in expressing, controlling and managing the political and physical aspects of nation states in Cartesian and numerical terms. As there is a relationship between the invisible and the visible, between the model we imagine and the one we actually have in front of us, the tabular simplification of the Modern gives us a simple, comprehensible representation with invented spatial hierarchies such as *"centre"* and *"periphery"*, which in the twentieth century were the prevailing models in the development of the centralised State: a real copy of the abstract model (map), which can discipline thought. Linear metric space was the defining standard of the twentieth century.

There is now an urgent need to **redraw the geography of the Earth**, starting with the planet itself and its solid dimension, and to restore it to its condition of globe. Globalisation produces precisely this, the need to return to the terrestrial sphere by dealing with the real physical world, not the abstract one of flat maps. The spherical surface of the terrestrial globe has no centre and no periphery, but it does have two poles. The very high risk now posed by the geopolitical and social model towards which we are moving is that it will shortly become multi-polar, as warned by the economist O'Sullivan.

³ O'Sullivan, M. (2019). *The Levelling: What's Next After Globalization*, PublicAffairs, New York

⁴ <https://www.economist.com/open-future/2019/06/28/globalisation-is-dead-and-we-need-to-invent-a-new-world-order>

⁵ Farinelli, F. (2009). *La crisi della ragione cartografica*, Einaudi, Turin

We thus need to reinvent our reference **model of the world** in order to really understand how it works – no longer according to the rules of Modernity, but in ways which are conditioned by a networked system that transcends all spatial and temporal limits.

As observed by the physicist Rovelli – in the elaboration of the relativistic conception – **the World and the Universe** can be understood as a **network of events** (Rovelli, 2017)⁶.

The very concept of **context** – historical, geo-political, physical, linguistic and so on – in the networked 4D scenario, transcends the sense of geo-localisation and space-time, as it can evade the local physical limits and tie itself to meanings influenced by the set of events and circumstances within which the project event takes place, and by which it appears to be influenced, between reality and virtual reality, space and cyberspace. To gain a broad multivision of the meaning of context, it may be helpful to think of the structural idea offered by the linguistic dimension of philosophy, which tells us that *a context is primarily everything that accompanies a text*. The *context* thus characterised is then divided into *linguistic context* and *extralinguistic context*. The *linguistic context* consists of the parts of the narrative that precede and follow a certain text; the *extralinguistic context* is the part of the world in which the text is produced. It includes the *time* when the text was produced; the *place* it was produced; the author that produced it; the *recipient* and also the *encyclopaedic knowledge* of both author and recipient, which each of them assumes is possessed by the other⁷.

It may be interesting to transpose those meanings in order to define an **“extraspace” context**, by linking the areas described above with the virtual, global dimension of the **new geography**, in order to focus on the planning of diverse **landscapes or contemporary contextual patterns**. Although the traditional literature on geographical phenomena persists in describing patterns of world migration or collective ecological risks within the confines of nation-states by analysing, for instance, the gradients of density or land-use categories which overlook many of the radically different morphologies and typologies currently emerging around the globe (Sarkis, 2011)⁸, **the geographical reality is controlled by vectors: “forces that intervene in the evolution, transformation and structure of landscapes, as well as in social, political and economic activity, forces in which the prediction is always relative, shifting and changing”**. From this point of view, we can say that *geography predicts a vectorised project that encloses different forces than that of prefigured reality*⁹ (Morales, 2003)⁹.

⁶ Rovelli, C. (2017). *L'ordine del tempo*, Adelphi Edizioni, Milan

⁷ Frigerio, A.; Raynaud, S. (2006). “Contesto”, in *Enciclopedia Filosofica*, vol. 3. Milan: Bompiani, 2006, page 2233

⁸ Professor of *Landscape Architecture and Urbanism in Muslim Societies*, Harvard University Graduate School of Design

⁹ Gausa, M. [et al.], coordination, Susanna Cros (2003). *Geography in: The Metapolis dictionary of advanced architecture: city, technology and society in the information age*, Actar, Barcelona

Nowadays, those forces are dense, strong, interconnected and sometimes conflictual, but in other cases collaborative, defining different sequences of perception, fruition, and development. The ability to read and interpret those vectors represents the various qualities of the spatial projects. Phenomena like the movement of migration, or the density of pollution, beyond the borders of nation-states define flows maps, made up of vectors that draw contemporary models, helping to map the problems, understand the complexity, and define design hypotheses. Software such as the GIS (Geographic Information System) easily allows the acquisition, recording, analysis, display and return of geo-referenced information. This enables big data to be mapped in an interrelated way, defining different patterns and matrices, freely selecting the parameters and their location and providing original interpretative models for the project.

INTERDISCIPLINARY STUDIES, GLOBAL ISSUES AND THE SPATIAL DESIGN APPROACH

The current generalised climatic-environmental and economic crisis, which has been accentuated and accelerated by the pandemic that began in 2020, has definitively highlighted what was already widely evident for capitalist economies: the **profound contradiction** in the twentieth-century model of economic development, which is essentially based on a system of production that revolves around continuous growth and the relative exponential consumption of non-renewable natural resources. There is clearly an urgent need for a change of course, and for the intervention of dominant economic models coordinated by the members of the European Union ¹⁰ and United Nations ¹¹, in order to radically modify the profitability frameworks that are now undermining the solidity of our ecological, social and political systems, and in doing so triggering deep social unease as well as huge discrepancies in the defence of human rights globally.

To succeed in pursuing at least some of these global issues and complex objectives, the EU has worked with global partners to encourage and strengthen international engagement on climate. The EU has been key in negotiating and upholding the landmark international agreements on the environment – the UN Climate Convention, the Kyoto Protocol and the Paris Agreement – and it continues to support the goals and aspirations they represent.

In December 2019, the European Commission announced the *European Green Deal* as the strategy through which to achieve EU climate neutrality by 2050. The Green Deal includes measures such as: investing in environmentally-friendly technologies, supporting innovation, helping the development of cleaner forms of transport and decarbonising the energy sector by making buildings more energy efficient, in order to progress towards a real energy transition and work internationally to improve standards around the world.

¹⁰ <https://www.consilium.europa.eu/it/policies/climate-change/>

¹¹ <https://www.un.org/en/climatechange>

¹² Piccinno, G. (2021). *A New Taxonomy for Spatial Design in the post-Anthropocene Era*, in: Camocini, B.; Vergani, F., *From Human-centered to More-than-human Design and beyond. Exploring the transition*, Franco Angeli, Milan, p. 91

¹³ Clément, G. (2014). *L'alternative ambiante*, Sens Et Tonka Ed.

¹⁴ Piccinno, G. (2020). *5 Spatial Design Tactics*, Maggioli-Design&, Arcangelo di Romagna
Piccinno, G. (2021). *A New Taxonomy for Spatial Design in the post-Anthropocene* (op. cit), p. 92

¹⁵ The *Epitome* is a carefully chosen combination, which although incomplete, can represent something wider.

¹⁶ Gausa, M. [et al.], coordination, Susanna Cros, (2003), *The Metapolis dictionary of advanced architecture: city, technology and society in the information age*, Actar, Barcelona

What is new about the EU's climate-neutrality goal and the Green Deal is that they require action from all sectors of the economy and also integrate climate and environmental considerations across all areas of EU policy. This is known as climate mainstreaming. The energy sector, as we know, is in particular need of major transformation. To achieve these goals, it is vital that EU citizens and stakeholders play a part. The EU Green Deal includes a European Climate Pact, the aim of which is to foster engagement and cooperation among practices, individuals, communities, and organisations, to encourage people to commit to concrete actions aimed at reducing their own greenhouse gas emissions. It is necessary **to trigger a shift of interests**, coinciding with a complete redefinition of the values held by the current main¹² economies; as Clément observed, **a movement of substitution** and not of violence, which presupposes slowness, progressiveness and the awareness of the masses (2014)¹³. In urban development and territorial and spatial research, we are now seeing an increasing number of new interdisciplinary studies (such as landscape ecological urbanism or post-metropolitan studies), which are attempting to respond to the complexity of global issues like the collective environmental risk, world migration, the cosmopolis vision and diffuse urban-suburban-rural relational aspects. Problems that were in the past generally confined to the domains of engineering, ecology, economy, geography, architecture or regional planning are now looking for different answers and expressions, through the agile spatial design approach¹⁴, **moving towards a multidisciplinary-interdisciplinary and multiscalar dimension**.

In this evolving process, designers are becoming increasingly engaged in addressing and transforming larger contexts and in making them more legible and expressive, by adopting a wide range of technical and formal possibilities to resolve these geographical aspects, which encompass very different scales of spatial planning, from the very large to the very small. The practice of design can cover a multitude of scales – including district projects, the reform of neglected or developing parts of urban areas and cities, the design of neighbourhoods, the connecting landscape, interstitial urbanism, spatial devices, homes and the objects found in them as well as the informational relationship between them – linking global and local.

MULTISCALAR EPITOMES

In this geographical, local-global, multipolar and multifaceted reality, today's spatial projects thus become **multiscalar phenomena**: a kind of **epitome**¹⁵. As an epitome is a concentration of its fundamental dynamics and a transfer, a movement in synergy with the place, it is also capable of causing a scalar jump towards other scenarios beyond its edges (Gausa, 2003)¹⁶. Urban spaces and complex landscapes are an obvious manifestation of such processes. Multiscalar epitomes are spaces of mixed formations, structural networks, interstitial landscapes and in-between spaces.

Today, the guidelines for large projects must respond to the question of complex landscapes and spaces (neglected, residual, hyper-built, mining and so on) by seeking a new idea of space that combines the smallest (spatial design and equipment) with the infinitely large (planetary geographies), moving towards different project ethics and an interpretative rethinking of these complex physical and social spaces. Landscapes of migration, extraction and abandoned or overused spaces are, among other things, mirrors of the controversial processes of planetary urbanisation, often linked to social and environmental exploitation. Consequently, on the largest scale, we need to explore a different vision of the spatial project by modifying our design tools **to activate design strategies and construct other narratives for the Earth** (Piccinno, 2021) ¹⁷.

PERISCOPE_SPATIAL DESIGN INTERNATIONAL RESEARCH HUB

Due to these urgent and diverse ethical and global conditions, the PERISCOPE design research, which I have undertaken in recent years at the *Polimi School of Design_MSc in Interior and Spatial Design*, on an international platform, has had to tackle the challenge of identifying a new taxonomy of contemporary spatial design, in order to lead the 'world of the project' in a new direction, oriented towards humanitarian and ecological emergencies, to trace **new geographies of the Earth and to run new, sustainable 'landscapes'**.

• Earth station. Many hands

Michele De Lucchi presented his research on Earth Station at **Periscope | Ouverture_Next step: stop - 2019**. Many Hands - Amdl Circle, a new type of building designed to facilitate and promote encounters and cultural exchange, and to foster productive human relations. 'Many Hands Earth Stations' are destined for those areas of the planet whose particular climatic conditions have stimulated local craftsmanship with a strong identity, which continues to flourish even today, despite the expansion of the global economy. They are large buildings, crafted by many hands and people working together, using primordial techniques. Because even today, humankind can construct its most representative symbols by hand, without using any machinery, automation or technology for moulding, transport or assembly. This is a concrete answer to sustainability: not only are these buildings made from natural materials and built according to natural principles, they can also be repaired and transformed at any time.

• Climate performance

Climate change is real. The Earth is heating up, causing thousands of environmental refugees. By 2050, there will be more than 143 million.

¹⁷ Piccinno, G. (2021). *A New Taxonomy for Spatial Design in the post-Anthropocene Era*, in: Camocini, B.; Vergani, F., *From Human-centered to More-than-human Design and beyond. Exploring the transition*, Franco Angeli, Milan



The Interdisciplinary and International Workshops **Periscope | Climate Performance 2017–2018**, led by Markus Jatsch (MSP Studio) and Cristina Morbi, attempted to communicate the performative aspects of climate change through the impact of time on a public space design installation within the urban context of Milan. A landscape is understood as an artificial environment designed and created by man. This understanding is a crucial foundation for tackling climate change.

• **Extraction Places_scapes**

The Interdisciplinary and International Workshop **Periscope | Extractions Places_scapes_2020**, led by Camillo Boano (UCL) and Alexandros Tsamis (Case mit), with Elisa Cattaneo, looked at extraction places as an opportunity to redeem these spaces of natural and also human exploitation.

Despite their key role, extraction places are fragile and precarious. Regardless of the size of a settlement or its legal definition, if it is part of the extractive economy it is usually considered a “field”, a temporary life centre that forms part of the industry and overall extraction infrastructure. The three main fragilities of these spaces are: morphological/spatial, environmental/ecological, and social. Starting from this context of weakness, from the “differential” place it is necessary to establish a new open process by defining and reworking the apparent territorial, social and political weaknesses into new potential and new types of resources.

This generates new geographies ranging from the infinitely large to the infinitely small, overcoming the pure geographical borders in favour of a new system of coordinates and parameters: a new geography of possibilities.



Giovanna Piccinno presenting the *Periscope_Spatial Design International Research hub* research approach and methodology during the *Ouverture 2019–20* event *Periscope*, Politecnico di Milano, MSc. in *Interior and Spatial Design*.

**All the projects shown in this book have been developed
by the Politecnico di Milano Master's Degree students in
Interior and Spatial Design, from 2017 to 2022.**

Thanks to:

ACADEMIC YEAR 2017-18

Addesso Giuseppe, Al Chosmpan Katia, Albayrak Yasemin, Amadeo Maria Giovanna, Aquilani Silvia, Avanzi Sarah, Averno Gabriella, Bertani Alessandro Andrea, Biancotti Greta, Bonaventura Giorgia, Boromello Giada, Brambilla Gaia, Camera Veronica, Cao Boyue, Capasso Annalisa, Capitani Giulio, Cappellacci Eleonora, Capra Elena, Castegna Matteo, Castelnovo Noemi, Cesana Alessandra, Chaker Yara, Chen Huimin, Chen Zirog, Cimenti Giulia, Cipolla Marta, Ciravolo Gabriele, Contini Giulia, Cutrone Viola, Da Prada Filippo, D'Amico Tiziana, Das Aradhana, De Angelis Emanuela, De Masi Valeria, Dewanti Nabilla, Di Lorenzo Anastasia, Di Meglio Alessia, Di Pace Sara, Di Simone Martina, Dondi Luca, Dosh Aseel Sameer Khamees, Ersan Derya, Fazio Alessandra, Feng Zhiwen, Fontana Stefania, Gaggiato Giorgia, Georgieva Siyka, Giani Camilla, Giurfa Giuseppe Francesco, Gramazio Roberta, Gulienetti Greta, Guo Ce, Guo Kaiyu, Hami Bahar, He Yun, Ivkovic Tijana, Jahangiri Mahnaz, Jiaqi Bao, Kopanja Maja, Kuyumcu Ilgin, Laghi Maria Elena, Lamenta Stefano, Li Xin, Locatelli Camilla, Lombardo Vincenzo, Lorefice Alessandro, Lucidi Michela, Lukic Jana, Malatesta Beatrice, Maranov Roman, Mazzola Ilaria, Mickute Kristina, Moggi Arianna, Monna Maria, Montesi Alessandro, Morassutti Virginia, Motta Viviana, Neri Emma, Nespoli Martina, Nguyen Ngoc Thanh Truc, Odoli Ilaria, Ou Yanlan, Patrianagara Joddy, Pawar Kanika, Pei Xuan, Pernice Valeria, Peron Simonetta, Pessina Marina, Pezzuto Giulia, Picchi Virginia, Pirola Angelica, Pirovano Serena, Polvara Laura, Puccini Ilaria, Quaini Federico, Ragazzi Matteo, Razzini Giulia, Riolo Valentina, Ripamonti Francesca, Rota Tullio, Rueda Sergio, Sanfilippo Simona, Scalabrino Martino, Spicone Maria Francesca, Squillacioti Ludovica, Stanga Davide, Stevanovic Jovana, Tan Yawen, Tong Zhao, Torabzadeh Elnaz, Traverso Susan, Visentini Stefania, Volpi Daniel, Wang Jingxuan, Wang Siyi, Wang Xinrui, Wang Yuanchao, Xhemalaj Nelsi, Yan Jingwei, Yarahmad Dehnavi Parivash, Ye Yiyun, Yuchen Xi, Yueming Long, Zavettieri Carmen, Zhang Junrong, Zhang Junrui, Zhao Yuanxing, Zhou Kang, Zhu Jiaqi, Zulato Carola.

ACADEMIC YEAR 2018-19

Alvarez Garcia Maria Camila, Amiri Elnaz, Ando Megumu, Argento Federico, Armellino Luca, Aslan Ahmet, Barrile Mattia, Barros De Melo Amanda, Beglarian Inessa, Beghi Antonella, Ben Ayed Syrine, Berardo Sara, Bergami Giulia, Bettinelli Giovanni, Bhat Ramanath Narayan, Biffi Benedetta, Bonadei Giorgio, Borrello Federica, Brambilla Elena, Brena Cristina, Brusamolin Erica, Brusoni Valerio, Calicchia Camilla, Cambaz Berilsu, Cao Boyue, Carioni Claudia, Carlone Francesca, Carugati Laura, Catellacci Flora, Chandwani Piyush Suresh, Chang Ting-Chun, Chen Chuyi, Cheng Ming, Chigvinadze Mariam, Chmet Nicole, Cinelli Elisa, Cipolla Marta, Cisotto Daniela, Civetta Alessia, Cossali Francesca, Crosara Gustin Carneiro Dandara, Cui Yongmei, Dalle Pezze Alice, Dalmonte Sofia, De Danieli Mattia, De Marchi Dafne, Deng Xin, Di Guardo Alice, Donvito Ludovica Maria Giulia, Doustdar Sangari Termeh, Duarte Baron Maria Natalia, Dziedzic Anna Aleksandra, Escude' Andrea, Fagiani Filippo, Fan Yujie, Farahmand Negin, Feng Zhiwen, Filippini Alessia, Finotto Maria Beatrice, Fortini Elena, Ge Jingyi, Gelmi Martina, Gennari Luca, Golfieri Giulia, Gorio Martina, Gorla Valentina, Gramazio Roberta, Gravino Roberta, Grigis Erika, Groppi Mariasole, Guerini Deborah, Han Yue, Hernandez Aguirre Angelica Maria, Hou Hua, Houshmand Setareh, Hu Ran, Iorio Gnisci Antonietta, Ivanova Ekaterina, Jakupi Fleta, Janghorban Pegah, Jayaprakash Mohan, Kotwis Aleksandra, Kucuker Aysu, Kundem Aslinur, Lazzari Anna Flavia, Lin Tiancheng, Lonardi Alice, Long Yueming, Longagnani Giorgia, Lorefice Alessandro, Magarelli Mauro,

Mahmoodzadeh Sahar, Malakootimanesh Saeed, Maramotti Maria, Marchi Anna, Martinovic Nina, Melli Silvia, Merciai Eleonora, Michael Qashqaei Samane, Mikhail Reejy Atef Abdelatty, Mirashi Gilserena, Moridian Atin, Motta Viviana, Nazarenko Olga, Nguyen Ngoc Thanh Truc, Novaira Maria Emilia, Odoli Ilaria, Omodei Guendalina, Ortuso Veronica, Ossama Mohamed Rashad Elsabbagh Gannah, Otarod Milad, Páez Cataño Giset Paola, Palazzolo Lorena, Paltseva Anastasia, Parolini Martina, Pelizza Simone, Pellegrino Althea, Peng Shan, Peri Mattia, Predonzan Chiara, Pulvirenti Giordana Lucia, Qodratnama Hourieh, Quattrini Giulia, Quocchini Sabina Elena, Riina Elena, Rodde Sophie, Ronchi Elena, Salcuni Simone, Salot Elena, Sangermani Chiara, Setoguchi Erick Katsumi, Shelevaya Anisiya, Sniegowski Wojciech, Strianese Gianna Maria, Sun Li, Suwantawat Pidsinee, Tong Yu, Tonoli Elisabetta, Turati Giulia, Valassina Sara, Vasile Valentina Maria, Vukasinovic Sladana, Wang Anqi, Wang Qiaoyi, Wang Xinyi, Waszkiewicz Joanna Maria, Xun Ran, Xue Yuan, Yang Jinnuo, Yang Shuai, Yarahmadi Dehnavi Parivash, Yu Cheng, Zanotti Pamela, Zeni Chiara, Zhang Da Zheng, Zhang Zedong, Zhao Tong, Zhou Kang, Zhou Huizi, Zhou Hanxiang, Zhou Yaxian, Zhou Yingying, Zhu Rongzhen, Zhu Lin.

ACADEMIC YEAR 2019-20

Albano Annunziata, Almogabar Ruiz Angélica Sarai, Alpago Eleonora, Antonelli Francesco, Aran Cansu, Ashraf Ali Reehanul Karim, Astolfi Matteo, Bagnacani Marta, Bai Xiaoman, Bakar Ece, Barilli Sara, Beglarian Inessa, Beltrami Batista Giulia, Bergonzini Gian Marco, Beri Elena, Bonanomi Filippo, Busatta Susanna, Caputo Marika, Cartagena Sevillano Maria Antonia, Castiglioni Martina, Cattani Carlo Leone, Cerini Andrea, Chai Min Li, Ciprian Alessandro, Combi Chiara, Comini Elisabetta, Crusco Daniele, De Pace Pierluigi Angelo, Decio Margherita, Di Fonzo Chiara, Di Luciano Giulia, Dicheva Ivanka Yordanova, Dilmen Tugba, Duan Shuang, Escobar Arango Valeria, Eugeni Marco, Fiorentini Ilaria, Firouzbakhsh Armin, Focarazzo Luca, Fregoni Martina, Ganci Miriam, Gardoni Alessia, Girola Francesca, Giussani Luca, Granillo Maria Dolores, Huang Yidan, Husaru Alexandra, Ikutake Ken, Ilic Sofija, Intravaia Davide, Ippolito Mariangela, Jayaprakash Mohan, Jin Xin, Karagozoglu Idil, Karol Cagla Irem, Kim Hyo Won, Lakdawala Masoom Bhasit, Lamperti Francesco, Lazzarotto Elisa, Leone Giorgia, Li Xiang, Li Yanxin, Lian Weichao, Lin Tiancheng, Lozzi Luca, Maggioni Francesca, Mahmoodzadeh Sahar, Mahmoud Nasr, Shuaib Sodos, Maia Francesco, Malakootimanesh Saeed, Martic Ksenija, Masini Nicolò, Mauri Giulia, Melano Letizia, Melioli Lucia Cecilia, Melloni Alessandro, Meneghello Arianna, Micheli Arianna, Miranda Catalan Andrea María, Misagh Taheri Mohadeseh, Mittal Aditi, Moioli Federica, Morabito Rosa Angela, Morosato Sonia, Mudgal Shreya, Nabizadeh Elmira, Nalcaci Mevce, Nguyen Ngoc Tho, Oldani Ilaria, Ostolaza Udondo Itziar, Otarod Milad, Padmiyani Anindita Kharizma, Panteleeva Daria, Pavicevic Danica, Pérez Castro Daniela, Petersen Lotta Luise, Pigozzi Ilaria, Pirovano Cristina, Poli Asia, Pouri Mahsa, Prepiaková Kristína, Pucciani Francesco, Putri Haritsya, Ragusa Gabriele, Rajavel Pavithra, Ralli Elisabetta, Ratti Lucia, Rebecchi Sara, Riabenkova Mariia, Righini Diana, Rocca Licia, Romero Muñoz Natalia, Rossi Valeria, Rossini Ferreira Zanatta Túlio, Santambrogio, rianna, Scarselli Dario, Silva Maddalena, Silvestrini Margot, Spinelli Elena, Sturlese Mirco, Suriyaprakash Sobhana, Tesconi Giulia, Trojsi Maddalena Flavia, Urazbayeva Aigherim, Usacheva Elizaveta, Vaetisi Emanuel Catalin, Valori Camilla, Volpato Eleonora, Volpe Chiara, Wang Yuting, Xiong Xiaomei, Xu Nuo, Xue Yuan, Yan Yudi, Yang Shuai, Ye Qianqian, Zambotti Sara, Zeng Wenjie, Zhang Da Zheng, Zhang Yi, Zheng Weiqin, Zhou Xu, Zhou Zi Yin, Zou Xinhe.

ACADEMIC YEAR 2020-21

Al-Masri Rama, Albanese Anna, Alfaro Fregoso Gabriel, Amati Alessandra, Ateeq Shayan, Atzeni Andrea, Babayeva Gunay, Baharlouei Elena, Barbaglia Serena, Bassi Irene, Belotti Michele, Berumen Borrego Ricardo, Biginato Greta, Boccucci Margherita, Bonopera Elisa, Brandi Davide, Bressan Lorenzo, Bucchi Serena, Cali Ottavia, Campi Alessandra, Caronni Federica, Caterino Marina, Cavasio Chiara, Cerruti Alessia, Chen Zixi, Chen Nan, Chiofalo Ilaria, Colombo Anna Maria, Corino Chiara, Dai Zhuoan, Dal Col Silvia, Del Prato Carlotta, Di Gamberardino Isabella, Dino Federica, Donini Gaia, Feng Tianxin, Fugazza Francesca, Galbiati Francesca, Galluzzi Marika, Gao Yuan, Gao Shengzhi, Gao Tanhao, Gao Yunchuan, Gomes Grosso Isadora, Grazzini Luna Maria, Grossi Lucilla, Gu Ziwei, Guarnieri Federica, Hou Xiaodi, Huang Dianhui, Huang Mengyao, Iotti Matteo, Ismail Dima, Ji Eryu, Jiang Jinhua, Karadsheh Sima Khaldoon Salameh, Karountzou Iro Maria, Kong Lin, Laporta Martina, Lestari Intan Sinta, Li Yanqing, Li Yue, Liu Chengyao, Liu Yiwen, Liu Fulin, Liu Xinyu, Liu Yeran, Lombardi Debora, Londoño Cortés Juana Margarita, Luo Chenmin, Maggioni Eleonora, Magli Lucia Daniella, Marongiu Emma, Mateus Gutiérrez Viviana Patricia, Mathisekar Preethisakana, Melioli Lucia Cecilia, Mondatore Giulia, Monterisi Roberta, Montrasio Ilaria, Mostafaei Amirreza, Nakisci Ece, Nizam Lina Irem, Ozcoban Nazli Can, Ozmen Inci, Paramita Dhyani, Passini Secchin Ludmila, Passoni Luca, Patru George Narcis, Pellegrinelli Stefano, Pellegrino Rossella, Perego Caterina, Pescatori Andrea, Petrilli Laura, Pham Minh Chau, Piantedosi Arianna, Piccirillo Manuela, Pieroni Nicolò, Polidoro Angelica, Qian Jinyu, Ranieri Giulia Ricchioni Carla Andreja, Sacchi Giorgia, Sasanian Avishan, Scanavino Elena, Schiavone Carlotta, Schumacher Henriquez Javiera Ignacia, Selim Selim Magdy, Sesti Marta, Sgouros Stavros, Simonetti Asia, Soppelsa Alice, Stama Daniele, Subburaj Nandha Kumar, Sun Yihao, Süzen Özge, Tacchini Michela, Tardi Valentina, Temeroli Giacomo, Tian Yuan, Tolotti Noemi, Tong Martina, Tsilivis Konstantinos, Vergni Francesco, Vespa Ilaria, Villa Annamaria, Wang Ce, Wang Delin, Wei Xuemin, Wei Lin, Wu Huanhuan, Wu Geyu, Wu Wenqi, Xu Wenxuan, Yang Xuefei, Ying Yi Long, Yu Peishuang, Zancan Silvia, Zenitagoya Hernández Claudia Berenice, Zhakenova Aigerim, Zhang Mojin, Zhao Shuting, Zhou Tian, Zhu Jing, Zin Giorgia, Zolfaghari Kimia.

ACADEMIC YEAR 2021-22

Abbiati Luci, Abdelmalek Paula, Adriano Maddalena, Agnello Matilde, Ajaysimha Lakshmi, Aksentijevic Marko, Akyazici Berna, Alberti Eleonora, Allioli Ilaria, Almomatten Zainab, Alocarni Alessandra, Arrigoni Elisa, affico Erika, Bains Mannat, Basile Adriana, Baù Alberto, Betekhtina Ekaterina, Biancardi Alice, Bivona Francesco, Borney Martina, Bottini Guia, Brambilla Mattia, Burga Castro Giuliana Alejandra, Cai Yuyao, Calcagni Michelangelo, Campitelli Giovanni, Cangelosi Cecilia, Cao Lin, Carati Naomi, Carniel Arianna, Cavallier Andrea, Chen Ziyin, Cheng Xinyi, Chighine Maira, Christie Devira, Ciceri Francesco, Ciliberti Elisa, Cipolla Elisa, Colli Giulia, Costa Martina, Curti Elena, Deng Qingyuan, Drakonaki Angeliki, Ergin Ezgi Deniz, Fabbrici Caterina, Fang Shuyi, Fang Tingqiu, Ferrari Federica Andrea, Foresti Annalisa, Galloni Viviana, Garagiola Stefano, Gasparri Alice, Gonzalez Montaña Alejandra, Huang Zhiwei, Jiang Nan, Kalachev Krastyo, Kankaria Shreya, Kavuzlu Izel, Kazemi Mahafarid, Khazaeli Pegah, Kochhar Mehar Kaur, Kodijat Kittan Ramadira Eimir, Ladino Yanez Camila Vanessa, Lazar Bianca Maria, Li Xiayi, Li Yan, Li Yue, Lin Yu-Hsuan, Liu Jilian, Loggia Giacomo, Longoni Elisa, Luo Xiaoqi, Mai Wenjun, Malagnini Valentina, Marani Camilla, Martelli Laura, Mastrorocco Miriana, Mazzetti Giorgia, Messaggio Tuyu, Milani Francesca, Misani Sofia, Molteni Ilaria, Morgante Valerio, Murali Neha, Muzzolon Sara, Nazarova Elena, Paciolla Maria Altomare, Pagliaro Alessandro, Pan Runrun, Panganiban Kaiserin Alen, Patavino Natalia, Patti Pietro, Perotti Asia Nicoletta, Pezzetti Chiara, Piantanida Chiara, Pin Leonardo Giovanni, Ponzo Antonino, Quan Yijie, Raju Rojer Jeevan, Rao Shunyu, Regalin Ludovica, Romanin Vittoria, Rossi Fabio, Roversi Francesco, Russo Andrea Ignazio, Saglam Oyku, Sandy Owei Kurnia, Sciabica Giuseppe, Segala Camilla, Sena Francesca, Senni Giulia, Serra Navas Martha Andreina, Simone Alessia, Solodovnikova Ekaterina, Steffenoni Valentina, Tagliani Giulia, Terzi Arianna, Tomasi Irene, Tonoletti Grazia, Torreggiani Emma, Toy Nilüfer, Tretter Lilli, Tsao Li-Wen, Ubertosi Sara, Urli Francesca, Uscategui Alvarez Luisa Fernanda, Valle Diego, Veronese Ilaria, Vibiana Valenzia Natasha, Vidoni Francesca, Volonte' Serena, Wang Xuanfang, Wen Yuhuan, Xuan Yijia, Zeng Xiaowei, Zhang Jing, Zhang Ming, Zhong Jiawen, Zhou Zitong, Zhu Huimin, Zhu Yuxuan.



