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Delft 10-11 October

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Conference
Program

TUESDAY 10-10-2023

All schedule indicates local time in Delft, NL (UTC/GMT +2 hours)

	09:15 - 09:30	Welcome and Presentation
panel #1 Revisited Terms	09:30 - 11:00	Faculteit Bouwkunde TU Delft Berlagezaal 1
Elisa Monaci Università Iuav di Venezia, Italy	09:35	Kitsch. Learning from Ordinary Dreams of Architecture Critical Spatial Practices
Francesca Gotti Politecnico di Milano, Italy	09:50	Inhabiting an Ever-changing Term
Jana Culek Delft University of Technology, Netherlands University of Rijeka, Croatia	10:05	(Re)Defining Utopia. The Changing Concept of an Ideal World
Carla Molinari (1) and Marco Spada (2) (1) Anglia Ruskin University, United Kingdom (2) University of Suffolk, United Kingdom	10:20	Past and Future of Townscape. For a Humane Urbanism (*)
Session Chair: Marcos Pantaleón Universidad Politécnica de Madrid, Spain	10:35 - 11:00	Discussion
Welcome by BK Dean Dick van Gameren	11:00	Berlagezaal 2
Coffee Break	11:00 - 11:30	Berlagezaal 2
panel #2 Modern Genealogies	11:30 - 13:00	Berlagezaal 1
J. Igor Fardin and Richard Lee Peragine Politecnico di Torino, Italy	11:35	The promise(s) of sustainability
Cássio Carvalho and Alexandra Alegre Universidade de Lisboa, Portugal	11:50	Visions on Democratic Architecture
Federico Costa Universidade Estadual de Campinas & Fundação de Amparo à Pesquisa do Estado de São Paulo, Brazil	12:05	Nostalgia for Backwardness. Investigating the Persistent Influence of Modernity on Brazilian Contemporary Architecture
Öykü Şimşek Istanbul Technical University, Turkey	12:20	Vulnerable architecture as a/n (im)material assemblage
Session Chair: Heidi Sohn Delft University of Technology, Netherlands	12:35 - 13:00	Discussion
Lunch Break	13:00 - 14:00	Berlagezaal 2
panel #3 Situated Terms	14:00 - 16:00	Berlagezaal 1
Mohammad Sayed Ahmad (1) & Munia Hweidi (2) (1) Tohoku University, Japan (2) Sophia University, Japan	14:05	Space, Makan, Kūkan. Phenomenology of Space through Etymology
Khevna Modi CEPT University, India Carnegie Mellon University, USA	14:20	Word, Associations, and Worldviews. A case of pol Architecture of Ahmedabad (*)
Marine Zorea Kyoto Institute of Technology, Japan Bezalel Academy of Art and Design, Israel	14:35	Speaking of Collective Dining. The Spatial, Social and Semiotic Realities of the Kibbutz Dining Room
Lola Lozano Architectural Association, UK	14:50	Redistribution: Domestic space and Land Sharing in Mexico City's urban centre
Hanxi Wang Cornell University, USA University College London, UK	15:05	HOME-steading. Subversions, Reversions, and Divisions of the Moral Right to Space

Session Chair: Janina Gosseye Delft University of Technology, Netherlands	15:20 - 16:00	Discussion
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panel #4 Expanded Meanings	16:30 - 18:30	Berlagezaal 1
Clarissa Duarte and Mariana Magalhães Costa Université Jean Jaurès (UT2J), France	16:35	From sustainable development to sustainable (urban) engagement: The evolution of a concept
Haitam Daoudi Universidad Politécnica de Madrid, Spain	16:50	A relational approach to performance. Composition of meaning through Price and Ábalos
Grayson Bailey Leibniz Universität Hannover, Germany Association for the Promotion of Cultural Practice in Berlin, Germany	17:05	Architecture / architectural
Zeynep Soysal Atılım University, Turkey	17:20	Platform: as an Architectural Ecotone Transtemporal
Maria Kouvari and Regine Hess ETH Zurich, Switzerland	17:35	Unlocking Time in the Architectural Discourse
Session Chair: Alejandro Campos Delft University of Technology, Netherlands	17:50 - 18:30	Discussion
Dinner	19:00 - 21:30	Huszár, Delft

(*) presenting remotely

(**) by express desire of the author the full article is not included in these digital minutes

WEDNESDAY 11·10·2023

All schedule indicates local time in Delft, NL (UTC/GMT +2 hours)

panel #5 Projective Language	09:00 - 11:00	Berlagezaal 1
Cathelijne Nuijsink Massachusetts Institute of Technology, USA	09:05	Redefining Architecture from an Undecidable 'Anybody'. The Anybody Conference in Buenos Aires, 1996 (**)
Caterina Padoa Schioppa Sapienza University of Rome, Italy	09:20	Composting Death. Towards a Body Sublimation
Federico Broggin and Annalisa Metta University of RomaTre, Italy	09:35	Mundus. Designing landscape as wholeness, thickness, and fertility
Silvia Calderoni CIRSDe, Interdisciplinary Centre for Research and Studies on Women and Gender, Italy	09:50	Architecture, transfeminism, queerness: reimagining the urban space
Marco Spada (1) and Carla Molinari (2) (1) University of Suffolk, United Kingdom (2) Anglia Ruskin University, United Kingdom	10:05	Industrial Pastoralism. Post-productive arcadias in machine-modified landscapes
Session Chair: Mariana Wilderom Universidade de São Paulo, Brazil	10:20 - 11:00	Discussion
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Keynote Lecture Albena Yaneva	11:30 - 12:30	Berlagezaal 1 Don't Fly, Don't Jump: Critical Proximity in Architectural Research
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Xuerui Wang Tongji University, China	13:35	The Term "Architectural Art" in the 1950s Chinese Architectural Theory. A Semantic Transplantation (*)
Miho Nakagawa University of East London, United Kingdom	13:50	Analysing English translation of ma interpretations between the 1960s and 80s (**)
Mustapha El Moussaoui Free University of Bolzano, Italy	14:05	Going Back Home/House. Unravelling Linguistic and Existential Differences
Marcela Aragüez IE University, Spain	14:20	From Kankyō to Environment to Enbairamento. A Mutating Concept Between Intermedia Art and Architecture in Post-War Japan
Ye Chen Nagoya Institute of Technology, Japan	14:35	Comparison of Jiàngòu and Kekkō. Differences in Terminology Translations of Tectonic Between China and Japan in <i>Studies in Tectonic Culture</i>
Session Chair: Marcos L. Rosa Universidade de São Paulo, Brazil	14:50 - 15:30	Discussion
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05 Papers

Mundus

Designing landscape as wholeness, thickness, and fertility

Broggini, Federico¹; Metta, Annalisa²

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Abstract

Plutarch recounted that the founding act of Rome consisted of digging a pit into the ground, where people, coming from nearby sites, were asked to put something good, according to nature, and something beautiful, according to culture: each one threw a handful of their homeland soil. The pit's name was *mundus*, the Latin word for world. It even meant sky, in accordance with Cato and Pliny the Elder. Thus, the Urbe foundation coincided with acknowledging soil as a *mundus*, intimately linked with the subterranean and the celestial realms (comprehensive of atmosphere, air and water) and able to contain multiplicity and diversity. Not secondly, according to the tale, soil as *mundus* is where nature and nurture coexist.

This paper investigates the multiple meanings of *mundus*, considering their inherent complexity and apparent contradiction as an opportunity for advancement in design critical thinking. The ambiguous notion of *mundus*, comprehensive of soil, air, and water, of ground and sky, of nature and culture, can help to overcome the separation between those elements and categories, to which modernity has accustomed us. Moreover, conceiving our habitat as a *mundus* forces us to consider soil, air, and water as a single complex entity, whose parts gradually differ in concentration and density, but act strictly together: *mundus* focuses on the relations and behaviours of each component, that collaborates, exchanges, or repulses with others.

The paper aims to outline the complexity and the relational character of the term *mundus*, considering evidence coming from different references in Western history, from Kircher to Ait-Touati, Arènes and Grégoire, from Ovid to Agamben, from Mosbach Paysagistes to GTL Landschaftsarchitektur, who boldly put in relation subterranean and celestial worlds. The aim is to recur to the concept of *mundus* to extend the limits of design, towards a more comprehensive and integrated approach.

Key words: Mundus, Soil, Relation, Design.

1. Wholeness. The very idea of *Mundus*

According to Plutarch, "Romulus, having buried Remus (...), set how founding the city (...). He therefore dug a circle-shaped pit in the place where the Comitium now stands, where the best of all things, as being beautiful according to custom and necessary according to nature, were laid" (Plutarch, *Vita Romuli*, 11, 1). Romulus needed inhabitants to populate the new city of Rome and so he welcomed both Latin and Etruscan shepherds and overseas people, such as the Phrygians, who had flocked under the leadership of his ancestor Aeneas, and the Arcadians, who arrived following Evander. He asked them to fill the pit with their own things, 'beautiful according to custom and necessary according to nature': "Each of them threw a handful of earth taken from the place from which they came and mixed them together. They called this pit *mundus*, that is the same name by which they call the sky. Then, they marked the perimeter of the city as a circle around the centre. The founder, having attached a bronze ploughshare to the plough and having hitched a bull and a cow to it, pushed them by drawing a deep furrow around the circle, while it was the duty of those who followed him to turn within the furrow the clods that the plough lifted and to take care that none were left out" (Plutarch, *Vita Romuli*, 11, 2).

Plutarch, in essence, attributes to the *mundus* the role of creating and shaping urbanity, in physical terms (city as a spatial entity, made by the circular pit) as well as social terms (city as a community, gathering people together). *Mundus* is indeed the core of this tale of foundation, and it is where the first settlers came to cast both cultural/artificial objects (things that are 'beautiful according to custom') and natural items (things that are 'necessary according to nature'). Soil is among those gathered things, but Plutarch does not specify whether it is among the first group (culture) or the second one (nature), suggesting that it can belong to both collections, being concurrently and inextricably both artificial and natural, manmade and just found. From this tale we also learn that *mundus* means ground but even sky, so merging in the same word two different material and cosmological realms, which are usually meant to be opposite, for composition, position, and behaviors. Thus, *mundus* is a place of encounters, totally inclusive of different entities which, together, create something new: new conceptual categories as well as new places. Furthermore, *mundus* is the Latin word for world, and indeed coming into the world is a way to say to get life. So, coming to the *mundus*, bringing one's soil, is a generative action, in which distant lands and people, ground and sky are mixed to create a new substrate, which speaks about both subterranean and celestial realms, both soils and people, and their mutual and ceaseless exchanges, where natural and artificial dissolve as divided categories and give way to a wholeness, to the world: *mundus*, precisely.

Not secondarily, the notion of world can fluctuate between a universal and comprehensive totality and a selective and sectorial realm: world can be used to mean the planet we live on; it can be associated with specific domains, such as the world of bacteria or the world of minerals; it can even identify a cultural frame as well as a fieldwork. The apparent contradiction of these conceptions reveals the promising potential of the term, whose meaning is affected by both the geometrical and semantic scales of reference. A world can exist and make sense at any scale of observation, it depends on the point of view we adopt and the relations we decide either to consider or to ignore: a world exists only as a situated network of relations and correspondences between the material and immaterial entities that inhabit and surround it. As Jakob von Uexküll observes about *umwelt* (environment), the meaning of world is ambivalent: while being well-defined and circumscribed by the perception of the subject, it is shaped by correspondences with the surrounding realms (von Uexküll, 1957). In other terms, worlds exist through interferences. In this perspective, every world is constantly changing and evolving, according to what happens inside and to what happens in the other nearby worlds, sometimes even reciprocally overlapping and trespassing.

Getting oriented through the origins and meanings of the word *mundus* is tricky, due to its polysemic and homophonic troubles (Puhvel, 1976). The notion of *mundus* is one of the most controversial in Roman culture (Dumézil, 1974), as the thematic plentiful bibliography demonstrates (Fowler, 1912; Vendryes, 1913; Puhvel, 1976; Paillet, 1988; Humm, 2004; Sammarco, 2015; Georgescu, 2019). Its earliest appearance goes back to Cato's *Commentarii Iuris Civilis* (II century B.C.), where it means a hemispherical pit, dug into the soil: "the name of the *mundus* was given from that *mundus* that is above us: because its form is similar to that one [from above]; its inferior part, just as it is consecrated to the Manes gods, is closed all the time, except for those days mentioned before" (Thewrewk de Ponor, 1889, p. 154). Those days are the ones of the *Mundus Cereris* ritual. According to Varron (Macrobius, *Saturnalia*, 16, 18), the *mundus* pit was regularly sealed with a stone called *lapis manalis*, but during the *Mundus Cereris* — on August 24th, October 5th, and November 8th — the stone was removed, and the underworld was connected with the earth surface, allowing the dead souls to walk among the livings. Romans used to say that during those days the *mundus patet* (*mundus* is open) (Fowler, 1912). The ritual refers to Cerere, an Etruscan goddess protecting harvests and fertility (Coarelli 1983, Magdelain 1976, Dognini 2000). Dedicating a ritual of connection between life and

death to the goddess of fecundity could sound contradictory, but it is another way to confirm *mundus* as a wholeness: Cerere presides over life cycle, where birth, death, and resurgence cannot be separated because they are just moments of the same dynamic. The worship of Cerere is related to the cult of Tellus (Ovidius, *Fasti*, I, 671-674; Eliade, 1970), corresponding to the Greek goddess named *Gea* or *Chtonia*, depending on the contexts: “the earth is a double reality: *Chtonia* is the formless and hidden bottom that *Gea* covers with her variegated array of hills, flowery countryside, villages, woods and flocks” (Agamben, 2022). Thus, *mundus* is an ambivalent space that creates a relation with the obscure and deep underworld, while representing the cradle for the cyclical resurgence of life.

The chthonian and agrarian cult of Cerere resonates with the mentioned Plutarch's account of Rome foundation, where *mundus* is a vessel of nature and nurture, soil and harvest, entangled and inseparable as a unique entity, and where the very first image of the *urbe* is that of the bare living soil, very far from the imagery of the monumental Rome we are used to. Leaning on Macrobius (Macrobius, *Saturnalia*, I, 11, 48), Filippo Coarelli places the *mundus* between the altar of Saturn and the Comitium, identifying it with a real object: the *Umbilicus Urbis* (the navel of the city), a conical brick construction rising behind the Rosters, next to the arch of Septimius Severus. It is hybrid and composite, the result of additions and subtractions, made of different types of bricks, pieces of marble stones, and mortars. It is composed of several superimposed parts (Pailler, 1988; Humm, 2004): an underground room, where the infernal divinities lived, recalling the Greek *omphaloi* (Lugli, 1946), with an opening that barely allow to enter into the deepest darkness; an open-air altar, probably dedicated to Cerere (Pailler, 1988); the upper part is well rounded, resembling the base of another construction, probably a *monopteros*-like temple (Verzàr, 1976); finally, the celestial space that surmounts it, where the heavenly gods live. For Humm, “the mundus thus corresponds to the three definitions of a temple given by Varron (Varron, *De lingua latina*, VII, 6): it is at the same time a celestial temple (*templum a natura in caelo*), a space dedicated to the ground (*templum ab auspiciis in terra*), and a *templum sub terra*, similar to heavenly one” (Humm, 2004, p. 53).

2. Threshold. The extension of *Mundus*

Many of the sources recalled in the previous chapter associate *mundus* to a space of transition, a passage to cross and a way to connect. This condition resonates with the meaning of the Italian word *soglia*, i.e. threshold, coming from the Latin *sōlea*, which in turn originates from *solum* (soil) (Festus, *De Verborum Significatiu*, 129, 1). Soil is indeed a threshold, properly because it is the result of the encounter and exchange between atmosphere and solid rocks: pedogenesis processes are the thickening of this threshold between soil and air. Due to the erosion, sedimentation, and diagenesis operated by the wind, water, and temperature ranges, rocks are separated in fine-grain minerals that let air penetrate, water infiltrate, bacteria and other forms of life inhabit. The result is a stratification of different horizons that gradually differ in material composition: from the top layer, which is rich in air, organic matter, vegetation, roots, edo-fauna, and with bigger pores, to the lowest soil horizon which is rockier because the minerals are not fully degraded yet, thus pores are narrow. In this sense, soils “becomes the name of a melange of ongoing processes: a great number of waves of action that act and retroact with unforeseeable effects, as effects always are. Soil is alive in its plural relationship with bodies” (Bianchetti, 2022, p. 91). This makes soil a vibrant matter permeated by impulses, desires, and sacrifices (Ibid.), like a threshold-space of contact and contamination (Gentili, 2022). At this regard, Walter Benjamin extends the significances of threshold, tracing the etymology of the German term for threshold (*schwelle*) to something fluid and liquid (Benjamin, 1999). Indeed, the word *schwellen*¹ means ‘to swell’ and it encompasses the meanings of grow, blow up, overflow (Gentili, 2022). Like soil, the threshold is a place of transit and mutation, where inside and outside are not antithetical, but substantially and ambiguously indistinct (Lazzarini, 2016). Recurring to the idea of fluid threshold, Benjamin overcomes the dichotomous scaffolding of Western culture, which frames the world within binary oppositions and irreconcilable polarities.

Movements and stratifications locate and happen inside the depth of the soil. As in the myth of the foundation of Rome, to make something happen, to create a new city and a new community, to merge death and life, ground, and sky, it is necessary to go into depth, to dig, to explore what is hidden inside. Indeed, the concept of depth is inseparable from soil. Vendryes identifies the origin of the Celtic word for world in the root *dubno*, from which many languages (Irish, Lithuanian, old Slavic, Germanic) derive their respective words meaning depth and hollow; he hypothesizes the double meaning of the Celtic word *dubno* as both depth and world, intending *dubno* to be the root of the Latin world *fundus* (depth) and *mundus* (world), due to a series of phonetic accidents (Vendryes, 1912). *Fundus* means even a small farming land (in Italian, still today *fondo* stands for the adjective ‘deep’ as well as the noun ‘farming field’), again recalling the linkage between soil, depth, and world.

Over time the meaning of *mundus* has been changing but confirming its leanings for wholeness. The Seventeenth century has been a crucial time for exploring and understanding the world, from medicine to astronomy, from geology to biology. It can be depicted as a time of transition, where the scientific method was developing, while a system of knowledge based on believes, myth, and traditions was still ruling. At that time disciplines were not so defined and hermetic; they weaved together fluidly, and the scholars used to navigate through many fields of knowledge (Consigliere, 2023). In 1664 Athanasius Kircher published his masterpiece *Mundus Subterraneus* (Fig. 1), an immersive journey through the earth, deep to the centre and up to the sky and beyond, trying to comprehend the working principles of the universe and the relations between elements like fire, water, ground, and air. Kircher elevates soil and subterranean realm to prominent spaces of effervescence and liveliness, depicting them with impressive section-drawings, from single clump of dust to mountains and volcanoes, until the entire globe, describing the connection between the fire in the core of the planet, the boiling inner water, the movement of the earth crust, the ocean currents, even the wind and the clouds in the sky, whose thickness is comparable to the one of the earth. Kircher's opera offers a collection of striking and fascinating features, divided in twelve books, each one dealing with a specific topic — from hydrography to volcanoes, from metals to minerals, from magnetism to tides, from fossils to dragons, from plants, seeds, and roots to insects — and speculating even about the invisible transformation of these matters, thanks to both a direct observation of real phenomenon and a vivid imagination, merging fabulism with the knowledges that were developing at time in Europe². Kircher's conception of the world as an entity in continuous transformation, whose matter is alive and fluidly changing inside a constant flow, explains why his investigations cross and tie together different scales of observation, from an atom-like dimension (Book X, XI and XII where he deals with magnetism, alchemy, panspermia, and chemistry) to the geological forces that shape the earth (Book II, III and IV), ascribing to this ceaseless metamorphosis the eruption of volcanos, earthquakes, or the ocean tides. The concept of a world made of living and fluid matter clearly emerges in the last two books (Book XI and XII) which are dedicated to alchemy, a field of knowledge that, besides its literal meaning related to the fusion of metals, can be more broadly intended as an attitude to see the world as an entangled living system.

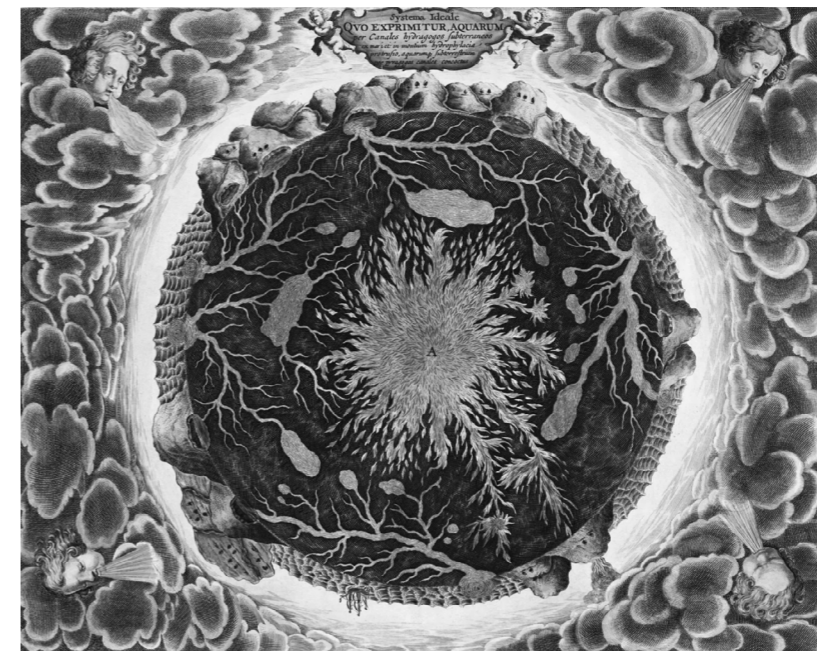


Fig. 1

In 2019, about 350 years after *Mundus Subterraneus*, the theatre director and science historian Frédérique Aït-Touati, the architect and cartographer Alexandra Arènes, and the architect and visual artist Axelle Grégoire co-signed the book *Terra Forma. Manuel de Cartographies Potentielles*, which presents a new cartography that considers the implications of living beings and evolving matters in the construction of the world (Fig. 2): “*Terra Forma* proposes to re-interrogate the maps but also, by their bias, the state of the world. One of the aims of the experiment is the modification of the classical attributes of the map to consider data and entities, human and non-human, living and non-living, which have often been hidden in conventional representations” (Aït-Touati, Arènes and Grégoire, 2019, p. 13). In the temporal gap that divides *Mundus Subterraneus* and *Terra Forma*, modernity has been emerging and establishing, with a deep changing in the way of questioning, understanding, and explaining the world: the knowledge systems got increasingly specialised, and the fields of studies got

separated, focusing on progressively more singular and mutually isolated topics. This attitude had great consequences on the representations of the world, especially in cartography (Farinelli, 2003), so that the imaginary of the world rapidly became that of an abstract, still, and stable surface, without any living domains. *Terra Forma. Manuel de Cartographies Potentielles* overturns the modern representations and focuses on the so called ‘critical zone’ (Latour and Weibel, 2020), meant as the external layer of the Earth, few kilometres thin, where all known living beings, humans included, and their resources lie, and where most of the transformations of the geology produced by human beings over the last centuries are evident and undeniable. Soil, *point de vie*, living landscapes, borders, space-time, (re)resources, memories are the seven models used by the three researchers to propose new points of view on the world. Thus, in the chapter ‘soil’ the globe is turned-up like a glove, putting the deepest layers on the exterior part of such an inverted *mappamondo* (world map) (Fig. 2); in the subsequent chapter named ‘point de vie’ (a wording coined by Emanuele Coccia) the orthogonal grid of Euclidian geometry deforms and evolves according to the actors who moves across space, admitting that the shape and extension of space are not a matter of fact but a relational condition, so that time partition curves in a spiral-like model, questioning the modern vision of history as a linear development. *Terra Forma* is the result of an incessant back and forth between data, experiences, attempts to modelling, imagination, and return to the ground. Just as *Mundus Subterraneus* was an attempt to explore and understand a hitherto unknown world, *Terra Forma* is an endeavour to re-compose worlds that climate change and Anthropocene have made us discover into constant metamorphosis and entanglement. By redefining, or rather extending, the traditional cartographic vocabulary, *Terra Forma* is a sort of manifesto for the foundation of a new geographical, political, and design imaginary. In fact, on one side it is a way to find our bearings in the world as it is, on the other it is an attempt to figure out our position in the world as it will be, imagining an increasingly complex, denatured, re-natured *mundus*. It spurs to cross the thickness of the world, looking for connection between design and ethology, geochemistry and biology, that kind of world that traditional cartography cannot capture, and that traditional design ignores.

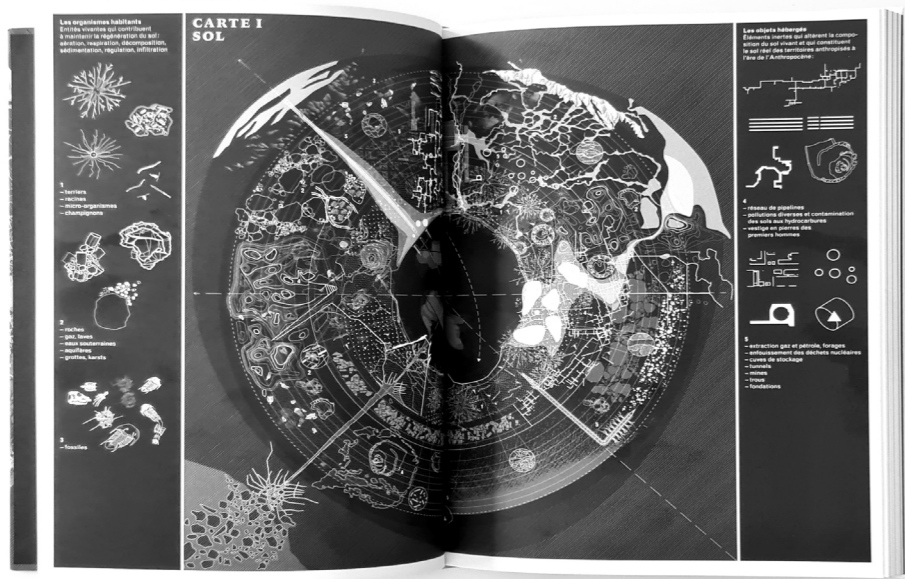


Fig. 2

3. Fertility. The destination of *Mundus*

The idea of *mundus* strongly resonates in some contemporary studies, variously connected with design. For example, the *Solid Fluids* theory recently explored by Tim Ingold and Cristián Simonetti (Ingold and Simonetti, 2022) poses itself at the intersection of chemistry, physics, and anthropology. According to them, the world is a constant flow of matter that passes through different states, where solidity and liquidity are just among the ones that humans best perceive. It is even a matter of scale: “whether we take a material to be fluid or solid may simply be a matter of granular scale. A particle of sand may be solid with regard to its crystalline structure, but sand *en masse*, as in a desert, in dunes, or even pouring through the waist of an hourglass, behaves very much as a fluid as it is sculpted into forms of movement such as whirls, waves, and swellings. Mudslides, avalanches, and surging glaciers are among many natural examples in which apparently solid matter gives way to flow, often with devastating consequences” (Ingold and Simonetti, 2022, p. 7).

Addressing into the field of design this perspective of the unescapable relational and inclusive value of the term *mundus/world* could be a way to extend the capacity and possibility of architecture³: it can help to have a comprehensive and integrated approach that focuses on relations between factors and

actors involved in shared environments and boosts the generative role of design. Specifically, looking at landscape architecture as a peculiar design world, the notion of *mundus* can be convenient to reconcile some elements that modernity has accustomed us to think as separated entities: soil, air, and water, ground and sky, nature, and culture, human and not human. Conceiving our habitat as a *mundus* forces us to consider these elements as a unique and interlaced entity, whose parts gradually differ in concentration and density, but act strictly together (Meulemans and Tondeur, 2022). In this perspective, thinking about design as a way to make *mundus* prompts to weave unprecedented relationships and correspondences within human and non-human entities, with other materials and other forms of life, crossing scales ranging from the infinitely small to the infinitely large, in a temporal spiral where past, present and future can coincide.

The meaning of *mundus* is rooted in soil as the interface where air, water, earth, rocks, vegetation, and other forms of existence meet and entangle. Starting from soil, *mundus* extends and encompasses the entire environment in which we live seamlessly, as a single entity that differs in concentration and density. A pair of samples taken from the contemporary landscape architecture scenario could help us to underline the potential application of this approach into design, properly focusing on soil meant as *mundus*, as a promiscuous place par excellence, a transitional space experienced and designed by multiple elements and bodies.

The park of the Louvre Lens Museum, designed by the landscape architecture firm Mosbach paysagistes (2014), is a meaningful reference. Lens is a city in the north of France, since the mid-19th century almost completely invested in the coal mining industry, that has been deeply imprinting the local landscape, economy, and society. Through overturning and displacing operations — excavating and cutting into the subsoil, moving and exporting ground from below to above, moving it from site to site — the underground world poured to the surface, ground masses moved to other sites, giving rise to new topographies and even to new atmospheres, due to the combustion of coal. Indeed, the Louvre Lens Museum is located on a 25 hectares brownfield produced by coal mining. The landscape design for the open spaces belonging to the museum resorts to soil as a detector and seismograph of the geological, environmental, and social transformations that affected the site. Catherine Mosbach treats soil as an active subject, playing at the intersection of three main layers — mine, environment, culture — and using ripples, pits, deformations, depressions, reliefs, continuous changes of material, from concrete to turf, from asphalt to bare ground, as the basic elements of the park (Fig. 3). While walking through the Louvre Lens Museum Park and looking around, it is easy to feel immersed in a moving landscape, where different conditions of soil intersect and interact into a continuous flow that reveals recent geological processes, adapts, and reacts to different atmospheric and seasonal conditions, and finally constitutes a space that is an actual part of the museum experience. Like a *mundus*, the Louvre Lens Museum Park is a dense field of entangling relationships weaving chemical and physical correspondences between atmosphere, soil, and subsoil and temporal correspondences where past, present and future overlap. It is worth to note that some parts of the park are arranged as bare soil: it is a totally unusual solution in landscape design, perhaps because bare soil recalls ideas of neglect, casualness, unproductiveness, which are problematic moral categories typically perceived even as aesthetic aberrations. It is not by chance that dirty is the English word for meaning unpleasant or not clean (from dirt, which stands for soil) and that neglected and polluted sites are called brownfields (as brown is the usual colour of soil). When turned into a verb, the English word soil means anything that gets dirty and muddy (sullied); what an American calls dirt, an English calls soil, and something that is soiled is irretrievably dirty.



Fig. 3

If the Lens site exemplifies how to design a new *mundus*, setting on a rich palimpsest of environmental, social, and cultural mutations, the transformation into a park of the former Bonames airport, closed to Frankfurt, demonstrates that any soil, even the most simplified, neutralized, and isolated one, as the one covered by asphalt, can act as a *mundus* thanks to design. In 2003, once acquired the disused aerodrome, the municipality intends to give the area – a previously wet prairie along the Nedda, a tributary of the Mein – ‘back to nature’, entrusting GTL landscape studio with the design. Due to the financial and environmental unsustainability of the old river fields’ faithful restoration and of the total dismantling of the facilities, included the asphalt strip, GTL adopt an incremental design strategy, aimed to triggering and accompanying the transition towards a progressive re-naturalisation of the site, while guaranteeing the social enjoyment of the site. They keep unmodified about 2/3 of the entire surface of the runway, making it available as an informal playground, very successful for rollers’ rides and kites’ flight from the very beginning. At the same time, taking inspiration from the pioneering weeds spontaneously growing into the asphalt crackles, GTL break into pieces the remaining part of the runway, leaving the resulting scraps on site. They operate very carefully, breaking the asphalt into different grain sizes, creating different conditions of local humidity, temperature, exposition, pedological substrate, with the aim to welcome some spontaneous living forms and discourage other ones; here and there, plants covering is favoured and speeded up by planting some fifty trees. Therefore, the objective is to encourage a varied and rich colonisation by plants and animals, where the asphalt plays, indeed, an active role in the formation of new soil and the growing of species as a mulching layer. Since its opening in 2004, the demolished part of the runway hosts a still-evolving forest where numerous little mammals, birds, amphibian species, and insects live. Trees have been growing with their roots protected by the asphalt and now the white trunks of the birches stand up through its broken black slabs, in a sort of uncanny landscape (Fig. 4). Some troublesome questions arise: is it whether natural or artificial? Is it manmade or spontaneous? Is it beautiful or ugly, attractive or disgusting? Is it welcoming or dangerous? Is it bad or good? Is it the end of a landscape or the beginning of a new one? Is it the celebration of death or a rebirth ritual? Many answers are appropriate, since contradiction and ambivalence are the very essence of this situation, giving itself as a *mundus*, the site of wholeness, of coexistence and interference between soil and sky, culture and nature, here and elsewhere, death and life. *Mundus* offers itself as a paradigm for a project approach, capable of creating relationships or making explicit those that already exist, without any anxiety of simplifying.



Fig. 4

In conclusion, tracing the etymology of *mundus*, between ambiguity and multiplicity, reveals how *mundus* is capable of encompassing and holding together some founding categories of contemporary landscape design. *Mundus* implies wholeness because, by interweaving multiple scales of space and time, it relates and creates correspondences between the various actors - human and non-human, organic and inorganic - that shape it. *Mundus* is a threshold because it is a thick platform of encounters, clashes, interferences in a constant mutable process. *Mundus* is fertile because, in the grip of intermingling, it is incessantly capable of resurgence and new life cycles⁴.

Notes

1. According to Benjamin “the threshold must be carefully distinguished from the boundary. A *schwelle*, threshold, is a zone. Transformations, passages, waves, actions are in the verb *schwellen*, swell, and the etymology ought not to overlook these senses” (Benjamin, 1999, p. 494). In the notes he writes: “*schwelle*, cognate with the English word ‘sill’ has the root sense of ‘board’, ‘structural support’, ‘foundation beam’. According to current information, it is etymologically unrelated to *schwellen*” (Benjamin, 1999, p. 991). *Schwellen* means ‘blow up’ and it is used also to mean the movement of the ocean when it rises and falls without the waves breaking. Beneath the etymological discrepancies the German philosopher implicitly suggests a strong relation of the meaning of the two similar terms, as the threshold is a space that moves, changes and eventually grows.
2. We can consider *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus*, published by William Harvey in 1628, a mature account on the circulation of blood; Kircher explicitly refers to it when he proposes an organic comparison between the human bodies vascular system and the Earth’s hydrographical network. Another critical reference is *Micrographia* by Robert Hooke (Hooke, 1665), one of the most relevant scientists of the 17th century, who is the inventor of the modern microscope, thanks to which he explored the world of insects and plants at the scale of the cell.
3. In this context, architecture is intended as a set of interdisciplinary and operational knowledges that is translatable in a design process. Therefore, its range spans multiple scales, including clothes, furniture, buildings, urban districts, infrastructure, landscapes and so on: it could potentially address all aspects of reality (Hollein, 1968).
4. The authors contributed equally to this work.

Image captions

Fig. 1. Plate from Athanasius Kircher’s *Mundus Subterraneus*, showing the functioning of underground water network and the relation with the heated core of the Earth. Source: <https://www.sensesatlas.com/territory/mundus-subterraneus-athanasius-kircher/>

Fig. 2. Drawing of *Terra Forma. Manuel de Cartographies Potentielles*, showing the new cartographies resulting from the inversion of the point of view. Source: <http://s-o-c.fr/index.php/terraforma/>

Fig. 3. Soil patterning of the Louvre Lens Museum Park, 2018. Credits: Luca Catalano.

Fig. 4. Trees grown amidst the torn asphalt fifteen years after the Bonames airport was converted in a park designed by GTL Landschaftsarchitektur, 2019. Credits: Leonhard Lenz.

References

- Ait-Touati, Frédérique, Arènes, Alexandra, Grégoire, Axelle. *Terra Forma Manuel de Cartographies Potentielles*. Montreuil: Editions B42, 2019.
- Agamben, Giorgio. “Gaia e Ctonia.” *Quodlibet*, December 28, 2020. <https://www.quodlibet.it/giorgio-agamben-gaia-e-ctonia>.
- Benjamin, Walter. *The Arcades Project*. Translated by Howard Eiland and Kevin McLaughlin prepared on the basis of the german volume edited by Rolf Tiedemann. Harvard: Harvard University Press, 1999.
- Bianchetti, Cristina. “Rethinking Soil Design, Starting from the Body”, *OASE Journal of Architecture* 109, (2022): 89-94.
- Coarelli, Filippo. *Il Foro romano*. Roma: Quasar Edizioni, 1985.
- Coarelli, Filippo. “Ara Saturni, Mundus, Senaculum. La parte occidentale del Foro in età arcaica” *DA Dialoghi di Archeologia* 9-10, (1976-1977): 346-377.
- Consigliere, Stefania, ed. *Materialismo magico. Magia e rivoluzione*. Roma: DeriveApprodi, 2023.
- Daremberg, Charles-Victor, Saglio, Edmond. *Le Dictionnaire des Antiquités Grecques et Romaines d’après les Texts et les Monuments*. Paris: Hachette, 1877.
- Dognini, Carlo. *Mundus: Etruria e Oriente in un’istituzione romana*. Roma: Congedo Editore, 2000.
- Dumézil, Georges. *La religione romana arcaica. Miti, leggende, realtà della vita religiosa romana*. Milano: Rizzoli, 2001.
- Farinelli, Franco. *Geografia. Un’introduzione ai modelli del mondo*. Torino: Einaudi, 2003.
- Gentili, Dario. “Una soglia per Begato.” in *Selve in città*, edited by Alberto Bertagna, Massimiliano Giberti, 250-253. Milano: Mimesis Edizioni. <https://doi.org/10.7413/1234-1234008>
- Georgescu, Simona. “The world as a yawning gap. New insights into the etymology of Latin mundus world.” in *Lemmata Linguistica Latina vol. 1*, edited by Nigel Holmes, Marijke Ottink, Josine Schrickx, and Maria Selig, 206-223. Berlin: De Gruyter, 2019.
- Hooke, Robert. *Micrographia, or, Some Physiological Descriptions of Minute Bodies Made by Magnifying Glasses: with Observations and Inquiries Thereupon*. London: The Royal Society, 1665.
- Humm, David. “Le mundus et le comitium: representations symboliques de l’espace de la cite”. *Société française d’histoire urbaine* 2, no. 10 (2004): 43-61. <https://doi.org/10.3917/rhu.010.0043>.
- Ingold, Tim, Simonetti, Cristian. “Introducing Solid Fluids.” *Theory, Culture & Society* 39, no. 2 (2022): 3-29. <https://doi.org/10.1177/02632764211030990>.
- Kircher, Athanasius. *Mundus Subterraneus, in XII libros digestus; quo divinum subterrestris mundi opificium, mira ergasteriorum naturæ in eo distributio, verbo pantámorphou Protei regnum, universæ denique naturæ majestas. Joannem Janssonium, 1665.*
- Latour, Bruno, Weibel, Peter. *Critical Zones. The Science and Politics of Landing on Earth*. Cambridge MA: MIT Press, 2020.
- Lugli, Giuseppe. *Roma Antica, il centro monumentale*. Roma: Barbi Editore, 1946.
- Macrobius: Saturnalia, Volume I: Books 1-2. Translated by Robert Kaster. Cambridge, MA: Harvard University Press, 2011.
- Magdelain, André. “Le pomerium archaïque et le mundus” *Jus imperium auctoritas. Études de droit romain* 1, no. 133 (1990): 155-191. http://www.persee.fr/doc/efr_0000-0000_1990_ant_133_1_3956.
- Meulemans, Germain, Tondeur, Anaïs. “Petrichor: On Correspondence between the Ground and the Sky” *OASE Journal of Architecture* 109, (2022): 80-83.
- Ovidius Naso. Ovid’s Fasti. Translated by Sir James George Frazer. Cambridge, MA: Harvard University Press. 1933.
- Paillet, Jean-Marie. *Bacchanalia. La répression de 186 av. J.-C. à Rome et en Italie: Vestiges, images, tradition*. Roma: École française de Rome, 1988.
- Perrin, Bernadotte. *Plutarch. Lives, Volume I: Theseus and Romulus. Lycurgus and Numa. Solon and Publicola*. Cambridge: Harvard University Press, 1914.
- Plutarch. Lives, Volume I: Theseus and Romulus. Lycurgus and Numa. Solon and Publicola. Translated by Bernadotte Perrin. Cambridge, MA: Harvard University Press, 1914.
- Puhvel, Jaan. “The Origins of Greek Kosmos and Latin Mundus”. *The American Journal of Philology* 97, no. 2 (1976): 154-167. <https://doi.org/10.2307/294405>.
- Rose, Herbert Jennings. *Dizionario di antichità classiche, s.v. Giano*. Milano: Edizioni San Paolo, 1995.
- Sammarco, Giulia Felicia. “Aspetti sacrali, socio-politici e spaziali del Mundus nel Foro romano: alcune considerazioni e confronti.” Master dissertation. Università degli studi di Genova, dipartimento di antichità, filosofia, storia, 2015.
- Thewrewk de Ponor, Aemilius, ed. *Sextus Pompeius Festus, De verborum significatu quae supersunt cum Pauli Epitome pars I*. Budapest: Budapestini sumptibus Academiae litterarum Hungaricae, 1889.
- Varron La langue latine Tome III Livre VII. Translated by Pierre Flobert, Paris: Les Belles Lettres, 2019.

Verzár, Monika, 1976-1977. "Umbilicus Urbis: Il Mundus in età tardo repubblicana", in *DA Dialoghi di Archeologia* no. 9-10, pp. 378-388.

Von Uexküll, Jakob. "A Stroll through the Worlds of Animals and Men: a picture book of invisible worlds" in *Instinctive Behavior: The development of a modern concept*, edited by C. Schiller, 5-80. New York: International Universities Press, 1957.

Warde Fowler, William. "Mundus Patet. 24th August, 5th October, 8th November". *The Journal of Roman Studies* 2, (1912): pp. 25-33. <https://doi.org/10.2307/295939>.

Biography

Federico Broggin is architect graduated at Accademia di Architettura di Mendrisio. Since the early experiences he focused his interests on urban and landscape design, in particular dealing with soils and water management concerns. Since 2020 he is part of Latitude Platform for Urban Design and Research, an interdisciplinary collective of architects, urbanists, anthropologists, and photographers based in Bruxelles, Venice, and Rome, that carries on research and design projects with a particular regard to socio-environmental themes. In 2022 he started a PhD in landscape architecture at RomaTre University. The thesis explores the world of urban soils, in particular sealed soils with asphalt, investigating their intrinsic values in landscape design practices intersecting ecology, art, matter sciences and history.

Annalisa Metta is professor of Landscape Architecture at Roma Tre University. In 2016- 2017 she won the Italian Fellowship Grant for Research at the American Academy in Rome, to which she has been a consultant ever since. Her research concerns contemporary landscape design. Her books include: "Il paesaggio è un mostro. Città selvatiche e nature ibride" (DeriveApprodi, 2022), "Alberi! 30 frammenti di storia d'Italia" (MarsilioArte, 2022), "Verso sud. Quando Roma sarà andata a Tunisi" (Libria, 2018), "Anna e Lawrence Halprin. Paesaggi e coreografie del quotidiano" (Libria, 2015). In 2007 she was one of the founders of Osa architettura e paesaggio, with which in 2012 she signed the curatorial and installation project for Bosco Italia, the Italian pavilion at the Venice Architecture Biennale. Recent implemented works include: the urban park on Lungotevere Flaminio, Rome (2023) and the installation *Every 9 Days*, at the American Academy in Rome (2022).

Architecture, Transfeminism, Queerness Reimagining the urban space

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Abstract

This study highlights how different representations of architecture and urban space have contributed to the fossilization and normalization of binary gender identities. Indeed, the essay focuses on the increasing attention being given to transfeminist and queer studies in relation to architectural space.

Specifically, a focus on gendered language in architecture is given, aiming the attention to how the architectural experience has changed after modernism, when gendered language seemed about to disappear, taking up Adrian Forty's studies. Regarding the modernist period, the essay presents two different feminist approaches to the study of architecture, one done by Beatriz Colomina and the other by Paul B. Preciado.

Finally, a reading of a few words is given. These words are contextualised to the context of architecture, and the paper aims to highlight the shifting meaning developed through queer transfeminist analysis. The goal of this paper is to show how architecture and urban studies relies on a patriarchal system of power and how queer transfeminism can support language in its role of challenging the norms.

Keywords: Architecture, transfeminism, queer, language, critique.