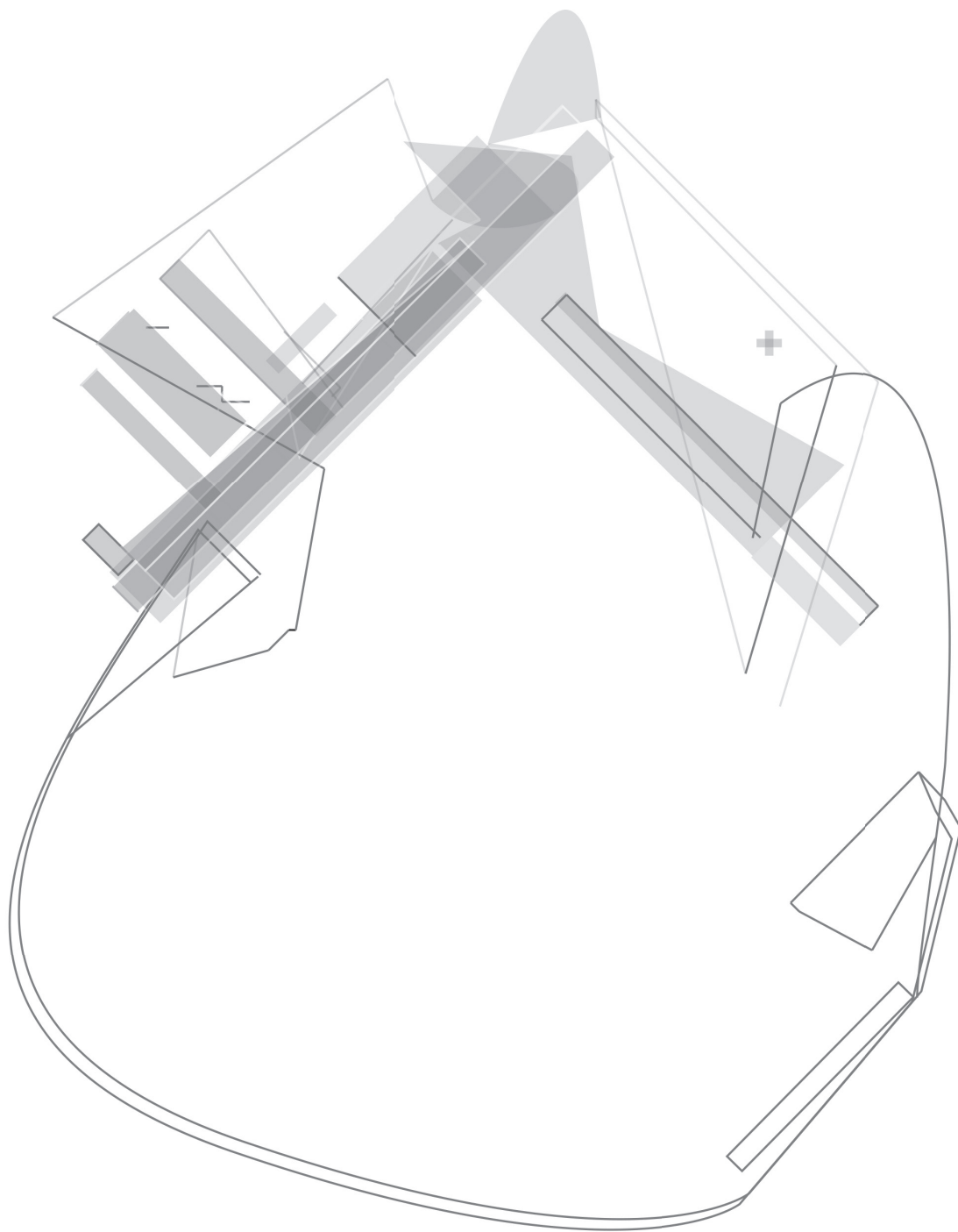


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ARCHITECTURE DRAWING TOPOLOGY

Edited by CORT ROSS DINESEN INGER BERLING HYAMS MORTEN MELDGAARD ANDERS MICHELSEN HENRIK OXVIG







ARCHITECTURE DRAWING TOPOLOGY

**Edited by
Cort Ross Dinesen
Inger Berling Hyams
Morten Meldgaard
Anders Michelsen
Henrik Oxvig**



**ARCHITECTURE
DRAWING
TOPOLOGY**

INTRODUCTION

This book presents contributions of drawing and text along with their many relationalities from ontology to history and vice versa in a range of reflections on architecture, drawing and topology. We hope to thereby indicate the potential of the theme in understanding not only the architecture of today, but – perhaps most importantly – also creating and producing architecture that is contemporaneous and reacts to the radical changes of the physical world which surrounds us in the increasingly artificial measures of new materialities and understandings thereof. The contributions range from the intricate issues of the imagination and the moving ratio in the topological culture, over urban topology, diagrammatisation, mediality and dynamics of transduction in the contemporary artificial environment.

The Hydra project, which has produced the drawing material in this book, develops a strategic and reflective approach to the artificial environments of today's world. It may be seen as an aesthetic proposal for design acknowledging previously articulated and existing materialities. A common trait is that topology establishes a great many parallels to the architectural context in which we find ourselves today – a context which can be said to constitute time and space as a complex formation traversed by forces, information and synergies which cannot be restricted to the scales, principles and forms of modern architecture or historical forms of building.

What the drawings in this book articulate and configure are varied and ambiguous constellations that are both real and virtual. Most importantly, this forms a context which is co-developed by the act of drawing. Topology thus becomes not just a framework for understanding the context of architecture in terms of the surroundings in any particular way of a direct phenomenological approach to the world, but also something which relates to a host of concerns: anything that can be extracted from the significance of a map or a satellite image, for instance, and by such relationality co-constitute a movement and event in a context.

Since the beginning of the 2000s, The Royal Danish Academy of Fine Arts, Schools of Architecture, Design and Conservation (KADK), Study Department 6, Architecture, Space and Form has conducted research in close connection with the department's teaching. A central part of this has been the role played by the Hydra Project – an annual summer school held on the Greek island of Hydra since 2004. Each summer, 12-15 students are engaged in a four week long intensive drawing practice.

The point of departure in 2004 was how the topography of the island could be worked and developed into architectural formats as different ways of considering topology. In the following years, this approach was developed with a new angle on an architectural drawing each year, through posing a series of questions, resulting in an extensive body of drawings as well as texts. One important step in this development was to involve urban landscapes from Berlin, Paris and Tokyo.

The latest stage in the work on Hydra explores architectural drawing as a special plastic event unfolded around an existing building – the Slaughterhouse, here drawings, photographs and projections produced a spatial matrix that was recorded by the movements between the signs and markings, which created the special topological drawing space.

A more detailed description of the questions and concerns can be found in the ensuing introduction by Cort Ross Dinesen.

The Hydra Project is to be understood as an ongoing dialogue between artistic research – articulated by the drawings – and scientific research, from the art history of architecture to the software that underpins

the ways and potential of architectural drawing today. Over the years, the Hydra Project became a repeated and differentiated dialogue between new formats and articulations of drawings and reflections on topology.

The Hydra Project has sought to provoke a mode of operation in between the real and the virtual which may be said to hold the sensing body as its pivot along with the phenomenology of the object – whilst at the same time considering and shaping virtual constructions. It draws on the many considerations of meaning, form, writing and signification, which have been indispensable for the development of architecture in many parts of the world since the 1980s. Most importantly though, it has produced a new understanding of what architecture can be said to be: how architecture produces works of art and how such art becomes situated in a context and, furthermore, what forms of aesthesis are involved in such building art.

At least three important problems that emerge out of this genealogy of the architectural event have inspired the selection of contributors to this collection:

Topology. What are the options and implications of the continuity between projects, e.g. as expressed in drawings and the world: when drawing does not function as a representation but rather as enactive working of cartographic material, which feeds back into the engendered topologies?

Diagrams. What is the 'flesh' underwriting the mesh/tissues indicated hereinabove which enable diagrams and working of elements and entities apprehended from cartography and reinserted into transformations of real structures of artifice, e.g. in urban areas as new domains and scales?

Aesthetics. How does the aesthetics of the drawings produce reflections and knowledge forms, in particular perhaps, what is the role and potential of the intensities of computer based rendering, data resources and media?

The editors wish to sincerely thank the contributors to this book for their insightful and intellectually stimulating articles which we hope, in their compilation, will shed new light on the interplay between architecture, drawing and topology. The broad yet interlinked spectrum of argumentation of the articles offers detailed and sophisticated reflections that demonstrate the profound relevance for the further interest in this interplay.

In connection with this publication, special thanks are directed to the Dreyer Foundation, the Danish Arts Foundation, Nationalbankens Jubilee Foundation and the Royal Academy Schools of Architecture, Design and Conservation for their financial support.

Copenhagen 2017

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INTRODUCTION

About Drawings in the Hydra Project

The drawing material from Hydra is divided into three sections. Section 1 is about the material from the period 2004-2008, Section 2 is from the period 2012-2015 and Section 3 contains material from 2015-2016.

The production of the drawing material took place in Hydra over four weeks in March every year, based on a series of questions that were phrased successively during the period. The approach was a rephrasing based on the previous year's material and experience.

During the first period from 2004-2008, Hydra's special topography was the starting point. Hydra, the town, and the surrounding landscape, its specific geography, structure, dimensioning, etc. gave rise to the development of a number of special morphological and topological drawings. In this connection, a number of drawing related discourses were developed, which contained the basis for a special way of handling complex relations and flexible forms, which were open to dimensioning and creating meaning of a particularly reflective character for the architectural drawing.

This artistic exploration always brought experience back to our study environment/department, where it was expanded on in projects. Not as methods, but rather as reflections on how a progression can be developed as the basis for project development.

The research on the drawings has had a rub-off effect on the creation of a special works appreciation, which seeks to develop a topological architecture, reflecting on and placing architecture's possible manifestations in perspective at a time where urbanity and global relations are a condition for architecture's concretion at the local level.

As its starting point, the work took a period where deconstruction posed questions about the meaning of the architectural order, completely transforming this against a context where urbanity was focusing on space and time. In a crossfield between architectural concretion as a fractal and a virtual space, the focus was directed at the handling of the complexity that dimensioned the architectural work and created operative and strategic manifestations, through which architecture could contribute to promoting and rephrasing its social significance.

In this perspective, the drawing work gave rise to, among other things, an exploration of the generic morphology, the vague and continual forms, and the non-hierarchical systems that opened up for supple and pragmatic compositions, in which it is the relations and the architectural movements that unfold special network-based aesthetics, creating a dynamic composition plan, from which an architectural position develops. From this point of view, the architectural handling of the complex relations is inscribed into a concretion with an openness, which, simplified, was previously a semantic and tectonic handling in the form of the open work as a structuralist paradigm and a confrontation with architecture's autonomy – paradoxically, ending up here in the contemporary discussion, leading to greater attention to architecture's ability to frame and shape a different and vitalising appearance with a special type of creativity, which positioned itself between the language of mathematics and the language of poetry. Here, a concretion is unfolded, which does not evoke a response in the presence of a holistic picture, a holistic plan or a master plan, but which constitutes a fractal; a fractal that contains 'its own totality' at all levels. As asked in the article Byens Laminær (The City's Laminar), quote:

How do you establish a way to relate to an urbanity that has lost the contours of a cleared space for settlement and obliterated its boundaries, making it difficult to speak about where the city's soul begins, and where the shapeless urban appearance and the very weak contours of converging structures, which outline a cohesive meaning-making, are only faintly noticed through the immanence of things, and which almost in spite retain your memory of the city as a representational social construct?

As existence is spatial, this regenerates the question about how the cultural territory is constituted through the structure of the space as a place for an existence.

The ambiguity in the spatial constitution can be viewed as a sort of transfer, which creates a configuration of modal character that binds together without creating coincidence or unity between the reference and the model's appearance.

Where the model takes its starting point in architecture's experience of the scale, and through this, among other things, establishes a configuration of partial urban work character, which in a described horizon seeks to bind together problems/solutions, partly with necessary precision, and partly with attention to creating loose relations of mutually variable consequences, in a pliant complexity that weights an instrumentalisation of events, and which places the model in a perspective in an urban field by means of a modal generality. This binding together differs from a traditional vertical model and its binding together of appearance and significance by having distinctive horizontal structures, where transverse interchanges evoke relations that produce or open up for new events, and where the semantic fades into the model's procedural properties.¹

Identifying the questions was an obvious discourse in parallel to this period from 2004 to 2008 on Hydra, which resulted in the book: MORPHOLOGY, TOPOLOGY, CARTOGRAPHY, 2009.²

In 2009, the task was to register the experience and the different discourses with a new starting point: From Hydra's topography to three city sections in Berlin, Paris and Tokyo.

The six periods addressed a continual string of questions, which were exhausted in 2008, resulting in the book: MORPHOLOGY, TOPOLOGY, CARTOGRAPHY, 2009. As from 2009, the starting point was changed from Hydra's topography to three city sections in Berlin, Paris and Tokyo.

The three cities contain clearly different characteristics, and it was natural to explore how the drawing space's encounter with this urbanity would take shape. In 2012-2015, a new and characteristic material was developed, focusing on cartography as large sheets that contain both visible and invisible forces, intensities, relations, figures etc. in a continuous and flexible form with many inherent scales. A special plasticity and depth were developed in the drawing, including both strategies and operative traits for handling urbanity and cartography. The material contained traits that formed the basis for thinking about passage and enfolded and unfolded movements, domains, levels, dimensioning, meaning, relations and figures as well as an architectural discourse with special relational aesthetics.

Cartography as a pure writing/drawing action creates a form that opens for something to step forward and create relations and cross connections, and which finds different manifestations. Here, the only validity in the process is the ability to develop effective deliberations, and, drawing a parallel to historical progress taking its starting point in afunctional structures, to facilitate the establishment of a diagonal movement from a plan that contains a design (drawing) based on something specific (aerial photo) to a point where it is also possible to generate statements of high public use (contributions to research). Here, it must be conducive to find a number of reasons why architecturally significant forms can develop effective structures that can link industrious relations and productive processes in multitudes of functional structures – functional in the sense that they encourage action and promote developments in the local, but reach beyond this by pointing to the global.

Such a practice seems very natural if you look at the sections from Berlin, Paris and Tokyo. In a way, all three aerial photos contain the same. As an urbanity, they speak about the

different cultural practices through the ages. However, they are modern as sections, considering that they are fragments that express and contain our modern idea of an urban landscape as a compound of combinations of practice forms, which create structures, and where the intensities dimension the appearance forms. Through the special and unique, the sections point to bodies that we connect with a combined expression of a global organisation.

A section of a city and a rural area will always indicate a number of practices for the organisation of a life that has been lived. The section will also, by being a section, inscribe itself at several levels in the perception of this practice, both in reality and in virtual reality, and as a section it will point to our modern experience, i.e. that the sections' appearance is both unique and an indication about the omnipresent conditions that merely appear with a different emphasis in the heterogeneity. We see a description of urbanity's many appearance forms in the aerial photos of Berlin, Paris and Tokyo.³

In 2015-2016, attention was again directed at Hydra, turning the starting point from a macro world and satellite imagery to the micro world of a slaughterhouse. The slaughterhouse is located on the edge of Hydra town, and it is now the backdrop for artistic activities under the Deste Foundation in Athens. The mapping of the slaughterhouse began with detailed drawing-related measuring and photographic registration. The universe of drawings developed into a number of notation forms, not unlike the architectural drawing's conventional elements of mimicry, which unravels a number of 'landscapes' of pervading intensities as continuously configured and completed groupings of relations. As a contrast to this, the photos created a special saturation through the almost haptic appearance that became the object of a cutting up, marking and drawing based inscription of signs.

These two sets of drawing experience were brought together in a series of projections in the slaughterhouse, creating a drawing space that people could 'step into'. During the last period, in 2016, the work aimed to create such drawing related installations in the slaughterhouse, and on this basis to develop several montages, which in their handling contained a conceptual indication of the drawing material's 'mindset'. A different way of handling the architectural discourse in a material that has been the focal point since 2004.

This is how the text about Slaughterhouse ends, expressing and summarising the 'desire', which in 2004 was latent in the exploration concerning ARCHITECTURE, CARTOGRAPHY, TOPOLOGY:

Slaughterhouse violence, which not only as a reference, as a concretion, contains the obscenity's beauty, arouses a desire. The slicing, veiling, scratching of the surface, the cutting, skinning of the animal – all these are artistic tools that arouse our desire for initiating something. Slaughterhouse is a testimony, and the drawings and the photo provoke our capture and are seen as a rite. Creation is linked to the flesh and the blood as a sacrifice that stirs our urge to possess. The drawing constitutes a rite in sketches, and the photo in the view.

The projections at the slaughterhouse created, through the movement and the edited observation, a focus back towards the figures, the appearance forms, unfolding new utterances. Qualitative events occur, are obscured, and focusing brings out other motifs. Clipping, courses, overlapping etc. edit the story, and the reflection crosses backwards and forwards along many lines of sight. Transversals emerge, and time is compressed.

This corresponds to the drawing's work with keeping together the many lines without going back to a plan that determines the drawing's compositional or other hierarchical level, which is characteristic of tradition.⁴

Many architectural works and practice forms have been objects of parallel studies. Among these, three works should be mentioned, as the issues they address are important in this context, forming a basis for discussing *the installational, topological and relational*.

The Inujima Art House Project by SANAA consists of the insertion of a series of small built installations in a village in the archipelago around Narashimo, Japan. They form part of a revitalisation project in the local community along with other structures and art installations. In particular SANAA's two glass pavilions with their softly curved glass surfaces, which reflect the organic print on the glass, create a contrast, which in its artificial elaborateness comments on the Japanese built environment – the dense interconnectedness with the cultivation between the smaller buildings and the provisional structures. The lightness and materiality of SANAA's pavilions give them a strong architectural appearance, which does not aim to resemble the local building tradition, but rather creates a simple and minimalist form that contains Japanese architecture's sensuous and fine laminations of spatial separations in a web of modulations between places, in both the interior and the exterior environments.

The strongly aesthetic appearance is the moment that opens up for the differently shaped components to interact and function architecturally. Precisely the installational traits and the clear, artificial architectural expression – which does not mimic the local, but rather has an autonomy of its own in its appearance, and which adds presence to the environment as you pass through the estate – are inspiring in relation to seeing an architectural concretion in the virtual urbanity, which points at architecture's ability to create a difference through the artificial, which in its pure form without representation opens up for a reflection on possible possessions, thereby vitalising the context.

The 21st Century Museum of Contemporary Art, Kanazawa, by SANAA contains another significant aspect of the fractal as a topological component. The museum is located in a green, open space, surrounded by roads and adjacent buildings. It is circular at the ground level and features a rectangular plan underground, from which a number of cubes of varying sizes rise up, filling the circle. These cubes house the exhibitions. These volumes are grouped without a superior structure in a grid-like matrix. Among these volumes and the building's circular contour, a number of residual areas emerge along the entire facade. These residual areas provide space for meeting places, resting, play, a café, a restaurant, book sales etc.; i.e. a number of social spaces have been modulated into the periphery. Here, you stay behind the glass, and during the day you can watch life unfold in a panoramic view on the green surface between the small works of art. The glass creates a practically frameless view to the surroundings. In the evening, when the museum's interior is lit and you are outside in the dark, the exhibition volume and the passages in between are experienced as a city and its streets. Here, the stage is reversed, and the internal outplays our memory of the social, cultural spaces, which belong to the city as focal points. This double modulation creates two sides of the reflection: the dense, sensuous closeness, the presence, and the community metaphor. The encounter with the other. In this way, the exterior is folded into the interior and vice versa in a topological figure that contains a pervasion and filtration of signs that create a meaning sphere in this architectural fractal.

Due to the compositional openness in the different sizes of the museum's interior volume and their mutually offset positions and opposition to the circle, a composition plan emerges, which creates the possibilities for the pragmatic modulation around the building's functions. This inscribes an institutional

function as a meeting place into a context where the building as a fractal contains both its interior and its exterior relations, and into which we inscribe our existence through the movement between the shapes and their destabilisation of the relations.

The Rolex Learning Center, Lausanne, by SANAA contains several features related to the fractal component as an architectural concretion. The centre is located in a university area, constituting a gathering point for the students. Architecturally, it is shaped as a large, rectangular disk, raised above ground in a wavy form. The building takes its shape from the wavy movement in the plan's two directions with a volume that features the same floor height in its entirety. The building is cut through by a number of large, soft voids that create several meeting places, light openings, and clearings for people to stay between the ground level and the building. In the places where the building is lifted above ground, you are invited into the middle, and from here, you enter the learning centre.

The special thing about the centre is the open compositional structure. There is no particular overall feature in the exterior environment under the main body of the building or in the building's interior organisation – everything is suspended in time and space. Both outside and inside, you find your way around by means of places. Like a sundial, the light draws places in the grounds, creating a movement towards 'clearings in the forest', and inside, the shadows along the glass facades around the cut-through voids draw the light's continuous movement, which is followed through the building's sections, throwing shadows onto the surfaces. This sense of time is enhanced in the movement through the centre, where the wavy shape opens and closes for the view as you move across the exposed, open surfaces, offsetting your view in depth and at the horizontal level. Here, you also find your way between places. 'Islands' with a café, shop, study cells, library, restaurant etc., which create special horizontal levels in the surface where people can stay. Add to this a number of components, such as a ramp facility and similar, which contribute to distending distances in the large surface. Elements, cells, surfaces and places for the programmes bring about a tension field in the building, constituting the composition plan that can be described as being distended in places – actions – and in time and space.

The centre stands out as an autonomous volume, functioning as a series of action spaces, which in their pragmatic appearance seem like an open programmatic structure that frames the meeting, creating cohesion around this, stretching out into spheres containing an awareness of a cohesion with a greater context than the centre's association with the local environment.

All three examples point to an architectural way of contemplating work/urbanity, the global/local, space/time and relational aesthetics as a possibility field for creating manifestations and possibility fields in the creation of architectural solutions in a context that challenges our handling of complexity. It is in this professional space that the work and research on the architectural drawing takes place with attention to how the work can create a framework for the life lived in a close study of creativity's ability to unfold and spark questions that challenge our architectural thinking, which is an obligation in teaching and research as well as in practice.

Cort Ross Dinesen, Copenhagen 2017

NOTES

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2 Cort Ross Dinesen, *MORPHOLOGY, TOPOLOGY, CARTOGRAPHY*, The Royal Danish Academy of Fine Arts School of Architecture, Publisheres, 2009.

3 Cort Ross Dinesen, *CARTOGRAPHY AND URBANITY*. Hydra 10, The Royal Danish Academy of Fine Arts School of Architecture, 2010. pp. 18-23 and *ARCHITECTURE, DRAWING, TOPOLOGY*, 2017. pp. 93-98.

4 Cort Ross Dinesen, *SLAUGHTERHOUSE*, The Royal Danish Academy of Fine Arts School of Architecture, Design and Conservation, 2015. pp. 5-9 and *ARCHITECTURE, DRAWING, TOPOLOGY*, 2017. pp. 165-170.



The Inujima Art House Project by SANAA, 2013



The 21st Century Museum of Contemporary Art, Kanazawa, by SANAA, 1999-2004



Rolex Learning Center by SANAA, Lausanne, 2010



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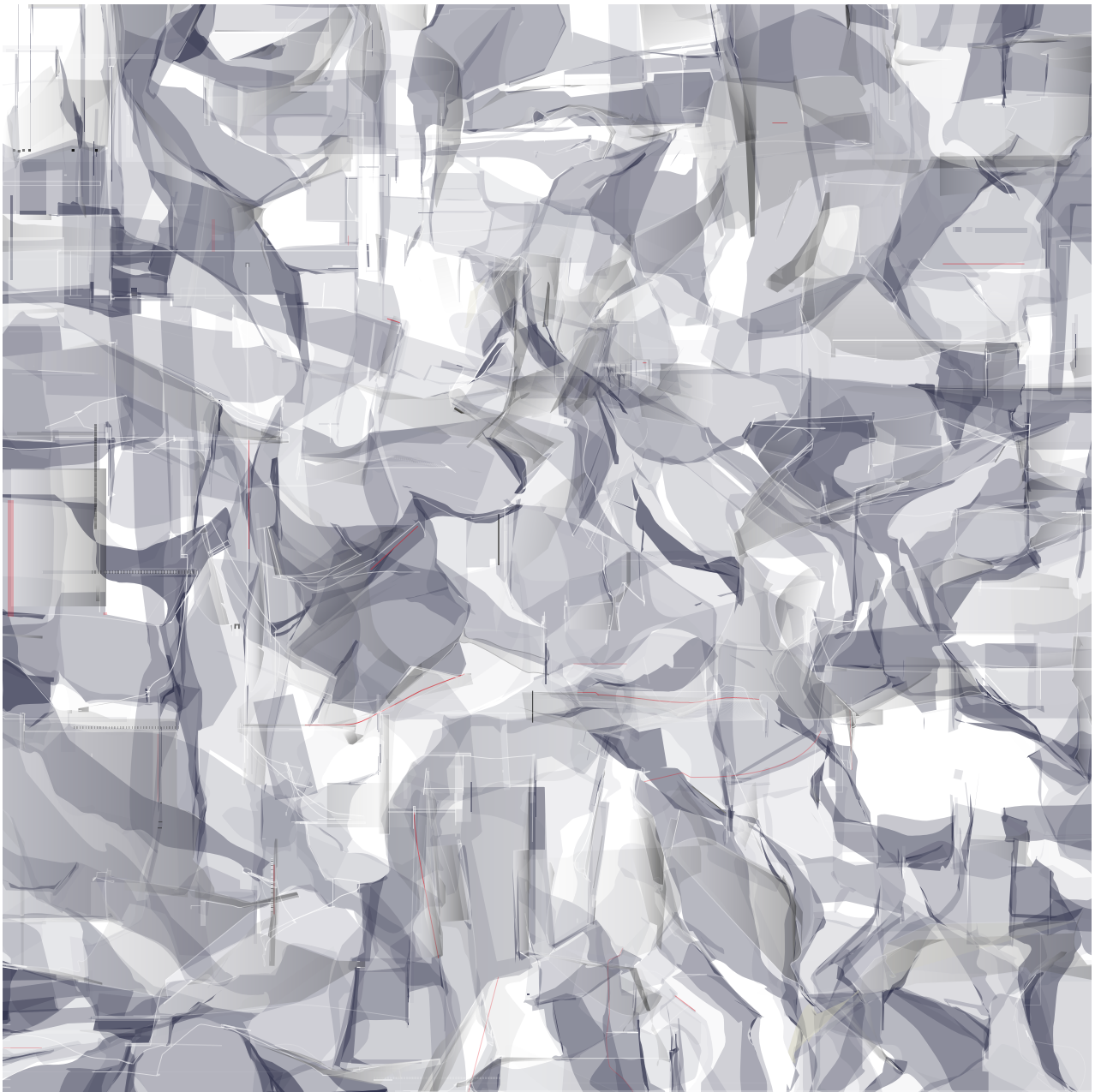
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Berlin 2012
Kasper Spange

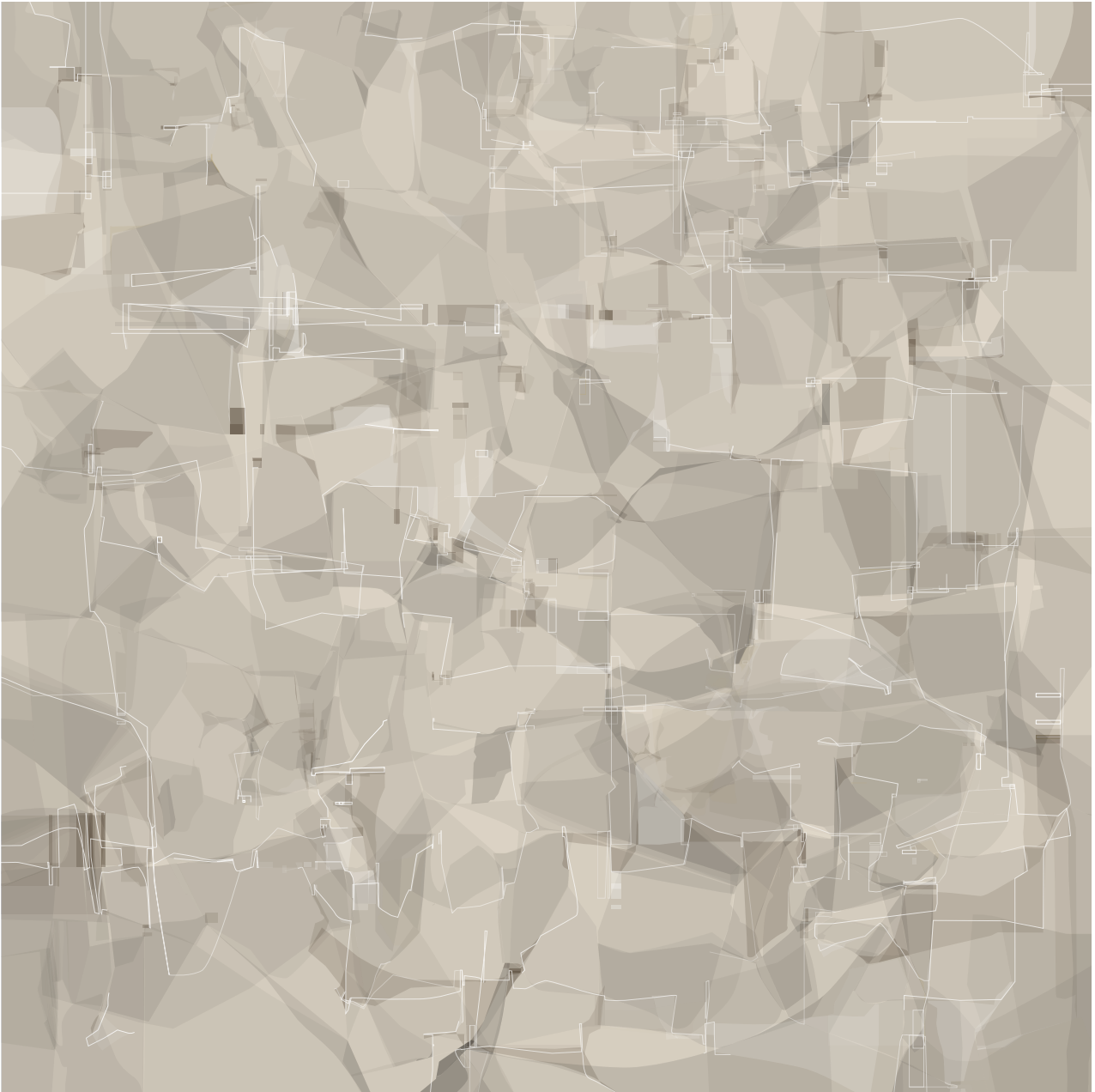


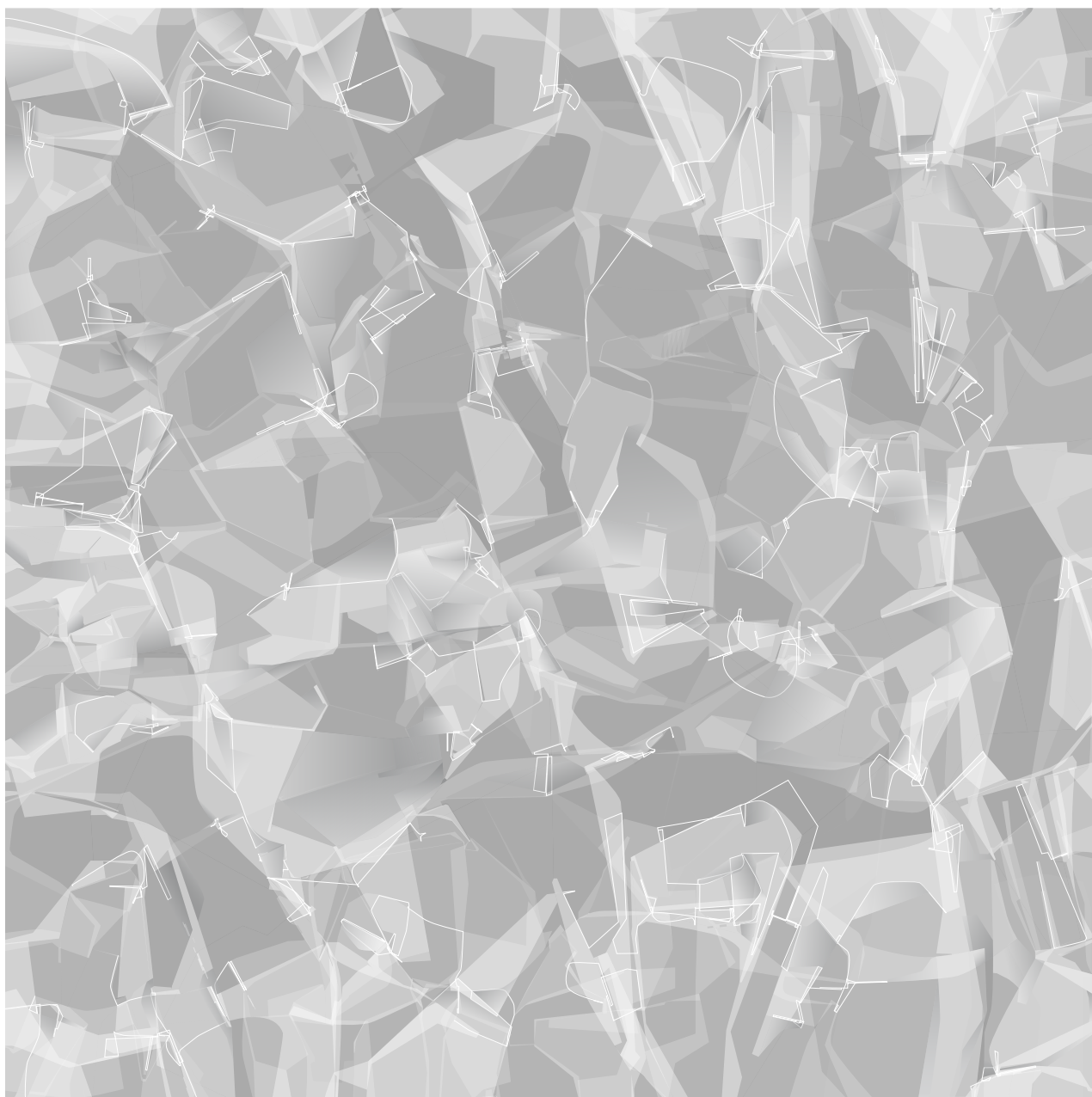
Berlin 2012
Jakob Franjeur Holmqvist-Larsen



Berlin 2012
Maja Ifergan







Architecture Drawing Topology presents an extensive body of drawings and texts and their complex relationalities, ranging from ontology to history. These relationalities have been developed in response to the natural topography of the Greek island of Hydra, and tested in the urban landscapes of Berlin, Paris and Tokyo.

Through constellations that are both real and virtual, the collection is composed of numerous highly detailed drawings. The diverse drawings express a complex and ambiguous field of significations, instrumentalizing an open production of meaning. Positions, relations, orders, levels, dimensions, energies, and processes are discovered as a new field of possibilities, creating an architecture of the event.

A diversity of essays complement the collection of drawings. They explore concepts of topology that establish parallels with the architectural context in which we find ourselves today; a context in which the synergy of time and space is traversed by information and dynamic forces that cannot be restricted to conventional questions of scale, the principles and forms of modern architecture, or historical forms of building.

The book collects artistic research from a period of more than 15 years, with a range of reflections on architecture, drawing and topology in Cort Ross Dinesen's Hydra project at the The Royal Danish Academy of Fine Arts, Schools of Architecture, Design and Conservation (KADK).

Architecture Drawing Topology is an excellent book for students, academics and researchers in the fields of architecture and architectural theory, geography, media studies and cultural studies.

Contains contributions from:

Cort Ross Dinesen

Stephan Günzel

Inger Berling Hyams

Celia Lury

Morten Meldgaard

Anders Michelsen

Peter Murphy

Henrik Oxvig

Luciana Parisi

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