

Platzgummer, Documents, Monuments, Lineaments: On Pre-existing Elements of Innovation in Construction Drawing | Petar Bojanić, On the Temporality of the Project | Federico Cesareo and Valeria Federighi, Narrating Innovation: Some Stories in the Voice of Practitioners | Petar Bojanić and Snežana Vesnić, Architecture & Terminology | Design | Exaptation | Alessandro Armando and Giovanni Durbiano, Innovation from the Practice: a Perspectival Fragment | Elena Todella, Unpacking Architectural Design Practice in the Folds of Decision-Making Processes. An Innovative Mapping Tool | Caterina Quaglio, Innovation Trajectories. Retracing the History of Area-based Initiatives | Caterina Barioglio and Daniele Campobenedetto, Urban Rules | Gianfranco Orsenigo, Experiencing the Possible. The Design of Open Devices for Modification of Marginal Contexts | Elena Guidetti, Potential: Defining, Decoding and Assessing the Potential in Existing Buildings | Donato Ricci, Developing Images into Voices of Concerns. Some Note on Using Networked-images and Participatory Setting for Inquiring into Public Issues | Exaptation | Architecture | Lidia Gasperoni, The Environmental Architect. Reflections on Media Performativity | Ambra Migliorisi, The New Planning Paradigm Between Experimental Practice and Regulatory Framework | Marco Paladines, Andean Heterotopia. Disruptive Innovation in El Alto | Maria Fedorchenko, The AA Project on the City. Architecture in Transition | Albena Yaneva. Postface: the Love of Innovation | Caterina Barioglio, Daniele Campobenedetto, Andrea Alberto Dutto, Valeria Federighi, Caterina Quaglio, Elena Todella, The Problem of Innovation: Archi-

ecture, Design, Agency, Exaptation | Architecture | Agency | Hélène Frichot, Innovation, Enervation... Experiments in the Swiss Pavilion | Ozan Soya, On the Tectonic Threshold of Innovation. Between Architectural Object and Architectural Act |

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Caterina Barioglio, Daniele Campobenedetto, Andrea Alberto Dutto, Valeria Federighi, Caterina Quaglio, Elena Todella, The Problem of Innovation: Architecture, Design, Agency, Exaptation | Architecture | Agency | Hélène Frichot, Innovation, Enervation...

the Contemporary Architectural Situation | Andrea Alberto Dutto, Diagrams Beyond the Avant-garde. Several Reasons Why Diagrams are (Still) Worth Making in Architecture | Klaus Platzgummer, Documents, Monuments, Linea-

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In what is arguably a most crucial time for discourse around issues that are concerned with the political, institutional and social shape of worlds to come, this book explores the agency of the project of architecture and its processes of innovation by constructing an opportunistic and contingent map of effectual positions. The book is built around two sets of questions: the first set of questions concerns itself with the distinction between built objects and actions as the focus of observation, and as objects that are susceptible to innovating, or being innovated. The second set of questions concerns itself with the understanding of the relationship between theory and practice, and is defined by two positions: one that looks to theory as a result of practice, another that looks to practice as subsequent to theory. These two axes are used to locate and compare different positions, thus allowing the readers to construct their own readings of what it means to innovate the project of architecture.

Matheus Cartocci, John Ruskin, Architectural Innovation in Anonymity. The Creative Process of a Discipline | Melek Pinar Uz Baki, A Critical Investigation into Technopoiesis of Architecture | Jörg Gleiter, The Promise of an Object. Design Processes as Processes of Theory Construction | Agency | Design | Snežana Vesnić, Time and Technology of the Architectural Concept: (Sur)réalité Virtuelle | Pierre Caye, The Poietic and Symbolic Place of the Project in the Contemporary Architectural Situation | Andrea Alberto Dutto, Diagrams Beyond the Avant-garde. Several Reasons Why Diagrams are (Still) Worth Making in Architecture | Klaus Platzgummer, Documents,

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Edited by (A-Z):

Caterina Barioglio  
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Valeria Federighi  
Caterina Quaglio  
Elena Todella

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	Caterina Barioglio, Daniele Campobenedetto, Andrea Alberto Dutto, Valeria Federighi, Caterina Quaglio, Elena Todella			
4	<b>The Problem of Innovation: Architecture, Design, Agency, Exaptation</b>			
<hr/>				
14	<b>ARCHITECTURE-AGENCY</b>	52	<b>AGENCY-DESIGN</b>	118
<hr/>				
16	Hélène Frichot <b>Innovation, Enervation... Experiments in the Swiss Pavilion</b>	54	Snežana Vesnić <b>Time and Technology of the Architectural Concept: (Sur)réalité Virtuelle</b>	120
29	Ozan Soya <b>On the Tectonic Threshold of Innovation. Between Architectural Object and Architectural Act</b>	66	Pierre Caye <b>The Poietic and Symbolic Place of the Project in the Contemporary Architectural Situation</b>	138
34	Matheus Cartocci <b>John Ruskin, Architectural Innovation in Anonymity. The Creative Process of a Discipline</b>	72	Andrea Alberto Dutto <b>Diagrams Beyond the Avant-garde. Several Reasons Why Diagrams Are (Still) Worth Making in Architecture</b>	146
39	Melek Pinar Uz Baki <b>A Critical Investigation into the Technopoiesis of Architecture</b>	82	Klaus Platzgummer <b>Documents, Monuments, Lineaments: on Pre-existing Elements of Innovation in Construction Drawing</b>	156
43	Jörg H. Gleiter <b>The Promise of an Object. Design Processes as Processes of Theory Construction</b>	87	Petar Bojanić <b>On the Temporality of the Project</b>	171
		97	Federico Cesareo, Valeria Federighi <b>Narrating Innovation. Some Stories in the Voice of Practitioners</b>	176
		106	Petar Bojanić, Snežana Vesnić <b>Architecture &amp; Terminology</b>	181
				198
				<b>DESIGN-EXAPTATION</b>
				<b>EXAPTATION-ARCHITECTURE</b>
				<hr/>
				200
				Lidia Gasperoni <b>The Environmental Architect. Reflections on Media Performativity</b>
				211
				Ambra Migliorisi <b>The New planning Paradigm between Experimental Practice and Regulatory Framework</b>
				216
				Marco Paladines <b>Andean Heterotopia. Disruptive Innovation in El Alto</b>
				221
				Maria Fedorchenko <b>The AA Project on the City. Architecture in Transition</b>
				232
				Albena Yaneva <b>Postface: the Love of Innovation</b>
				Alessandro Armando, Giovanni Durbiano <b>Innovation from the Practice: a Perspectival Fragment</b>
				Elena Todella <b>Unpacking Architectural Design Practice in the Folds of Decision-making Processes. An Innovative Mapping Tool</b>
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## THE PROBLEM OF INNOVATION: ARCHITECTURE, DESIGN, AGENCY, EXAPTATION

Caterina Barioglio, Daniele Campobenedetto, Andrea Alberto Dutto, Valeria Federighi, Caterina Quaglio, Elena Todella (A-Z)

In a time of supra-national economic, political and social crises, architectural design is acknowledged as necessitating a fundamental restructuring in order to gain renewed relevance both as a discipline and as a practice.

In what we think is a most crucial time for discourse around issues that are concerned with the political, institutional and social shape of worlds to come, this book explores the agency of the project of architecture and its processes of innovation by constructing an opportunistic and contingent map of positions.

The book is the result of a tripartite academic trajectory dedicated to the issue of innovation in practice. It gathers material produced for and during an international Ph.D. course, an international Summer School for Master students, and an international Ph.D. seminar, all held at Politecnico di Torino with the participation of students and faculty from TU Berlin, University of Belgrade, Architectural Association, KTH Stockholm, Sciences Po, Centre Jean Pépin, CNRS Paris, Ecole National d'Architecture Paris Val de Seine. These three events also coincided, in temporal terms and in the general hypothesis being tested, with the fifth issue of the journal *Ardeth (Architectural Design Theory)* guest-curated by Andrés Jaque and dedicated to the theme of "Innovation as it happens."<sup>1</sup> These academic experiences are part of a wider thrust towards the consolidation of a growing network of schools and research groups working on the issue of innovation in the project of architecture: what does it mean to innovate the practice of architecture? Can we understand the project of architecture as a socio-technical object that, as much as other socio-technical objects, is susceptible to processes of innovation? Which paradigms of innovation can we refer to as architects? What is the role of critical theory in the research for innovation in the project? And, on the other hand, what is the contribution that pragmatist approaches can make when looking at day-to-day practice?

Any understanding of innovation, in design as well as in other fields, is not absolute, but rather contingent: the use of artificial intelligence in design processes, for instance, which is rapidly developing in China where the number of architects is relatively low, and the real estate market demands the construction of consistent numbers of new residential units in /equally numerous newly-built settlements, would arguably not fit as well in the Italian market, where the number of architects is highest in the world, and very little demand exists for new residential units or new developments in general.

On the other hand, if we concern ourselves with the understanding of innovation – that is, if the understanding of innovation is our objective - we need to define at least some degree of commensurability across contingent situations. How can we go about managing the variables at play to isolate recurriencies and differences? The contingency of the market that is interested in new AI design technologies is sufficiently large (as large as China, in fact) to justify substantial investment on the part of research, as it is fairly sensible to imagine that such technology can be used enough times to justify its costs, before it is made less profitable by changing contingencies.

This book deals with questions that are crucial with respect to the debate on architectural design and its agency. It aims to look at the ways in which we understand, tell, capitalize and possibly reproduce "innovation." To introduce the book and its contents, we propose two sets of questions, which define a two-axes diagram that we employ to navigate the different positions expressed by different authors.

The first set of questions concerns itself with the distinction between built objects and actions as the focus of observation, and as objects that are susceptible to innovating, or being innovated. Should discourse deal with the built matter of architecture: buildings - and their effects on our societies? Or, on the contrary, should it deal with the system of practices that, together with other systems of practices (that of engineers, contractors, but also sociologists and philosophers) contributes to the production of built objects on a daily basis? Both positions recognize the built world as part of a stratified entanglement of social, economic and political instances. Agency is not a prerogative of human beings: buildings, documents, people, norms, can have different types of agency within processes of innovation. If we look to buildings as the object of analysis and the locus of innovation, it is possible, for instance, to make an attempt at defining measures of effectiveness that have to do with different types of performance, such as environmental or economic ones (Batty, 2017; Bertaud, 2018), or to develop critical approaches to address the relationship of cause and effect between built space and society at large (Borden, 2003). Also, it is possible to develop retrospective narratives that make comparable types of innovations that develop in different times and places (Forty 2004; Cohen, 2012). The articulation of this last set of positions is represented in architecture schools around



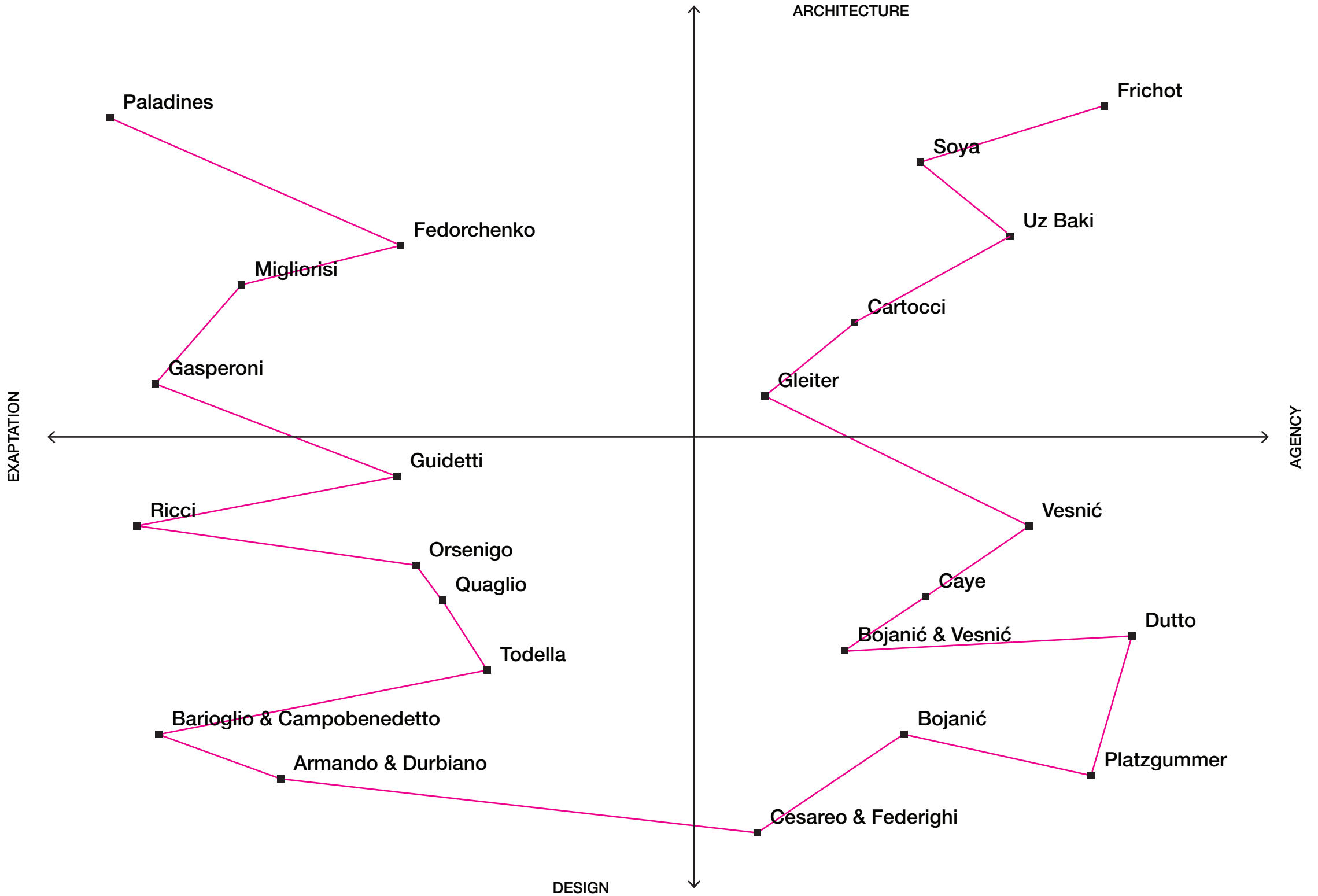
the world within “History and Theory” pedagogical frameworks. On the other hand, if we look to design as the object of analysis and the locus of innovation, the aim/focus of the observation shifts to defining the effectiveness of the practice, rather than the products, of design. The time of observation spans the time of production of design documents, rather than the time of production of built objects; the place of observation is the laboratory of design practice, rather than the worksite, the city, or practiced space. The articulation of this emergent set of positions includes ethnographic observations that attempt to give a definition of what a laboratory of practice is (Yaneva 2018) as well as neomarxist attempts at locating design practice within the market (Deamer 2015), or critical analyses of the agency of design within wider social trajectories of change (Awan, Schneider and Till 2009; Doucet, 2015).

The second set of questions concerns itself with the understanding of the relationship between theory and practice, and is defined by two positions: one that looks to theory as a result of practice, another that looks to practice as subsequent to theory. The difference is notable: on one end, we find the cartesian argument that makes ontology a product of epistemology, and locates the distinctive trait of human nature in our ability to think and formulate complex thoughts – which makes us fundamentally different from other animals, but also from machines. On the other end, we find the pragmatist claim that ontology leads to technology, which, in some cases, leads to epistemology: technology is developed in the course of action, and exists even without a full comprehension of its functioning. According to philosopher Maurizio Ferraris, “in a complex society it is a fatal mistake to think that in order to have a competence, a preliminary and full comprehension is needed” (2021: translation by the authors) If competence can precede comprehension, knowledge is produced *in practice*: as in Gould’s and Vrba’s account of evolutionary exaptation (1982), the interval of possibilities is narrowed down in the course of action and reaction, and effects emerge as a consequence. If, on the other hand, comprehension must precede competence, actions in practice should follow a definition of desirable effects: actants preliminarily define their field of agency, and then act accordingly.

The two sets of questions thus presented give shape to two gradients that can be arranged along two axes: built objects (architecture) or actions (design), and competence as preliminary to comprehension (exaptation) or rather comprehension as preliminary to competence (agency)? The essays included in this book are arranged in the four quadrants that exist as a result of these two gradients. Essays include long position essays (written by scholars and researchers), shorter case-study essays (written by Ph.D. students) and visual essays which are primarily image-based. Together, these three formats and these four quadrants attempt to offer a wide spectrum of positions that integrate, oppose and complement each other.

The first quadrant (**architecture-agency**) displays essays that are concerned with exploring the relationship between different types of agency as a conscious effort toward a specific effect, and different types of built space: **Hélène Fric-hot** operates a critique of the very concept of innovation, and challenges the relationship between built object and design process by looking at two critically acclaimed installations at the Venice Biennale. The following two essays are first concerned with defining the research field and tools: **Ozan Soya** proposes the concept of tectonics as a key to reconciling technological and cultural aspects in exploring the concept of innovation “as a total experience;” while **Matheus Cartocci** starts from an analysis of John Ruskin’s writings to identify the collective interest as the field of application of innovation in architecture, concluding that “innovation in architecture can be considered as such when it is an anonymous addition to the line of historical events”. **Melek Pinar Uz Baki**, whose essay opens a theoretical inquiry into the concept of *techné*, reflects on and traces the project of architecture and its agency for a critical and innovative act, conceptualizing then architecture as a *technopoietic* system. Finally, **Jörg H. Gleiter** problematizes the effects of digital design methods in the constitution of architectural knowledge, exploring the role of the modeling chain in creative design processes and in theory-building.

The second quadrant (**agency-design**) contains essays that explore the relationship between agency and design as a field of research: **Snežana Vesnić** explores the semantic potential of words, and traces their relationship with practice through a series of designs that represent the movement between “object” and “concept.” **Pierre Caye** points out how the architectural project has been neglected from the theoretical point of view and shows under which conditions and in which form it can prove to be a critical tool of “liberation” rather than an instance of order and organization. **Andrea Alberto Dutto** wonders whether the overcoming of the avant-garde—i.e. the logic of the new at all costs, and of *tout court* breaking with the past—can be a way to innovate, with particular reference to the legacy of diagram-making. Also working on the tools of design, **Klaus Platzgummer** argues that innovations are never creations ex nihilo: rather, they can be found in the materiality of cultural techniques—specifically, of drawing as material expression. Moving to the dimension of exchange, **Petar Bojanić** unfolds the temporal nature of the word “project” as a way to assess its potential agency within social processes, while **Federico Cesareo** and **Valeria Federighi** explore the relationship between narratives of innovation as retrospectively constructed by practitioners, through the collection of 75 stories of innovation and the observation of recurrent narrative structures. Then, reconstructing the origin of architectural terms and (de)constructing projects, **Petar Bojanić** and **Snežana Vesnić** examine the potential of language in architectural theory and practice, and focus on how to render architectural conceptualization visible.



In the third quadrant (**design-exaptation**) we can find essays that unpack the mechanisms of design innovation as they evolve within situated systems. **Alessandro Armando and Giovanni Durbiano** try to frame the range of possibilities for innovation in architectural design: by entering the folds of a real architectural design process, the authors propose a method to recognize more effective design strategies, based on the “instability” of both the architectural process and the architectural product. From a similar perspective, **Elena Todella** explores a mapping tool tracing architectural design practice as a taxonomy of multiple entities that interact in a multi-sited and large-scale decision-making process, while **Caterina Quaglio** retraces the history of area-based initiatives to investigate the relationship between individual learning and collective capitalisation in order to assess the actual conditions and modalities of innovation in design practices. **Caterina Barioglio and Daniele Campobenedetto** explore the echoes produced by the anthropic modification of the spatial environment, in terms of urban rules, technical requirements, cultural shifts, and behaviors that travel beyond the place in which the modification occurs. Through four case studies in New York and Paris, the authors investigate the possibility of considering localized design as a means of representing and addressing general and comprehensive issues. **Gianfranco Orsenigo** reflects on the role of architecture and architectural innovation to address uncertainty and complexity in marginal contexts, through a reflexive critique of two personal research experiences, while, starting from the concept of “potential” as an operational category to act on existing assets, **Elena Guidetti** points out how an evaluation of the transformative “potential” of buildings could open up possibilities in architectural practices of adaptive reuse. In closing the section, **Donato Ricci** tries to unfold the specificities of a design approach to repurposing online images to study, inquiry, and intervene in urban issues. The scope is to extend and further the role of large image corpora visualizations beyond pure analytical or critical purposes.

The fourth and last quadrant (**exaptation-architecture**) defines a field of observation that refers mechanisms of innovation to built space and its forms of evolution. **Lidia Gasperoni** elaborates on the notions of mediality and performativity in architecture and on the way in which these concepts can affect the practice of the environmental architect, namely an architect who embodies complex social and political challenges. **Ambra Migliorisi** reflects on the need for a new legal context of reference to contemporary urban practices, reducing the power of traditional urban design instruments and proposing gaps for experimentation as a possible paradigm change within the existing regulatory grids. In the essay by **Marco Paladines**, the recent transformations of the city of El Alto, Bolivia, becomes an opportunity to study innovation in architecture as the confluence of different accumulation processes, while for **Maria Fedorchenko** the contemporary city represents a reservoir of experimentation with her students at the Architectural Association in London. Her reflection is concerned with the representation of the city as a space in constant transition both physically and conceptually.

#### Notes

1 Ardeh is funded by the Department of Architecture and Design (DAD) at Politecnico di Torino, the Department of Architecture and Urban Studies (DASU) at Politecnico di Milano, and the Department of Architecture and Design (DiAP) at Roma La Sapienza, and is edited by a group of researchers from Politecnico di Torino, Politecnico di Milano, Roma La Sapienza and ETH Zurich.

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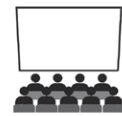
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from UNIVERSITY OF BELGRADE



LECTURE

LAB 2\_Jörg H. Gleiter  
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LECTURE

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**Innovation, Enervation...**  
**Experiments in the Swiss Pavilion**  
*Hélène Frichot*

Innovation, which demands the perpetual production of the new, too often seeks out novelty for the sake of novelty alone, resulting, finally, in a sense of affective enervation. This chapter argues that innovation needs to commence from the point of view of problems worth addressing, and questions worth asking. Sometimes, the result might not be to pursue innovation at all, but to slow down and undertake a careful reconsideration of a state of affairs by acknowledging what most urgently confronts us in a contemporary world. To question and critique the thoughtless push for innovation, I look to the controlled and circumscribed event and exhibition space that is the Venice Biennale of Architecture. To enable focus and specificity, I address the 'innovative' architectural experiments on display in the Swiss Pavilion in the 15th and 16th Biennale of Architecture, in 2016 and then 2018 respectively. After placing these architectural experiments in critical dialogue, I conclude by introducing Isabelle Stengers and Didier Debaise's "speculative pragmatism" as a remedy to the presumed good of innovation.

**On the Tectonic Threshold of Innovation.**  
**Between Architectural Object and Architectural Act**  
*Ozan Soya*

Should we need to think about innovation in architecture through the object of architecture or the act of architecture? In other words, should we look at buildings and architectural products, or accept these objects as results of several changes that occurred in processes that architects are involved in? A contemporary tectonic theory may have the answer. The term tectonics derives from the word "tekton," referring to carpenter or builder at its Greek origin. However, throughout the nineteenth century, the term was used by architectural theorists to refer to architecture's coordination of structural/constructional aspects with systems of decoration/ornamentation. Today, its potential, providing various perspectives on the relationships between the major aspects of architecture, gains even more importance.

**John Ruskin, Architectural Innovation in Anonymity.**  
**The Creative Process of a Discipline**  
*Matheus Cartocci*

If innovation is a term applied to an instrument that is set to perform a *work*, this short paper proposes to define a hypothetical work field and goal for architecture as a discipline. Writings of John Ruskin (1819-1900), theoretical scholar of the Victorian period, will here be used for their clear definition of architecture as a tool for an expressed purpose: the establishment of a better society and the formation of personal character through an act of education. Once clarified the objective of the work to pursue, this paper presents the characteristics of *innovation* in architecture when utilised as a practical instrument, through the theoretical classifications of different scholars of the 20th Century.

**A Critical Investigation into the Technopoiesis of Architecture**  
*Melek Pinar Uz Baki*

This paper presents a theoretical inquiry into the concept of *techné* and traces the project of architecture and its agency for a critical and innovative act. The conventional account of making trajectory in architecture within the scope of a design problem, maker(s), and alternate possibilities have been enhanced through the changing nature of design thinking, tools and methods. Besides its practical appeals and evolving discourse, developing tools, technics and technologies have caused the disciplinary transformation of architectural thinking as well as the ways of practicing, transferring, and interpreting experiments. On the transformation of tools into technologies, *technopoiesis* will be introduced as a contemporary explication of *techné* to remind the significance of knowledge production generated from the current interrelationship of *poiesis* and technology. Architecture will be conceptualized as a *technopoietic* system that offers pluralistic participation, multiplicative operations, and particular solutions for architectural thinking and making.

**The Promise of an Object.**  
**Design Processes as Processes of Theory Construction**  
*Jörg H. Gleiter*

Digital design methods pose major problems to architecture. Rapid prototyping, digital fabrication or BIM and other forms of computer-aided design, are possible without clearly scaled model spaces as introduced by Leon Battista Alberti (1404-72). Alberti was the first to insist on architectural design in the form of concrete, scaled drawings. Accordingly, Alberti's innovation was to transform the design process into a series of modeling processes, each at its own scale, each with its own promise of an object. With Alberti, the process of designing became a process of theory building. But today, digital design processes interrupt the modeling chain. In doing so, they interrupt nothing less than the creative design process and thus further theory building. Despite the possibility of creating fantastic new forms and figures, theory building is short-circuited in strictly algorithmic design processes. The crisis of creativity as it can be observed today is basically a crisis of theory building, triggered by the partial interruption of the modeling chain.

### Time and Technology of the Architectural Concept: (Sur)réalité Virtuelle *Snežana Vesnić*

In this text, I thematize the creation of the (architectural) concept and creation with the concept, in order to present a new argument that the production of the object of architecture is a consequence of the creation by concept. The concept translates one form of reality into another. In these deconstructions of reality and the object, we find the potential for ever-novel creation and an always new reality. In the changes of *modes of reality*, the object always has a new reality. The non-identity created among various forms of existence of a single object creates new 'potency' for new objective reality. In the text, I present the phrase "*surréalité virtuelle*" to express my idea of the creation of the new conceptual potential at the point of absence, lack, or inexistence of the architectural object.

### The Poietic and Symbolic Place of the Project in the Contemporary Architectural Situation *Pierre Caye*

Contemporary architecture is in a paradoxical situation. The project, which played such an important role in the Modern Movement, has been neglected from the theoretical point of view, even though in practice architecture cannot do without it for legal and economic reasons as much as for constructive reasons. But architecture as an art form no longer depends on the project. The project is no longer the condition for its symbolic establishment. However, I do not believe that the deconstruction of the architectural project is an expression of its freedom, particularly in relation to the construction industry. This article shows under which conditions and in which forms the project can prove to be a critical power of liberation even more than an instance of order and organisation.

### Diagrams Beyond the Avant-garde. Several Reasons Why Diagrams Are (Still) Worth Making in Architecture *Andrea Alberto Dutto*

Making diagrams beyond the avant-garde means recognizing in the ordinary use of these representational tools an architectural competence. The essay presents some reasons why making diagrams is not a matter of style but a technical and epistemological issue. The diagram can be considered as an innovative tool insofar as one renounces to recognize a value in temporary architectural trends. The essay proposes a reflection on the diagram as a contingent medium. Unlike the avant-garde: making diagrams does not constitute a value in itself.

### Documents, Monuments, Lineaments: on Pre-existing Elements of Innovation in Construction Drawing *Klaus Platzgummer*

This paper argues that innovations in architectural practices can be found in the materiality of cultural techniques—in this case, in the materiality of the cultural technique of drawing. This is rendered visible by two historical moments in the development of construction drawing: the transition from stone to paper as sign carrier in the early modern period and the transition from paper to complex electronic sign carriers in the second half of the twentieth century. Ultimately, the paper attempts to show that innovations are never creations *ex nihilo* but are always constituted in pre-existing elements, such as material expressions and traditions of thinking.

### On the Temporality of the Project *Petar Bojanić*

This essay will attempt to systematize a few difficulties and present a few conditions that have to do with revealing the future, that is, the temporal nature of the project. First, I would like to insist on a weakness in languages spoken by a great number of people, which is that the future is difficult to linguistically stabilize and document: German and English do not have a future tense, using instead auxiliary verbs, respectively, "werden" (to become), "will"/"be going to." I will argue that when the project is no longer – there is no longer any future. The project ensures the future. To achieve complete circularity, I will introduce a third element: without the future, a group (in studio) or a "we" (in love) cannot possibly exist. In this essay I would like to unreservedly insist that the idea of a project, or perhaps a sketch of any future theory of the project (or concept), was provided at the beginning of the last century, within an imaginary exchange between Henri Bergson and Georg Simmel.

### Narrating Innovation. Some Stories in the Voice of Practitioners *Federico Cesareo and Valeria Federighi*

Starting from a research on the topic of innovation in architectural practice, the essay attempts to analyse the epistemic level of the relationship between the events of a design practice and the way of narrating them. Beyond specific contingency factors that a practitioner may point out, it can be argued that the concept of innovation in architectural design practice is conveyed through communication based on comparable narrative constructs. In accordance with Bruner, the research shows how the actions and events narrated by designers are part of legitimation processes that require a correctness of the choices made, not in absolute terms, but relative to a thematic-value focus. Through the presentation of some of the stories collected, it is possible to find a coexistence of three levels of signification on which the design narrations act. By parametrizing these planes, the essay introduces a comparative representation capable of making explicit the relationship between the components of innovation in the tales of architectural design practice.

### Architecture & Terminology *Petar Bojanić and Snežana Vesnić*

As the first and most important institution, language institutionalizes all institutions, gives them the power to become disciplines and produce knowledge. In architectural theory and practice, language defines the processes of architectural design, while in architectural philosophy it reveals conceptualization and thematization. The main goal of this project is to extensively study architectural concepts. By introducing the philosophical text into the process of architectural design, this project aims to examine the relation between architectural concept (philosophy), architectural design (technology) and architectural project (process). Furthermore, this research will attempt to assemble an architectural dictionary of technical terms and notions, and then apply them to deconstruct architectural concepts.

*De re Aedificatoria*. Rather, thinking in lineaments is a modern *tradition* of architectural thought, so internalised that architects almost forget that they are always confronted with lineaments when drawing. During the twentieth century, this completely internalised tradition became entangled with the materiality of complex electronic sign carriers; that is, silicon chips, magnetic hard disks, copper cables and liquid crystal displays. According to André Leroi-Gourhan, such entanglements of *traditions* with the *material* expressions of a time are pre-existing elements of innovation. Like all innovations, the cultural technique of digital drawings is not a pure invention. Far from being creations *ex nihilo*, today's digital construction drawings are inextricably interwoven with the long history of architectural lineaments.

#### Notes

<sup>1</sup> Vilém Flusser, *Die Schrift. Hat Schreiben Zukunft?* (Göttingen: Immatrix Publications, 1987), 21.

<sup>2</sup> *Ibid.*, 23.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> André Leroi-Gourhan, *Milieu et techniques*. (Paris: Éditions Albin Michel, 1973), 387 – 388.

<sup>6</sup> *Ibid.*, 388.

<sup>7</sup> *Ibid.*, *Gesture and Speech* (Cambridge: MIT Press, 1993), 183, 214, 233; see also Mario Carpo, *Architecture in the Age of Printing, Orality, Writing, Typography, and Printed Images in the History of Architectural Theory*. (Cambridge: MIT Press, 2001), 119.

<sup>8</sup> Joseph Böker, *Architektur der Gotik – Gothic Architecture* (Salzburg: Anton Pustet, 2014), 15 – 28.

<sup>9</sup> James S. Ackermann, “Architectural Practice in the Italian Renaissance,” *Journal of the Society of Architectural Historians* 13, no. 3 (October 1954): 3 – 11.

<sup>10</sup> It is plausible to apply this model for the historicity of the technique of writing also to drawing practices. Indeed, it is Flusser himself who argued that “the writer is not a painter, he

is a draughtsman [...] The writer is a drafter, draughtsman, a designer, and a semiologist.” See Vilém Flusser, *Die Schrift. Hat Schreiben Zukunft?* (Göttingen: Immatrix Publications, 1987), 21 – 22.

<sup>11</sup> Vilém Flusser, *Die Schrift. Hat Schreiben Zukunft?* (Göttingen: Immatrix Publications, 1987), 57.

<sup>12</sup> Mark Wigley, “Black Screen: The Architect's Vision in a Digital Age,” in *When is the Digital in Architecture?*, ed. Andrew Goodhouse (Montréal: Canadian Centre for Architecture, 2017), 177 – 192.

<sup>13</sup> John May, *Signal. Image. Architecture. (Everything is already an Image)* (New York: Columbia University Press, 2019), 91 – 104.

<sup>14</sup> Leon Battista Alberti, *On the Art of Building in Ten Books*, ed. Joseph Rykwert, Neil Leach, Robert Tavernor (Boston: MIT Press, 1988), 5; original Latin wording added by the author.

<sup>15</sup> *Ibid.*

<sup>16</sup> *Ibid.*, 7; emphasis by the author.

<sup>17</sup> W. J. T. Mitchell, “What Is an Image?,” *New Literary History* 15, no. 3 (Spring 1984): 504 – 507.

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## ON THE TEMPORALITY OF THE PROJECT

Petar Bojanić

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Presently, I will elaborate on a passage from Henri Bergson's 1902-1903 lectures about how English is learned, and how to acquire its best expression (pronunciation). However, before we get to Bergson, I would like to offer a few of my own thoughts to strengthen the connection between time (specifically, the future), action, and the community. Imagine, if you will, how much conversation, back and forth, chatter etc. needs to take place among organizers, participants, representatives of various authorities for a short summer school at, say, the Politecnico di Torino.<sup>1</sup> At some point, before it started, there was a clear intention (let us call it “empty intention”<sup>2</sup>) that the school take place. Then, while it was happening, we were participating in it, talking within it and about it (when it had become “(ful)filled intention” or just intention), the summer school had ceased to exist in the future or to exist merely as a project to be or project to be realized. In taking place, the school certainly had a new modality. Unclear ideas, intentions, conceptions (concepts<sup>3</sup>) of the summer school in Politecnico Torino (the space, location), formulated and constructed over the course of the previous year or the previous several months, through various communal acts, as a complicated project (with a document, budget, money, order, work plan, schedule, timing), all had to come together in the course of a few days. They had to take place by holding us (the organisers, the students, the guest lecturers) together as a group with a given task. The future (the school now being actualized and objectivized) had in one way or another replaced the concept and project. A group of people, together, had designed and organized the transmission of a series of amorphous mental entities into our current communal social acts and facts. The future must conform to the present. I do not need to list all the consequences of this future that took place, but certainly the school as a social fact or repertoire of social facts had eliminated the time of execution of the project and design of this very school.

“Eliminated time” actually represents the erasure of temporality in the project, a temporality only possible within the project—this is what I am above all interested to show<sup>4</sup>. Let me formulate my claim in reverse: when the project is no longer—there is no longer any future. The project ensures the future. Or, to achieve complete circularity, let me introduce a third element: without the future, a group or a “we” cannot possibly exist.

When it appears that the project is taking place, we will all together (in the days the school was taking place) assess whether the project corresponds to the concept that preceded it, which is to say, whether the project was executed better than thought (as in the saying “it went better than I expected,” or when the project realized surpassed the concept, what was “in the head,” “the idea,” or “on paper,” the comparison of the expected and what remained unbuilt). Or whether the project has fallen apart. What does a failed project mean? Does not the meaning of the word “project” (to throw something forward, to pitch) already imply that every project is necessarily failed? The very possibility of comparing what was taking place then with other summer schools or some idea of an ideal, imagined (then, or previously) summer school implicitly opens the possibility for constructing a next project and the future as such. Thus, as soon as it appears that a project has been executed<sup>5</sup> and ceases to exist, a new project or slew of projects appears on the horizon. If several protocols, such as “possibility,” “horizon”<sup>6</sup> and “imagination” (“as if”) are in some way “mingled” and “entwined,” would that be enough to show that the basic modus of project temporality—the future, what is yet to come (*avenir* in French) or what is to follow—has finally been revealed?<sup>7</sup> If “the future” is revealed within an imaginary distance between the concept and project, between two words or notions always difficult to differentiate, does then this modality of time have special status in the “time–space” relation? How much future is there necessarily in space? Better still, is future more connected to space than is, for example, the past?

I would now like to systematize a few difficulties by constructing several conditions that refer to the revealing of the future and temporary nature of the project. I would like to provisionally insist on a weakness found in certain languages spoken by a great number of people that makes the future difficult to linguistically stabilize and document: German and English do not have a future tense, using instead auxiliary verbs, respectively, “*werden*” (to become), “will”/“be going to.”

The first condition refers to the pronoun “we”. Whence “we” and how is it possible? “We” who produce certain social acts as part of a project (residents of a city, for example, who pass by each other, live side by side, tolerate one another, etc.<sup>8</sup>) also construct its following, its new projects.<sup>9</sup> ‘We’ is always what is left over from a project just completed and what is always altered and constituted anew (“new” or “sudden” is always both possible and impossible). The future is implicitly present in each expression of a given state that

is addressed to some other or others (individuals): if I promise something to someone, there is an assumption of time needed to make good on the promise.<sup>10</sup> Further, every address to another is simultaneously the expectation of a reaction and reciprocity, also always temporally conditioned (between my saying “hello” and your responding “hello” there is an interval; between my Viber message, and your response, there is a period in which you are perhaps answering or in turn asking a question of someone else). “Give me time” or “take your time” or “I will buy time” can confirm the future as an interval in which various actions are to be performed. Reticence to answer or address someone else is a kind of negative social act. Finally, the still complicated and ill-defined position of a head or leader in a democracy opens the act of ordering (or consulting, suggesting, advising) to future time and thus producing inequality. Alexandre Kojève gives a very simple example of some of these issues, in which the authority of the project creator (the subject) is incidental compared to the authority of the project itself: “Let us consider a familiar example. A band of kids gather to play. One of these kids proposes to go and steal apples from the orchard next door. Immediately, by doing so, he casts himself in the role of the band’s leader. He became this leader because he saw *further* (*plus loin*) than the others, because it was he alone who thought out a *project*, while the others did not manage to get beyond the level of immediate facts” (Kojève, 2014: 63; Kojève, 2004: 74).

For a group to potentially remain together, confirm its own “we-mode” (for two to remain together, since love is above all continuously projected), and preserve its ‘co-presence’ (such as to meet and work together the following year in Torino), various project operations (co-regulations) have to be introduced: correcting mistakes in the production of social acts, exclusion of the undisciplined, repetition, forecasting, differentiation of the possible from the impossible, insistence anew, insistence on the new, amendment, etc.

The second condition also refers to the pronouns “we” or “us”, referring to an important connection of the future with space (co-presence or co-present implies “the local structure of we-space itself”) (Krueger, 2010: 4) It is as if the future is primarily that form of time that allows and ensures the connection between time in general and space. The simple fact of my passing time unfolding inseparably from my body extending in space can be entirely simultaneous with the simple fact of your passing time unfolding in your body extending in space. Two temporalities and two spatialities that do not intermingle are always recognized in the present. However, physical (and not only physical<sup>11</sup>) co-present contact always introduces the aspect of future: orientation and location (and dislocation, a term by Peter Eisenman). Based on this, my existence in the future is directly dependent on the future I could occupy along with others. The architectural protocol does not necessarily appear with the invention of space, but only with the introduction of “our” time (or “our” future) into space.



The various problems that occur in the course of our common or simultaneous penetration as a group into a given location and its duration there, its co-existence or common being in a single place, all demand a necessary reconstruction of the connection between architecture and philosophy (or sociology).<sup>12</sup> The first task or epistemological operation would consist of constructing an architectural terminology that meticulously follows the repertoire of various gestures (steps, moments, points, sequences) made in the course of a communal taking of space (from concept and project to object and the material). How do we name the various gestures and provide an order of notions that would correspond to the archeology of philosophical and historical notions? Parallel to this, a new reading of philosophical texts from an architectural perspective allows for correcting their logic and establishing new connections between the future (time) and space. Here is an example. At the same time that Bergson thematizes time in his seminars (although it is equally important how he even enters the abstract problem of time), Georg Simmel publishes his 1903 text “Über räumliche Projektionen sozialer Formen.”<sup>13</sup> I would like to unreservedly insist that the idea of a project, or perhaps a sketch of any future theory of the project, has been constructed at this very time within an imaginary exchange between Bergson and Simmel. Simmel’s title could be a translation and addition to a well-known expression from Kant, which also requires intervention if we introduce the dimension of time, that is, the future. Simmel calls the transfer or shift of social forms “spatial projection.” If we pull apart this phrase, we have social forms launched from somewhere or projected into space. Casting social forms into space is actually a temporal operation that relies on social forms maintaining themselves or existing only in space (these social forms are actually constructions protecting the relations among people, what connects them and their or our “we”). However, by combining this protocol with a 1908 sentence by Simmel, written in the style of John Searle (“The boundary is not a special fact with sociological consequences, but a sociological fact that forms spatiality itself”) (Simmel, 1992: 697), it becomes clear that social acts in fact establish space. Space is always already social space, constituted in time to come. The project (or projection, design) actually brings future time to space. Only in this way is the construction of the social complete. Agents or subjects occupy or make space by projecting their mutual relations. Simmel cites Kant’s sentence from “Paralogisms” several times (“Criticism of the fourth paralogism of transcendental psychology;” the always relevant passage on the difference between idealism and realism). Speaking of space as representation:

“This perception thus represents (staying for now only with outer intuitions) something real in space. For first, perception is the representation of a reality, just as space is the representation of a mere possibility of coexistence.”

*Diese Wahrnehmung stellt also, (damit wir diesmal nur bei äusseren*

*Anschauungen bleiben) etwas Wirkliches im Raume vor. Denn erstlich ist Wahrnehmung die Vorstellung einer Wirklichkeit, so wie Raum die Vorstellung einer blossen Möglichkeit des Beisammenseins. (Kant, 1999: 428 [1781: 374]).*

Space is really a representation of mere possibility of coexistence. The phrase can also be rendered into English as “possibility of being together.” Only in this one place does Kant use this word, so difficult to translate, *Beisammenseins* –“being next to one another.” The social is here only implicit, but the phrase provides a primer for Simmel’s suggestion that space is always ready to accept any future projection.

The third condition—which is implicitly the first necessary condition to give the future form—refers to the connection between the concept and expression. Thus, prior to the condition in which the group constitutes the project in the future in order to sustain itself in the present (which is a fundamental characteristic of strategy—“having a project”), and prior to the second condition in which social forms penetrate into space all at once, constituting it, there is a complicated attempt to conceptualize the concept through expression and expressivity. In the introductory session of his second seminar on 5 December 1902, Bergson differentiates relative and absolute knowledge. English pronunciation provides him (whose mother was English) with an example. After concluding that his English is completely contaminated by French and “in service to French” (*en fonction du français*), Bergson says:

“What would it take to have absolute knowledge? It would be necessary to be transported to England, live among the English, living an English life, immersed in the flow of English pronunciation ... Relative knowledge means knowing from outside of what one is learning; relative knowledge of English expressions is having knowledge outside England, being and residing in France. It means knowing English in service of French elements and expressions. On the other hand, absolute knowledge of English expressions is knowing not from the outside, but from within. In order to have such absolute knowledge of expressions, I must not stay at home, I must go to England. I can then learn to use not my home expressions, but those foreign, know them in themselves, as the philosophers say.”

*Que faudrait-il pour en avoir une connaissance absolue? Il faudrait me transporter en Angleterre, il faudrait vivre avec des Anglais, vivre de la vie anglaise, il faudrait me plonger dans le courant de la prononciation anglaise; (...) Connaître relativement c’est connaître du dehors, c’est être en dehors de ce qu’on apprend; connaître relativement la prononciation de l’anglais, c’est la connaître étant hors de l’Angleterre, étant en France et restant en France; c’est connaître l’anglais en fonction*

*d'éléments de prononciation française. Au contraire, connaître absolument cette prononciation, c'est la connaître non pas du dehors, mais du dedans. Pour connaître cette prononciation absolument, il ne faut pas que je reste chez moi, il faut que j'aïlle en Angleterre; je connais alors la prononciation non plus de chez moi, mais chez elle, en soi, comme dissent les philosophes.* (Bergson, 2016: 18-19)

This is a magical passage from a man who was well-nigh bilingual, yet insisted on a specific difference that concerns a few crucial notions that frame any possible knowledge about time. Let me list them here, provisionally:

a) precision (a register we would today easily confuse for perfection, yet Bergson ascribed the invention of precision of articulation and demonstration to the Greek genius<sup>15</sup>), which is in harmony with others and concerns socialization or the social (Bergson uses the phrase “*la vie sociale*”) (Bergson, 2019: 134-135). It includes a locality that surpasses people who live in a given location. Bergson differentiates England, life with the English and English life;

b) concept (since Bergson’s seminars are really about the construction of the concept, such as the concept of knowledge of expression (“absolute knowledge of expression” (*connaître cette prononciation absolument*)));

c) “active expression” (the phrase is mine) since the concept for Bergson is “an invitation to action” (*une invitation à agir*) or “above all a suggestion of possible action” (*avant tout une suggestion d’une action possible*) (Bergson, 2016: 64), meaning c1) action, and c2) expression (the imperative is to express oneself absolutely—to express the concept). To know—to know absolutely—means to express oneself absolutely or correctly.

Why is the concept (“*le concept*” or “*la pensée conceptuelle*,” words which Bergson uses interchangeably) (Bergson, 2019: 125) (2 May 1902)<sup>16</sup> important for Bergson, and why is the theory of the concept constructed by Bergson really an introduction into an imaginary never-written study of the project?<sup>17</sup> Time and duration are what cannot be expressed through concepts (*par des concepts*).<sup>18</sup> But time as future begins with naming, with language and expression of what is initially present in the mind (*à l’esprit*).

“I am saying that it (the noun, substantive) first refers to the individual. When I say ‘man’ or ‘table’, it is in the singular, individual form that the concept presents itself to the mind.”

*(Je dis qu’il (le nom, le sustantif) exprime d’abord l’individuel. Quand je dis: l’homme, la table, c’est une conception individuelle, un concept d’individu que se présente d’abord à l’esprit.)* (Bergson, 2019: 126) (02.05.1902).

If time as such cannot be rendered or expressed in language (“there is an interval that remains unexpressed” (*il y a un intervalle qui reste inexprimé*)), language as well as the expression of everything else begins in the future tense. Action, as the actual beginning of the project (and action is in opposition to

perception, according to Bergson [2016: 70]), “throws time back outside”<sup>19</sup> and is regulated by the precision and rigor of expression in uttering the concept.<sup>20</sup>

“Among else, man is a speaking being, a social being, and will assign words to concepts. Being much more malleable than any corporeal approach he takes, the word will also render the concept much more malleable and flexible. Man will make use of the word not only to speak to others, but to speak to himself.”

*L’homme est, en outre, un être qui parle, un être sociable, et ce concept il va le designer par un mot, et ce mot étant un signe beaucoup plus maniable que ne le serait l’attitude corporelle prise par lui, ce mot va rendre le concept beaucoup plus maniable, aussi plus mobilizable. Il se servira du mot non seulement pour parler aux autres, mais pour se parler à lui-même.* (Bergson, 2016: 72)

The production of concepts is an entirely artificial, human thing, as is the project. “The concept has its origin in action and is above all an instrument for action” (*concept a son origine dans l’action et il est avant tout un instrument d’action*) (“a concept expresses an action” (*un concept exprime une action*)) (Bergson 2016: 73). Action creates concepts and concepts draw on action. The second operation marks the birth of the project.

Bergson offers no further explanation of “speaking to himself” (*pour se parler à lui-même*), despite this being a substantive aspect of speech addressed to others. It is thus possible to speak of a further construction or speculation about a project that is individual or mine alone. In any case, the idea that it is possible to speak to oneself is deduced from speech addressed to others and implying their response. Speaking to others is to invite them to action, or better still, joint action. Several possibilities follow from this: first, that I cannot express on another’s behalf (I can help and complete someone’s words or sentences, I can translate, but never replace another in “expressing a concept”). Second, precise expression implies retaining those who hear me (as well as those who have yet to hear me) in the given space, preserving our common use of the space. Third, expressing the concept would be equal to expressing one’s own concept or one’s self – expressing oneself is expressing one’s concept. This means gaining time in anticipation of others’ responses, which is common construction of projects and the future.<sup>21</sup> Fourth, good expression is necessarily compulsive and pressing (*Zeitnot*, urgency, priority, prevention, etc.).<sup>22</sup>

“All concepts have, more or less, a practical goal, and all concepts are our questions addressed to reality, from a subjective standpoint, regarding the attitude we should adopt towards it and it towards us. A concept is a rubric, a class into which we enter an object. Finding the right class

for each object, asking of it whether it goes here or there, ultimately means asking it what it is in relation to us, what we can make of it.”

*(Tout concept a, plus ou moins, une destination pratique, tout concept est une question posée par nous à la réalité, au point de vue relative, à l'attitude que nous devons prendre vis-à-vis d'elle ou qu'elle prend vis-à-vis de nous; un concept c'est une rubrique, une classe dans laquelle nous faisons rentrer un objet. Chercher dans quelle classe un objet peut rentrer, lui demander s'il est ceci ou cela, c'est au fond lui demander ce qu'il est par rapport à nous, ce que nous pourrions faire de lui).* (Bergson, 2016: 73)

#### Notes

1 The present paper grew out of a lecture given at the Innovation in Practice Summer School, Torino, in September 2019. The author would like to thank Giovanni Durbiano and Alessandro Armando for their invitation and hospitality, as well as Valeria, Elena, Andrea and Edoardo for organizing the school. In particular, I am grateful to the participating students and my co-presenter Snežana Vesnić – conversations we had were very useful in providing specific terminology, and went a long way to giving this text its ultimate form.

2 Husserl speaks of an intentionally empty horizon (*intentionaler Leer-horizont*), an absence to be filled (*eine ausfüllende Leere*). (Husserl, 1966: 6) Cf. Losoncz 2017.

3 In speaking of the “concept” when lecturing about time, Bergson neglected to make use of something that might more precisely explain his intention – the “empty concept,” which has a history from Kant to Sartre. As opposed to the “authentic” concept, the “empty concept” refers to something fictitious that has no corresponding “reality.” In the commentary of his translation of Aristotle’s “Peri Ermenias,” Boethius recognizes the existence of empty concepts. Alain de Libera translates Boethius’ “*intellectus*” as “concept,” because in Boethius “*conceptio*” and “*conceptus*” are synonymous with “*intellectus*.” “Boethius was apparently the first to recognize that there is such a thing as empty concept, i.e., intellections that have no corresponding real subject, such as centaurs and chimeras or ones invented by poets.” (*Or Boèce est, évidemment, le premier à reconnaître qu'il y a des concepts vides, i.e., "des intellections qui ne correspondent pas à une réalité sujet, comme celles que les poètes ont façonnées, centaures ou chimères*) (Libera, 1990: 418).

4 Divine creation, the various acts of Adonai in the course of creating everything, only partially satisfy the criteria to be named project or the product of a project. When he thinks (conceptualizes) or simply says, Adonai has already created. It is as if there were no process of creation or time of execution of the project.

5 English is wonderfully helpful with the word execute: where other European languages use some variation of ‘realized’ for the operation of bringing something to fruition, English more commonly uses a word meaning to kill, to remove from existence.

6 These two words speak to the constitutive primacy of the future and evoke the phenomenological hermeneutic method.

7 Does the future arrive or follows and moves ahead? How can we describe what has yet to happen? Does one wait for the future, or is it constructed and anticipated? Projection and design is an artificial operation of preparation for what is to come thus reducing the uncertainty of “what has yet to arrive.”

8 In Hebrew, making time has the same root with the invited one, with hospitality. The invitation produces the future.

9 For example, within this group working together on the notion of the future, I have entirely different projects and plans with Giovanni Durbiano, Alessandro Armando, Snežana Vesnić, Edoardo Fregonese, Joerg Gleiter, etc. Maurizio Ferraris wrote to me a few days prior my arrival in Torino, saying “We must meet when you arrive. I have many projects to share with you” (*j'ai beaucoup de projets à partager*). Is there such a thing as an unsharable project that would still keep the characteristics of the project?

10 Interestingly, when constructing his argument on the difference between performative and constative, John Austin never speaks of time implied in any successful performative act. If I promise to replace your bike tire, is there not an implied agreement of deadline by when I will do so? A promise necessarily introduces time.

11 Does Skype (Viber, WhatsApp, or Signal) co-present mean “present” and does it mean common space? Also, does telepathy contain a future moment or an announcement of future time?

12 This reconstruction should be constantly thematized in order to compare and harmonize two different productions of knowledge. Take, for example, the question of the “Architecture Biennale 2020” curator, Hashim Sarkis: “How will we live together?” It is a remake of the seminar held by Roland Barthes in 1976/77, “Comment vivre ensemble?”

13 “The Spatial Projection of Social Forms” is first published in *Zeitschrift für Sozialwissenschaft*, 6, 5, 1903, 287-302. Reprint: Simmel, 1995. Along with some other writing, it will be incorporated into a chapter of his *Sociology* where he thematizes the notion of space.

14 A version of this passage appears in Chevalier, 1959: 6.

15 “Should I wish to arrive at perfection, I would have to continue indefinitely, into infinity – when I might reach perfect reproduction – but this could never truly take place.” ([...] *et si je veux arriver à la perfection, il faudra que je continue sans fin, à l'infini – j'obtiendrai la reproduction parfaite -, mais elle ne sera jamais véritablement réalisée.*) (Bergson, 2016: 88, 90, 30) The perfect, which is good and gone, is not the same as the realized. The project substantively resists the complete or finished, which as such definitely belongs to the past; the project is ceaseless.

16 The following academic year, Bergson says the following: “the concept, which is to say, the general idea, simple, abstract” (*le concept, c'est-à-dire l'idée générale, simple, abstraite*) (Bergson 2016: 69).

17 What philosophers call the concept, says Bergson “that is, the idea, the representation, that which can be in its entirety intellectually manipulated” (*c'est-à-dire l'idée, la représentation, en tant qu'elle a été préparée entièrement pour la manipulation intellectuelle*) occurs in three ways or through three operations. The origin of this manipulation lies in “the faculty of the intellect par excellence” (*la faculté intellectuelle par excellence*) or “ability to form concepts and think in concepts” (*faculté de former des concepts et de penser par concepts*) (Bergson, 2016: 56, 60-61).

18 “The conclusion is this: if there is something that cannot be expressed through concepts, if there is something defiant of all symbolic representation, it is the object we will be speaking of this year – time. We will be exploring different theories of time and duration.” (*La conclusion est celle-ci: s'il y a quelque chose qui ne puisse pas s'exprimer par des concepts, s'il y a quelque chose qui soit réfractaire à toute espèce de représentation symbolique, c'est précisément l'objet dont nous allons parler cette année, c'est le temps, c'est la durée, don't nous allons examiner les différentes théories*) (Bergson 2016: 77.)

19 “L'harmonie, comme le projet rejette le temps au dehors” (“Harmony like project, throws time back into the outside”). (Bataille, 1973: 70; Bataille, 1988: 56).

20 If we take precision as our guide, we must necessarily consider as inexistent anything that is not expressible with perfect clarity, not to mention that which is not expressible at all” (*Là où on tient à la précision avant tout, on est amené nécessairement à considérer comme inexistant ce qui n'est pas exprimable avec une précision parfaite, à plus forte raison ce qui n'est pas exprimable du tout*). (Bergson, 2016: 91) Analyzing Parmenides’ poem on pages 94 and 95, Bergson insists that what cannot be expressed is not real, although he is aware that “becoming” (*devenir*) is always difficult to express. It is remarkable that Deleuze lifted this idea many years later.

21 How does a turning signal work in traffic? The conception or set of conceptions about the functioning of the turning light in traffic, recognizing traffic rules, car use technique, as well as holding various concepts about movement in space (left, right, forward, backwards), all draw us into the operation of movement. I have the intention to turn left, which I signal thus projecting in time my future left turn. Signaling (singular or plural) is an address to others, it is a call for us to jointly consider my intention. By their joining into this consideration, it becomes a spatial projection of (one or more) social forms or social facts.

22 “Question: you were a boxer? Tadao Ando: it was a question of survival. I had to earn money for my grandmother who raised me in a working-class neighborhood in Osaka. There was a box-



ing club across the street. I thought I could win. I had a trial and went professional. Box consists of being forced to fight someone. There is no pulling back once you are in the ring, this space designed for fighting. You can count only on yourself. Compulsively, the gestures become automatic. Now, on a project, I act as if in the ring.” (Enjalbert, 2017: 41).

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## NARRATING INNOVATION. Some Stories in the Voice of Practitioners

### Federico Cesareo and Valeria Federighi

Federico Cesareo holds a Ph.D. from Politecnico di Torino and is one of the editors of *Ardeth*, an architectural scientific journal that focuses on the power of the project. He is member of LabOnt Arch (the interdepartmental Center for Ontology of the University of Turin) and he has been part of the working group of “Pratiche di ordinaria innovazione,” a research project of the Alumni Association of Politecnico di Torino on architectural design forms of innovation.

Valeria Federighi is an architect and assistant professor at Politecnico di Torino. Her research work focuses on analysing mechanisms of innovation in architecture as expanding practice. She is on the editorial board of the journal *Ardeth* and she is part of the China Room research group. She is the author of *The Informal Stance: Representations of Architectural Design and Informal Settlements* (AR+D Publishing, 2018) and co-editor of *The Eyes of the City: Architecture and Urban Space after Artificial Intelligence* (Hatje Cantz, 2021).

The relationship between the world and the words we use to represent it is a widely debated issue among linguists, language philosophers, and semiologists (Austin, 1974; Eco, 1979; Searle, 2009). Less debated and less studied is the relationship between the models that can be produced from that relationship and their analytical possibilities in the study of specific disciplines focused on the performativity of actions that are carried out through words (Leonardi, 1976; Sbisà, Weigand, 1994). If in the title of his most famous work Austin asked “How to do things with words?” Here we ask ourselves what can we say about the things we know through words: that is, what happens when we want to know things, starting from the words that have been used to represent them? This working perspective can be found in rather ordinary research activities such as the interpretation of the results of qualitative interviews: How do we know what is the degree of correspondence between what is said and the event or action that is told?

In the course of a research carried out on the concept of innovation in architectural practice,<sup>1</sup> this very question was addressed: after 32 interviews with architects and architecture professionals, 75 tales of innovation were collected. Predictably enough, these were stories that did not describe the world from an objective or adequate point of view, but from a markedly subjective and situated one: each of those stories is the result of an attempt on the narrator’s part, to



**Innovation from the Practice: a Perspectival Fragment**  
Alessandro Armando e Giovanni Durbiano

The article tries to define the range of possibilities for innovation in architectural design. Through a concrete example of design practice conducted in the real world, a method to produce maps aimed at identifying effective design strategies is proposed. Mapping strategies is possible by betting on the instability of the project, which can be divided into two fields. The first is meant as process instability, due to the continuing possibility that the result of the project must be modified and adapted to the conditions of negotiation and decision during its process. The second is meant as product instability, linked to the limited duration in time of the effects of a project, after it has been completed. Considering that the process instability corresponds to a mobility of the final objective, which depends both on external and internal conditions of the process, the case studied allows us to enter the folds of a segment of the design evolution process, to bring out the relationships of concatenation that link between the adjustments undergone by the drawings, to shape the chains of deviations and to observe how the project progressively consolidates.

**Unpacking Architectural Design Practice in the Folds of Decision-making Processes.**  
An Innovative Mapping Tool  
Elena Todella

The kind of complexity of decision-making processes of urban and architectural transformations is often accounted as a linear process of subsequent steps and decisions, from the project to its execution. Since projects rarely move forward without detours to buildings, how is it possible instead to take account of their diversions, as constituent elements of the decision-making process? By shifting the attention from the products of architecture – as buildings – to the processes of project production and negotiation, this paper traces a taxonomy of multiple entities with different ontologies that interact in a multi-sited and large-scale process. In this sense, a mapping tool is proposed to investigate – from the inside – what architects do and how projects operate in an ongoing decision-making process, in projecting decisions that would have not otherwise been possible to witness without being in the folds of the process.

**Innovation Trajectories. Retracing the History of Area-based Initiatives**  
Caterina Quaglio

In the diffusion of area-based initiatives in Europe, a strong emphasis was placed on innovation as both a prerequisite and a result of the work carried out by professionals. However, even when innovation in design and other professional practices has occurred, it has rarely been the result of voluntary and planned actions. Research conducted today allows us to bring to the fore not only the contextualization of innovative practices in a wider *collective*, but also to question how they spread over the long run through formal and informal processes. Drawing on the history of three area-based programs developed between the 1980s and 2000s, this text aims to interrogate the actual conditions and modalities of innovation in design practices and their impacts in different professional and institutional contexts. In particular, the relationship between individual learning and collective capitalization is investigated as a fundamental dimension in order to assess the potential of innovative design practices to overcome the specific contingencies of a project.

**Design Echoes: Four Stories of Projects that Resonate with Urban Rules**  
Caterina Barioglio and Daniele Campobenedetto

The effects of architecture extend beyond their localization. The anthropic modification of the spatial environment produces echoes in terms of urban rules, technical requirements, cultural shifts, and behaviors that travel beyond the place in which the modification occurs. While these effects of built and unbuilt projects are part of the outcomes of design, they are hardly considered part of the design process. In most cases, they just occur. How, and through which tools, could these non-local effects of design be recognized? More generally, is it possible to consider localized design as a means of representing and addressing general and comprehensive issues? In this visual essay, we attempt to face these questions, exploring the relationship between architectural projects and urban rules as a way of tackling the theme of design echoes.

**Experiencing the Possible. The Design of Open Devices for Modification of Marginal Contexts**  
Gianfranco Orsenigo

Today the project has to face *complexity* and *uncertainty*. Complex because we witness multiple and conflicting needs, responsibilities, knowledge and problems. Uncertain due to lack of resources, changing political intentions, and hesitant time of realisation. *Inactivity* seems to be an inevitable condition, particularly in marginal contexts. From the architectural perspective to shack this state, it seems necessary to see the design process as an “ecology of practices” (Stangers 2005). An attitude capable of overcoming the traditional public-private system and developing an attitude to deal with contingency. A posture to cluster projects, policies, spaces and skills creatively. Through a self-reflexive critique of two research experiences, I try to empirically explore how architectural design can equip itself to become a key stage of transformations involving marginal territories. The reflection shares intermediate outcomes related to a *method* and open *documents*.

**Potential: Defining, Decoding and Assessing the Potential in Existing Buildings**  
Elena Guidetti

The concept of *potential* emerges as crucial in the current preservation debate. Within the field of adaptive reuse, this research aims to define, decode and assess the *transformative potential* in existing buildings through a post-functional perspective. The theoretical objective is to add this novel concept to the preservation theory in evaluating existing buildings. The task is to express the *transformative potential* as a relationship between dimensional features and materials in a diachronic and trans-scalar perspective, outlining a pattern within existing features and adaptive reuse interventions.

**Developing Images into Voices of Concern.**  
Some Notes on Using Networked-images and Participatory Setting for Inquiring into Public Issues  
Donato Ricci

The essay tries to unfold the specificities of a design approach to repurposing online images to study, inquiry, and intervene in urban issues. The scope is to extend and further the role of large image corpora visualizations beyond pure analytical or critical purposes. To this extent, the ‘DEPT. project is described. A series of visual artifacts —data- and media- visualizations, catalogs, tableaux, and scores were conceived during the project to progressively bring online images to public and participatory settings. The contribution details needs, intellectual frameworks, methodological choices, and visual artifacts conceived in the project to transform networked-image into shared and collective expressions of the issues under inquiry.

**The Environmental Architect. Reflections on Media Performativity***Lidia Gasperoni*

The environmental architect is responsible for experimenting with the manifold effects of the spatial constitution and impacting on it. This experimentation is the challenge for the designer as a producer of architectural artefacts, expanding her role regarding the architectural significance of complex processes. In order to reveal these complex inter-relations, the environmental architect uses different media in their performative capacity. Media are generative, producing architecture in the design process but also performative impacting on the environment. In the first part of this essay, I will introduce the notion of mediality in architecture. In the second part, I will stress the relevance of performativity theory in order

to distinguish between means and media. I will conclude by outlining the importance of providing an account of media performativity when it comes to implementing the modes of experimentation of the environmental architect.

**The New Planning Paradigm between Experimental Practice and Regulatory Framework***Ambra Migliorisi*

Cities are dealing with a schizophrenic situation: on one hand the disparity between the increase of forces of globalization, population growth and advancing technology, on the other the fragmentation of the urban territory with an increment in vacant lots and disused buildings. Within this context, activities are changing faster than the physical environment, reducing the power of traditional urban design instruments and providing gaps for experimentation to flourish.

A reflection on the actuality of the redevelopment strategies reveals how the rigidity of the regulatory framework contributes to slow down the propulsive drive of those hypotheses which, due to their experimental nature, are not suitable for an immediate re-traceability within the existing regulatory grids.

The paper attempts to give a new legal context of reference to contemporary urban practices, answering not only to the disarmament of architecture in our urban landscape, but also to a possible advancement of the design culture.

**Andean Heterotopia. Disruptive Innovation in El Alto***Marco Paladines*

This article begins with a description of the emergence of the Alteño building type and the Neo-Andean and Transformer styles, which triggered a disruption of the collective expectations and the urban landscape of the peripheral but developing city of El Alto. The second part narrates the confluence of different accumulation processes that made this innovation economically sustainable and publicly legitimate, and finally realized by identity-seeking clients, creative constructors and skilled workers. The last part interprets this emergent architecture as heterotopic and as a performative claim for aesthetical autonomy in the public space.

**The AA Project on the City. Architecture in Transition***Maria Fedorchenko*

The visual essay analyses the work of the research-design studio on the European City that ran at the Architectural Association, School of Architecture, since 2010. It is curated into two sequential chapters. First, I contemplate how we tackle clashes between old and new cities, institutions and artefacts, testing ideas for cultural and architectural “depositories.” Then, I suggest we can use real urban contexts to expose deeper, long-term disciplinary tensions – leading to works on deliberately “dis-continuous” urban models and transitional elements. Overall, we seek broader speculative urban projects that go beyond previous oppositions and mediations, and operate across levels and scales.



## POSTFACE: THE LOVE OF INNOVATION

Albena Yaneva

**Albena Yaneva** is Professor of Architectural Theory at the University of Manchester, UK. She has worked at Princeton School of Architecture, Parsons, Politecnico di Torino, and held the prestigious Lise Meitner Visiting Chair at Lund, Sweden. She is the author of: *The Making of a Building* (2009), *Made by the OMA: An Ethnography of Design* (2009), *Mapping Controversies in Architecture* (2012), *Five Ways to Make Architecture Political. An Introduction to the Politics of Design Practice* (2017), *Crafting History: Archiving and the Quest for Architectural Legacy* (2020), and *The New Architecture of Science: Learning from Graphene* (2020), co-authored with Sir Kostya S. Novoselov. Her work has been translated into German, Italian, Spanish, French, Portuguese, Thai, Polish, Turkish and Japanese. Yaneva is the recipient of the RIBA President's award for outstanding research.

We cannot imagine a society that is not built by things—IT technologies, trains, telegraph cables, cars, but also—we might add—buildings and infrastructure. We cannot understand societies and how they work, without an understanding of these things and how they shape our everyday life, without unravelling the meaning of innovation. Therefore, it becomes important to study the process of technological and architectural innovations. The socio-technical studies of innovation (Akrich 1992; Akrich, Callon and Latour 2002; Callon 1986) developed in the 1980s in the aftermath of structuralism, advocated a new approach to innovation where the modernist divide between the “subjective” and “objective” dimensions of technologies was entirely abandoned in favour of the idea of mediation, of translation, of network of practice. Drawing inspiration from this body of work, the volume *Innovation in Practice* explores the agency of the architectural project and questions the meaning of innovation in architectural practice: what does it mean to innovate in architecture today? What are the technologies, the tactics and the documentary techniques that drive innovations in design process? How does innovation happen in practice? To understand the rationale behind this nexus of questions, let us clarify some key concepts from innovation theory that shed light on the relationship between design technologies and social processes, and the meaning of architectural innovation.

Innovation as a War of Interpretations

In the early 1960s, an iconic high-tech automated subway system known as Aramis, was developed in France. Designed as a Personal Rapid Transportation

(PRT) system, it was poised to dethrone the automobile as the future of transportation. This system was supposed to combine the efficiency of an automated train with the convenience of personal transport. It implied walking into a car, entering your destination into a computer onboard, and walking out a few minutes later. A combination of private cars and public transportation that was to be accomplished by programming the individual cars to autonomously link up into trains when traveling in a group, and then splitting off onto branching paths as per the rider's destination. An innovative line of technology, mechanically inventive and politically relevant, it had so much promise.

Intrigued by this highly complex technological project, the French sociologist Bruno Latour analysed the Aramis innovation as it wended from its inception as an innovative inevitability to its eventual end. Throughout his account, which is also a narrative experiment mixing criticism and fiction, he engaged with the historical and social aspects of the project as well as the technical aspects (Latour 1996). Interviewing engineers, bureaucrats, and politicians in order to address the central question “Who killed Aramis”? Latour investigated, like a detective, the failures in the socio-technical network that surrounded the concept of Aramis. The exploration of this question allowed him to bring his rhetorical resources to bear on his argument regarding the inclusion of nonhumans such as motors, chips, and PRT systems into his theoretical sociological network as actors in their own right. The concept of Aramis is enticing, but its execution proved to be rather complex.

As a prototype, Aramis was at the mercy of its makers—a diverse group, ranging from industrial kinematicians and satellite engineers to sympathetic bureaucrats and the Mayor of Paris. They could not agree on what Aramis was supposed to do and their views as to what killed Aramis ranged from fundamental technical failures to cynical political manoeuvring. After 50 interviews and a year of fieldwork, Latour gathered not only one explanation but at least twenty different interpretations of the project that remain inseparable from the project itself.

“To study Aramis, we also have to explain how certain points of view, certain *perspectives*, certain interpretations, have not had the means to impose themselves so as to become objects on which others have a simple point of view. So we have to pass from relativism to relationism ... The war of interpretations continues for Aramis; there are only perspectives, but these are not brought to bear on anything stable, since *no perspective has been able to stabilize the state of things to its own profit.*” (Latour 1996, 79) [emphasis added]

It is difficult to arrive at one interpretation, the correct explanation as to who or what killed Aramis. The sum of the interpretations of Aramis is hard to make, since there is no common intersection and hence no distinction between the interpretations and the object to be interpreted. Aramis remains a story, an argument, a



quasi-object that circulates as a token in fewer and fewer hands. After fifteen years, millions of francs, and the participation of dozens of governmental and private institutions the project was abandoned as a failure.

#### Innovation as a Network of Practice

The irony of the Aramis case is that the main engineers behind the project really believed in the epistemological myth of a technology fully independent from society. Latour demonstrated that this is a pragmatic absurdity. To end the dualism of Society and Technology, and the partition between materialist and culturalist or sociological accounts, he engaged in a *symmetrical anthropology of technology*. Shifting attention to the network of practices and following the trail of actors involved with Aramis, Latour concluded that Aramis was not deliberately “killed.” There was no perpetrator, no guilty party. There was no Aramis affair, scandal, or public controversy. Rather, its trajectory “depends not on the context but on the people who do the work of contextualizing” (Latour 1996, 50). The individuals and the interest groups involved in its conception and creation failed to “love” it, they stopped the negotiations, the research, and they abandoned it; or, in other words, they failed to engage with the concept of Aramis in a fashion that would make it a dynamic actor within the network of practice. The case of Aramis demonstrates forcefully that the social construction of artefacts/technologies and by extension buildings and infrastructure, should be understood together with the technical construction of society. Rather than positioning the object (Technology) at one of the extremities while the social would be at the opposite (the pole of Society), Latour demonstrated that the body of the social is actively constituted by technologies (Latour 1993). Technologies exist as institutionalised transaction between humans and nonhumans. In this process of transaction elements of the human actors’ interests (bureaucrats, politicians, funders and others) are reshaped and translated, while nonhuman competences are upgraded, shifted, folded or merged. Therefore, *the process of innovation becomes accountable if we follow simultaneously the translations of human and nonhuman competences* instead of only following the displacements of the intentions of the human actors and their multiple interpretations, the perspectives.

Therefore, the real locus of enquiry for the researcher of innovation processes is neither the technical object itself, nor the social interests and subjective interpretations of different human actors. The locus of enquiry is to be found in the exchanges between the translated interests of humans and the delegated competences of nonhumans. As long as this exchange goes on, a project is alive and remains a possibility.

“The thing we are looking for is not a human thing, nor is it an inhuman thing. It offers, rather, a *continuous passage, a commerce, an interchange,*

*between what humans inscribe in it and what it prescribes to humans.* It translates the one into the other. This thing is the nonhuman version of people, it is the human version of things, twice displaced. What should it be called? Neither object nor subject. An instituted object, quasi-object, quasi-subject, a thing that possesses body and soul indissolubly. The soul of machines constitutes the social element.” (Latour 1996, 213) [emphasis added]

The thing, the project, as witnessed here, is a contested gathering of many conflicting demands; a disputed assemblage of humans and nonhumans. Paradoxically, many design objects often appear as things and not as mere objects; in design studies, new design artefacts are often a contested territory and their study cannot be reduced to a simple description of what they are materially, of how they function, and what they mean (Latour 2004). As soon as a project is interrupted, or fails, it dies, and we obtain, on the one hand, a social assembly of quarrelling human actors and, on the other, a stack of documents, and a pile of idle and rapidly decaying technical parts. As Latour stated, “The distinction between objects and subjects is not primordial, it does not designate different domains in the world: it is rooted in the fracture of action” (Latour 1999, 26). That fracture of action, that failure of the technical gesture, separates what is blended together in the repetitive act of making or in the use of the technological artefact. That is why in its normal functioning technology is an abstract system, often invisible; when it fails, it become visible, concrete, actual.

Taking inspiration from Latour’s anthropology of technology, it becomes important to study the *work of innovation in architectural practice*, as well as the work of success and failure symmetrically. This would require scrutinising carefully the documentary exchange in both successful and unrealized projects (Armando and Durbiano, 2017), the failed design projects (Yaneva 2009), the unbuilt and highly controversial urban plans, the technological failure in urban contexts (Simondon 1989). Both to study the work designers perform on the representation of users, but also, equally, the work they do on the representation of the design object itself (its agency, what it does, how it is perceived and apprehended). Scrutinizing the object and the user, their relationship and the effects that the object generates on relevant social groups, is another way to introduce symmetrical thinking in design research.

#### Innovation in Practice: The Escape from Perspective

Architectural theory commonly embraces an understanding of buildings as having an objective reality “out there” while a number of subjective perspectives to the building are being expressed, compared, weighted and reconciled. This interpretation can be termed “perspectival flexibility” and points to the fact that design generates physical reality that has a *meaning* for many different actors

(users, planners, citizen groups). Designers have a *perspective*; they acknowledge also *the perspectives of others* and their points of view to the objective reality of built forms.

Taking a step away from the dominant perspectivalism in architectural theory, *Innovation in Practice* aims at foregrounding the practicalities, materiality and events in various architectural processes of innovation. If we focus on the practices of making, negotiating, decision-making, drawing, fabricating; if the actions of urban practitioners (designers, planners, renovators, builders, contractors) are foregrounded, buildings will cease to be passive objects that can be understood and interpreted from various perspectives. The analysis would escape perspective. Buildings will not be seen any longer as symbols; they will rather become a part of what is done in design, construction and dwelling. This will place the analysis within an “aperspectival objectivity” (Daston 1992; Daston and Galison 2007) of built form. One that shifts the source of variability from the many subjective viewpoints (in the perspectival view) to the multiple realities of design process.

Inspired by a pragmatist philosophy of process each essay in this volume unearths a palette of implicit theories about the meaning and the tactics of architectural innovation and its network of practice. Scrutinizing different sites of innovation, the volume takes the reader to the heart of these places through empirical accounts of the work of contextualizing innovation and the various sets of techniques through which architectural innovation is performed. *Innovation* emerges here not as an attribute of Architecture, but as an active underlying dimension of architectural practices that can only be grasped by following *how* they unfold. It is to be constantly negotiated, translated, scrutinised, probed and assembled in such a fashion that would make it a dynamic actor within the network of practice; it is to be “loved.” And it can only succeed if it is “loved.”

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