Guillaume DREVON
Luc GWIAZDZINSKI
Olivier KLEIN

Lecture et écriture des mondes en mouvement

CHRONOTOPIES
CHRONOTOPICS

Readings and Writings on a World in Movement

l'innovation autrement

Préface de Maurice BENAYOUN
Postface de Vincent KAUFMANN

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CHRONOTOPIES

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À Colette et Sandra qui ont posé les bases
et toujours veillé à faire le lien

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Sous la direction de
Guillaume Drevon
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PRÉFACE

Représentation des mouvements et mouvements en représentations

« *Le jardin planétaire ne saurait se soumettre à une cartographie classique. Il est partout, il occupe la biosphère, son territoire est l'épaisseur du vivant.* »

Gilles Clément

Anna Barbara

SENSITIVE MAPS FOR DESIGNING THE PLACES

Introduction

Spaces are not inanimate volumes fixed in time. When we stay in a space, we live it with all the senses and we experience it long many time layers and lines. The senses must be stimulated, involved, become a tool for designing the spaces, to be part of the experiential performances. For this reason we must learn to analyse, to map and to design with the senses and with time, inventing forms of writing and notation that are able to describe the experiences, but also to design sensitive and dynamic space.

Sensitive maps for designing the places

The Western architecture has place for centuries the sight at the core of design the spaces requiring to the other senses to play a marginal role in the design, even if they were not useless into the daily experience of the places. The objective of the research and teaching that I had for years is to return to the senses and the time the role of key ingredients in the architectural design of places.

To achieve this ambition my educational and research work was focused on training the "future architects" to provide sensory exercises, to raise awareness, and include these aspects in their projects. To pursue this goal, however, an important part of my teaching has devoted to interdisciplinary research and notation systems useful to translate the sensory qualities in architecture.

The dimensions of architecture are multiple and complex: the known metrical coordinates of the surfaces and volumes; the more complex psychical plans of the mind; the anthropological dimensions of the social experiences; the sensitive quality of the human body.

However, the architectural education requires that the poetics of architecture is focuses on the shape, leaving very often the control and also the design of senses to the technology and engineering.

Thinking how architecture is told by critics, you can understand that the main topics are stylistic and theoretical, and rarely those of the poetics of light, air, color and tactile behavior of surfaces, air and odors, sounds and reverberation of materials and spaces, the movement of air, its temperature and its humidity...

But how could we explain the Pantheon without telling its light, and how to interpret the Berlin Philharmonic, designed by Hans Sharoun, without understanding its aesthetical dimension at the service of music, or the Jewish Museum by Daniel Libeskind without understanding the relationship between the silent cuts of light, the vacuum and the surface qualities?

Notations

The involvement of senses and time in architecture can not only depend on the sensitivity of a single architect, but needs languages of signs and symbols to represent and express their qualities through them.

In the early eighties of the XXth century, the problem of inventing systems of notation usable by designers, was placed in the interior design and product. This approach was called "qualistic" by the founders (Andrea Branzi, Clino Trini Castelli and Antonio Petrillo) and "universal design" by the Japanese designers.

The centrality of sight has developed -for centuries in architecture- visual languages for representation and reproduction of shape, space, size, etc. neglecting other sensory languages. Some languages of visual representation have reached these levels of reality, or similarity to reality, by becoming their own creative engine for architecture.

The first example comes from the past: the prospective. It was an instrument of relief that became an instrument of representation and finally origin of important sites such as the square of Pienza in the fifteenth century, strongly desired by Pope Pius II Piccolomini. When Filippo Brunelleschi invented the perspective, he didn't invented only a technique of representation as an exceptional way to describe what he saw, but also an extremely easy tool to use, to be understood by many people and not only architects.

During the history, thousands of notation systems of environment and its sensory variables have been developed, but mostly there are two main strands: the codes for the reproduction of experts (engineers, technicians, etc.); the languages of representation of artists. In both cases, the semiotics is difficult to use: the former, codes require too much expertise to be used commonly; the second are too personal to be shared.

For analyzing the architecture, we have tools and languages belonging to the visual culture and thus we consider mostly those qualities that the sight can express. The creation of codes and languages to express the other senses means to provide new generations of designers, further possibilities of analysis and expression in architecture.

As with the systems of musical notation, many disciplines have made their languages to express the sounds, light, air quality, shade, surfaces, finishes. Thus the construction of systems of notation becomes a mandatory step for analyzing and using the senses. For years, with students of different faculties where I taught and still teach all over the world, I try to build diagrams of possible notations on the senses or chronotopes on times.

Examples of notations:
– The translation in signs of musical objects by Franz Schubert
– The notation system created in soundscapes by Murray Schafer
– The onomatopoeia SMACK, SGRUNT, BROOM... used in comics

– The musical notations
– The representation of Color Palette: Goethe Otswald, Itten, Munsell, CIE or Pantone system
– The ideograms
– The songlines from Australian aboriginal
– Max Neuhaus's sound devices
– *Architecture and Music* by Iannis Xenakis
– Choreographic plans for dancing in the seventeenth century
– The Gregorian music
– The acoustic Holograms by Salvador Dalì
– The strategic drawings in team game
– Eisenstein's holographic movies
– Le Corbusier's palette of grey
– The cave paintings, Egyptian hieroglyphics, Mesopotamian cuneiform writing.
– Kepler's notations combining music and astronomy
– Kandinsky's transcription of Beethoven symphonies
– Paul Klee experiments on synesthesia
– Etc.

At the beginning of the research, I was tempted to build a universal language that synthesizes all the codes. Working on the intersection of the languages in use, I wanted to reach the common denominator, but soon I realized that my project had the same presumption of Tower of Babel: reducing all languages to a single one. Welcome failure!

To make me give up, there were the incredible insights of students (usually the worst) to represent light and shadow in the spaces they designed, of my children to represent a sound or a color in their drawings and not least the wonderful advent of the open-source culture conveyed from the internet that is inclusive and never exclusive.

The architecture is living matter

Just graduated in architecture I thought to be a promising architect, but my first experiments were so formal and depressing for me to question the quality of what I was designing. Always lacked the sensory aspects, I could not design the light and shadow, and barely I knew the difference between natural and artificial light. I did not know that color means nothing in architecture, if not in the duality color-light or color-matter. The places never had the sounds I imagined, because I never thought that architecture is a big harmonic box sounding continuously.

If we consider the central role of sight in Western, we have also to think that a cause -or an effect- of all of this comes from considering architecture as a static object. But it is, by definition a living one, which is redesigned by the performances of natural light, by air movements, temperature, noises, by distortions produced by the people here and there. This idea extends the responsibility of the single architect until that of time designer than a sculptor of totem, much like the gardener who continually works on landscapes in transformation. Designing with senses, acquiring a notational system, shared by others, means to start and retrieve (the Greeks had done very well some millennium ago) a sensory architecture.

Sensitive Diagrams

Take a place, and think how to tell someone which sound is in there, or which smells, and try to describe it without using metaphors ... or imagine you must communicate this information in drawing to be sent across the world via email and be sure that the recipient understands the invisible quality of the place. It's a very difficult task if you do not have a system of signs and symbols to fine-tune your language with that of your interlocutor. Moreover, the dimensions of senses are not static, but dynamic over time.

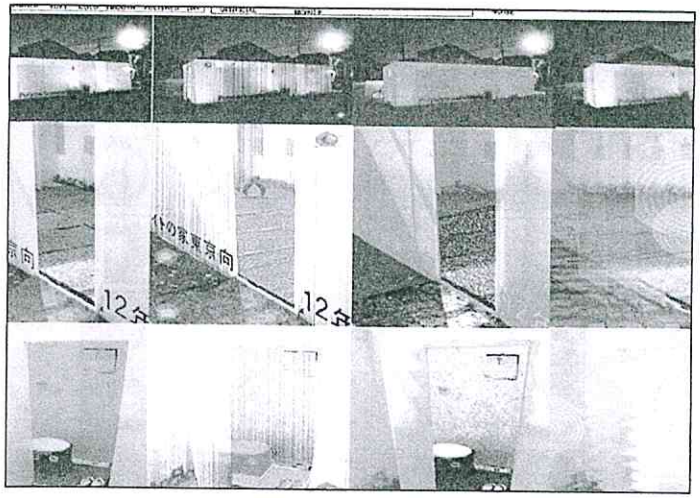

Figure 1 – Sensitive diagrams, notation system. PC House. Canon Foundation project. Mukojima, Japan. (Brigata Tognazzi)

Sensitive Diagrams are always aimed at a project and a framework for understanding what period of time and what scale has to be considered. Sensitive diagrams are a tool to detect in the form of graphic novel the environmental features (which are also the senses of a place): light natural (direction, reflection, shade, intensity, etc.); artificial light (quality, source, temperature-color, etc.), sounds (mechanical, human, stereo, shape, reverb, rhythm, volume, source, intensity, vibration, etc.), the air movement (circulation, temperature, speed, smell, etc.), surfaces (color, material finishes, texture, pattern, porosity, etc.). Sensitive diagrams are useful both for analyzing a place, and for the project that wants to change it, and for the story to represent it.

The Sensitive Studies has the purpose to combine the quantitative with sensory variables, but not to engage in the psychology of perception that is another topic instead.

Chronotopes

Once you understand what the story to tell, the question is how to consider its time: which time slot, how often, the rhythm…

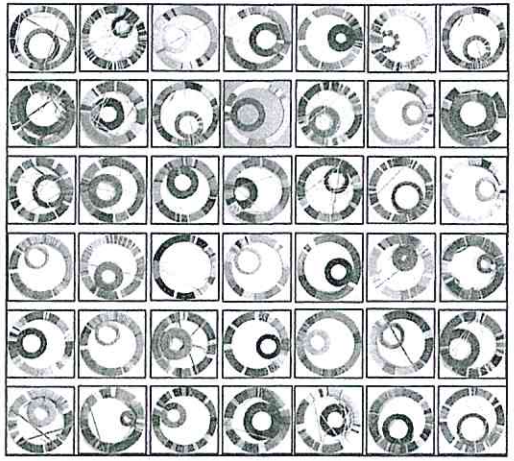

Figure 2 – Chronotopes, Real spaces/virtual places. Time mapping. Laboratorio di Progettazione, Students works.

Understanding and monitoring the temporal variation of sensory qualities is something that only the latest design programs allow. Thus you can proceed with the extreme frames, or work with videos and follow (as with the generative architecture) the frequency of the phenomena or simply their transformation.

It would seem that the notation is only an instrument of relief and storytelling, indeed as soon as these qualities are reconsidered as main ingredients for the architecture, notations become the way to start the project, because in the construction of sensory-time quality is the first design choice, strategic to plunge you into the imagined architecture just at the beginning.

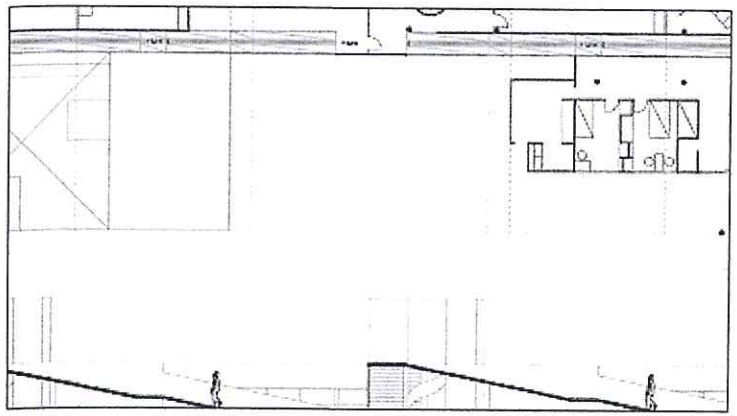

Figure 3 – Rolling Time Diagrams, Ville Savoye and Guggenheim Museum. Student work.

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Architect and designer. Researcher at Politecnico of Milano- Faculty of Design. She has been visiting professor at Kookmin University in the Architecture, Design and Interior Design faculties and professor at the Techno Brain Master 21 at Seoul (South Korea). In the 2000 she won the Canon Foundation Fellowship for making a research at Hosei University Faculty of Architecture and Town Planning in Tokyo (Japan). She was visiting lecturer in many international faculties of Architecture and Design in United States, France, Korea, Japan, Thailand, Philippines, Brazil, Emirates, Jordan, etc. The relationships between senses, time and spaces are the main interest developed in research, education, publications and professional works.

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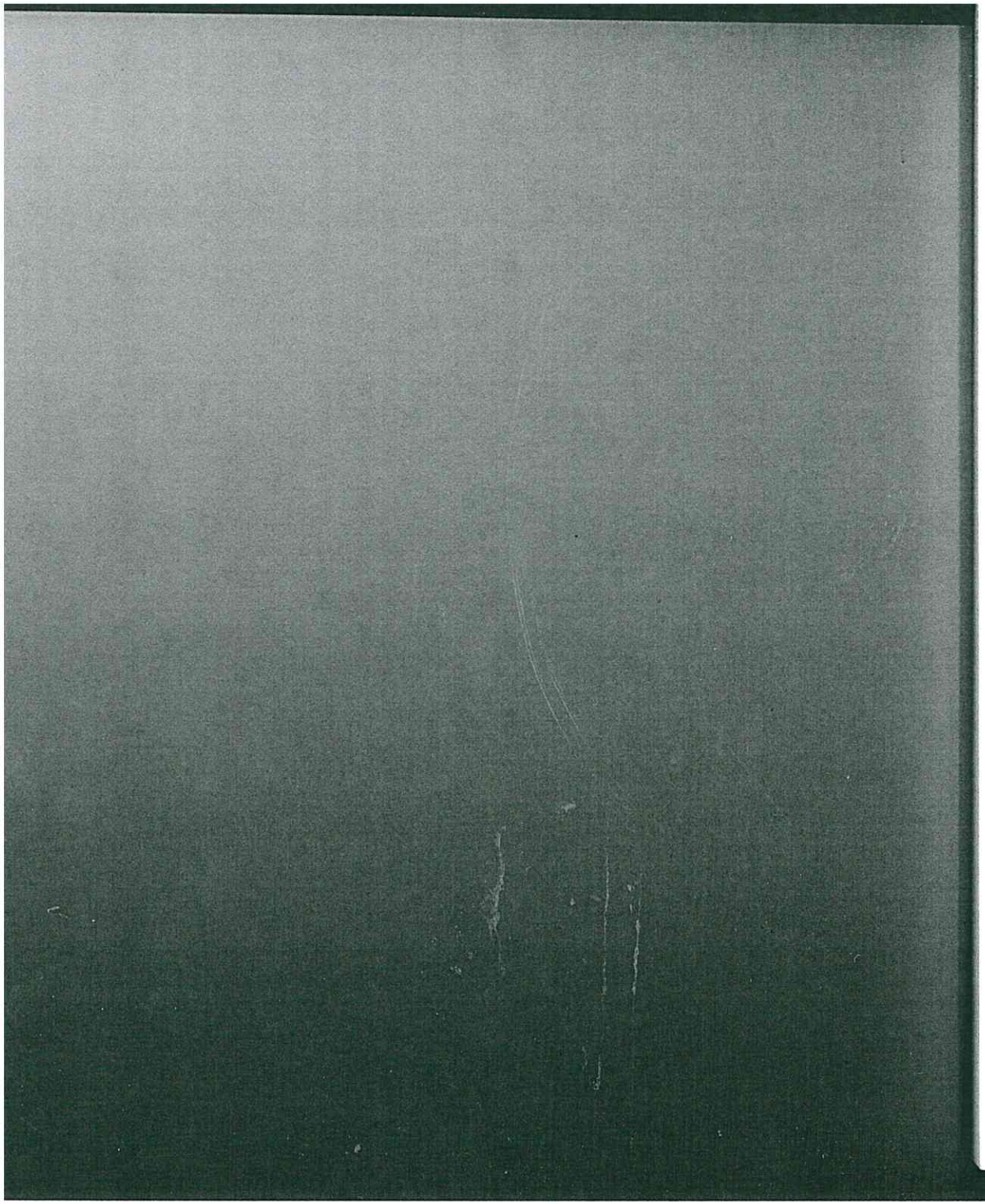

« *En chacun de nous, il y a tous les temps.* » **Theodore Zeldin**

CHRONOTOPIES – *CHRONOTOPICS*

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Le géographe n'est plus le savant du *Petit Prince* de Saint-Exupéry, décrivant des « *géographies qui ne se démodent jamais* ». C'est un observateur désorienté qui sait que ses cartes évoluent vite et qui s'interroge sur les dynamiques en cours et sur les modes d'observation et de représentation possibles.
Il doit changer de regard, prendre en compte la dimension temporelle, passer à une approche « *chronotopique* », imaginer de nouveaux outils et protocoles d'observation et de collecte de données, intégrer des approches sensibles *in vivo*, mobiliser les données numériques, concevoir d'autres représentations et analyses des espaces et des temps des individus, des groupes, des organisations et des territoires. Il doit acquérir de nouvelles compétences, s'associer à d'autres disciplines, et mobiliser d'autres acteurs comme les artistes et les usagers.
La carte n'appartient définitivement plus aux seuls géographes. C'est une chance pour une discipline en mutation. C'est un défi en termes d'innovation ouverte pour celles et ceux qui participent à cette fabrique permanente des représentations et des imaginaires. C'est un enjeu d'intelligence collective et d'imagibilité pour nous qui souhaitons saisir la complexité de nos milieux pour bien vivre et habiter les espaces et les temps de la terre.

Avec les contributions de : **Anna Barbara** (Italie) / **Maurice Benayoun** (Hong Kong) / **Mario Boffi** (Italie) / **Florent Cholat** (France) / **Matteo Colleoni** (Italie) / **Alain Guez** (France) / **Dietrich Henckel** (Allemagne) / **Wenbo Hu** (France) / **Vincent Kaufmann** (Suisse) / **Daniel Lima** (Brésil) / **Licia Lipari** (Italie) / **Marco Mareggi** (Italie) / **Josiane Meier** (Allemagne) / **Philippe Mouillon** (France) / **Alexandre Rigal** (Suisse) / **Dario Rodighiero** (Suisse) / **Johanne Sloan** (Canada) / **Olivier Soubeyran** (France) / **Will Straw** (Canada) / **Kai Syng Tan** (Corée) / **Wanggen Wan** (Chine).

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