



Mapping Ambiances: a synopsis of theory and practices in an interdisciplinary perspective

Barbara E.A. Piga, Cecilia Chiarini, Irene Vegetti, Marco Boffi, Nicola Rainisio, Aurore Bonnet, Valerio Signorelli, Vincent Tourre, Myriam Servieres

► To cite this version:

Barbara E.A. Piga, Cecilia Chiarini, Irene Vegetti, Marco Boffi, Nicola Rainisio, et al.. Mapping Ambiances: a synopsis of theory and practices in an interdisciplinary perspective. Nicolas Rémy (dir.) ; Nicolas Tixier (dir.). Ambiances, tomorrow. Proceedings of 3rd International Congress on Ambiances. Septembre 2016, Volos, Greece, Sep 2016, Volos, Greece. International Network Ambiances ; University of Thessaly, vol. 1, p. 367 - 372, 2016. <hal-01414063>

HAL Id: hal-01414063

<https://hal.archives-ouvertes.fr/hal-01414063>

Submitted on 12 Dec 2016

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Mapping Ambiance

A synopsis of theory and practices in an interdisciplinary perspective

Barbara PIGA¹, Cecilia CHIARINI¹, Irene VEGETTI¹, Marco BOFFI²,
Nicola RAINISIO², Aurore BONNET³, Valerio SIGNORELLI³,
Vincent TOURRE³, Myriam SERVIÈRES³

1. Laboratorio di Simulazione Urbana 'Fausto Curti', Politecnico di Milano,
Department of Architecture and Urban Studies (DASU)

2. Università degli Studi di Milano, Cultural Heritage and Environment Dept

3. UMR CNRS AAU - Equipe CRENAU/Centrale Nantes - Univ. Bretagne
Loire, France

Abstract. *The research investigates the multidisciplinary nature of the ambiance notion and proposes a novel methodology to strengthen multidisciplinary collaborations. In particular, an ad hoc tool named 'mapping ambiance' based on semi-structured interviews, was developed. A qualitative analytical method for studying and comparing results was implemented and applied to twenty cases. The process highlights commonalities and discrepancies of different international approaches by researchers dealing with the notion of ambiance. This paper presents the research methodology and the outcomes of a case study application, as follows: (i) a methodological approach to investigate the ambiance from a multidisciplinary and comparable perspective; (ii) a first comprehensive interdisciplinary theoretical framework and a first collection of methodological procedures, based on interviews, to capture and represent the ambiance in different disciplines; (iii) an interactive platform that enables to depict and navigate the interviews contents and the outcomes of the qualitative analysis process.*

Keywords: *ambiance, interdisciplinary, synopsis*

Introduction

*Mapping Ambiance*¹ is part of a larger research initiative developed by a group of international and multidisciplinary professionals, composed by Italian and French researchers investigating the role of multisensory perception and experiential simulation for studying, designing and evaluating the impact of urban transformation on people's well-being.

In the human/environment interplay, people interpret the urban context and add specific meaning to it; hence, for instance, a 'space' becomes a 'place' (Tuan, 1977).

1. The topic of ambiance is the main focus of several researches developed since 20 years by UMR AAU and International Ambiances Network (www.ambiances.net)

In fact, the individual becomes part of the environment and participates to define its identity, and while doing it, s/he influences the *ambiance*, that is the atmosphere experienced by a person (Piga & Morello, 2015) and the unity of the plurality of the space (Thibaud, 2002a). The literature review reveals that the concept of *ambiance* is always situated, i.e. referred to a physical space, intended as the environment which surrounds and absorbs personal and social lives (Thibaud, 2002b). It represents what we immediately grasp through sensory perception and experience (Rasmussen, 1964; Pallasmaa, 1996; Thibaud, 2015).

The concept of *ambiance* includes several dimensions that are the object of investigation of different disciplines (Amphoux *et al.*, 2004). Research fields such as architecture, urban planning and environmental psychology study this concept, by analysing it under different points of view, using different tools, and with different outcomes. The aim of this research is to depict the complexity of the multiple *nuances* of the *ambiance* notion, considering its interdisciplinary and international dimension, by comparing the approaches of different fields dealing with themes and topics related to the *ambiance* notion. One of the goals of this research is to highlight commonalities among the disciplines, approaches, methods and techniques, in order to find bridges that can enable or favour a multidisciplinary collaboration on the topic. To achieve this goal we developed a method based on: data gathering, data post-processing and analysis, and data rendering. The tools used for the three phases are respectively: semi-structured interviews; qualitative analytical study of the authors' speeches; multimedia interactive platform. The semi-structured interview was considered the best option of investigation, since it permits to collect comparable contributions of experts from different disciplines and countries. Moreover, the questions are open enough to allow scholars to freely argument their approaches and perspectives, while keeping the framework (theory, methodology, tools, case studies). The qualitative analysis was employed to reorganise and correlate interdisciplinary data. The multi-entry interactive platform allows to 'navigate' the content according to specific perspectives (e.g. from a disciplinary and thematic point of view). The platform is designed to enable a threefold purpose: to study, to compare and to disseminate the contents in order to identify mutual or divergent concepts and approaches, from both the theoretical and the experimental perspective. Moreover, through the platform, the research project aims at collecting and giving back the contemporary interdisciplinary framework of the *ambiance* notion and approaches. As a result, this tool can become a reference for spanning disciplines dealing with the topic of *ambiance* and for fostering interdisciplinary collaboration.

Mapping *ambiance*: a novel methodology for a multidisciplinary investigation

Data gathering: the interview to collect research approaches and perspectives

The interview is an efficient instrument to collect comparable data and information from experts belonging to different disciplines. In particular, the interview is designed to tackle theoretical and methodological issues, as well as tools and procedures used by researchers to investigate and communicate the research

outcomes. Specifically, the interview is divided into four parts. The first part addresses the theme of perception: the interviewee is asked to define the sensory perception in relation to his/her studies, and the role it assumes in his/her research. The second part explores the *ambiance* concept and looks for a possible definition by commenting on a semantic map elaborated by Daniel Siret². The map includes concepts such as *genius loci*, *aura* and *milieu*, and researchers are encouraged to underline the notions they are more familiar with or to broaden the scheme with other keywords. This phase is useful also to researchers that deal and address the *ambiance* issues using other terms, to become confident with the concept through a process of mental association. The third part inquires relevant case studies linked to the topic, and in doing this it investigates methods, tools, and procedures. Lastly, the interviewee is asked to define and describe an hypothetical methodology of investigation applied to a specific case study given by the interviewer; the answer allows to clarify the research approach through a concrete 'ideal application'. This section ends investigating how the scholar is used to capture, reproduce and communicate the *ambiance* of a place.

Data post - processing: the qualitative analysis of the interviews

The analysis of the interviews is based on a qualitative and interpretative method. The process is structured in a chain of sequential phases based on the examination of each interview and on a comparative study of the whole sample. The separate analysis lead to the identification of relevant keywords related to the principal concepts addressed by scholars; these keywords are then represented into a scheme that highlights the relationship between the different parts of the same interview. The keywords are then systematised in a coherent way through a process of categorisation. It is important to notice that the categories were not fixed in advance, they were instead created with a bottom-up approach clustering together the content of the interviews in consistent groups of concepts; hence, this part of the proposed method can be expanded and integrated while developing the experimental application. The keywords, based on their nature, meaning, and relationship with the concept of *ambiance*, are then subdivided according to the following categories:

- *Features*: concepts that describes the notion of *ambiance*; these can include essential or structural features, as well as optional ones.
- *Variables that produce/modify the ambiance*: elements that generate or transform the *ambiance*. The change of a single element impacts the *ambiance* as a whole, since it acts as a unity.
- *Character*: characterisation of an *ambiance* as it is perceived by the individual; hence, it derives from the personal interpretation.
- *Effects*: all the phenomena that are generated or affected by an *ambiance*.
- *Similar concepts*: references that are used by scholars as metaphors and similitudes that support the definition or description of an *ambiance*, thanks to the transposition of similar concepts. These can include synonyms, metaphors, anecdotes, and so on.

2. The map is developed starting from the data collected by the French Centre National de Ressources Textuelles et Lexicales (<http://www.cnrtl.fr/synonymie/ambiance>)

- *What is not*: concepts mentioned as a non-constitutive feature of an *ambiance*. They represent a mean to better define an *ambiance*.

Keywords may belong to more than one category. The concepts emerged from this phase are then put in relationship according to the following criteria:

- *Correlation*: when two or more keywords affect each other.
- *Subordination*: when keyword A affects keyword B.
- *Descriptive*: when keyword A is described by keyword B.
- *Contradiction*: when one or more scholars disagree on the meaning of a keyword that contributes to define the concept of *ambiance*.

These relationships can connect elements belonging to different categories. It is significant to remark that each keyword is always connected to the relative interview content; this is a matter of transparency and is essential to better clarify the connections between keywords.

At this stage it is important to aggregate results into sets, in order to keep the complexity of contents in an organised and manageable structure. To do so, it is necessary to translate the keywords into the same language; this procedure represents a delicate step, so it is useful to refer to the scholars' translated literature. The aggregated keywords represent families of keywords composed by a group of words which contributes to give meaning to the family itself.

Data rendering: representing the interdisciplinary approach to ambiance

The outcome of the interviews analysis can be fruitfully represented through an interactive platform. The tool has a threefold mission: to communicate the research outcomes, to support research investigation, and to facilitate collaboration among professionals.

The navigable web platform contains all the collected and processed interviews and the analytical outcomes. In particular, it includes:

- The schemes that emerged from the analysis of each interview. These underline the most important concepts, keywords, and quotes of the contribution. The scheme itself is interactive, and some hyperlinks enable to access the original videos or voice recordings, permitting the user to explore the raw material.
- Video excerpts showing some scholars tackling the same concept. This section, named 'polyglot answers', allows to highlight the complexity of the interdisciplinary approaches.
- A catalogue of methods and tools that emerged from the comparative study of the interviews.

Mapping *ambiance*: a case study application

In the case study application, our team interviewed twenty scholars³ from different disciplines and provenience. In particular, they come from the domain of architecture, urban planning, computer science, philosophy, environmental psychology, anthropology, ethnography, and sociology. The interviewee target in this study is European, specifically from Denmark, England, France, Germany, and Italy. We believe that the international and interdisciplinary target is crucial to efficiently depict a comprehensive overview of approaches to *ambiance* today. For this reason, the project should be enlarged to a wider audience in a future development.

The process enables to delineate a first theoretical and practical framework. Even if the sample is not exhaustive, it is possible to delineate the initial outcomes of the application. In particular, it is possible to sum up the keywords, collected from the analysis of the interviews, into the following categories:

The main *feature of the ambiance* that emerged from this study is that it is always situated in space and time (here and now), and it is strongly affected by personal and collective experiences, which are influenced by the historical, social and cultural dimensions. In any case, even if it is possible to share the general idea of a specific *ambiance*, it is impossible to define the totality of the elements that contribute to generate it. Among the *variables that produce/modify the ambiance* it is possible to identify two principal variables, that are the contextual dimension and the experiential one, both evolving in space and time. Hence, the individual is immersed into the *ambiance*, that is characterised by evolving sensible qualities. The *character* can be synthetically summarised into two main typologies: (i) *ordinary*, that is perceived as neutral and it is often associated to a routine, where the person does not notice the *ambiance*; within this category, there are also those *ambiances* considered anonymous; (ii) *remarkable*, that is an unusual or novel *ambiance*, that generally stimulates a specific behavioural and emotional *effect*. In order to further understand what an *ambiance* is, it can be useful to have an overview on what is *similar* and *what is not*. More in detail, many interviewees referred to the term *atmosphere* as the closest concept to the notion of *ambiance*. Beside this, both material and immaterial references have been used, such as climate, *genius loci*, and tuned space. On the other hand, it emerged that an *ambiance* cannot be empty and is not a single stimulus, since it is a combination of different stimuli coming from the environment to someone's attention.

Analysing and aggregating scholars' keywords belonging to the categories, it is possible to define some relevant *families of keywords* emerged by the comparative study of the interviews; inside each family, we can find keywords belonging to different categories. An example is represented by the aggregation of concepts referred to the subjective side of the notion of *ambiance*, such as *personal*, *human scale*, *perceived*, which belong to the category *feature of the ambiance*, and *experience*, together with the *sensory*, *cognitive*, *emotional*, *affective dimension*, which belong to the category *variables that produce/modify the ambiance*.

3. *Anthropology*: E. Chauvier, T. Ingold; *Architecture*: E. Morello, J.P. Péneau, B. Piga, I. Ruiz-Requena, R. Salerno, V. Signorelli, D. Siret, N. Tixier; *Computer Science*: T. Leduc, B. Morille, J.M. Normand; *Environmental Psychology*: M. Boffi, N. Rainisio; *Ethnography*: P. Briata; *Philosophy*: G. Bohme, T. Griffero; *Political Science*: N. Albertsen; *Sociology*: J.P. Thibaud.

Furthermore, it has been possible to frame a catalogue of the most common interdisciplinary methods and tools, used to investigate the *ambiance* by the interviewees' sample. Specifically, *commented* or *experiential walks* are practices that bring together architects and sociologists. *Immersive simulations*, such as Virtual Reality, are a useful support to partially reproduce an *ambiance*; this is a tool typically used by architects and computer scientists. *Interviews* are another tool that join architects, environmental psychologists, philosophers, political scientists, sociologists, and anthropologists. It also emerged that images and other types of media, such as audio recordings and videos, are used transversally in all the practices, both as a mean for stimulating a reaction and for representation and communication.

The outcome of the process are collected and presented in a first draft version of an interactive web platform, that has to be further implemented.

Conclusion

Even though the interviews belong to different disciplines, nationalities and linguistic contexts, the analysis of the keywords leads to a quite wide but coherent framework. In fact, theories and practices reveal similar or common interdisciplinary approaches; this highlights important bridges that would benefit from further studies and detailed analysis. In particular, the development of the interactive platform into a structured open database would be an important step for reinforcing the project and make it more accessible and usable; we also believe that its development should include a dedicated part showing the outcomes of case studies, e.g. documents and other media, developed by the interviewees. The implementation of the interview sample, from a quantitative, disciplinary and international point of view, is necessary to strengthen the research outcomes.

Acknowledgments

We would like to thank all of the experts contacted for the interview, their kind and generous contribution was essential for the realisation of the research project.

References

- Amphoux P., Thibaud J.-P., & Chelkoff G. (2004). *Ambiances en débats*. A la Croisée
Rasmussen S. E. (1964), *Experiencing Architecture* (originally published in 1959),
Cambridge MA: MIT Press
Pallasmaa J. (1996), *The Eyes of the Skin: Architecture and the Senses* (1° Ed.),
London and Lanham, MD: Academy Editions
Piga B., & Morello E. (2015), Environmental design studies on perception and
simulation: an urban design approach, *Ambiances. Environnement Sensible,*
Architecture et Espace Urbain (<http://ambiances.revues.org/647>)
Thibaud J.-P. (2002 a), L'horizon des *ambiances* urbaines, *Communications*, 73 (1)
Thibaud J.-P. (2002b), From situated perception to urban ambiances, First
international Workshop on Architectural and Urban Ambient Environment, Nantes,
France

Thibaud J.-P. (2015), The backstage of urban *ambiances*: When atmospheres pervade everyday experience, *Emotion, Space and Society*, 15, 39–46
Tuan Y.-F. (1977), *Space and Place: The Perspective of Experience*, Minneapolis MN: University of Minnesota Press

Authors

Barbara E. A. Piga \ An Architect by education, Adjunct Professor in Urban Design at the Politecnico di Milano (POLIMI) since 2011, where she is also research fellow (since 2010). She is research scientist at the *Laboratorio di Simulazione Urbana 'Fausto Curti'* (DASTU) since its foundation in 2007 and holds a Ph.D. in Urban Planning from POLIMI (2010). Her research interest is multisensory urban design and experiential simulation.

Cecilia Chiarini & Irene Vegetti \ Master of Science graduated in Urban Planning and Policy Design at Politecnico di Milano in Milan, Italy. They collaborate with *Laboratorio di Simulazione Urbana 'Fausto Curti'* (PoliMI - DASTU). They are investigating the *ambiance* notion from an interdisciplinary point of view.

Marco Boffi \ Psychologist, leads research on the relation between environment, individual wellbeing and collective quality of life. He is experienced in consulting for policy makers and associations about best practices, aimed at designing inclusive processes and wellbeing indicators.

Nicola Rainisio \ Ph.D. in Environmental Psychology, he studies the psycho-social meaning of places, promoting the interdisciplinary dialogue between urban sciences, design and psychological approach.

Aurore Bonnet \ Research Fellow, Team CRENAU, Laboratory AAU, ENSA Nantes. An architect by education, she holds a Ph.D. in Architecture and space management from University of Grenoble. Her research interests concern the *ambiance* aesthetic, the occurrence of presence through the engagement of the bodies in the movement, the audiovisual expression of the *ambiances*.

Valerio Signorelli \ Research Fellow, Team CRENAU, Laboratory AAU, ENSA Nantes. An architect by education, he holds a Ph.D. in Territorial Design and Government from the Department of Architecture and Urban Studies at the Politecnico di Milano.

Vincent Tourre \ Associate Professor, Team CRENAU, Laboratory AAU, ENSA Nantes. His research interests concern the use of natural lighting during the architectural design, the modeling and visualization of urban data, and the analysis of the morphology of urban public spaces.

Myriam Servières \ An associate professor in computer science at ECN and a member of CNRS JRU 'Ambiances, Architecture and Urbanity' since 2006 where she studies Computer Vision and Image Analysis, GIS, Augmented Reality and the use of mobile tool for urban design.

