

How can a heuristic study of geometry, materiality and identity enhance the atmospherical presence of architecture?

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Introduction

Awareness regarding the ways we work as architects are not only formally necessary but a welcome help in the research and design processes of every branch of the field. The familiarity with which we can follow a certain *modus operandi* works towards two directions: firstly, it positively influences the researchers' experience; secondly, it aids the future readers of their research findings.

Consciousness is useful in clearing the researchers' minds, forcing them to make choices, narrow down and rationalise what would otherwise be a free flow of accumulated thought: this avoids the risk of sinking into an encyclopedic amount of information. Once we know our approach, resulted from the specific way in which we see the world and therefore intervene in it through design, we also make a more conscious selection of the methods to follow it. Research-methodological awareness also facilitates identifying the mechanisms that lead our apparently intuitive processes, consolidating their results without superficially labelling everything as 'creative', but looking for the invisible roots of this 'instinct'.

As for the ways to convey research results, awareness assists in communicating them, justifying decisions as well as positioning oneself into a wider panorama of knowledge. This way, others will be able to not only absorb and use findings with more specificity, but also to allocate the gained material in their own systems of knowledge, rendering mechanisms of association and referencing more efficient, and potentially helping them formulate their own thoughts more deliberately.

Each lecture in the course has been eye-opening in delivering knowledge of specific methods and their wider context of application, and in deepening my understanding of architectural interdisciplinarity. As introductory lecture the 'Heuristics' talk allowed me to realise the importance of ontologically defining what we are doing as participants of the education system where we are forming ourselves as architects¹.

Not only have I gained awareness of the necessity to theoretically investigate my approach, but I will also actively use many of the practical lessons in my research, for which a few lectures were especially relevant. 'Investigating Material Culture' gave me a clearer idea of artifacts as content or product of culture and means I can create through which to forward my research, not only in their individuality but also in collection². 'Investigating Spatial Narratives' introduced me to the possibilities of the written word and its validity in the description of atmospheres³. Finally, 'Investigating Typologies' highlighted the possible connection between typological studies and what can be considered architectural 'collective memory'⁴. These findings have composed the triad of methods I am currently using: *drawing*, *model making* and *writing*.

The thesis topic is developed in relation to the year theme of the Interiors Buildings Cities (IBC) chair: The Intimate City. It regards a study on the abstract concept of atmosphere and what it is composed of: more specifically whether and how *geometry*, *materiality* and *identity* can create a comfortable *atmosphere*, with the purpose of users engaging with architecture and its function with more ease and therefore more consciousness. This will be developed as a hymn to ordinary life, through the design of a culture centre in Antwerp, Belgium.

As of now, the class has been analysing different cities - in my case Naples - in order to apply our learnings to Antwerp. Next, we individually designed a functionless, contextless 'City Room' that could anticipate our focuses and fascinations for the future project. Both these assignments induced me to consciously frame my process within the terms that I further explain in this self-assessment.

Research-Methodological discussion

Each of the triad methods will reflect a component of what I am assuming creates an atmosphere; geometry being connected to drawing, materiality to model making and identity to writing. The final result, delivered through a multiplicity of representative means as well as the chair-specific Project Journal, will shape the concept of what 'atmosphere' is.

The research will be brought on as qualitative, fitting within the parameters of an explorative 'thinking by doing'⁵. Fundamentally, it is a search for physical elements that have psychological results. This means a theoretical research is developed in dialogue with a practical trial-and-error attitude, which introduces a heuristic approach⁶. Here the concept of *accumulation* is extremely relevant - a continuous production of artifacts highlights the importance of the process: a rereading and variation of concepts and results, which will be looked at from ever changing perspectives. The artifacts I will produce are not only aimed at finding an answer to my research question, but they also speak of the process I employed⁷. This is in direct connection with Kirk Varnedoe's interpretation of modern art as a product of continuous variation and new combinations, rather than pure invention⁸.

As *drawing* techniques, interesting references are the work of studios such as Dogma, Flores i Prats and Atelier Bow Wow. These practices use this medium to research people's inhabiting dynamics, essential element in creating atmospheres. They do so in an extremely focused and technical way, which distills the geometrical features and objects of a space, at a scale that is very relevant for a study on *The Intimate City*. Surveying manuals⁹ also aid in a conscious study of precedents and typologies through their redrawing. In this work, typologies should be intended also as a mechanism that puts single objects in a system of relations between each other and as consequence of the contextual culture¹⁰.

Among *model making* techniques, the research models of Peter Zumthor¹¹ and Francesca Torzo are of inspiration in their evident focus towards the atmospherical presence of spaces through a study of their actual materialisation. The message of authors such as Pallasmaa¹² are also poignant in a calling towards the concretisation of ideas into artifacts: this highlights the relevance of models not only as final objects but also as a stratification of an idea physically unfolding in front of you, ending up being valuable in their 'becoming' identity. Furthermore, Kenneth Frampton grounds architecture to the notion that its tectonics hold 'expressive potential' as well, rendering it ever more necessary to study architecture in its material terms¹³.

Finally, the way I will use *narratives* is rooted in the work of Klaske Havik, for their potential in describing atmospheres¹⁴. The concept of a *dialectic continuum* - for which external environments and psychological environments are interconnected through written text¹⁵ - is in direct connection to a study on collective memory and the search for a common architectural language that speaks to all. Narratives are also useful in their introduction of the dimension of time in architectural research and design, so that spaces are no longer designed or described as statuary objects but as atmospherical experiences.

Research-Methodological reflection

Starting from the work of Palladio, surveying and redrawing significant precedents was a way to research proportions and geometries that worked according to the Renaissance paradigms of harmony, calm and dignity¹⁶, in order to later apply the same to his own buildings. The same kind of surveying later became a major element in Piranesi's work, who would mainly apply his findings in his drawings of cities or *capricci* as a celebratory message, which communicated the atmospherical value of certain proportions, being his drawings of a picturesque quality¹⁷. In *Il disegno obliquo*¹⁸ Massimo Scolari highlights drawing techniques as products of their times: the use of axonometric drawings belonged to settings in which ruled the search for an objective truth; perspective drawings were developed during Humanism, times in which the subjectivity of human experience was the central focus. Awareness regarding not only drawings as artifacts, but drawing techniques as products of their time could also be relevant throughout this thesis' study.

A similar approach to survey and to the drawings of the above mentioned practices is useful to introduce in the thesis a typological study¹⁹. Studying the geometry of existing buildings could definitely help finding justified proportions for my future project, as well as highlighting the essentiality of geometry in influencing atmospheres. As noted by Aldo Rossi²⁰, architecture should make use of archetypical shapes to be legible for and understood by the totality of its users: this would narrow the distance towards a communal practice or language of architecture, and could be seen as a way to make sure the architectural visual aspect could be evoked in a community's collective memory. During the 'City Room' exercise this process was employed through the study and redrawing of Hans van der Laan's buildings, which informed my proposal's proportions.

Model making is mentioned by Vitruvius mainly as a way to communicate a project to its clients, often ignorant of any architectural knowledge²¹. Brunelleschi will later use it with different purposes, namely those of technical performance proofing and of communication between architect and skilled workers²². To this day, model making is still employed in these terms. However, especially within the chair of IBC, models hold great relevance in their ability to visually portray an ambience through the study of surface materiality, lighting and human scale. To do so, great importance is given to model photography, which opens a whole other expertise level. Research through model making for the purpose of questioning the

genesis of atmospheres should focus on the proportions and materiality of investigated spaces - in their visual and in their tactile and auditory qualities. Importance should be given to the technical essence and assemblage of such materials, through fragment models. It is here worth mentioning again the ever growing awareness regarding the value of models as artifacts which are product of their time and cultural context²³. The 'City Room' assignment forced us to make material choices as its representation was to be through a model and its photographs. Materials were mainly chosen across my memories library in order to select certain physical qualities from the mental atmospheres they evoked.

A similar attention to the subjective sequentiality of spatial experience that is found in the use of narratives can perhaps be seen in works such as Gordon Cullen's *Townscape* (or Ralph Rumney's *The leaning tower of Venice*). Works closer to the Situationists or to Psychogeography don't exclusively use writing to communicate atmospheres, but through words, paired with photographs or drawings, they end up introducing the essential concept of time within architectural perception and analysis. The commonalities between these are the subjectivity or the point of view; the architecture as a three-dimensional object that takes time to walk through and unravel²⁴, room by room, until it is perceived as a whole²⁵; and the communication of evocative connections between the observed object and the observer's background, creating the unique experience we call atmosphere. The mechanism of the *dialectic continuum* is therefore essential in answering my research question, applying it to the concept of identity. These methods were used in our analysis of Naples, for which a board of photographs through streets and squares with correlated narrative descriptions helped us draw conclusions regarding the city's main atmospherical identities and the concrete objects that originated them.

Referring back to the previous two methods, referencing my architecture to certain typologies would make sure its result could enhance the evocation of atmospheres through the same mechanism; and in the quest for a dialogue with the collective memory, building construction is, after all, part of its content; model making in these terms would therefore hint at certain environments through this added layer as well. Finally, narratives could expand and synthesise the multiplicity of experiential perceptions and open a discourse on the concept of culture and cultural identity. Developed as three equally independent methods, they are rationally joined together and intertwined through a different use of literary methods, no longer narrative but rather argumentative.

Positioning

The 'Material Culture' point of view finds me deeply agreeing in the notion that objects "are central to an understanding of culture and social relations"²⁶. This brings me to note that not only objects but the ways we research are the product of circumstances as well. It is my opinion that the value of embodied experience should be part not only of the output evaluation but also of the research phase²⁷.

The accompaniment of material culture with the notions of atmosphere and typology create an interdisciplinarity which ensures a more comprehensive approach. Typologies should however not be intended as purely historical remnant, but actively inform our design²⁸, in dialogue with the other positions. Atmospheres should also enrich this discourse to pragmatically include physical factors and materiality in their matrix²⁹; it is also the memories of experienced materialities that evoke our sensations.

A logical premise constitutes the starting point of this research: a deductive reasoning brings me to try out and question whether geometry, materiality and identity are the generating triad of 'atmospheres' - a hypothesis that will later result in a synthesis³⁰. However, this way is only imposed by the necessity to formulate a question. The rest of the research follows an inductive process instead, with a heuristic approach that with the exploration of these components through the above mentioned methods will try to formulate uniform 'theories' regarding the specific features of the triad, starting from a series of particular artifacts³¹. Moreover, a phenomenological sensibility will guide the ways to judge whether and how these objects answer my question.

The multiplicity of these approaches suggests that architecture needs to keep oscillating between intuition and rationality in order to draw conclusions to its questions³². Heuristics precisely hint at this way of making use of different methods to navigate throughout the dialectical relationship between theory and practice³³.

The reason why the heuristic approach can aid a research is the reason phenomenology enters the scene: a heuristic approach makes sure that the amount of subjective data collected - which express how we perceive phenomena - takes the deserved space in the discourse. A scientific approach can aid in focusing towards a question, but architecture is not a positivist science and it should not make use of certain methods with the scope of 'solving' it in a tautological way; architecture does not have a universal aim or necessity.

In this sense architecture is closer to an art than a science: it is subjected to questions, problems and sensibilities that are specific of a certain *zeitgeist*, a certain time and collective experience; it is not guided by universal questions inspiring a universal answer. Every year every country alters architecture's premises and prerequisites.

Atmospherical studies are often neglected; certain methods are often used for the purpose of creating statements, rather than relevant realities for the subject. After the lessons of the past century, architectures should start to be seen not only as *objects* but more as *experiences*. Developing further the concept of atmosphere within my project, the aim is to introduce the theme of *comfort*: a project should not be a superimposition of exclusive languages, but it should be legible and represent instruments that allow for it to be perceived and understood as familiar.

Perceiving spatial qualities in these terms can enhance and deepen our position in space and our participation within the world. This can be achieved more directly if the language architecture speaks is of a *vernacular* sort. Vernacular is here intended as an architecture that is more observant of the human scale, and which is the product of collective memories, commonalities of expertise and of contextual parameters. Having said that there feels to be a necessity for architecture to care more about the subjective experience, it is however possible to elaborate this concept further questioning whether a commonality of intent, exemplified by sets of common values - therefore common lexicon - , can cohabit with the ever growing focus on individuality that began in the course of the 19th century³⁴.

Perhaps a temporary answer could be the embracing of diversity as a statement of architectural pluralism. Relatively to our time, as product of our time and society, the final aim of architecture might not be a definite role but the appreciation and strengthening of difference. This could become our common value: not a specific set of values, which are ever changing and not applicable to the new perceived borders of geography, but an enhancing quest for the plurality of our values.

¹ From the 'Heuristics' lecture by J. Mejia Hernandez.

² "An artefact is a materialisation of a thought", quote by Tim Ingold, from the 'Investigating Material Culture' lecture by E. Schreurs.

³ From the 'Investigating Spatial Narratives' lecture by K. Havik.

⁴ From the 'Investigating Typologies' lecture by R. A. Gorny.

⁵ Ray Lucas, *Research Methods for Architecture* (London: Laurence King Publishing, 2016).

⁶ From the 'Heuristics' lecture by J. Mejia Hernandez.

⁷ Following Aristotle's notion of inductive process, from particular to universal, as explained in: Aristotele, *Poetica*, edited by Pierluigi Donini (Torino: Einaudi, 2008).

⁸ Kirk Varnedoe, *A Fine Disregard: What Makes Modern Art Modern* (New York: Abrams, 1989).

A similar thought can be read in Bruno Munari's definitions of fantasy, invention, creativity and imagination, as explained in: Bruno Munari, *Fantasia* (Roma-Bari: Editori Laterza, 1977).

⁹ Mario Docci, and Diego Maestri, *Manuale Di Rilevamento Architettonico E Urbano* (Roma: Laterza, 2012).

¹⁰ "To understand the question of type is to understand the nature of the architectural object today. It is a question that cannot be avoided. The architectural object can no longer be considered as a single, isolated event because it is bounded by the world that surrounds it as well as by its history. It extends its life to other objects by virtue of its specific architectural condition, thereby establishing a chain of related events in which it is possible to find common formal structures. If architectural objects allow us to speak about both their singleness and their shared features, then the concept of type is of value, although the old definitions must be modified to accommodate an idea of type that can incorporate even the present state, where, in fact, subtle mechanisms of relationship are observable and suggest typological explanations."

Rafael Moneo, in *Oppositions: a Journal for Ideas and Criticism in Architecture* (Cambridge, MA: The MIT Press, Summer 1978), 44.

¹¹ Berteloot, M., & Patteeuw, V. (2013). Form / Formless. Peter Zumthor's Models. *Building atmosphere*, OASE, (91), 83–92. Retrieved from <https://oasejournal.nl/en/Issues/91/FormFormless>.

Also: Peter Zumthor, *Atmospheres: Architectural Environments, Surrounding Objects* (Basel: Birkhäuser, 2006).

¹² Juhani Pallasmaa, *The Thinking Hand: Existential and Embodied Wisdom in Architecture* (Ad Primers. Chichester, U.K.: Wiley, 2010).

¹³ "It is my contention that the unavoidably earthbound nature of building is as tectonic and tactile in character as it is scenographic and visual, although none of these attributes deny its spatiality."

Kenneth Frampton, John Cava, and Graham Foundation for Advanced Studies in the Fine Arts. *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture* (Cambridge, Mass: MIT Press, 2001), 2.

¹⁴ Havik, K., Teerds, H., & Tielens, G. (2013). Editorial. *Building atmosphere*, OASE, (91), 3–12. Retrieved from <https://oasejournal.nl/en/Issues/91/Editorial>.

¹⁵ "Novels and poetry weave external physical space and the internal mental spaces of both the characters and the readers into a dialectic continuum. The fusion of various settings, situations and human characters into a convincing singular entity is the very essence of literary art. But isn't this the ultimate task of architecture, too?"

Klaske Havik, *Urban Literacy: Reading and Writing Architecture* (Rotterdam: Nai010, 2014), 11. Foreword by Juhani Pallasmaa.

¹⁶ Andrea Palladio, *I Quattro Libri Dell'architettura* (Milano: Hoepli, 1976).

¹⁷ "According to Piranesi, the architect "cannot be content of being a truthful copyist of the ancients, but studying their work, they must show an inventive genius, almost desecrating; and wisely combining together the Greek, the Etruscan and the Egyptian, they must open the door to the finding of new ornaments, and new ways".

"[...] l'architetto "non deve contentarsi di essere un fedele copista degli antichi, ma sù le costoro opere studiando, mostrar dee altresì un genio inventore, e quasi dissicatore; e il Greco, e l'Etrusco e l'Egiziano con saviezza combinando insieme, aprir si dee l'adito al ritrovamento di nuovi ornamenti, e di nuovi modi"."

Roberto Gambetti, *Architettura italiana del Settecento*, in *Storia dell'arte italiana*, 6** (Torino: Einaudi, 1982), 717. Translation by C. Ceccacci.

¹⁸ Massimo Scolari, *Il disegno obliquo: una storia dell'antiprospectiva* (Venezia: Marsilio, 2005).

¹⁹ Typologies are here intended as being product of certain somewhat universal necessities, declined in subjective cultural terms.

²⁰ Aldo Rossi, *L'architettura Della Città* (Macerata: Quodlibet, 2011).

²¹ Antonio Corso, Elisa Romano, and Pierre Gros, *Vitruvio, De Architectura* (Torino: Einaudi, 1997).

²² Albert C. Smith, *Architectural Model As Machine: A New View of Models from Antiquity to the Present Day* (Amsterdam: Architectural Press, 2004).

²³ "This research takes the position that architectural scale models are created not only as a means of designing buildings, but also partake in defining a culture's cosmos. Though specific models from different historical periods may physically appear quite similar, contextually, they can play different roles. Through the use of analogy and metaphor, architectural scale models offer architects an understandable way with which to develop and define their concepts."

Albert C. Smith, *Architectural Model As Machine: A New View of Models from Antiquity to the Present Day* (Amsterdam: Architectural Press, 2004), VII.

²⁴ A process similar to what cubists were seeking to portray on a two-dimensional surface: not only a portrayal of objects, but of the time it takes to see them in their entirety - overlapping different perspectives onto the same point of view.

²⁵ “This is an essential aspect of atmosphere: it is an immediate experience of the whole, the entity, and only later can one distinguish the details that are part of it. If one then thinks of architecture, in its perception and understanding as well as in the process of architectural design, a constant interaction between entity and detail is at stake. The bouncing back and forth between entity and detail is somehow a natural process of human perception and thinking. And perception is a creative act.” Havik, K., & Tielens, G. (2013). Atmosphere, Compassion and Embodied Experience. A conversation about Atmosphere with Juhani Pallasmaa. *Building atmosphere*, OASE, (91), 33–53. Retrieved from <https://oasejournal.nl/en/Issues/91/AtmosphereCompassionAndEmbodiedExperience>. Page 37.

²⁶ Excerpt from the ‘Investigating Material Culture’ lecture by E. Schreurs.

²⁷ “Thus we may claim that the built invariably comes into existence out of the constantly evolving interplay of three converging vectors, the topos, the typos and the tectonic. And while the tectonic does not necessarily favour any particular style, it does, in conjunction with site and type, serve to counter the present tendency for architecture to derive its legitimacy from some other discourse.”

Kenneth Frampton, John Cava, and Graham Foundation for Advanced Studies in the Fine Arts. *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture* (Cambridge, Mass: MIT Press, 2001), 2.

²⁸ Intended as syncretical results of a stratification of shared intent.

²⁹ Havik, K., & Tielens, G. (2013). Atmosphere, Compassion and Embodied Experience. A conversation about Atmosphere with Juhani Pallasmaa. *Building atmosphere*, OASE, (91), 33–53. Retrieved from <https://oasejournal.nl/en/Issues/91/AtmosphereCompassionAndEmbodiedExperience>.

³⁰ According to the definitions of Hegel, as explained in:

Ray Lucas, *Research Methods for Architecture* (London: Laurence King Publishing, 2016).

³¹ Aristotele, *Poetica*, edited by Pierluigi Donini (Torino: Einaudi, 2008).

³² David Wang, and Linda N. Groat, *Architectural Research Methods. Second Edition* (Hoboken: Wiley, 2013).

³³ From the ‘Heuristics’ lecture by J. Mejia Hernandez.

Also: Tim Ingold, *Making: anthropology, archeology, art and architecture* (London and New York: Routledge, 2013).

³⁴ Lewis Mumford, on Sullivan: “If his ornament means less to the present generation than any other part of his work, it is only because we have begun to see that the nineteenth century quest of “individuality” and “personality” in architecture was a last step of disintegration, since architecture is a social art, and must stand or fall by its collective achievement. “Individuality” cannot be the foundation of a common rule: it is only the irreducible residue that remains after the common rule has been established”.

On Frank Lloyd Wright: “A man of genius delights in such a load: but architecture as a social art cannot depend upon the existence of men of genius: when it is in a healthy state it relies upon the commonplace efforts of the carpenter, the builder, the engineer, the manufacturer, and the task of the architect is not to usurp the work that is done in these departments, but to organize it intelligently and to create out of it an orderly composition.”

Lewis Mumford, *The Brown Decades*, 1931. Reprint, (Toronto: General Publishing Company, Ltd., 1971), 70, 79.

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