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Dialectic Atmosphere of Architecture: on Aesthetic Experience and Meteorology

Abstract: This paper seeks to trace the genealogy between two different terms of 'atmosphere'. On the one hand, the term is primarily understood as a meteorological phenomenon. On the other hand, the word 'atmosphere' has found its way into the field of aesthetics, as the spatial diffusion of a certain mood. But, as Tim Ignold remarks, current aesthetic approach to atmosphere is mostly all about sensory experience, with no mention of meteorology at all. Similar to this exclusion, current attitudes to climate change often reduce nature-culture relations to a merely technical concern. The purpose of this paper is to permeate these two divergent positions through three different architectural concepts. The first one – *Flying* refers to Derek McCormack's theoretical concept of *balloon flight*, combining the imaginative force of *flying* with balloon's technical ability to enable this desire. This position is further reviewed through *balloon-like* architecture of 1960s, as in its contemporary revival. The second concept – *Sensitivity* starts from the premise that our imaginative and perceptual activities are forced – not in the static beauty of ideal weather conditions, but in their constant oscillation and contingency. This state is elaborated in the work of architect Philippe Rahm. Finally, the third concept *Breathing* is a critical response to a meteorological idealization, which is manifested in technical perfection of Le Corbusier's *exact air*. As opposed to such intellectual *air control*, postmodern approach explores imaginative force of an *anti air* – dust, pollution, fog.

Keywords: atmosphere, architecture, meteorology, air, imagination, flying, sensing, breathing

Atmosphere, *Atmosphere*

The term 'atmosphere', which dates back to the early 17th century, was initially derived from the Greek words *atmos* (vapour, steam) and *sphaira* (sphere). The word is originally used in meteorological sense to describe the layers of gas surrounding a planet. Its aesthetic connotation, which refers to spatial ambience and mood, was established centuries later. The metaphorical shift from meteorology to a theory of feeling is based on the common idea that weather conditions can induce particular

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states of mind. After almost 200 years of using this term in the field of aesthetics, its meteorological background is nearly forgotten, even when the term is a direct reference to certain meteorological conditions. Contemporary coherence between aesthetics, architecture and climate change restores aesthetic field of atmosphere to its meteorological orientation.

While the term atmosphere conflates two different meanings (meteorological and aesthetical), in either case it suggests an in-between state. Following Gernot Boehme's "ecological aesthetics of nature"[1], in the widest sense atmosphere can be considered as an ambiguous phenomenon between environmental qualities and human sensibilities. Thus we can notice an emphasis shift: from aesthetics as a theory of beauty to a concept of "aisthetic"[2] reality – based on a theory of sensual perception.

Taking into account this perspective, this paper focuses on the discourse of *weather*, as the most immediate phenomenon in meteorological field. Compared with the *climate,* which is global, measurable and recorded, weather is rather celestial and, most importantly, it is emotionally experienced.

Architecture and Aesthetic of Atmosphere

The significance of 'an atmosphere' within architectural theory has gained increasing attention in the architectural discourse since the 1990s. Atmosphere as an aesthetic phenomenon finds its contemporary relevance in the phenomenology of Edmund Husserl, Hermann Schmitz, Martin Heidegger and Maurice Merleau-Ponty.

Yet, they are often considered as historical background to a heavily referenced philosopher Boehme who suggests that the qualities of the built environment must have an impact on the atmospheric perception of an occupier coinciding with their personal context. For Boehme, atmosphere is thus a "common reality"[3] between the inhabitant and the built form and its presence must exist as a reality to the perceiver. According to this state atmosphere is actually created through the process of making and manipulating a built form. Similarly to this state, Italian philosopher Tonino Griffero asserts that atmospheres persist as the in-between of objective and subjective states, which he nominates "atmospherology"[4].

Parallel with philosophical approach, aesthetic concept of atmosphere is considered from its instrumentalized viewpoint, including the texts of architects such as Juhani Pallasmaa, Peter Zumthor and Mark Wigley.

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[1] Cf. Andreas Rauh, "On The Ethical-Aesthetic Potentials Of Special Atmospheres," *Lebenswelt. Aesthetics and philosophy of experience* 4 (2014): 251.

[2] The Bohme's idea of 'aisthetic' is based on the Greek term 'aisthesis', which means sensual perception. It emerged from Bohme's previous concept of 'ecological aesthetics of nature'. Ibid.

[3] Gernot Bohme, "Atmosphere as the Fundamental Concept of a New Aesthetics," *Thesis Eleven* 36, 1 (1993): 122.

[4] Tonino Griffero, *Atmospheres: Aesthetics of Emotional Spaces* (New York: Routledge, 2016), 101.

Juhani Pallasmaa emphasizes "peripheral perception"[5] in architectural experience as the most relevant to the concept of atmosphere. In a similar way Peter Zumthor describes atmosphere as a form of multisensory perception and emotional response.[6] Such approach is in strong contrast to traditional understanding of architecture, which has been interpreted as a material artifact experienced largely through the sense of sight. Wigley fallows anti-theoretical and non-intellectual approach to the concept of atmosphere, relativizing the architect's idea of full control over its creation. He states that architects have always been occupied with effects, even when they argue the opposite.[7]

Architecture between Two Atmospheres

Contrary to the precedent approaches, where atmosphere is considered in its strict aesthetic notion, fewer researches are focused on the atmosphere in its both aesthetic and meteorological notion. Discussing the permeation of two different atmospheres, Tim Ignold remarks that Boehme's aesthetic position of atmosphere is all about sensory experience, with no mention of weather at all, even of the air.[8] He elaborates this observation arguing that science of meteorology "gives us notion of atmosphere evacuated of all traces of moods and affects", while for aestheticians, atmosphere is "a system of affects that appears to exist in a vacuum"[9].

A further aim of this paper is to overcome such divergence on three different levels. Chapter *Flying* refers to Gaston Bachelard's "imagination of Air",[10] elaborating this position in Derek McCormack's theoretic conception of (both atmospheric and meteorological) "balloon flight"[11]. This position is further reviewed through *balloon-like* architecture of 1960s. Chapter *Sensing* relies on Willy Hellpach`s "weather image",[12] finding its architectural stronghold in sensual approach to "meteorological

[5] For Pallasmaa perception of atmosphere calls for "unconcious and unfocused peripheral perception". As he states, this is "our normal reality, although we beleive that we perceive everything with precision". Cf. Juhani Pallasmaa, "Space, Place and Atmosphere. Emotion and Peripheral Perception in Architectural Experience," *Lebenswelt. Aesthetics and philosophy of experience* 4 (2014): 243.

[6] Peter Zumthor, *Atmospheres* (Basel: Birkhauser, 2006), 12.

[7] Mark Wigley, "The Architecture of Atmosphere," *Daidalos Architectur* 68 (1998): 25–26.

[8] Tim Ignold, "The Atmosphere," *Chiasmi International* 14 (2012): 80.

[9] Ibid.

[10] Throughout his entire study of "air and dreams" Bachelard elaborates imagination of air not as an static image buth as "imagination of movement" Cf. Gaston Bachelard, *Air and Dreams: An Essay on the Imagination of Movement* (Dallas: Dallas Inst Humanities & Culture, 1988).

[11] Derek McCormack, "Engineering affective atmospheres on the moving geographies of the 1897 Andree expedition," *Cultural Geographies* 15, 4 (2008): 413–30.

[12] Cf. Jurgen Hasse, "Traffic architecture: hidden affections," in Mikkel Bille and Tim Flohr Sorensen, *Elements of Architecture: Assembling Archaeology, Atmosphere and the Performance of Building Spaces* (New York: Routledge, 2016), 178.

architecture"[13] of Philippe Rahm. Finally, chapter *Breathing* discusses two different aesthetic positions – one modern, which referred to technical perfection of Le Corbusier's "exact air",[14] and the other of the postmodernism, which implies so-called *anti air* – dust, pollution, fog.[15]

While modern architecture perceived atmosphere as a pure space filled by technically controlled – exact air – all other approaches emerged as a critical response to this state, focusing on the atmosphere in its unpredictable, both aesthetic and meteorological notion.

Flying

In his 'phenomenology of imagination' Gaston Bachelard understands weather phenomena, not in their perceptive and habitual way, but as initiators of the dynamic process of imagination. For Bachelard, the element of air involves the "psychology of the imagination of the movement"[16]. Following this concept, all meteorological phenomena are rather more action than still images. They are guided not by the eye, but by the other senses and feelings, and they also help us dream about transformation. A shift from observation to (emotional) movement identifies air with flight, in its both physical and metaphorical sense.

Similar to Bachelard's concept, geographer Derek McCormack talks about atmosphere as a "set of dynamic and kinetic affects",[17] in a way that is never still but continually overtaking itself. For McCormack balloon can be understood in three ways: it "participates in the process by which atmosphere is rendered 'explicit' cultural geographies as a distinct zone of moving matter."[18] Second, the balloon offered a vehicle through which we explore the imaginative dimensions of earth-atmosphere relations. And finally, the experience of balloon flight was more than contemplative, however – it was also profoundly affective.[19]

In elaboration of McCormack`s theoretical position, Ignold emphasizes that in the 'atmosphere' of scientific meteorology, it will be impossible to *fly* with balloon. Science, as Ignold observes, tells us precisely *how* balloon can fly, but it, however, does

[13] See: Mirjana Uzelac Filipendin and Haris Bradić, "The Metereological Architecture of Philippe Rahm," interview, *International Journal of Contemporary Architecture "The New ARCH"* 1, 2 (2014): e1–e17.

[14] Le Corbusier, The Radiant City: Elements of a Doctrine of Urbanism to be used as the Basis of our Machine-age Civilization (New York: The Orion Press, 1964), 40.

[15] Cf. Peter Sloterdijk, *Terror from the Air* (Cambridge: The MIT Press, 2009); David Gissen, *Subnatures: Architecture's Other Environments* (New York: Princeton Architectural Press, 2009).

[16] Bachelard, *Air and Dreams*, 7.

[17] Derek McCormack, "Engineering affective atmospheres on the moving geographies," 418.

[18] Peter Sloterdijk, cited in: ibid., 415–416.

[19] Derek McCormack, "Engineering affective atmospheres on the moving geographies," 416.

not tell us what it feels like to fly. On the contrary, aesthetics seeks to characterize the 'mood space' of ephemerality, but it is not able to get the balloon off the ground.[20]

The dream of flying, or overcoming gravity, finds its formal appearance most notably in utopian architectural visions, such as Buckminster Fuller and Shoji Sadao "Floating Cloud Structures (Cloud Nine)" from 1960. (Fig. 1) It was a theoretical proposal for an airborne habitat whereby several thousand people would be housed within the space of mile-wide floating spheres. The hypothesis of the project is that if the air within this urban sphere could be climatologically controlled so that its temperature is just one degree higher than the ambient atmosphere, the sphere would levitate, like a giant hot air balloon.

Fig. 1: Buckminster Fuller, Floating Cloud Structures (Cloud Nine), 1960.

At the same time, artist Yves Klein supported by knowledge of architect Clode Parent, at the same time explored anti-gravitational architecture, aimed at obtaining structures which would levitate against gravity through the passage of air and hydrogen. These principles were the background for their two common projects: the "Air-conditioned city" (Fig. 2), where the whole Earth surface would become an inhabitable environment and "The air roof", an immaterial enclosure protecting the infinite open space where humanity would live freely and protected from bad weather.

In the wave of inflatable architecture of 1960s, the avant-garde Viennese group Haus-Rucker-Co set out to explore the capacity of architecture to enhance sensory experience and highlight the potential of human senses. In opposition to practical and cubical modernist architecture, as well as the critic of the confined spaces of bourgeois life, this group in 1967 proposed an experimental architectural intervention "Balloon for two". (Fig. 3) This room-size plastic bubble expands the boundaries of living space, showing at the same time how people could affect their own environment. In 1972 the

[20] Tim Ignold, "Lighting up the atmosphere," in Mikkel Bille and Sorensen Tim Flohr, *Elements of Architecture: Assembling Archaeology, Atmosphere and the Performance of Building Spaces* (New York: Routledge, 2016), 169.

architectural group Coop Himmelblau designed 'inflatable, movable cloud', which was adopted in similar way by Tomas Saraceno in Gallery Pinksummer in Geneva, 2004.

Though 'balloon practice' never achieved mainstream appreciation in its early days, many contemporary architects revisited this avant-garde line. In 2006 Rem Kolhaas and Cecil Belmonds installed globe-shaped air construction filled with helium above their Serpentine Gallery, while artist and architect Tomas Saraceno in his numerous experimental projects invokes balloon-like architecture of 1960s, such as those of Buckminster Fuller and Haus-Rucker-Co. (Fig. 4)

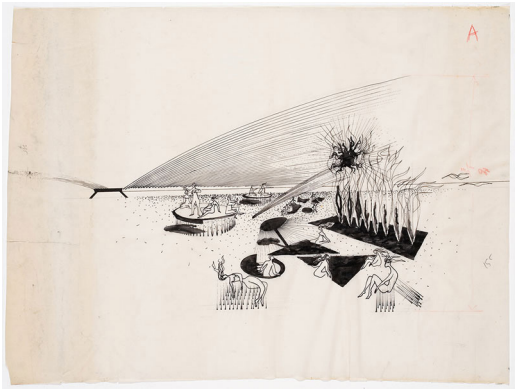

Fig. 2: Yves Klein, Claude Parent,
Air conditioned city, 1961.

Fig. 3: Haus-Rucker-Co, Balloon for two, 1967.

Fig. 4: Tomas Saraceno, In orbit, Kunstsammlung Nordrhein-Westfalen, Düsseldorf, 2016.

Sensing

According to Willy Hellpach's, every meteorological phenomenon has its own specific atmosphere. Hellpach refers to "weather image" where many situations caused by the 'weather' merge into the weather.[21] In the same way, many situations, manifestations and sensual experiences permeate themselves into an atmospheric space. Simultaneously, every man-made thing or situation has an inherent characteristic or potential to affect natural environment.

The multisensory dimension of weather contradicts the modern priority of a universal codex of prescriptions – sun, light and air. Contrary to practical interest of Le Corbusier's "exact air",[22] postmodern collaboration of architecture and meteorology is a sort of semantic provocation which invites the user to find their own psychological balance.

As Madalina Diacony observed, fine weather – which is mostly related to practical interest, or even stereotypical beauty, is a kind of neutral, "point zero of experience",[23] and it places the subject outside the weather itself. It paradoxically appears that the weather is what one does not become aware of, as it is actually forgotten immediately after we had perceived it. On the other hand, oscillating weather conditions keep us from abandoning ourselves to outdoor activities, forcing our imagination.

While the modernist architecture reduced the atmosphere experience to ideal and controlled weather conditions, current architectural explorations seek more sensible approach. However, architect and theorist Jonathan Hill suggests that Modernism has not been wholly devoid of weather sensitivities. As Hill observes, Sverre Fehn and Sigurd Lewerentz accomplished this by effectively translating the national romanticism of Scandinavia into what Christian Norberg-Schulz called a "romantic Modernism"[24]. The particularities of Nordic light, clouds and air defined the region's cultural sensibilities permeated with architectural imagination. (Fig. 5)

As a critical response to a dominant functionalist message of Modern architecture, and its perfectly controlled inner weather, architect Philippe Rahm – currently the most dedicated to meteorological issue, sees meteorology as "electromagnetic geography" or "thermal landscape",[25] inseparable from the psychological components of architecture. For instance, in his temporary, but paradigmatic project "Interior Weather", he proposes different interior weather situations, caused by the variations in temperature, light intensity and humidity. In order to define architecture as a spatial

[21] Cf. Jurgen Hasse, "Traffic architecture: hidden affections," in Mikkel Bille and Sorensen Tim Flohr, *Elements of Architecture*, 178.

[22] Le Corbusier invented the "neutralizing wall" – a double-glazed facade with an air cavity that can be heated or cooled, and the *exact air* system – a purified circulating air system at constant internal temperature of 18°C. Cf. Le Corbusier, *The Radiant City*, 40.

[23] Mădălina Diacony, "Longing for Clouds – Does Beautiful Weather Have To Be Fine?," *Contemporary Aesthetics* 13 (2015), accessed March 1, 2017, http://hdl.handle.net/2027/spo.7523862.0013.016

[24] Cf. Jonathan Hill, *Weather Architecture* (New York: Routledge, 2012), 260–61.

[25] Cf. Philippe Rahm, in Laurent Stalder, "Interview with Philippe Rahm," *Architheses* 2 (2010): 88–90.

vacuum filled with the solid, predictable elements, Rahm conceptualised it as a sort of ethereal mass, filled with the immaterial components that stimulate users' reactions. (Fig. 6)

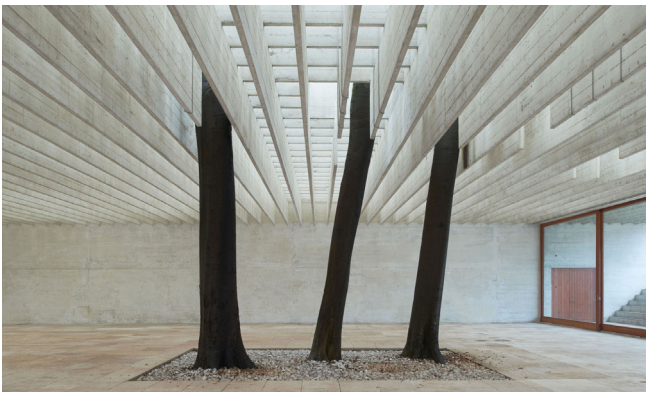

Fig. 5: Sphere Fehn, Nordic pavilion, Venice, 1962.

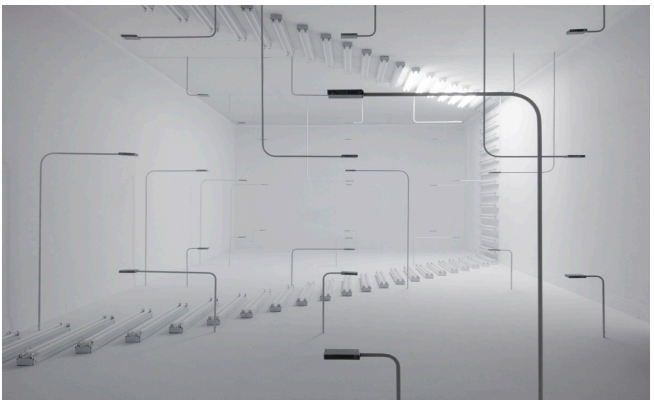

Fig. 6: Philippe Rahm, Interior weather, Montrael, 2006

Breathing

Contemporary work on atmospheric architecture, besides its imaginative and perceptual values, questions its potentials through the *air as breathing*. Yet Le Corbusier supplied his ideal house, as a "house with the correct air for breathing".[26] However, modern intensive focus on new spatial definitions narrowed the idea of air to a merely technical issue. Le Corbusier's almost fanatically engineered "exact air" has empha-

[26] Le Corbusier, cited in: Roberto Gonzalo and Karl J. Habermann, *Energy-Efficient Architecture: Basics for Planning and Construction* (Basel, Boston, Berlin: Birkhauser, 2006), 14.

sized the need to isolate the breather from the exterior pollution (or "devil's air"[27] – to use his own term). This techno-utopian climatology was the response to three different impacts. Firstly, Le Corbusier's "exact air" or "true God-given air",[28] follows general modernist form of purification. It was a kind of architectural hygiene dedicated to a higher visible truth, or as Wigley notes, "it is the hygiene of vision itself"[29]. Secondly, *fine* weather conditions are always good for practical external activity, such as recreational and sport facilities. Thus modernist obsession with sun and fresh air shifts experience of weather phenomena from its aesthetic to its practical interests, suggesting a conscious integration of hygiene and the body. Thirdly, and even for some authors most importantly, perfectly controlled air fulfils a kind of *immunological space*, in order to protect modern body from diseases, primarily from tuberculosis.[30] Thus air, light, roof terraces, whitewash became physical as well as metaphorical way for treating tuberculosis with sun therapy.

Good modernist architecture is professedly associated with good weather conditions. But as Friedrich Christian Delius remarked – "weather is always unfair"[31]. Paradoxically, modernist interest in effects that climate may have on health and well-being was refuted by clients' frequent complaints about the bad *interior weather*.[32] Hygienist obsession with controlled air, replaces its sensual atmospheric experience with intellectuality of clear vision. And finally, as Nicholas Negroponte observes, "the invention of the air conditioner once and for all limited the breather's experience of air to a static, unresponsive and predetermined regulation."[33]

However, breathing in the 21st century has become a critical cultural issue. German philosopher Peter Sloterdijk, recalls the gas warfare of World War I to illustrate the first moment of the awareness and fear of air. In his reference to German gas attack on French-Canadian troops, Sloterdijk notes that the clouds of chlorine gas revealed that the environment can create a spatial condition.[34] In such a state of *air-paranoia*, the air conditioning system became the only possible way to isolate the breather from the exterior hybrid atmosphere of *anti-air* – gases, smoke and exhaust.

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[27] Le Corbusier, *The Radiant City*, 40.

[28] Ibid.

[29] Mark Wigley, *White Walls, Designer Dresses* (Cambridge: The MIT Press, 1995), 5.

[30] Cf. Beatriz Colomina, "X-ray Architecture: Illness as Metaphor," *Positions* 0 (2008): 30–35; Cf. Margaret Campbell, "What tuberculosis did for modernism: the influence of a curative environment on modernist design and architecture," *Medical History* 49, 4 (2005): 463–88.

[31] Friedrich Christian Delius, cited in: Mădălina Diacony, "Longing for Clouds."

[32] Those complaints are most strikingly noticeable in correspondence between Mme Savoye, the patron of the Villa Savoye and Le Corbusier, in her famed statement that "it is still raining in their garage". Cf. Jacques Sbriglio, *Le Corbusier: La Villa Savoye, The Villa Savoye* (Paris : Fondation Le Corbusier and Basel, Birkhauser, 1999), 144.

[33] Nicholas Negroponte, cited in: Melissa Mazik, "Breathe: Re-Defining the Urban Breathing Apparatus," *Digital Commons @ Ryerson, Theses and dissertations*, accessed December 16, 2016, http://digital.library.ryerson.ca/islandora/object/RULA%3A1116

[34] Peter Sloterdijk, *Terror from the Air*, 10.

And while the purification of air is the subject matter of many various researches, architectural theory and history offer fleeting glimpses of the problem of vapors and dirty air, at the same time retaining the heat and the social pleasure of a hearth fire – as described by historian David Gissen. This invasion of real into the ideal can be perceived as a human-made nature, or "subnature",[35] to use Gissen`s term. "Subnature" addresses disjunctions between urban environments and "those forms of nature deemed primitive (mud and dankness), filthy (smoke, dust, and exhaust), fearsome (gas or debris), or uncontrollable (weeds, insects, and pigeons)."[36] As Gissen states, all those substances with irredeemably negative connotations, have transformative nature which can also be considered in terms of wonder, imaginative possibility, and an ability to redefine boundaries.

Such an atmospheric architecture is currently being explored and practiced by architect and preservationist Jorge Otero-Pailos, who created series of installations, based on the idea that pollution, grime and dust are part of the cultural heritage. (Fig. 7) The name of his project "The Ethics of Dust" responds directly to John Ruskin's book, composed by series of lectures, from 1867.[37] Based on the notion that materials are constantly changing, Otero Pailos's project deals with the removal of dust and the pollution of the walls of historical buildings by using latex cleaning technique, where liquid latex is painted on the wall. As it dries, it lifts away taking the microscopic dirt and dust and leaving a clean and carefully preserved wall behind.

Fig. 7: Jorge Otero-Pailos, The Ethics of Dust, Palace of Westminster, London, 2016.

[35] David Gissen, *Subnatures*, 21–24.

[36] Ibid., 21–22.

[37] Cf. John Ruskin, *The Ethics of the Dust* (London: Dent, 1908).

In his projects "Windtrap" and "Airflux", Philippe Rahm explores natural properties of the site – air and wind, to sculpt the architecture and develop a relationship between the air and the breather. Paris-based architecture practice R&Sie(n), in never built museum project in Bangkok, explores relationships between facades and polluted city air, suggesting architecture as a breather. Diller Scofidio + Renfro in "Blur building" explore an *air architecture*, challenge the materiality and permanence of conventional building, using a *smart weather* system that respond to changing atmospheric conditions. Breathing space is thus not limited to the controlled inner air, it rather creates its state from unpredictable weather which is mixed with the filtered water of lake (Fig. 8).

Fig. 8: Elizabeth Diller, Ricardo Scofidio, Blur building, Yverdon-les-Bains, Expo 2002.

Conclusion

For the moment, it seems that atmosphere in its relation to architecture is mostly conceptualized as an aesthetic phenomenon, in terms of certain ambience and mood, synesthetic experience, or perceptual ambiguity derived from optical effects of monochromatic mist. On the other hand, current attitudes to climate change reduce atmosphere, in its meteorological meaning, to a merely technical qualities of space (thermal, luminous or humid). The intention of this paper was to reconcile these two opposite approaches, one sensitive, and other technical.

Following the position of atmosphere in architecture of the last century, it is evident that there is a different relationship between these two notions. Modern architecture perceived atmosphere as a pure space filled by technically controlled – *exact air* (Le Corbusier). Modernistic obsession with purification replaces sensual atmospheric experience with intellectuality of clear vision. As a critical response to such predetermined atmospheric regulation, architecture of 1960s is focused on the atmosphere

in its both aesthetic and technical notion. On the one side, anti-gravitational *baloon like* architecture (Buckminster Fuller, Yves Klein, Haus-Rucker-Co) seeks to enhance sensory experience in its technically radical form. On the other side, some examples of the same period, such as scandinavian architecture (Sverre Fehn and Sigurd Lewerentz), create atmosphere as a pure sensitive phenomenon. Contemporary architectural approaches to atmosphere relie to a large degree on experimental architecture of the 1960s, with a special focus on the sensitive capacities of different meteorological states (Philippe Rahm), or imaginative experience of almost immaterial balloon form (Tomas Saraceno). As opposed to pure air-space of modern architecture, some contemporary examples seek for more uncontrollable and imaginative air, such as dust, pollution or fog (Jorge Otero-Pailos, David Gissen, Diller an Scofidio).

Each of these different conceptual lines are based on the common phenomenon – on the (im)materiality of air. Here, air was not just observed as a matter in gaseous state, nor as an immaterial, subconscious thing produced by architecture. Whether it is ideal, invariable air (Le Corbusier), or air that initiates physical or imaginative movement and variations (*balloon like* architecture or *meteorological architecture* of Philippe Rahm), or finally an *anti air* which define new hybrid atmosphere, in all cases air is recognized as a phenomenon with an explicit materiality, which is able to produce different and unexpected spatial conditions.

References:

Bachelard, Gaston. *Air and Dreams: An Essay on the Imagination of Movement*. Dallas: Dallas Inst Humanities & Culture, 1988.

Bille, Mikkel, and Sorensen Tim Flohr. *Elements of Architecture: Assembling Archaeology, Atmosphere and the Performance of Building Spaces*. New York: Routledge, 2016.

Boehme, Gernot. "Atmosphere as the Fundamental Concept of a New Aesthetics." *Thesis Eleven* 36 1 (1993): 113–26. doi:10.1177/072551369303600107.

Campbell, Margaret. "What tuberculosis did for modernism: the influence of a curative environment on modernist design and architecture." *Medical History* 49, 4 (2005): 463–88. doi:10.1017/s0025727300009169.

Colomina; Beatriz. "X-ray Architecture: Illness as Metaphor." *Positions* 0 (2008): 30–35.

Diacony, Mădălina. "Longing for Clouds – Does Beautiful Weather Have To Be Fine?." *Contemporary Aesthetics* 13 (2015). Accessed March 1, 2017. http://hdl.handle.net/2027/spo.7523862.0013.016

Gissen, David. *Subnatures: Architecture's Other Environments*. New York: Princeton Architectural Press, 2009.

Gonzalo, Roberto, and Habermann J. Karl. *Energy-Efficient Architecture: Basics for Planning and Construction*. Basel, Boston, Berlin: Birkhauser, 2006.

Griffero, Tonino. *Atmospheres: Aesthetics of Emotional Spaces*. New York: Routledge, 2016.

Ignold, Tim. "The Atmosphere." *Chiasmi International* 14 (2012): 75–87. doi:10.5840/chiasmi20121410.

Hill, Jonathan. *Weather Architecture*. New York: Routledge, 2012.

Le Corbusier. *The Radiant City: Elements of a Doctrine of Urbanism to be used as the Basis of our Machine-age Civilization*. New York: The Orion Press, 1964.

Mazik, Melissa. "Breathe: Re-Defining the Urban Breathing Apparatus." *Digital Commons @ Ryerson, Theses and dissertations*. Accessed December 16, 2016. http://digital.library.ryerson.ca/islandora/object/RULA%3A1116

McCormack, Derek. "Engineering affective atmospheres on the moving geographies of the 1897 Andree expedition." *Cultural Geographies* 15, 4 (2008): 413–30. doi:10.1177/1474474008094314.

Pallasmaa, Juhani. "Space, Place and Atmosphere. Emotion and Peripheral Perception in Architectural Experience." *Lebenswelt. Aesthetics and philosophy of experience* 4 (2014): 230–45.

Rauh, Andreas. "On The Ethical-Aesthetic Potentials Of Special Atmospheres." *Lebenswelt. Aesthetics and philosophy of experience* 4 (2014): 246–63.

Ruskin, John. *The Ethics of the Dust*. London: Dent, 1908.

Sbriglio, Jacques. *Le Corbusier: La Villa Savoye, The Villa Savoye*. Paris, Basel: Fondation Le Corbusier, Birkhauser, 1999.

Sloterdijk, Peter. *Terror from the Air*. Cambridge: The MIT Press, 2009.

Stalder, Laurent. "Interview with Philippe Rahm." *Archithese* 2 (2010): 88–93.

Wigley, Mark. *White Walls, Designer Dresses*. Cambridge: The MIT Press, 1995.

Wigley, Mark. "The Architecture of Atmosphere." *Daidalos Architectur* 68 (1998): 18–27.

Zumthor, Peter. *Atmospheres*. Basel: Birkhauser, 2006.

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Fig. 3 http://www.archdaily.com/582842/haus-rucker-co-architectural-utopia-reloaded

Fig. 4 http://www.archdaily.com/394622/in-orbit-installation-tomas-saraceno

Fig. 5 http://www.archdaily.com/784536/ad-classics-nordic-pavilion-in-venice-sverre-fehn

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Fig. 7 http://thespaces.com/2016/06/28/westminsters-dirt-becomes-art-jorge-otero-pailos-new-installation/

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