ABSTRACT
The French artist Yann Kersalé has designed the lighting of most major buildings by Jean Nouvel, Helmut Jahn and Rudy Ricciotti.
His use of light is based on an indexation to on-site data recording in order to visually materialise social or environmental phenomena we do not perceive anymore as we have developed our vision to the detriment of our other senses.
This could be compared to the use of tracers in biology to reveal invisible processes or organisms; Kersalé likes to say that he reveals the "gestation" of a specific building by showing its "electrocardiogram".
This paper develops Kersalé's oneiric and sensible approach to light by exploring some of his most famous installations.
Keywords: Yann Kersalé, architecture, light, phenomenology

1. INTRODUCTION
Light has long and extensively been described as the 4th or 5th dimension of architecture. It has rapidly become a powerful tool to think, rationalize, signpost and experience a building at night: at nightfall. The urban 'nightspace' seems comprised of building soaking in an ever brighter magma of light. However an alternative and phenomenological approach to architecture lighting has emerged over the last three decades.
To better understand how this new concept of light in architecture can be described as phenomenological, we must recount some of the key moments of the recent History of architectural lighting. The first of them was the systematic lighting of historic buildings. Indeed most of these buildings were built at a time when architects designed buildings from the diurnal perspective only; consequently, they lost all of their visual appeal at nightfall. It was then decided to try to keep them in an artificial daylight and to preserve them from the infamy of night.
This use of light creates ‘circumstances’ which are supposedly optimum in order to fully comprehend a (historical) piece of architecture; as Nolen Gertz put it in a paper entitled Toward a Phenomenology of Light: “These circumstances surrounding our perception of a thing condition the perception, and do so in a ‘causal’ way. There are many factors that contribute to how we see something, but what is of importance is that these factors contribute to the perception in a strict, regulated fashion. In certain circumstances we see certain things in a certain way. This can be more rigor-
ously defined by approaching this situation as one that allows for perception to move within level of ‘indeterminacy’. There are then circumstances which provide for ‘optimum’ conditions of perception, what we otherwise refer to as the ‘normal’ condition for perceiving a thing. Light of course functions as such a circumstance, where the absence of light, i.e. darkness, and ‘clear daylight,’ operate as the ‘limit-conditions’ of the possible determinacy of an object.”

By doing so architects have determined buildings as objects, but disconnected them from the night and its true phenomenological nature. At the same time most new buildings were lit by functional lights only: light was shining forth from their inside, generated by various incoherent sources of light such as fluorescent lights and desk lamps. Even if light has often been described as the fifth dimension of architecture, its true integration to architecture only started in the late 1970’s / early 1980’s.

First architects used light in order to underline and reveal the architectonic complexity of their work. This new integrated approach to light in architecture first stayed very design related: it was devoted to a better visual understanding of a building but did not actually add anything to it.

The visual artist Yann Kersalé is undoubtedly one of the pioneers who have used artificial light to give his building a new dimension that cannot otherwise be conveyed.

2. LIGHT AS PHENOMENOLOGICAL LINK TO NATURE AND HISTORY

Having worked with light for over twenty years, Kersalé has collaborated consistently with architects such as Jean Nouvel, Helmut Jahn and Rudy Ricciotti. Kersalé uses light as a societal tracer, which can make buildings fit (back)
into their historical and socio-geographical environments. We may refer to Nicholas Mirzoeff’s words to grasp the societal nature of his work and then say that his light installations “seek out an intersection between visibility and social power”.

In 1992 the city of Nantes entrusted Yann Kersalé with the lighting of Saint-Pierre cathedral [1]. In this project, the artist has deliberately broken with the tacit rule of gothic cathedral lighting according to which light should only outline the building’s verticality and then reinforce one of the main characteristics of gothic architecture. His lighting proposal is not based on the use of rays but diffused patches of light.

At night, the massive cathedral of Nantes was totally disintegrated by 1,900 blue spotlights. Their blue hue varied constantly according to data recorded by captors set in the bed of the river Loire, which flows close by. The effect of this variation evoked Monet’s series of the Cathedral of Rouen, therefore it is more related to the idea of visual impression than to the idea of actual narrative representation. The nocturnal aspect of the building evolved from day to day depending on the strength of both the river’s current and the ocean’s tide.

Kersalé’s intention was to undo part of the recent urban planning in order to make the cathedral fit back into its historical socio-geographical environment. To describe his conceptual approach, Kersalé readily uses the term of ‘geo-poetics’ [2] which was coined by the Scottish poet Kenneth White [3]. Indeed, the city of Nantes flourished due to its location by the estuary of the river Loire, which might be considered the venous system of the city when the cathedral was its mediaeval heart. Kersalé’s light installation gives the impression that the concealed water is oozing from the pores of the cathedral stone walls at nightfall, merging again with its original phenomenological environment.

This installation is reminiscent of another milestone of this radically new approach to artificial light in architecture: the Tower of Wind by Toyo Ito and Kaoru Mende.

3. A VISUAL APPROACH TO NATURAL PHENOMENA

Its erection in Yokohama in 1986 was also governed by the same desire to make this building fit its societal environment. This tower was designed to hide a ventilation and water tank facility for a shopping mall buried immediately beneath it. It stands in the middle of a roundabout, in the immediate vicinity of the railway station. Comprised of a series of perforated aluminium panels it forms a tall oval cylinder surrounding the concrete structure.

Kaoru Mende’s very complex lighting system, based on the use of captors, allows the real-time materialization and visualization of ‘natural’ phenomena such as ambient noise and the movement of wind about the tower, and animates the building with a variation of light effects. The outer structure of the tower can look either like a brightly floodlit envelope or like a translucent film animated by colourful waves.

Toyo Ito’s work is based on a stratified approach to urbanism which can roughly be summed up in a two stratum system: the stratum of the urban fabric comprised of buildings, roads, rivers, etc. and the phenomenological stratum comprised of human influx, draughts, thoughts and data flows. This may be compared to Husserl’s phenomenology [4] which has revealed the importance of ideal strata in the subjective intentional constitution of real objects such as buildings. Ito’s use of light overcomes the interior – exterior distinction, and proposes an authentic phenomenological description of a building, in its own reality and interconnections with surrounding reality due to “a conversion of the invisible rhythm and colour (made tangible through light, sound, air, etc.) of the city of which bodies are subconsciously
aware due to a variable pattern of light." [5]

Kersalé’s most notable projects are the fruits of his collaboration with Jean Nouvel. Their partnership has turned into a friendship and complicity: “To tease Jean, I tell him that he is an architect by day, and I am an architect by night,” says Kersalé.

In 2006 Kersalé designed the garden of the new Branly museum designed by Nouvel in Paris. He created an ocean of translucent rods programmed to react to the ambient temperature by changing colour. The 1,600 fixtures are connected to the data base of a nearby weather centre, and their hue varies according to the external temperature: they turn white as soon as the temperature drops; as it gets warmer, they acquire a pale-blue glow, with deep turquoise for balmy nights and sultry evenings. Planted among tall grasses and thin reeds, his rods, now sticking out like small totems, will eventually be buried in greenery.

Back in 1993 Kersalé worked in Lyon to set up a new lighting system on the roof of Lyon’s Opera house just renovated by Nouvel. Entitled Théâtre-temps this project is based on a slightly different phenomenological indexation of light.

4. LIGHT AS PHENOMENOLOGICAL AND SOCIETAL CEMENT

The futuristic cylindrical roof of Lyon’s Opera house takes on a red glow at nightfall. The intensity of the red lighting changes depending on the level of “human activity” inside the building. This activity is detected and recorded by captors and video cameras throughout the building.

In this last example the lighting puts the emphasis not only on a piece of architecture combining classical and contemporary styles, but also on the societal functions of the opera house which is at the heart of one of the main districts of the city unveiling its ‘inner phenomenology’. Here, Kersalé helps the viewer to understand that a building has its own life form [6] and story to tell. His varying lighting indicates that an Opera house is constantly in operation, especially outside opening hours. Thus a diffuse pulsing glow betrays overnight rehearsals.

This approach to light can be taken backwards to visualize and materialize the inner physiological life of a given building which then becomes visually comprehensible by the passer-by.

Thanks to this visual experience, people are becoming visually aware of the complex and highly interwoven societal system within which we live. Architects tend to offer a more organic and intimate perception of their buildings by depriving the latter of any precise outlines and invading them by light. Thus Ito explains that “the tower (of winds) with such physical presence loses its presence after sunset and metamorphoses into a phenomenon of light. I refer to this metamorphosis from an opaque substance into a transparent object of light as ‘fictional’. ”[7]

The fictional nature of this ‘phenomenon of light’ actually demands further analysis as it has been the origin of what is now described as architainment.

5. THE TEMPTATION OF THE ARCHITAINMENT

Coined by the architect Luis Fernández-Galiano [8], this term is now commonly used by the lighting industry to refer to the architectural application of their products for entertainment.

Thus any new building is expected to glitter at night, pervading the urban nightscape with a series of patterns which have barely any direct link to the building they cover. The aim of architainment is not to provide any kind of message
nor to clarify the true nature/function of a building, but to entertain the passer-by thanks to the mesmerizing power of light. This new trend will inevitably diminish the work of artists such as Kersalé, as well as their phenomenological impact on our perception and apprehension of the urban nightscape.

The nocturnal omnipresence of light in today’s cities is such that we have almost stopped noticing it from a phenomenological point of view; the way our cities are lit has nevertheless continually evolved and, in fact, radically changed over the last decades. This evolution has its roots in two parallel processes: the development of new light sources and the ever more definite influence of *visuality* on Western cultures, both born of technological and scientific advances. Some of the current building designers' tendency to take the easy way out of *architainment* may ruin these efforts.

6. CONCLUSION

Nevertheless, the main characteristic of light is its paradoxical nature. Kersalé’s approach to architectural lighting will ever differ from *architainment* for it is based on a societal and phenomenological indexation to make concepts and aspects of our everyday life visible and more tangible.

Thereby, he tries to fight against the reduction of interpersonal communication in today’s urban life which is the result of an increasing *visuality*. He materialises phenomena we cannot perceive anymore because we have developed our visual sense to the detriment of our other senses. This can be compared to the use of tracers in biology which reveal invisible processes or organisms. Kersalé likes to say that he reveals the "gestation" of a specific building by showing its "electrocardiogram".

In a broader scope, the use of light as a medium in architecture draws a fresh and innovative comparison between the ephemeral nature of visual aesthetic experience and the phenomenological approach to a building to which the aesthetic experience refers to. Wind, air, feelings and ideas are totally fictional because they are not visible; in other words all that cannot be seen is barely considered as phenomenologically pertinent anymore. The sublime nature of light reiterates our apprehension of reality as it does not illustrate what it refers to; it bases our understanding of architecture on phenomenological experiment, not on a formal point of view. It then generates
‘active’ aesthetic experiences and opens up new dialogues that explore aspects of our everyday life that we had forgotten and/or we did not even suspect existed. It intends to visually investigate normal or everyday lived experiences from a phenomenological point of view.
This new urban phenomenology does not deal with a fantasized vision of architecture rooted in science fiction, but with a direct confrontation between the everyday urban reality and a certain idea of the sublime; as the French philosopher Emmanuel Levinas put it: “the miracle of light is the essence of thought: due to the light an object, while coming from without, is already ours in the horizon which precedes it; it comes from an exterior already apprehended and comes into being as though it came from us, as though commanded by our freedom.”[9]
Kersalé’s phenomenological approach to architectural lighting provides the circumstances necessary to plunge the viewer into the ‘psychophysical’ [10] state necessary to fully apprehend a piece of architecture.
When he tells the story of a particular building, he helps us re-discover and comprehend our direct environment and its phenomenological expressiveness. To achieve this we must agree to look up at the world again, much as we did as children discovering the world for the first time.

REFERENCES
1. The original project comprised of fifteen buildings, but for financial reasons it was reduced to the cathedral only.
2. In his use of the term, Kersalé obviously plays on both the meaning and the etymology of the word ‘poetics’ which comes from the Ancient Greek ποιειν (= to make).
4. Husserl’s phenomenology is mainly based on the idea of a spatial body which is a synthetic unity of a manifold of strata of ‘sensuous appearances’ of different senses.
6. Light is unconsciously but deeply linked to the idea of life.
7. Carly BERWICK, op cit.
10. See Husserl’s distinctions between eidetic psychology and psychophysics in Philosophy as Rigorous Science.