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Light in Architecture: Two Approaches¹

After reading Rémi Brague's book *Anchors in the Heavens* [3], I realized it could help guide my thinking about architecture at the moment. In this book, published originally in French in 2011, philosopher Brague presents a reflection on contemporary situation of humans. On a question what could made people want to hand over life, he replied that life must be considered good; it is necessary to connect, as was before, being as well as life with an idea of goodness. If today we can decide not to live (i.e. commit not only individual suicide, as it has always been possible, but also collective, social suicide, not only by atomic war, but mainly by the fact that the next generation will not be born, then it is necessary that life and being are good — our world is good — because it is necessary to persuade every one generation to give next one, so that life goes on.

He then goes on building his arguments for continuing human live. I won't follow the path — even not the idea of why we need to see being and world as good — and consider instead an idea how to achieve it. That's may be a fruitful issue for architecture. Daylight is a topic as old as architecture itself but now it seems to be suitable for the research; as is for instance the case of Elisa Valero Ramos [10]. It is thanks to light that we have (or perceive, or see) a house, a church, a street, a city, in a word, architecture. Light reveals us our world. That's hardly anything new. Phenomenology is informing us about phenomena of the world around us for more than a century and light is a key part of the message; especially in architecture. Great inspiration on light in architecture are investigations and photo essays of architect Henry Plummer who published numerous books on light and architecture either in a particular building tradition, as, for example, modern architecture [8], American shakers [7], or in a various region of the world, as, for instance, in Scandinavia [6].

Than it is necessary to take an interest in what kind of world may the light reveal. The possible first impression answer may be, of course, multiple, various, multifarious... But moment latter and bearing in mind historical and modern architecture, I came across an idea that there may anyway be only few distinguished attitudes. To this I took an inspiration by famous book by Rudolf Wittkower *Gothic Versus Classic* [11] on enduring of Gothic style in Italy in 16th to 19th centuries. In the book, Wittkower investigates the development of Gothic style edifices (mostly finishing great medieval churches in Milan and Bologna) in Italy during the emergence, development, and final spread of renaissance, mannerist, and baroque styles. He shows continuing Gothic principle in a classical country par excellence, Italy, in centuries that were

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dominated by classic oriented styles. These two stylistic and architectural principles, nevertheless, do not represent only two approaches in terms of style. They seemed useful to me and I tried to distinguish classical and Gothic attitude to the light in architecture. It goes without saying they are only ideal-type categories, and what's more, they are, in my understanding, not based on style. I would call them two poles toward which most of architecture only, sometime very vaguely, directs. On a question above, it may be preliminarily replied that classical and Gothic approaches work with the light in architecture in a very different way. And that they understand light differently because they see the world differently.

The older of these approaches I would like to call classical; it has its origins in more than a thousand years tradition of the ancient Greek and Roman world in the Mediterranean, where it originated, expanded, and found its largest, so to speak classical, application. If there would be a need for a synonym for the word 'classical', it would undoubtedly be the word 'Mediterranean'. The art of this diverse area can be included under various stylistic designations from Minoan, Mycenaean, Archaic Greek, Hellenistic, Etruscan, Roman Republican, Imperial, etc., and yet all of them will be accompanied by the designation 'classical'. The classical ones are Doric Greek temples, Ionic Hellenistic temples, Corinthian Roman temples, theatres, circuses, and Roman *thermae*. Such, but above all the so-called monumental, architecture is most often characterized by the use of columnar orders, i. e. Tuscan, Doric, Ionic, Corinthian, and Composite, which determine the entire building. The column orders are the clues or rules by which individual buildings are scheduled and constructed — i. e. they get an "order." Unlike John Summerson, I am not interested in classical language [9], in how architecture manifests itself, in how it communicates, but how it works with light. But one thing is clear from Summerson, and I will emphasize it here. Classical architecture does not belong to one style, one period and knows no borders or nations. Although the order architecture has its roots in Greece (and in Ionia, which is today's Turkey), it has already spread and developed independently in the Hellenistic world, regardless of the country of origin. I will also use the classical category for the architecture of ancient Egypt, which, with the exception of the Ptolemaic period, does not easily belong to classical antiquity; and it is possible to follow it until the works of 20th and possibly also 21th century. For this approach, I will mostly be interested in the exterior. This also applies to the classical building par excellence, the *Parthenon* in Athens on the *Acropolis*, which white marble columns of beautiful proportions are caressed by the strong southern sun.

Probably the strongest pronunciation of the classical approach, at least in 20th century, could be found in famous Le Corbusier's statement from his equally famous book *Vers une architecture*: "Architecture is the masterly, correct and magnificent play of masses brought together in light" [5]. In his view, a piece of architecture is an admirable object on earth bathed in the (preferably strong, south) sunlight and waiting for a human to meditate it.

Defining the second approach will be a bit more difficult. Its origins are in medieval Europe, and the term Gothic is actually only partially appropriate, because it also refers to the Gothic style, which is certainly the clearest example of this approach, one of its ultimate manifestations, but not the only manifestation. There is no complete agreement among experts on what most elementally defines the Gothic style. The first choice will definitely be a pointed arch, which does not occur anywhere else. Another candidate is verticality, in addition to the fact that the exteriors and interiors of high Gothic works steep in height, one can remember typical pinna-

cles and other vertical elements, which are also probably not found in non-Gothic architecture (and of course neo-Gothic). The pinnacles are connected with the supporting system of pillars and flying buttresses, thanks to which I could get to something that will be important for my inquiry in this approach: one of the constitutive elements of Gothic, especially church architecture, is the so-called diaphanous wall and the diaphanous structure in general. During the development, Gothic churches often turned into glowing vessels of divine light by enlarging the area of the windows at the expense of the filling wall. This method of construction, where the whole body of the building is transformed into a network of pillars connected at the top by a vault, secured by a supporting system of arches and flying buttresses and separated from the outside world only by a thin — and diaphanous, translucent — screen, most often filled with stained glass; this would represent clear, ideal-typical Gothic approach. Of course, it manifested itself very differently at different times and in different places. It is a principle that always implicitly and sometimes explicitly refers to Christianity. Its most typical examples can be found in France (excluding the southern regions), especially in the Île-de-France region, where the Gothic in the strict sense began to develop, as well as in the German lands and in broadly conceived central Europe, including among others the Czech lands. In this approach too, it is true that it knows no borders or nations. In time, we can talk about the time from the Early Middle Age to the present. And this also applies to the Gothic itself, which is probably the only traditional art-historiographic style that ended in modern times. It persisted, as Rudolf Wittkower shows, even in Italy during the entire 15th, 16th, 17th centuries, and even until 19th when it switched slowly to neo-Gothic. This is all the truer for the German and Czech lands — it is enough to mention the phenomenon of Baroque Gothic architecture of the 18th century, and for England, where even in the 17th-century university colleges were built in the uninterrupted Gothic tradition. For this approach, I will mostly be interested in the interior. This also applies to the Gothic building par excellence, the Notre-Dame Cathedral in Chartres, which stained glass windows transform the inner world of this church into a sacred place filled with God's presence.

Probably the clearest pronunciation of the Gothic approach came with abbot Suger of Saint Denis who wrote about his rebuilding of the Church of Saint-Denis, the burial place of the French monarchs, with clear interest on the light: “elegant and superb addition with its circuit of oratories that allowed the entire church to radiate with magnificent, uninterrupted light pouring through the sacred stained-glass windows that illuminated its interior beauty”[1]. In this view a piece of architecture is a place in touch with transcendence altered by coming (preferably sunbeams of) light waiting for a human to meditate there.

The situation is somewhat complicated when it comes to examining modern and contemporary buildings. Both principles, which I have chosen as an aid in classifying the work with light, are still to be found, but in an even more blurred form than in the pre-modern architecture. While the classical approach found a great proponent in Le Corbusier, who, above all, not only in the post-war work, created buildings which sculptural form directly demands that the sun's rays caress them; however, various aspects of the Gothic approach can also be found in various forms, not only in the church interiors.

It is, I think, more than clear from my description above that both classical and Gothic approaches see being as good, and the same with life that is also seen as good. It is so important

because (paraphrasing Brague's argument) with the growing ability of people to decide whether to be or not to be, there is also a growing need to find reasons that will lead them to choose *to be*. For acquiring this, Brague speaks of "the metaphysical infrastructure of human life", which anchors in the heavens. Any securing of life is, in Brague's view, not possible without transcendence. Both defined approaches are in accordance with this view because what characterise them are not stylistic factors, but how a piece of architecture is related to light and ultimately how it understands the world — what kind of world it reveals.

High above Athens, on the massive base of the Acropolis, raises probably the most famous Greek temple, *Parthenon*. With its Doric columns of beautiful white marble, it shows itself to the newcomers, usually in the strong southern sun. It shows in exceptional quality everything that needs to be shown: the highly elegant body of the building, harmoniously composed of measured, perfectly processed parts, i.e. columns, entablature, pediment, etc., careful and thoughtful details, noble material and surface, and so on. Above all, however, it represents a *thing* that stands out in the light. This certainly applies to every (perceptible) "thing," every *res extensa*, to use Descartes' expression, but here I will be interested in the fact that the builders, and it does not matter whether consciously or not, created the building so that thanks to sunbeams of light it would stand elegantly into its presence. This "coming into presence," the presentation, Karsten Harries would say re-presentation [4], is an important and integral part of it. In short and certainly simplified, that is why *it is here*.

In more detail, I can show it on the example of a base (of a column). At the point where the base touches the *stylobate*, it casts, under suitable light, a narrow strip of shadow; thanks to which the base, especially the Ionic or Attic base, acts as a foot resting on a footstool. The shadow "separates" the pillar/foot from the pedestal/ground and presents the pillar as a distinctive volume of matter for human perception.

At the pilgrimage church of Notre Dame du Haut in Ronchamp, built almost exactly in the middle of the 20th century, almost everything from the late Le Corbusier can be shown in terms of working with light. The church consists of a strong, plastic form of irregular but strong shapes, massive solid walls, three round towers, and a heavy concrete roof. The building has nothing of the classical architecture of the orders, no columns, bases, entablature, yet even here something is markedly exposed to the sun. Le Corbusier's above mentioned famous statement also applies to this building. There could be countless of other examples mentioned from all possible styles, epochs, and regions.

On the Gothic pole, there may be mentioned, as one of the most famous and typical, the main Marian pilgrimage site of medieval France, Chartres with the Cathedral of Notre-Dame, i.e. the Virgin Mary. Notre-Dame de Chartres is an excellent example because of the light that can be experienced inside the church, the light that man can even enter. The light regime in such a cathedral is determined by the size, layout, and treatment of the windows, transforming the light entering the church and creating within it a specific reality given by that light. The light that medieval people considered to be a manifestation of God's existence changes the reality of architecture. The light changes the here and now. There are also countless examples directing towards the gothic pole from all possible styles, epochs, and regions. It would probably be possible to write or rewrite an outline of architecture based on this two poles view. Most of the architecture, however, is located somewhere in-between.

One more detail that is necessary to mention in this two-pole view is the fact that both approaches are a reaction to light condition of a region. They both depend, among other, on climate, as climate control lights, i.e. something people have not in their hand. That's why there are so many differences between south and north even within one style. Advance examples of both approaches are conscious reaction to local conditions. Both very differently — through an immanence to and transcendence of our world, show kind accommodation of the world to humankind. Or, may be, vice versa... The interest in light in architecture brings one to appreciate and to accept what is given. That's something our today culture is lacking and ought to learn again. And sensitiveness to ever changing daylight in a place may be a graceful way to the goal.

When one looks at the marble inlaid elements of a masterpiece of architecture, has patience and is lucky with the light, one experiences beauty revealed everywhere around and perceives with the whole body the message of the beauty of the world. I firmly believe that this is one of the most important benefits of architecture for people. The light shows touching a piece of architecture and reveals that the world is good and beautiful.

The famous *Ca' d'Oro* house on the Grand Canal, in addition to twisted corner pillars, the surface of the façade and other details guaranteeing light effects, also offers real frames, such as are around windows whose “framed image” is made as truly stone inlay, i.e. decorated with a flat combination of contrasting stone slabs of different colours and textures. The frame itself is often in the form of a kind of dentil, formed by small cubes alternately tilting to one side and the other. Their shade is fantastically playful and supports the well-known fact that the Venetian palaces placed more emphasis on decor than on strict tectonic order. When one looks at the marble inlaid slabs of a Venetian palace, one sees the light that strikes them and the revealed beauty all around, and perceives the beauty and goodness of the world with one's whole body, and one can immerse oneself in this beautiful situation.

Regardless whether one observes the rising sun illuminating one of the (classical) pyramids at Giza or experiences coloured light entering a Gothic church, one will observe and experience this light as a bodily being with one's eyes and one's whole body. It brings another issue to today discussion in architecture. As long as human being is a bodily being, virtual reality (as such, important and necessary today) will stay only as a secondary world to physical world here and now. In the 20th century, philosophy finally came to the realization that the body is not a prison of the soul, that there is no duality of body and soul, and finally that a man is also his body, so light in the outside world is and will always be a fundamental matter of our lives, and I consider mindfulness to light in architecture a very elegant way to realize these matters. Descartes' cognitive subject — the famous *res cogitans*— cannot take pleasure in the play of rays in the interior, the rays which can often even be entered. This realisation could also be beneficial to humans in our today civilization.

In this context it is an irony of fate that I have started to think and write on light, architecture, beauty, and here and now at the moment when due to an extra-architectural factor from the year 2020 people started accelerating the change to almost exclusive on-line or virtual communication, teaching, exchanging — and I am tempted to say — also living. Experiencing architecture, including experiencing light in architecture resists transferring to virtual realm, to photography or video (at least not fully) and shows our human belonging to the world of the flesh, to the world on earth and under the sun. And it is also something I have wished to

demonstrate. And precisely in this, there is an irony, the irony of fate — I had to present on-line arguments, via internet, through virtual platforms on importance of awareness of bodily engagement (as a person) to the earthly world through experience of light in architecture. But maybe it should have been so.

In the paper, I have tried to indicate that attention and sensitiveness to light in architecture in a particular way may help us coming to a reply to Brague's call that urge us to understand being as good. Brague's proclaimed goal is to make us realize that we as humans need a metaphysical support (Brague's anchors in the heavens), and by far not only in religious architecture, may be ideal medium to show it and to understand it; not only in theoretical understanding but in everyday experience. The two poles in working with light in architecture I have tried to distinguish as two different points in an alternative seeing of the world; in one case, a piece of architecture immanent to the world, and in second, as a vessel pointing transcendently to an unspecified alternative to here and now of a particular physical place or situation. The two poles describe, rather than stylistic differences, the two alternative modes of how to experience the particular place or building. Nevertheless, both reveal (as Brague demanded and proclaimed) that the metaphysical infrastructure of human life is not its superstructure but the base that serves as a necessary foothold. How a particular architecture works with light was presented as a response to a condition that people do not principally control but only more or less freely and creatively response to. The more they do, the more convincing result they may create as in the examples above. Light in architecture was shown to demand the whole human as a bodily being in accordance with recent way of understanding a man. And a way of seeing and of living is the area toward which the text has been directing. Since, as I believe, architecture today cannot change stylistically but only in inner motivation, ergo in its awareness.

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Title. Light in Architecture: Two Approaches

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Abstract. The article deals with light in architecture. It brings the division of the topic into two poles, called classical and Gothic, which each represent a different approach to working with daylight. The classical approach, which has its origins in classical antiquity around the Mediterranean, shows the world around us through an illuminated building. The second, the Gothic approach, which originated in medieval Europe, shows the world around us through the transcendence of this world. This research has no art-historical ambitions; it is not interested in styles or historical development. It wants to show that through light architecture reveals a broader relationship to the world. The text uses the philosophical thinking of the philosopher Rémi Brague, who tries to appeal that we as people ought to once again perceive the world as good, being and life as good. He believes that it is important for the people to continue the adventure of human life — it is necessary to persuade each generation to take the next one. It is not just a theoretical, philosophical question, but a matter of life. Architecture does not seem to have much to say about this. But it is on matters of light and architecture that I am trying to demonstrate that it has. Architecture has always expressed people's relationship to the world, the belief that the world is good, beautiful and pleasant to live. The two poles mentioned are only approximate, but each in its own way shows that the world is good in its diversity and adapted to man (or man to the world). The topic also touches on the current phenomenon of transferring all human affairs, where possible, to an online version. It is certainly a necessary process, but the matter of light in architecture shows that we are bodily beings, and therefore our life will always be in this material physical body.

Keywords: architecture, light, daylight, architectural theory, metaphysics

Название статьи. Свет в архитектуре и два подхода к нему²

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Аннотация. В статье рассматривается проблема света в архитектуре. Исторически тема разделяется на два полюса, называемые классическим и готическим, каждый из которых представляет свой подход к работе с дневным светом. Классический подход, который берёт своё начало в античности Средиземноморья, показывает мир вокруг нас через освещённое здание. Второй, готический подход, зародившийся в средневековой Европе, показывает окружающий мир через трансцендентность этого мира. У этого исследования нет искусствоведческих амбиций; нас не интересуют стили или историческое развитие. Мы стремимся показать, что через свет, через то, как архитектура работает с ним, можно открыть более широкое отношение к миру. Исследование опирается на философию Реми Брага, который пытается апеллировать к тому, что нам, людям необходимо вновь научиться воспринимать мир как добро, бытие и жизнь как добро. Он считает, что важно, чтобы люди захотели продолжить приключение человеческой жизни — необходимо убедить каждое поколение принять следующее. Это не только теоретический, философский вопрос, но и вопрос жизни. Архитектура, похоже, мало что может сказать об этом. Но именно в вопросах отношения света и архитектуры я пытаюсь продемонстрировать, что это именно так. Архитектура всегда выражала отношение человека к миру, веру в то, что мир прекрасен и в нём приятно жить. Два упомянутых полюса лишь приблизительны, но каждый по-своему показывает, что мир хорош в своём многообразии и приспособлен к человеку (или человек к миру). Тема также затрагивает актуальный феномен перевода всех человеческих дел, где это возможно, в онлайн-версию. Это, безусловно, необходимый процесс, но материя света в архитектуре показывает, что мы телесные существа, и поэтому наша жизнь всегда будет в этом материальном, физическом теле.

Ключевые слова: архитектура, свет, дневной свет, теория архитектуры, метафизика

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