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Between the École Des Beaux-Arts and the Bauhaus: Modern Architecture as an Outcome of the Enlightenment Philosophy

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ABSTRACT

Starting from the Age of Enlightenment, and throughout 19th and 20th centuries, philosophical movement had reformed the face of life in Western World. One of the fields that remarkably reflected these changes was architecture. A study of the development of philosophical thinking of this era would hence help understanding the origins and inspirations that led architectural development in this period .

It is argued here that as long as fields like philosophy and criticism barely have any weight in architectural education in our Arab World, the architecture in this region will always lack meaning and value. The paper suggests that engraving some connections with philosophical and intellectual trends might be helpful for developing an architecture that reflects a special character and meaning in this region

Keywords
Age of Enlightenment- Modernism- Rationalism- Revivalism.

INTRODUCTION

Between 18th and 20th centuries cultural and philosophical life in Europe had witnessed so many changes with great impact on architecture.

The Age of Enlightenment brought about a great breakthrough in architectural theory and criticism, when **Reason** started to be advocated as primary source and legitimacy for authority, making a principled departure from the Middle Ages' religious authority toward rational discourse and personal judgment .

Experimental philosophy was the foremost idea of this age. Newly established academies like L'Académie Française in Paris and the Royal Society of London played a significant role in spreading enlightenment ideas and the rise of both reasoning and academia brought about an essential change in western culture. A set of philosophical ideas and schools of thought such as **Empiricism**, **Rationalism**, **Romanticism** ...etc had consequently spread all over Europe. Structural Rationalism was the name given to Rationalism in architecture and was later better known as **Neoclassicism** .

The Industrial Revolution was a one of the pivoting points in human history and cultural. Architects with academic qualifications was the outcome of this era, as courses started to be instituted at the École Des Beaux-Arts in Paris in 1819 and later at the Architectural Association in London in 1847 .

One of the key ideas of this period was Gottfried Herder's **Nationalism**, which had contributed to an aesthetic turning away from the realities of Rationalism, and facilitated a trend towards Romanticism and later to **Romantic Nationalism**. The architectural movement most associated with these approaches was the **Revivalism**, especially Gothic Revival .

Hegelian **Idealism** was the philosophical origin of some other movements and artistic trends in visual arts, the most important of which were **Impressionism** and **Symbolism**. Viollet-le-Duc was the one who reduced the Hegelian notion of historical determination to a set of instrumental principles that could provide a model for architectural practice

The ever growing interest in **Marxism**, Communism, and **Socialism** among the intellectuals at the turn of the 19th century and the ever growing number of artists and architect embracing leftist views had resulted in some new architectural trends away from wealthy clients. These trends were introducing an architecture that was meant to address working class and develop economical architecture that copes with them. These movements included: **Arts and Crafts**, **Deutscher Werkbund**, **Art Nouveau** and the **Bauhaus**. The revolutionary impact of the latter continued well into the 1960s

From this, it is argued that the revolutionary development of the European architecture in this period was bounded to the development of philosophical schools. The fact that fields like philosophy and criticism barely have any weight in the architectural education in our Arab World is the main factor that hinders such development in our region.

The hypothesis of the research relied upon two folds. Firstly, is that architecture would always reflect special character or meaning if a good connection with philosophical and intellectual trends being engraved, with some courses in this regard being taught to architectural students. Secondly, the existence of this connection in the western world (and not only the technological development) was the main factor that helped forming the academia-architecture, which has its bases not only on subjective issues or aesthetic formation of geometrical shapes or materials, resulting in a revolutionary development that came to being in the shape of Modern Architecture .

A fundamental objective of this research is hence to give a proof of this philosophy/architecture relationship and highlight its role in the huge architectural transformation and development that took place in Europe during the period under study.
Reaching to this objective the following aims are to be targeted:

- Draw the bridges to relate the different Philosophical Schools of Thought with the simultaneous Architectural Movements, from the Age of Enlightenment until the Modern Ages .
- Call attention to the role of the pioneering architectural academies in Europe in initiating this connection and the role of critical thinking that emerged when architects opened their minds to the world of philosophical thought
- Trace the outcomes of this connection in Europe, to give an example to follow in our region. .

The methodological approach to this research will be both theoretical and applicable. By means of discussing the development of the different philosophical schools and relating them to different architectural movements and the architects who embraced these philosophical ideas and how these ideas influenced their works. It will be proven that almost each architectural movement and each development in architectural thinking had been a result of some philosophical development. The unbroken relationship of the simultaneous development of both disciplines is to be illustrated .

Organized in 4 chapters, the paper reaches the conclusion that meaningful architecture cannot be achieved without some support from a philosophical school(s) that is directly related to its community.

1- Background:

Architecture had been always a multi-disciplinary field. Already in the 1st century Vitruvius' described it as, " *a science, arising out of many other sciences, and adorned with much and varied learning: by the help of which a judgment is formed of those works which are the result of other arts*" [1]. He adds that an architect should be well versed in fields such as music, astronomy, etc. Philosophy is a particular favourite; in fact one frequently refers to the philosophy of the architect when talking about '*approach'*. Rationalism, empiricism, structuralism, and phenomenology are some directions that had their roots in philosophy.

A new chapter in architectural theory began with the rise of the Renaissance. The reading of philosophies that were not based in Christian theology led to the development of **Humanism** through which it was clear that while God had established and maintained order in the Universe, it was the role of Man to establish and maintain order in Society.

Through Humanism, civic pride and civic order were seen as the marks of civilization. This led to building great civil structures such as the charitable Hospital of the Innocents, and the Laurentian Library [2].

With consolidation of knowledge in scientific fields introduced by the Enlightenment, and the rise of new materials and technology introduced by Industrialization, architects began to lose interest in technical aspects in favour of aesthetics. There was the rise of the "architect" who concentrated predominantly on visual qualities. Yet, the idea of a professional architect with formal training and academic qualifications is a product of the 19th century, when architectural courses were instituted for the first time at the Ecole Des Beaux-Arts in Paris in 1819 and later at the Architectural Association in London in 1847.

Developing academic qualification started to result in new trends of architectural theory that differentiate between a building and "a piece of architecture", which was not only about aesthetics and experience, but even more about philosophical and intellectual basis.

2- The Age of Enlightenment

Age of Enlightenment is a term that is used to describe a time in western philosophy and cultural life in the 18th century, in which reason was advocated as primary source and legitimacy for authority. It had made a principled departure from the Middle Ages, marked by religious authority and censorship of ideas, toward an era of rational discourse and personal judgment, republicanism, liberalism, scientific method, and even modernity that most of the 19th and 20th century-movements trace their intellectual heritage back to the Enlightenment [3].

Experimental philosophy, found by Robert Boyle, was the foremost of these ideas. It based knowledge on experimentation, which had to be witnessed to provide proper empirical legitimacy [4]. Newly established academies like L'Académie Française in Paris and the Royal Society of London played a significant role in spreading enlightenment ideas and were ideal locations for fairly public demonstrations of experimentation with reliable witnesses [5].

The rise of both reasoning and academia brought about as essential change in western culture. A set of philosophical ideas and schools of thought such as **Empiricism**, **Rationalism**, **Romanticism** ...etc had consequently came into vague and spread all over the Western World.

2-1 Empiricism:

It is a theory of knowledge, which asserts that knowledge arises from experience. "*Empirical*" in science and statistics may be synonymous with "*Experimental*" in philosophy and

humanities. In this sense, an empirical result is an experimental observation [6]. Empiricism emphasizes the role of experience and evidence, especially sensory perception (either through the five external senses or through inner sensations as pain and pleasure), in the formation of ideas. It hence claims that knowledge is essentially based on or derived from experience [7].

Empiricism, despite mostly seen as not having immediate influence on the architectural development of its time, was the route of another school of thought that played a great role in this regard which is **Rationalism** [8]. Yet, it could be said that it had in a way influenced architectural thinking of a later time; modern architecture -for example- is commonly seen as 'empirical' trend.

2-2 Rationalism:

It is a school of thought that takes on various philosophical positions that rely on the function of reason when searching for truth. Concepts of rationalism can be traced back to Plato, who believed that reason was one of the three faculties of the soul: mind and reason *Logos*, emotions *Thymus* and desire *Eros* [9].

It was associated with the introduction of mathematical methods into philosophy, as in Descartes, Leibniz, and Spinoza. In more technical terms it is a method or a theory in which the criterion of the truth is not sensory but intellectual and deductive.

In Architecture: the architectural treatises of the Enlightenment opposed the Baroque beauty of illusionism with the classic beauty of truth and reason.

Structural Rationalism was the name that was given to Rationalism in architecture and was later better known as **Neoclassicism**. The architectural notions of the time gravitated more and more to the belief that reason and natural forms are tied closely together, and that the rationality of science should serve as the basis where structural members should be placed. Towards the end of the 18th century, Jean-Nicolas-Louis Durand, a teacher at the influential École Polytechnique in Paris at the time, argued that architecture in its entirety was based in science.

After 1800 the interest in revival of Greek forms intensified and the stream of buildings based either wholly or in part on Greek models continued well into the 19th century. The first fully neoclassical building was Lord Burlington's Assembly Rooms at York in 1731 (fig 1) [10].

Fig1: Grand Assembly Room at York by Richard Boyle (Lord Burlington), 1731 [11]

Neo-classical Architecture was meant as a return to the perceived purity of the arts of Rome and Greece. It is therefore sometimes called also Greek revival or Greco-Roman revival style. In view of that, the Madeleine of Paris was a copy of the still-standing Maison Carrée, and the Brandenburg Gate in Berlin was modelled after the monumental *Propylaea* in Athens (Fig 2).

Fig 2a: The Propylaea in Athens

Fig 2b: Brandenburg Gate by Carl Gotthard von Langhans, 1791 [12]

** At the other side of the world, looking at the architecture in Egypt at this time, it is easy to realize that the main source of inspiration at this era was the Islamic culture. Religious notions and traditions were the main feature that guided both the form and the program. However, still can be said that religion - being also a source for intellect- insured a cultural background that gave character and unity to the Egyptian architecture at this time.

3- Industrial Revolution and Industrialization:

The onset of the Industrial Revolution in the late 18th and early 19th centuries marked a major turning point in human society and cultural conditions, marking the transition of manual-labour-based economy towards machine-based manufacturing.

One of the key ideas of this period was the assertion of Gottfried von Herder's **Nationalism** in the late 1770s, which became a central theme of Romantic art and political philosophy. Focusing on national languages, folklore, local customs and traditions, it marked the first half of the 19th century in Europe by a number of wars and revolutions, which contributed to another turning away from the realities of political and social fragmentation, and facilitated a trend towards **Romanticism.**

In Architecture: industrial revolution had major influence on the development of architecture both in practical and theoretical fields. A new method of producing glass, known as the cylinder process, was developed, allowing for creating glass-sheets or larger panes of glass without interruption and changing the way structures could be built and how they looked.
The Iron Bridge across the River Severn in England was erected in 1781 as the first arch bridge in the world to be made out of cast iron and in 1851 the Great Exhibition of London was held in the Crystal Palace in Hyde Park, which was a splendid cast-iron and glass structure and a supreme example of the use of glass- sheets in a new and innovative way [13].

3-1 Romanticism

It is a complex artistic, literary, and intellectual movement that originated in the second half of the 18th century in Western Europe, and gained strength during the Industrial Revolution. It was a reaction against both aristocratic social and political norms of the Age of Enlightenment and the scientific rationalization of nature.

The movement is rooted in both German **Pietism**, which prized intuition and emotion over Enlightenment rationalism, and Fritz Graebner's **Historicisms**, which tried to resurrect old styles with the new style [14].

Romanticism reached beyond the rational and classicist ideal models to elevate elements of art perceived to be authentically medieval. It also attempted to embrace exotic, unfamiliar and distant modes, harnessing the power of the imagination to envision and to escape [15].

In Architecture: As a result of the developed academic qualification, variable trends and movements started to take place. Ancient Classical Architecture ceased to be regarded as

criterion of excellence throughout the Western World and another approach sought beauty in all styles without holding rigidly to a single paradigm or certain era. This was called ***Eclecticism***, a term derived from the Greek *eklektikos*: meaning choosing the best [16].

The architectural movement most commonly associated with Romanticism is the **Revivalism**, specially Gothic Revival or Neo-Gothic. It lingered on late in the 19th century and survived even into the 20th. Conservatism and local building practices had conditioned the use of Gothic as the style for churches and collegiate buildings. In its earliest phase, therefore, Gothic Revival was not easily distinguished from original Gothic.

The second half of the 19th century saw the active and highly productive period of the Gothic Revival. By then, the mere imitation of Gothic forms and details was its least important aspect; architects were intend on creating original works of architecture based on principles underlying Gothic architecture and deeply infused with its spirit.

However, the movement had two great achievements; the first was to depart from rigid, codified and restrictive Classical or Neoclassical style, and the second was to provide structural elements as and where they were needed. The later emergence of **Functionalism** and **Structuralism** as ideals in the modern architectural movement is hence considered as legacy of the Gothic Revival.

As a result of growing **Nationalism** of this period, Germans, French and English all claimed the original Gothic architecture of the 12th century as originating in their country. The English boldly coined the term "Early English" for Gothic. Charles Barry in collaboration with Augustus Pugin put a design for the palace of the British Parliament of Westminster to make it one of the most remarkable examples of this movement [17], while in his 1832 edition of Notre Dame de Paris Victor Hugo refers to Gothic as France's national heritage. In Germany with the completion of Cologne Cathedral in the 1880s, which was at the time the world's tallest building, the cathedral was seen as the height of Gothic architecture [18].

3-2- Idealism

It was a philosophical movement in Germany in the late 18th and early 19th century, developing out of the work of Immanuel Kant in the 1780s - 90s and closely linked both with revolutionary politics of the Enlightenment and artistic and philosophical ideas of Romanticism [19].

The philosophical meaning of idealism is that the properties we discover in objects depend on the way that those objects appear to us as perceiving subjects apart from our experience of them, such that we consider something that appears without respect to the specific manner in which it appears [20].

In architecture: For Hegel, art and architecture could fulfil their historical destinies only by turning their backs on tradition. In architecture this meant the continual creation of new forms under the impulse of social and technological development, and the symbolic representation of society through these forms.

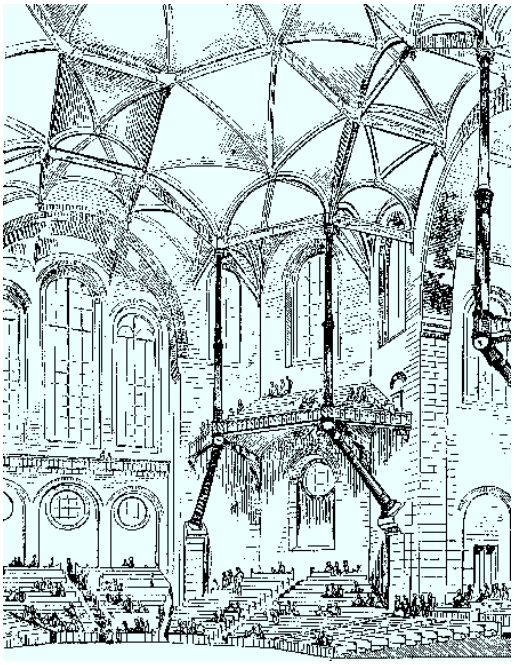

Fig 3: A sketch of a concert hall of brick and cast iron by Viollet-le-Duc [22]

Viollet-le-Duc was the one who reduced the

Hegelian notion of historical determination to a set of instrumental principles that could provide a dynamic model for architectural practice [21]. He was one of the most powerful theorist and leading architect of this period and the Gothic Revival movement. Throughout his career, he was in a quandary as to whether iron and masonry should be combined in a building. The flexibility and strength of cast iron freed neo-Gothic designers to create new structural gothic forms impossible in stone.

Between 1863 and 1872 Viollet-le-Duc put a set of daring designs for buildings that combined iron and masonry (Fig 3). Though these projects were never realized, they are considered by some theorists to be a prelude to the structural honesty demanded by Modernism. These projects inspired several generations of designers and architects, notably Antoni Gaudi and Benjamin Bucknall [23].

Idealism was the philosophical origin of some other movements and artistic trends in visual arts, the most important of which were **Impressionism** and **Symbolism**. The ascendancy of these movements in visual art at the beginning of the 20th century foretold the imminent rise of the Modernist school of architecture.

For Hegel "symbolic architecture comes before any posited separation of function and means [24]. **Symbolism** in architecture was later to associate with Art Nouveau and the expressionist architecture of Rudolf Steiner and Henry van de Velde. It had actually never been out of use; in his Notre Dame Du Haut in Ronchamps, Le Corbusier presents one of the most enduring examples of symbolic architecture in a roof that resembles hands in prayer. The never-ending helix of art in Frank Lloyd Wright's Guggenheim Museum, the diamond shaped Thorncrown of Fay Jones and the bird-like TWA Terminal Building of Eero Saarinen are all examples of this trend.

Impressionism was known for its simplicity and its celebration of natural phenomena like light and wind. Its tendency towards greater abstraction in later times led to nature being depicted as an abstract composition of form and abstraction became a fundamental part of a new strategy towards creating a new trend of art, emphasizing surface, materiality, and volumes and the interplay of planes and solids. The earliest Modernists, such as Le Corbusier, dabbled in painting and were deeply engaged in the avant-garde art world. In his famous paper Les 5 points d'une architecture nouvelle (The 5 Points of New Architecture') in 1926 Le Corbusier says: "Architecture is the masterly, correct and magnificent play of masses brought together in light; …" which is just as true about Impressionist art [25].

3-3- Marxism (Communism vs. Socialism)

It is the political philosophy and practice derived from the works of Karl Marx and Friedrich Engels, though the name 'Marxism' has been used by many with political perspectives those men would likely reject. Marxism appeared as a result of industrialization as to oppose materialism and endorse labours and working classes. The powerful and innovative analytical methods Marx introduced have influenced a broad range of disciplines and movements, the most remarkable of which are **Communism** and **Socialism**.

Socialism is most commonly attributed to Pierre Leroux in 1834, or sometimes to Marie Roch Louis Reybaud in France, or else in England to Robert Owen. It is however said to have mixed the political ideas of **Marx** with the utopian ideas of **Romanticism** [26]. The use of the words "socialism" or "communism" was related to the perceived attitude toward religion in a given culture. In Europe, communism was considered to be the more *atheistic*, while Socialism more *ethical*. Actually, it could be said that Marxism and Communism were somehow opposing to Socialism and Marx himself described socialists as "**utopian"**.

In Architecture: the ever growing interest in these views and the ever growing number of artists and architect embracing ***leftist views*** had resulted in some new architectural trends away from wealthy clients and luxury architecture. These trends introduced innovative architectural

approaches that were addressing working class and meant to introduce economical architecture that copes with them, taking advantages of the new technologies and materials.

Most remarkable among these approaches were:

I) Arts and Crafts:

Is an aesthetic movement that occurred in the last years of the 19th century and was inspired by the **socialist** writings of John Ruskin (who thought that a healthy society depended on skilled and creative workers) and the **romantic** idealization of the craftsman taking pride in his personal handiwork and influenced architecture, decorative arts and furniture making. Its best-known practitioners were William Morris, Charles Robert Ashbee, Christopher Dresser, and Frank Lloyd Wright.

The Arts and Crafts Movement began primarily as a search for authentic and meaningful styles for the 19th century and as a reaction both to the eclectic revival of historic styles and to machine-made production aided by the Industrial Revolution. Yet, it was neither anti-industrial nor anti-modern. Some of the most famous advocates of the movement, such as William Morris, were more than willing to design products for machine production, when this did not involve a loss of traditional skills and creativity [27].

II) Art Nouveau

Is a movement that appeared in the 1890s; developing from the revolutionary ideas of William Morris, the devoted socialist and founder of Socialist League, whose theoretical approaches (initiate also the above mentioned Arts and crafts movement) refused the cluttered compositions and the revival tendencies [28].

The common name of the movement (French of New Art) was first used in 1895 by the German art dealer Siegfried Bing for his art gallery in Paris to mark his exclusive focus on modern art. But similar tendencies were called Jugendstil (youth style) in Germany, and Sezessionstil (secession style) in Austria [29]. Being a reaction to the academic art of the 19th century, it was characterized by *organic*, especially floral and other plant-inspired motifs, as well as highly-stylized, flowing curvilinear forms. It is characterized by openness to the use of all materials and by the uninhibited reduction of everything to free form independent of the dictates of function.

III) Deutscher Werkbund:

A key organization that spans the ideals of the Arts and Crafts and Modernism as it developed in the 1920s was the Deutscher Werkbund (German Work Federation) -- a German association of architects, designers and industrialists that was founded in 1907 in Munich at the instigation of Hermann Muthesius with the purpose of sponsoring the attempt to integrate traditional crafts with the techniques of industrial mass production [30].

At this period, an alternate architectural approach has been developed by a group of German scholars who established an interpretation of architecture as an expression of the Zeitgeist (Spirit of the Age)[31].

Peter Behrens' pioneering industrial design work successfully integrated art and mass production on a large scale. He designed standardized parts, created clean-lined designs, built the modernist landmark AEG Turbine Factory, and made full use of newly developed materials such as poured concrete and exposed steel. Behrens was a founding member of the Deutscher Werkbund, and Walter Gropius the chef theorist and founder of the forthcoming **Bauhaus**, worked for him in this period.

The Werkbund was less an artistic movement than a state-sponsored effort to integrate traditional crafts and industrial mass-production techniques. Its motto *Vom Sofakissen zum Städtebau* (from sofa cushions to city-building) indicates its range of interest [32].

IV) Bauhaus:

The Bauhaus was the most apparent example of

an academy in which technical, aesthetic, philosophical, artistic, political and even socio-economic subjects had been taught for architectural student. This combination of knowledge -despite was a misfortune for the school itself -produced students who changed the face of architecture all over the world.

The school was founded in Weimar in 1919 by Walter Gropius, who was also the chief theorist of the school. The design innovations commonly associated with Gropius and the Bauhaus were partly developed in Germany before the Bauhaus by the **Deutscher Werkbund.** The school was highly influenced by philosophical and artistic movement of its time, being founded at a time when the German movement of **Zeitgeist** had turned from **Expressionism** to the **New Objectivity** under the influence of De Stijl founded in 1917, and **Constructivism**, founded at 1918 [33].

In the pamphlet for an April 1919 exhibition entitled "Exhibition of Unknown Architects", Gropius proclaimed his goal as being "to create a new guild of craftsmen, without the class distinctions which raise an arrogant barrier between craftsman and artist." The early intention was for the Bauhaus to be a combined architecture school, crafts school, and academy of the arts [34].

From 1919 to 1922 the students of the school studied a *Vorkurs* or 'preliminary course' to introduce them to the ideas of the Bauhaus. This course contained ideas about philosophical, artistic, political and even socio-economic movements like German Expressionism, New Objectivity, Functionalism, Marxism ….etc. It was actually the fact that the school was characterized as advocate for communists that led the school to be pressured to close in 1933.

Gropius argued that a new period of history had begun with the end of the WWI. He wanted to create a new architectural style to reflect this new era. His style in architecture and consumer goods was to be functional, cheap and consistent with mass production [35].

** Taking about the architecture in Egypt at this time, we find that it witnessed a huge transition, departing from the local styles and - for the first time- being opened to European styles. Small steps in this regard were already taken during the region of Mohamed Ali, but it was the region of Khedive Ishmael that witnessed remarkable steps. The most important example of this transition was the development of Cairo downtown. Khedive Ishmael was a big fan of the work of Georges-Eugène Haussmann in Paris and he wanted to modernise his country at the same style, so that he commissioned the French architect Marcel Dourgnon for this job.

French and Italian architects were commissioned for many other jobs and they transported all the notions of neoclassical architecture to Egypt, but the architectural education that they insured was based mainly on ‘copying’ rather than ‘creating’. It was this sort of ‘copied’ architecture that lasted in the Egyptian elite architecture up to the 1950s

4- Conclusion:

Architecture is certainly the most noticeable art form, and the primary medium, where ideas could be incorporated into material. So, it is, no doubt, the most immanent way that reflects the culture and the character of any society.

It is not hard to realize that the architecture in Egypt, and in Arab World in general, since a very long time ago, had almost ceased to reflect any kind of culture, character, or meaning. The research hence, shed some lights to the roots of this ‘copying’ architecture that dominated the Egyptian architecture for a very long time.

It is also undeniable that fields like philosophy and criticism barely have any weight in the architectural education in our region. The contribution of Egyptian/Arab architects/theorists in these fields is almost inexistent.

This research -through highlighting the most basic steps of architectural development from the decorative traditional architecture to the modern architecture which bears the attribute of 'meaning'- gives an example from western cultures to follow in our region of how the

intensive connection, which European architects kept between themselves and all philosophical and intellectual trends of the time as important source of inspiration, resulted in this revolutionary development that came in the form of the Modern Architecture.

In tracing the development of the Modern architecture and its International Style in their later phases, it also becomes obvious that at certain point when the ideas of the originators started to be adopted by lesser talents and profit-minded builders, who lacked the "meaning" and the "philosophy of the style", it turned to be synonym for vulgar.

In trial to introduce a proof of this philosophy/architecture relationship and highlight its role in the huge architectural transformation and development in the era of the study, **diagram A** is made to illustrate the subsequent interpenetration between architectural movements and philosophical schools of though in the period under study. It draws the bridges to relate the different Philosophical Schools with the simultaneous Architectural Movements and proves that any step in this development was supported by such bridges built by well informed architects who embraced these ideas and used their creativity to interpret it into styles and forms.

Of course there are some Arab architects, such as Hasan Fathy, who might have tried to constitute a school of thought in architecture, and some educators, who may have contributed to architectural criticism. But those were very few and their contribution did not stand the test of time and the 'market' to form a ‘movement’ and were hence soon ignored even by their immediate students. Even the courses of architectural theories do not usually allow the students/architects -or even guide them- to learn about the philosophical background of these theories.

The research also highlights the role of some pioneering academic institutions like the École Des Beaux-Arts, L’Académie Française, the Royal Society of London, the École Polytechnique, and above all the Bauhaus school, in which students were able to build a connection with philosophical knowledge, in this development. It shows how this connection formed the threshold between the guild-architecture of the Middle-ages and academia-architecture of the Enlightenment and later to Modernism.

These instituted introduced an architectural learning that has its bases not only on subjective issues or aesthetic formation of geometrical shapes and materials, but rather on impatient studies of different trends and thoughts that leads the architect to a sober embracement of a certain inspiration. And this is the way by which could those pioneering architect, starting from Walter Gropius up to Frank O'Gehry change the face of the world.

From here the paper concludes that concentrating only on practical subjects; where the student in architectural education acquires only technical skills, do not allow him to form an opinion or produce an architecture that reflects some values. Architectural students should be provided with -at least the choice- to study a course in philosophical schools and schools of criticism to provide them with the necessary background to start their own research in this field. The need here is to give special interest for inspiring students to think 'critically', not just to be different in the name of creativity.

An equivalent attention should be given by the Media for these subjects because what is true for architecture is true for all other visual and performing arts. Arts and culture are never to be separated and an art that does not have cultural basis would never be enlightening or inspiring.
Finally, the architect (and essentially the architectural student) should be able to discuss, analyze, convince and be convinced with different ideas and approaches. Learning how to criticize and how to debate -on concrete basis of knowledge- is very important for architect.

Yet, learning from distant cultures and from other disciplines should be seen as integral part

of developing critical thinking. Students should be taught (and architects should acquire for themselves) to be open to learn from colleagues, friends and even students, as well as from critics and opponents as a necessity to acquire an ever developing thinking.

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ملخص البحث

ما بين مدرسة البوزار و الباوهاوس: العمارة الحديثة كنتاج لفلسفة عصر التنوير

عصر التنوير هو اسم يطلق على فترة تاريخية فى أوروبا ما بين القرنين الثامن عشر و العشرين سادت فيها فكرة المنطق و اتجه الفكر بعيدا عن سيطرة الدين نحو اتجاهات أخرى اهمها مدارس الفلسفة الانسانية.

بدأت هذه المدارس بالمدرسة التجريبية و تلتها بعد ذلك العديد من المدارس منها الانطباعية و العقلانية و الرومانتيكية و تلاحظ أن لكل من هذه المدارس حركة معمارية مناظرة ترتكز فى أساسها على ترجمة أفكار المدرسة الفلسفية إلى أشكال معمارية، فطراز النيوكلاسيك ارتبط بالمدرسة العقلانية و عمارة الإحياء (خاصة إحياء الطراز القوطى) ارتبط بالمدرستين الرومانتيكية و القومية و استمر هذا النسق أيضا فيما بعد الثورة الصناعية و حتى عصر الحداثة. فنجد أن العمارة الحديثة –بما قدمته من طرز مثلت انقلابا فى شكل العمارة– ترتبط ارتباطا وثيقا بأفكار المدارس الفلسفية الاشتراكية و الوظيفية.

وبالنظر إلى خلفية هذا التقدم نجد أنه كان ثمرة الدراسة الأكاديمية المعمارية التى ظهرت لأول مرة خلال هذه الفترة فكان أن ابتعد المعماريون عن الجوانب التقنية للتنفيذ وانصب اهتمامهم على الفكر المعمارى، وأسهمت بعض المدارس المعمارية الرائدة بتعريف الطلاب بهذه الحركات الفلسفية بدءأ من مدرسة البوزار الى مدرسة الباوهاوس التى كانت تفرض سنة كاملة يدرس فيها الطالب مثل هذه العلوم الإنسانية و الافكار الفلسفية.

على هذا فإن البحث من خلال تتبعه لخطوات بناء هذه العلاقة ما بين الحركات المعمارية و المدارس الفلسفية فى أوروبا خلال هذه الفترة و تحليل و تتبع نتائج هذه العلاقة يقدم نموذجا ليحتذى به فى منطقتنا العربية فى أهمية ان يهتم المعماريون بمثل هذه الدراسات الإنسانية لتكون مصدرا يستلهم منه المعمارى أفكارا تربطه بالعصر و بالمجتمع، وكذلك أهمية إتاحة الفرصة فى مرحلة التعليم المعمارى للطلاب فى أن يتفهموا مثل هذه الاتجاهات و يفكروا بعقلية نقدية لها اساس من الفكر.

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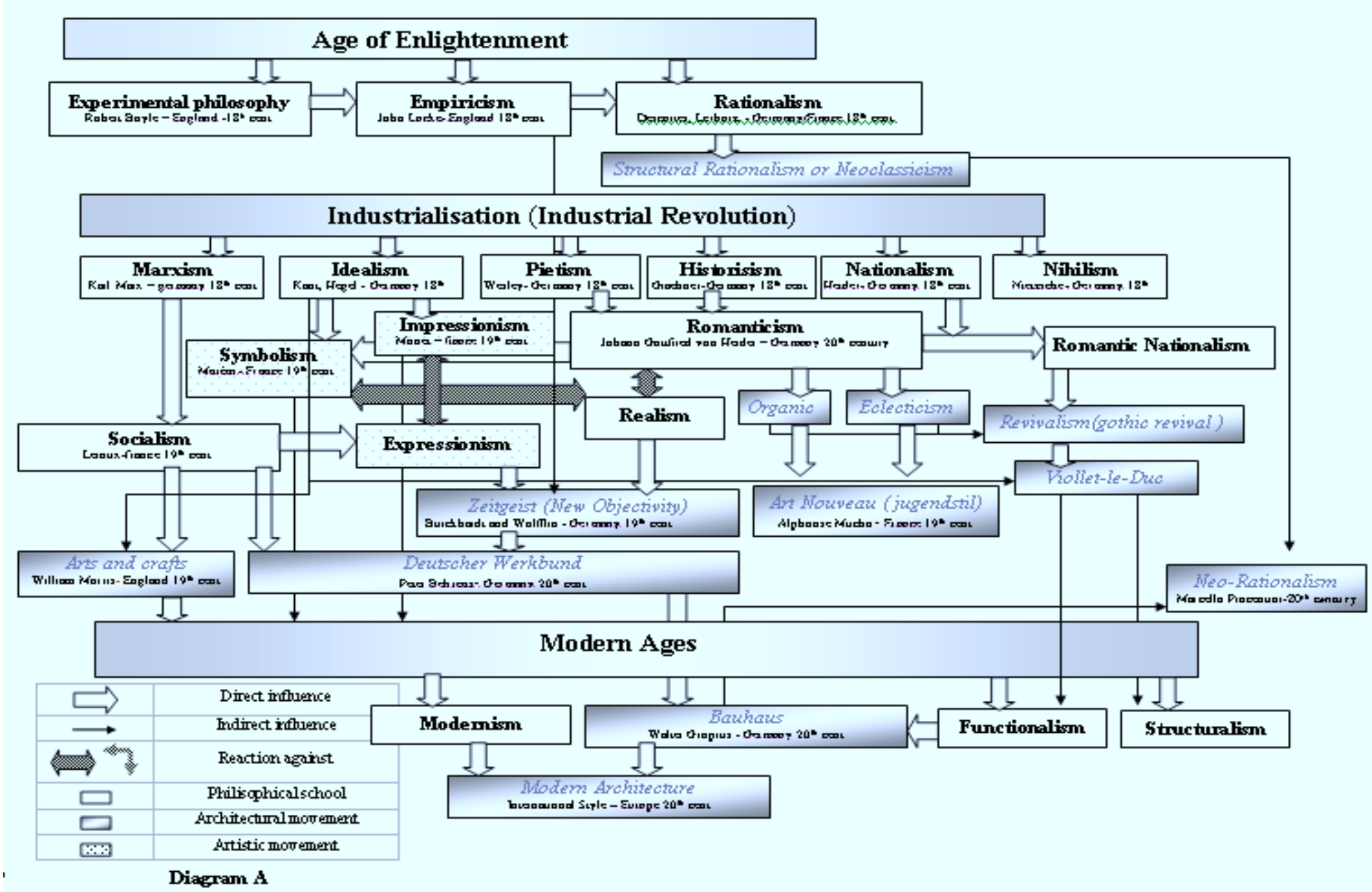
Age of Enlightenment
Experimental philosophy
Empiricism
Rationalism
Structural Rationalism or Neoclassicism
Industrialisation (Industrial Revolution)
Marxism
Idealism
Pietism
Historisism
Nationalism
Nihilism
Impressionism
Romanticism
Romantic Nationalism
Symbolism
Realism
Organic
Eclecticism
Revivalism (gothic revival)
Socialism
Expressionism
Viollet-le-Duc
Zeitgeist (New Objectivity)
Art Nouveau (jugendstil)
Arts and crafts
Deutscher Werkbund
Neo-Rationalism
Modern Ages
Direct influence
Indirect influence
Reaction against
Philisophical school
Architectural movement
Artistic movement
Modernism
Bauhaus
Functionalism
Structuralism
Modern Architecture

Diagram A