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MONITOR THE NATURE OF THE ARCHITECTURAL ROLE IN GLOBALIZATION AND INFORMATION TECHNOLOGY

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ABSTRACT

All the evidence and variables around us confirm that humanity is moving into a new era completely different from the previous historical eras. What is important to us in this event is to follow up on these transformations and monitor all the variables that affect us negatively or positively in all fields. To study the impact of these changes on the role of architect in the domination and bias of the thinking of globalization. Several studies have dealt with globalization and information technology and their impact on form and function in architecture, but there is no study that dealt with their impact on the role of the architect theoretically and functionally, so the main research problem emerged in the presence of a lack of knowledge towards the impact of globalization and information technology on the role of the architect, and whether global changes affect our economic opportunities as architects and the quality of services we provide to society or not. Therefore, the research aims to explore the main factors that contribute to the formation and formulation of the role of the architect, and the fact of this role, whether it is fixed or variable, and what is the reality of the impact of globalization and information technology on the elements of architectural work, and to achieve the goal, the research resorted to the following procedures:- 1. Building a comprehensive theoretical framework for globalization, information technology and the role of the architect by studying some architectural literature that dealt with the subject. 2. Conducting an opinion poll on an appropriate sample of architects on the nature of the role of the architect, and extracting a model that illustrates the main axes in the formation of the role of the architect theoretically and functionally.

KEYWORDS: Globalization, Information Technology, Role, Architect.

رصد طبيعة دور المعماري في ظل العولمة وتكنولوجيا المعلومات

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الملخص

تؤكد جميع الشواهد والمتغيرات حولنا أن الانسانية تمضى إلى حقبة جديدة مختلفة تماما عما سبقها من احقاب تاريخية. وهى ليست - كما يؤكد المتخصصون - امتدادا للعصور السابقة سواء كانت اكتشافات صناعية أو مجرد استخدام جديد لتكنولوجيا المعلومات والاتصالات أو البرامج المتطورة ولكن الحقبة القادمة تحمل معها تغيرات اساسية فى اسلوب ونمط الحياة وكذلك شكل وتصور

الروابط الإجتماعية والقيم الانسانية. وما يهمنا فى هذا الحدث هو متابعة هذه التحولات ورصد كافة المتغيرات التى تؤثر علينا سلبا أو إيجابا فى كافة المجالات. ودراسة تأثير هذه التغيرات على دور المعماري في ظل هيمنة فكر العولمة والإنحياز له.
وقد تناولت دراسات عدة مواضيع العولمة وتكنولوجيا المعلومات وتأثيرهما على الشكل والوظيفة في العمارة ولكن لا توجد دراسة تناولت تأثيرهما على دور المعماري نظريا ووظيفيا؛ لذلك برزت مشكلة البحث الرئيسية في وجود النقص المعرفي تجاه تأثير العولمة وتكنولوجيا المعلومات على دور المعماري، وهل التغيرات العالمية تؤثر على فرصنا نحن المعماريين الإقتصادية وعلى نوعية الخدمات التي نقدمها للمجتمع أم لا. لذلك يهدف البحث في استكشاف العوامل الرئيسية التي تساهم في تشكل وصياغة دور المعماري، وحقيقة هذا الدور هل هو ثابت أم متغير، وما هي حقيقة تأثير العولمة وتكنولوجيا المعلومات على عناصر العمل المعماري، ولتحقيق الهدف لجأ البحث إلى الإجراءات التالية-:1. بناء إطار نظري شامل لكل من العولمة وتكنولوجيا المعلومات ودور المعماري من خلال دراسة بعض الأدبيات المعمارية التي تناولت الموضوع. 2. عمل استطلاع راي على عينة حول طبيعة دور المعماري، واستخلاص نموذج يوضح محاور رئيسية في تشكل دور المعماري نظريا ووظيفيا.

الكلمات المفتاحية : العولمة، تكنولوجيا المعلومات، دور، المعماري.

1. INTRODUCTION

The emergence of industry and the spread of capitalism in the late nineteenth century led to social, economic and political transformations in the structures of Western societies and reflected this on Third World societies and developing countries. By the end of the twentieth century, information technology and the restructuring of the world economy had combined led to social and cultural changes that had contributed to the definition of the information age. As architects and planners, we must take care to study the impact of these changes on the urban and architectural environment, because the forthcoming cultural composition and its vacuum needs, which are beginning to form, will affect our economic opportunities and how and what quality of services we will provide to society.

Therefore, studying the architectural role requires more comprehensive insights than simply monitoring developments or structural change at the level of architectural output. And architecture is a more broad and holistic field than simply studying it based on formal and historical entrances only or addressing it according to a consistent ideology such as social ideology, From an anthropological point of view, the architectural product is a cultural product subject to the totality of cultural and human phenomena. and, in its entirety, represents a reflection of social values and considers architecture to be all forms built and designed by these architectural or other names, This view also prioritizes the nature of objects and the surrounding public context more than authorship and how ordinary people deal with and understand architectural production and any cultural behaviour underpinned by the shape of the built environment [1].

The shift towards a knowledge society, information technology and the dramatic change the world has witnessed with the effects of globalization has brought about an intellectual transformation in various fields and, of course, an impact on architecture. and here an important question arises as to how intellectual transformations and their impact on the architectural role are studied and assessed. This question has led many theorists to adopt philosophical approaches through which to interpret and understand how changes in architectural thinking and production have, in turn, led to a change in the performance and role of the practising architect Architects and theorists used the field of philosophy to use its intellectual foundations and theoretical methods to try to approach and position the interpretation of architecture - as a societal phenomenon - through these intellectual orientations from the ideology based on the phenomenology school, structural and social thinking to the adoption of the anthropological curriculum [2].

The importance of addressing the role of architect according to the anthropological curriculum is, as he sees it, important. "Rapoport", where he asserts when studying architecture, found that the different configurations of buildings are such a complex phenomenon that it is difficult to clarify them through a unilateral orientation or through a factor that studies them on the one hand, although there are many attempts but they are all geared towards the physical environment despite the multiple social, cultural, ritualistic and economic factors. In his view, these factors vary from place to place and also vary in the same place over time [3].

It also emphasizes that "there is undoubtedly an influential relationship between human behaviour, cultural changes, the cultural nature of society and the structure of the building. On the one hand, to understand the structure, it is necessary to understand the behavioural patterns, including the desires, sensations and patterns of behaviour, because the architectural output constitutes the physical representation of all previous points. and, on the other hand, the building itself then affects behaviour and the way of life " and anthropology depends on the integrative method or view of totalitarian architecture [4].

Therefore, the adoption of the anthropological gateway to the study of architectural transformations, such as that caused by globalization and information technology, is the most holistic because of its reliance on the study of the group's governing concept and the norms and norms governing social, cultural and human relations. These factors affect architectural thinking and production and thus the transformation of the concept makes the architectural study more relevant to human behaviour, its conduct, its relationships, its desires and the common group's wishes In addition, the transformation is linked to the general community's influence on thought or vision and thus to the effects of such collective influence.

2. Research Hypothesis

There is evidence that the role of architects and their occupation has been influenced, and that this has generally been affected by changing times and the various ideas, attitudes and events that have affected life, society and architecture. This impact is reflected in the architectural product - the result and output of the architecture - or, in particular, in reaction to political, social, economic, cultural and technical changes, and the resulting phenomena such as globalization and the digital revolution.

3. Globalization as a historical and global phenomenon

Globalization is a historical phenomenon with deep roots, contrary to what seems to be and as interrelationships between nations and peoples have increased, the main ideas and elements of the idea of globalization have been found through increased trade in goods and services and the transfer of capital among States and others, These are all ideas that existed many centuries ago, especially since the end of the fifteenth century, which began to emerge with geographical discoveries. But there are new and important things on the globalization phenomenon that have grown and spread very dramatically in recent years the end of the twentieth century and the beginnings of the twenty-first century and some thinkers believe that the significant increase and diversity of goods and services exchanged and the high proportion of the population interacting with and affected by the outside world, as well as cultural and intellectual exchanges, information and the proliferation of multinational companies and their role in the transfer of capital, ideas and information [5]. The American writer Thomas Friedom also identified that "today's globalization

is just a new round after the first round, which began in the second half of the nineteenth century due to the dramatic expansion of cruises using steam energy and has led to the unprecedented expansion of international trade" [6]. In formulating a definition of globalization and the difficulty of finding an adequate and comprehensive definition of the limits and dimensions of the phenomenon, Mr. Yassin considers that "The elaboration of a precise definition seems to be a daunting issue, given the multiplicity of its definitions, which are mainly influenced by the ideological biases and trends of authors towards globalization as rejected or accepted as any historical literature, Another obstacle to a specific definition of globalization is the expansion of its field to include different aspects of life " [7]. The task of finding a specific formula describing all these activities seems to be a difficult process, even if this concept is developed, it is questionable to be widely accepted and used [8]. The idea of a specific interpretation of the phenomenon of globalization is therefore extremely difficult. and because they take multiple manifestations and manifestations according to the context in which they operate, Globalization in the economy means the universality of economic relations through the expansion of capital markets and in the area of politics and international relations means the intensification of relations between States and the growth of what might be called globalized politics, In sociology, emphasis is placed on the social changes brought about by globalization and the emergence of the so-called global community. in cultural studies there is an interest in the growth of information communication and its impact on culture and identity, It is considered that most of the interpretations given to globalization have focused on the world's becoming more homogeneous through technological, commercial and cultural waves coming from the West. globalization is simply a type of alienation ", and some consider that globalization is simply a type of alienation, There are explanations, however, that globalization is a hybrid process. global mix of values, lifestyles and practices, Globalization in the United States, which I see as the source of globalization. s title in English Globalization, This expression outlines a different concept from Universalism or Mondialisme and means everything that falls under the concept of the world as human space and conscience. and the thinker Elsayed Yassin considers in his writings on the essence of globalization ": - The spread of information so that it becomes common among people. - Doban's borders between States, which multiplies the notion of national or national sovereignty. - Increased rates of similarity between communities and societies, leading to the disintegration of nationalism and its inability to take control [9]. William Greeder emphasizes in his book One world Ready or Note: The Manic Logic of Global Capitalism said that there was a material revolution that freed up capital and brought the material ahead of thought and beyond policies, which resulted in the emergence of great transformations throughout the world that disrupted ambition and the desire to accumulate wealth, leaving instability and insecurity and, as far as modern technology was available, restored barbarism [10].

4. Different dimensions of globalization

There are many attempts and analyses that have tried to understand and study the phenomenon of globalization, and through analysis and study we have monitored five main dimensions of globalization[11]:

1. The political dimension, which is the question of the role of the State and the need or unnecessary existence of the State. This is what the writer describes as a state of tension arising from the American policy in particular, which through its external strategy will determine the roles of States in the world.

2. The economic dimension of consumer industrial control of Western goods, the continued control of multinational companies over the global economy, the weakening of domestic economic structures, especially developing countries, and the reliance on imports.

3. The social dimension, which is manifested through increasing consumerism in socio-economic mobility at the expense of social, cultural and heritage features that characterize societies with a cultural depth.

4. The cultural dimension is the unification of the world cultural pattern, the production of the local image and its replacement by a Western-American cultural thrust specifically and the weakness of the local cultural industry in front of the expatriate cultural product.

5. The technological dimension, which is inevitable and irreversible, is the development of means of communication and the information revolution and innovations related thereto.

5. Societies' attitude towards globalization

There is a major ideological as well as political, economic and cultural battle about globalization, and there are totally dismissive trends that stand against the course of history and will not be successful. There are trends that accept globalization without reservations as the language of the next era, trends that ignore the serious negatives of certain aspects of globalization.

There are critical trends trying to understand the laws governing globalization and recognizing in advance that globalization is a truly historic process, but not the meaning of that recognition of the imperative of the values underlying today, which in fact tend to reproduce the old dominance system and present it in a new form. These trends have emerged in Europe and in France in particular [12], and reactions to globalization can be identified as follows:

1. First direction: the principle of participation

It is undoubtedly one of the most important and logical ways of communicating with globalization, where States seek to accept and follow the principles of globalization and participate in leading its completion and treating it as an active element. The desire to be an actor is not enough to achieve this. Agenda for Action ", a process that needs to use the innovative activation package not only to align with the wave of globalization but also to move towards co-leading and guiding the wave in accordance with the benefits and interests of the target.

2. Second direction: adaptation and compatibility with the trend of globalization

With these developments now taking place in the world as a result of globalization, the importance of adapting and adapting to globalization is highlighted, especially as the adaptation process takes a reactive and responsive approach. Adjustment approaches are based on monitoring and controlling changes and emergencies at the global level, either from the forces of globalization or from the globalized forces responding to the pressure to globalize. They are therefore working to understand and assimilate what is happening, to know its content, to determine its nature, to communicate to its effects and thus to deal with it, but to preserve national interests.

3. Third direction: isolation from globalization

There are many countries that are trying to isolate themselves from the tide of globalization or imagine the possibility of doing so. s perception may destabilize governance systems and that for many States with dictatorial regimes globalization is a serious risk to the tools it carries that help disseminate information, Thus, the threat of globalization goes beyond placing them within the scope of holding them accountable and prosecuting for the crimes they have committed against peoples and their citizens' rights. The first task of these rulers is therefore to slow the trend of

globalization, to put obstacles before them, to isolate their country from the cycle of globalization and to create strong networks of corruption that prevent their interests from being globalized [13].

6. Contradictions of globalization and domestic issues

"The Trap of Globalization" is a book written by Hans Peter and Harold Schumann, in which they assert that the world is now undergoing a historic transformation in which there is no progress and prosperity and economic degradation, environmental destruction and cultural degradation prevail, in the light of what they called "Stereotyping civilization", which globalization seeks to impose [14]. The contradictions of globalization are meant by the interactions, forces and general attitudes that globalization generates against the media it claims.

1. Economic contradictions: From an economic perspective, the concept of globalization refers to the world's transformation into an increasingly complex system of interconnected economic relations to achieve the sovereignty of a single economic system in which the world exchanges reliance on each other for both raw materials, commodities, products, markets, capital, employment and experience, Where there is no value for capital without investments, and no value for goods without markets consumed [15]. Noted the value shifts in Egyptian society in general as one of the countries affected by globalization and the prevalence of manifestations based on deepening the culture of consumption and adopting the Western model in all living patterns.

2. Cultural contradictions: Globalization increases the seriousness of the developing world's vulnerability and decline under the stress of living, ignorance and disease, which contributed to its defeat to the civilized West This is what makes globalization more intrusive to cultural identity. Some States believe that redressing the cultural divide will be achieved by emulating the superior Western model. Strangely, that behaviour has been known to philosophers since the age, and Ibn Khaldoun sees that case and says, "The conqueror is overwhelmingly fond of his motto, costume and other conditions and returns" [16]. which we might call the dissolution of societal specificities.

3. Political and societal contradictions: Globalization's most obvious and influential contradictions with regard to the political and social level of developing countries, including Egypt, can be identified as follows [17]:

- The State's Decline
- Increasing the gap between the North and South
- Weak identity and national personality
- Diminishing national local culture and civilization
- Worsening level of unemployment

4. Environmental risks: There is no real threat to the entire world, as stressed "Jawad Ali", as a result of the accumulation of globalization in industry and increasing consumption, which is the inability of the Earth to absorb the vast amount of pollutants produced on its surface. It is known that environmental standards stipulate that adequate land must be available for food and energy production, road construction, housing security and industrial production within a system that preserves the sustainability of life. "Environmental footprint" [18]. which is the area of land required for the needs of a human being. This area includes the space needed to bury waste, Naturally, it revolves around the rate of 2.2 hectares per person, and now the world faces approaching the rate of 1.9 hectares per person, which is extremely dangerous about 10 thousand metres hectares and the effects of environmental globalization are summarized in the accumulation of pollutants, the depletion of resources, the expansion of desertification and the increasing

epidemics in industrialized and developing countries in particular. The industrial revolution, while important, can therefore be seen as one of the main causes of social and economic imbalances [19].

7. Positive effects of globalization

Many writers and thinkers who have studied and analysed globalization see globalization as the only opportunity for the peoples of the developing world to catch up with today's civilization. and that cultural specificities may lead to stagnation, stalemate and underdevelopment, Indeed, the technical progress of globalization in terms of quantity and quality cannot be overlooked, which has undoubtedly contributed to raising awareness and awareness.

1. Political opportunities: the information revolution and the development of communications technology and the media have contributed to increasing communication between civilized and developing peoples, meaning "The widespread spread of the values of freedom, democracy, equality of human beings, the exercise of human rights and the rights of national groups, first and foremost their right to self-determination, as fundamental values of a general and comprehensive international nature, and the growing relationship between globalization and democracy affirms Jalal Amin [20]," It then takes on the fact that globalization-controlled forces are forces that possess universal democratic liberalism. and seeks to disseminate the democratic liberal pattern in its various fields to the world, and therefore the countries of the South and the Arab homeland, most of which are dictatorships, will face demanding democratic reforms. s political debate and whether it was a revolutionary movement or a conspiracy, Irrespective of the forces in his favour, this thinking is accompanied by widespread international pressure on less transparent States in applying the values of justice, equality and equal rights of citizens, Globalization, thanks to its technological aspect, has contributed to the transition of democracy as a result of what has come to be known as infection or simulation. Through the advancement of the media, citizens have been able to compare their own States with others in terms of freedoms, democracies, corruption and transparency.

2. Economic Opportunities: Globalization's Economic Hub is undoubtedly the main and most effective tool for global multinational enterprises with global competitiveness and permeability that penetrate all barriers and borders and possess the advantages of superior competitive excellence. and, on the other hand, modern technology and technology have driven unprecedented dimensions of production, productivity, cost reduction and price reduction with appropriate profits. This is indeed translated by the factors of desire and natural orientation towards higher and better, Through extraordinarily large global economic institutions that oversee the economic aspect of globalization and pursue policies that promote and develop the world's wealth.

3. Opportunities at the social level: The presence and growth of civil society are mainly due in the Arab world and Egypt to the era of globalization [21]. because of the new communication techniques that have enabled individuals and associations to obtain a minimum of knowledge independence from authoritarian systems The information no longer reaches the people of the congregation, whose institutions have been transformed primarily into websites and become a real force in virtual space. In fact, there has been a kind of psychological convergence created by the revolution of communication and information between civilians and groups of opportunities for political and material support, communication and interaction from outside the borders of the nation, despite which [22]. and the OECD report indicates that these organizations provided assistance estimated at US $ 15 billion in international assistance by 2006m [23]. NGOs, for

example, can review Governments' environmental and development policies and drive them to change by proposing other policies in the field of equality between men and women, for example. They also strongly defend human and women's rights and urge States not to press them to respect their commitment to civil rights, protect minorities, defend healthy food and consumers and exert pressure on their representatives in Parliament through oral reports and interventions [24]. Here, we do not discuss the political aspect of the fact that these organizations are sometimes instrumental for some States to guide them according to personal whims and interests and on issues that do not prejudice the country's national interest and values.

4. Technological and cognitive opportunities: As discussed earlier, researchers consider globalization's most important advantage to be the Internet. And then it's no surprise that Harry Corini asserts that the sites of companies like Amazon and Yahoo are not just bookshops that export, sell and shop books. but it is a library located everywhere in the world at the same time and enables students in Taiwan to order the same books as students in Chicago [25]. Informatics and the Internet can be used to keep abreast of the events of scientific achievements and accelerate the process of scientific research based on the concept of immediate availability of information.

Globalization has renewed confidence in science and technology and confirmed that our time is the age of science and scientific revolutions, as there are inventions or discoveries every two minutes as well. and this has contributed to the development of the education and scientific research sector by providing various institutions, research centres and universities with the latest technologies in the field of ICT and facilitating communication between authors, both inside and outside and facilitating access to up-to-date research and studies in various fields, The knowledge economy [26], is one of the most recent and major trends in the economics of developed countries energy sources ", which are working hard to develop it, especially with fears of current energy sources running out of petroleum, gas and other natural resources that makes it necessary to find solutions and energy alternatives, which the specialists agree were mostly focused on knowledge. and also mention should be made of the abuse of that advantage by some in terms of infringing on intellectual property rights and perpetuating a culture of lack of scrutiny of information, It's not enough just because the information is on a site to give it credibility. and treating it as if it were an unquestionable Muslim.

The foregoing confirms with some certainty that globalization is a phase of modern human civilization that transcends States, nationalities and national cultures to resolve instead a single system. It is obvious that the more economically, cognitively and politically weak States are, the more subjected to the system of globalization and the loss of their cultural identity s identity and the destruction of its cultural personality for the benefit of a particular nation.

Thus, entering the globalized world is no longer an alternative option but a necessity imposed by reality with its underpinnings of scientific and technological development. and at the same time imposes the importance of improving education and opening up to future thinking and material and electronic means of knowledge, Who owns science and technology is entitled to survive in this world. From this point of view, globalization must be treated as an opportunity to move forward and consider the opportunities it endures positively, but through platforms and values that enable it to preserve what is good in our societies and culture, So globalization is a reality when it is understood as the inevitable convergence of human systems and experiences. s Development ", a convergence caused by the fall of barriers between States and the tremendous scientific progress in means and tools of communication and exchange of information, However,

this convergence is not capable of creating on its own a better human reality than before or itself enough to solve our societal problem, but ultimately depends on the valuable ways, means and tools of dealing with this new reality. This, of course, constitutes the environment that determines the shape and content of the architecture profession and whether we as architects are ready to deal with such issues.

8. Technology and information revolution (building materials and efficiency revolution)

Over the last two decades, major technological variables have emerged in the world, with advances in computer science and applications. This led to the pioneering of computer science digital technology in all areas of life to see the world since then and for the time being what has been termed the era of the digital revolution, Because of the community's attachment to and association with its various activities, contemporary architecture has been closely linked to the information revolution and architectural creativity has become linked to the complementarity between human creativity and artificial intelligence, which is tangible and intangible. as well as the realism and hypothetical, given the particular importance of the architectural design phase to architects, Being the direct product of the design's architectural intellectual orientation, representing the essence of the process of creativity and architectural creation, Modern architects continue to employ the latest technology available to serve architecture and its purposes. And so it was important to learn about the evolution of technology and the aspects of its influence on thought and architectural role [27].

9. Architectural thought from the industrial revolution to the advent of information technology

By the end of the nineteenth century, the industrial revolution had a clear impact on the areas of architecture and urban planning, and the industrial revolution had helped to increase energy and develop construction technology and materials [28].

The use of steel, iron and armed cement has helped to increase the pillar's axis and create multi-storey buildings.

In 1786, Pham Victor Lewis used wrought iron to cover the ceiling of the Paris Theatre, which allowed for a wide dialogue of unprecedented distances, the Golden Gate Bridge. Golden Gate Bridge, California, United States, 1933-1937 is one example of this. A distance between the main pillars has been achieved up to 1,280 longitudinal metres, owing to the significant development of structural systems due to the use of steel and iron. New industries and scientific innovations have benefited from construction on the one hand and mechanical on the other, as exemplified by elevator work such as the Otis mechanical elevator, which has helped to produce new types of buildings such as skyscrapers. Many new theories and ideas, such as the Open Projector, structural system and glass facades, have also emerged visibly in the works of architectural pioneers since the beginning of the twentieth century, including Louis Sullivan, 1856-1924, Licorbose, Miss van Drohe and Frank Lloyd Wright, have led to the evolution of the concept of cultural life in the twentieth century and the emergence of Vertical or Vertical City City.

The development of emerging communications and media technologies Nascent Communications and Media Technologies such as telegraph and aerial photography, television and

cinema, which reshaped man's sense of proximity to geographical distances and rounding distances by using cars, trains and aircraft, moving from one city to another and facilitated trade and the need to establish highways, The discovery of outer space, access to the Moon, satellite transmission and exploration of the Earth's geography, The high resolution spatial description via satellite, and the identification of coordinates of cities, streets and buildings, all helped to reframe the idea of the place, and it became possible to see any city or building from anywhere immediately with the help of digital means of communication and the Internet [29].

Accordingly, architects have realized how important it is to communicate with other sciences to achieve their goals, leading some to engage in research on manufacturing and materials and to study what digital technology and software software can make possible for architecture and architecture and how these technologies can be integrated into a single research entity.

From the above, it is clear to us that information technology has gone through different stages until it has demonstrated its impact on the architectural work system. These stages are as follows [30]:

1. Emergence and development phase:

- Technology has an important role to play in human development. This evolution takes place in the form of transformation ages or transformation waves. These transformations have been slow in hundreds of years and have accelerated with the industrial revolution in the mid-18th century.

- Then IT emerged in the mid-nineteenth century and was based on computers, telecommunications systems and automated movement, and it has gone through stages of continuous and accelerated development to the fastest, smallest and most beneficial.

2. The emergence of information technology in architecture:

- The computer went through six generations - the most important elements of information technology - and the beginning of the role of the computer for the architect and the extent to which it benefited from the possibilities of the third generation. The first and second generations were in the process of development and in a state of great slowness the architects could not benefit from it.

- With the advent of the third generation, computer-assisted drawing and design software emerged but was in the trial and test phase and has not yet risen to practical and professional practice.

- With the advent of the fourth generation, software applications have developed significantly in all engineering disciplines, and have begun to be widely used in scientific and professional practice along with traditional drawing and design tools.

- With the advent of the fifth generation, all images of professional scientific practice have been digitized at the level of design, production, manufacturing and implementation tools At the building level, experimental architects developed the user's relationship with the building by interacting with the building elements to meet its basic and recreational needs, Examples of this type of building include interactive virtual reality museum buildings that help provide information through visitors' interaction with architectural elements (walls, ceilings and floors) which have been combined with computer-related electronic elements in order to provide information through them.

With this generation, the architect's role has evolved into a software development phase and he has developed the building's performance through databases that are kept in controllers to be consulted.

- In light of the breakdown of the computer into three types which have been identified in both digital computing, analog computer and hybrid computer Digital computer has been used as a medium through which drawing and design is done, This is the form commonly used in architectural offices, and with the evolution of computer generations and the emergence of mobile computer, it has become common and easy to use in implementation sites, especially digital scans and coordinates, It has been linked to the main offices' organs through the information network, which has helped to save time and speed of decision-making.

- The analog computer was used architecturally in the form of devices for controlling the building's systems and operating environmental performance measurement and giving indicators of environmental changes surrounding and linking them to databases to regulate the performance of the building and through this type of development of smart building applications.

- The hybrid computer has been heavily used in security monitoring and monitoring and is also used in the follow-up of maintenance and performance of the technological equipment of the buildings.

By illustrating the role of information technology in many aspects of life, and integrating it into architectural work, architectural thinking has tended to seek employment for this technology. (Information technology) within the architectural work system, thus necessitating clarification of what architectural thought is, which has been found to be the engine of the architectural system by definition, which has shown that architectural thought is the thought based on the creation of an interactive balance between human beings (physical and moral) and the environment, both physical and moral, using appropriate construction methods and materials.

This underscores how important it is to learn about the nature and characteristics of the tools, methods, materials and structural methods used by architects in the age of information technology. and study the surrounding environment under the age of the information revolution, in order to recognize the role of architect in creating an interactive balance between man and his environment But before that, the existence of architecture in the midst of information technology generated some changes, the result of which was the emergence of new dimensions that affected architecture and urbanization.

10. Nature of architect's role in society

The views of architecture thinkers differ on the identification of architectural profiles and capabilities and the role it plays in the formulation of the architectural product of the society and the extent to which it affects the formulation of the ruling thought of this society at some point in its history and divergence and pluralism of views can be traced back to the multiplicity of intellectual orientations in the architectural arena as a logical reaction to the pluralism of general intellectual orientations, The twentieth century represents a period when all traditional ideology has changed, lost value and the world has moved towards new, multifaceted concepts (political, scientific, social...). This has affected the architectural role and its complexity towards multiple areas without a good understanding of the characteristics and requirements of this complexity. Abdulhalim Ibrahim as the hallmarks of this era [31]:

First, it is an age of spectacular scientific openness and progress in which man contacted material and cosmic knowledge that approaches the secret of matter and the laws of the universe in an unprecedented manner.

Second: It is a complex technical economic age in the sense that the scientific knowledge obtained does not stand at the threshold of theory but is applied through advanced techniques and produced and distributed through extremely complex and efficient productive and economic mechanisms.

Third: This is an age of cultural overlap on the world's [32] levels, in addition to the diversity of factors, whether political, economic, social or cultural... Influencing the formulation of features of the role of architect in society that differ in the strength and direction of their respective influence according to the society's ruling thinking in a period of time And by analysing architects' insights into the role of architect in society, there are those who see architect as a creative artist whose output converges into sculptural works expressing moments of creativity in his life, such as Philip Johnson, There are those who see the architect as the person who possesses the tools and skills necessary to express the individual's vision and desires and translate their needs into the product of a building This is in addition to many other insights that one Paul Oliver pointed out: "Most architects see themselves as the highest and greatest person who has the ability to be the highest as well with the ability to devise, accomplish, protect and realize his ideas. He always seeks to break all the constraints that restrict his thought and creative movement such as topography, the social and economic framework in which he works." [33].

Some architects consider that their role is to express the culture and general philosophy prevailing in their community through their architectural works and buildings [34], Although these visions are diverse, they bring together an architectural person of the nature and composition of his work who can influence and redefine society by formulating its physical and human content through its production of buildings that have a profound impact on this society.

10.1. The Enabler architect: This role has emerged for architects as a response to problems that have arisen in housing projects where architects are separated from users. in an attempt to allow the user to participate in the design and express his thoughts and wishes, Participation varies from architect to architect, there are users involved in the design, those involved in the implementation process and only those who lead the construction process. In this way, the architectural role has been reduced from controlling and controlling all stages of design and construction to helping the user at all stages of work. There are many architects who belong to this (enabled architectural) orientation. Chief among them is Egyptian architect Hassan Fathi. In the formulation of his projects, he turned to the natural environment and man and his dialogue in his wishes and studied his means. His role in his architectural and planning projects was one that could link his culture and science between local data and the actual needs of human comfort. In his vision of housing the poor, he pointed out the need to let individuals adopt: "Let The People Build" [35], reformulates the relationship between the trio (architectural, owner, craftsman). His project is an application of the concept of architecture as a possible village of Qurnah in Egypt. He has given the user the opportunity to participate in the design, supervision and construction of his house himself, making the user contacts all architectural processes such as architects themselves. In some architects' view, the role of architect in society is somewhat exaggerated, and Bender points out that most construction processes do not require direct architectural services. A few models can be used to formulate premium buildings [36].

Friedrich Hundertwasser also points out in his book Manifesto for The Boycotting of Architecture.

Any human being has the right to build his or her own walls and to be responsible for them. In her paper entitled "Architectural Today and Tomorrow", the architect Bela Borvendeg emphasizes the enabling role of the architect, noting that the user has a creative mind, the architect must give him an opportunity to express his identity, and many architects support this vision, including Mario G.Salvadori, where he says: "Architecture for all people and the perfect architecture is every person," Fred Koetter & Colin RoWe adds to the foregoing requirement that all buildings must be professional practice is an attack on public vision... Architecture can be a social institution associated with the construction process [37].

10.2. Architect Leader of the Task Force: Many architects believe that the primary architectural role is to lead the working group that brings together all specialists and experts in different fields (economists / sociologists / politicians / experts in climate effects /...) Which serves the construction process at both the architectural and urban levels. The perceptions of the concept of the architectural leadership work vary:

A - There are those who believe that the architect is the leader of the team composed of planners, engineers, statisticians, sociologists and others which aims to develop environmental frameworks so that architectural and architectural products can be formulated that are compatible with the forces of nature (sun/wind/water/..) It reduces the energy consumed.

B - There are those who present the concept of architectural leadership work as coordinating and organizational for all stages of architectural and urban work from the stage of the formulation of the idea and the development of the programme through the design and post-implementation stages to the post-operational evaluation phase. The architect Lajos Jeney emphasizes this vision of the role of the architect divided according to successive and varied stages associated with the stages of architectural work.

The first phase is the formulation of the idea and the formation of a team of experts in the functions of the building to be built and representatives of the expected users of the building with a view to reaching an easy-to-implement programme that is adapted to available techniques and adapted to the architectural features of the place. This stage requires architects to familiarize themselves with the basic functions of future buildings as well as the essential functions of future users [38].

In the second phase: the design and construction phase, the architect cooperates with experts specializing in all fields related to the construction process to make appropriate design decisions according to the criteria and possibilities available and put forward by the working group.

In the third phase: the architect plays the role of a leader in post-employment evaluations as he can assess the humanitarian outcomes of various social programmes as well as lead a working group including the planner and the sociologist after the growing global interest in the behavioral and social aspects of users [39].

The architect/Jamal Bakri emphasized the concept of architecture as a leader setting out the conditions for successful leadership, noting that the word (Architectural) means Leader and Head of Labour is the organizer and maestro who leads the work, and must be able to lead the work successfully, and has identified these tools in three types: (technical, scientific and artistic tools) Because real architectural work must represent a state of balance between science and art, it carries cultural and aesthetic connotations and simultaneously expresses the age, civilization and progress The architect Kevin Roche supports this trend by indicating that the architect must be a good organizer and leader as well as a good politician, This is in addition to the need to be mindful of

sense, creative, and good at dealing with materials and vacuum. Georgi Stoilov also emphasized the concept of architecture as a leader and general coordinator, noting that the role of architect in society must be structured, programming and general coordinator working to raise public awareness and aspiration for a better life, as well as to define the requirements of the community's appropriate life environment in accordance with its customs and traditions.

10.3. Architect Professor and Technologist: The scientific and technological revolution affects all aspects of life very quickly They affect the architectural and urban output, the visions of architects and the tools at their disposal to express their intellectual orientation, As a result of this huge progress, the concept of the world's architecture and technology has emerged, with the proponents of this concept believing that architecture must be informed by scientific knowledge and technical means of implementation, It is an activity associated with scientific and technological development, and therefore it is necessary to pay attention to the scientific preparation of the architect and to link his training with the methodology and the engineering method, The owners of this trend also see architecture as a complex technical activity in which civilization reprofiles itself during construction and other products and that this rebuilding process is not inevitably a repetitive or cumulative process of previous cultural and urban stereotypes but a creative renewal process in which this civilization's capabilities and potential are emitted which means and among the architects who embrace this trend "William Porter" is a professor of architecture at the Massachusetts Institute of Technology [40].

10.4. Architect Artist and Poet: In the view of the owners of this trend, architecture is a comprehensive art of high universality derived from the understanding of taste and culture. And therefore the architect must be considered an artist and creative, and the evaluation of the architectural work must follow the approach of evaluating the artwork The architect here is an artist who relates to the movement of society and draws his vision and expresses this vision through his works and buildings, and many architects adopt this vision. "Ronata Hulud" is a professor of architectural and urban history at the University of Pennsylvania where she points out that the work of architecture that produced masterpieces of architecture throughout the ages as an artist necessitated him to learn about many rules and laws related to engineering, descent and experimentation, and also sees "Oleg Grabar" is a professor of architecture and Islamic art at Harvard University, who draws close to the artist's role in inspiring a vision and creative architectural work in a new formulation of the vacuum. There are many theorists and architects who support this concept of the role of architect in society. Frank Loyd Wright emphasizes this by stating that "the creative artist who is considered the qualified leader in any society, it is an interpreter of nature and a problem of invisible formation of any community system in which you seek to live". Sullivan supports this vision, saying "architectural must be a good poet and interpreter of the life that characterizes his time."

Le Corbusier supports this vision, emphasizing that architecture is the art of right play with light-drenched blocks architecture ", for him, it is an aesthetic and architectural emotional experience that formulates this experience and draws its features, He also indicates to the architects that they will create for themselves the true poetic vision expressed in their time and that he promises them the poetry of the modern architecture This vision is reflected in the design of the Ronchamp Church in Paris, 1955, where he adopted the direction of sculptural architecture and expressed his creative abilities in formulating a block of structural dimensions, and from his point of view the poetry of modern architecture. Many architects disagree on this vision of architecture

and architecture. Charles Correa refers to the differences between architecture and art and how architecture is born of the lasting change imposed by social change. and art is the product of a mythical ideal space that relates to the deep depths of peoples' existence, This space is a constant residential space, as opposed to architecture, because architecture is able to infuse the creativity of society and not just practice it as it happens in art. It is an iconic productive framework that enables peoples to relate socially rather than individually to their creative abilities and thus formulates a reality from which the artist and other members of society draw their visions and symbols and refer to the Temple of Luxor, the mosque and the Sultan Hassan School code ", but were not inspired by a symbol but created the symbol [41].

Dr. Abdelbaki Ibrahim supports Correa's comment and vision on the concept of architecture as art and architecture as an artist, pointing out that architecture is more the art of nautical creativity than the silent volumetric formation or flat art formation because architecture differs from visual art as the plastic artist enjoys absolute freedom and individuality in his creations with the style that caresses his sense or consciousness without regard to his own sense. in addition to the fact that the relationship of plastic art to society is limited by the place of display inside or outside and is limited by the place, Also, visual art is only optional and not necessarily beneficial in a few cases other than the architecture that imposes itself on the human being who lives and moves outside it. Architecture is the art, science and meeting together, and the difficult equation lies in how individual intellectual creativity is aligned with the various architectural trends and with the satisfaction of members of society with their different cultural and social levels.

10.5. Architectural as an expression of society: This concept emerged as a result of the growing global interest in social and human aspects of contemporary architectural and urban thought, and is based on the definition of architecture as a collective holistic work based on the understanding of society as an integrated dynamic entity in which social, political, environmental and technical forces interact. This trend is adopted by many architects, headed by Robert Stern, Spiro Kostof, Christopher Alexander and Hassan Fathi...

The architect Spiro Kostof considers that "architecture is a collective struggle to express its existence during construction. It is not a single model or memorial buildings but a constant movement of construction and reconstruction involving millions of people throughout the Earth to express their existence through construction." Christopher Alexander supports this vision: "It is impossible to produce good buildings based on the creativity of a few individuals. Good architectural and urban production can only come as a result of collective experience and creativity because there is a huge gap between the values of members of society and those of architecture." Robert Stern points out that architect is a person who must hold ideas and goals greater than just building and practising the profession. His architectural and urban output must reflect the place, culture, beliefs and dreams, not only the personal desires of the architect, and he must be familiar with what he sees and what he knows about what he is about, as he uses what he knows about the past to produce outstanding work. Robert supports his vision by illustrating the role that architecture and his architectural play played in shaping the identity of American society [42]. Architect Hassan Fathi also offers his vision of architecture as a tool of expression, noting that architecture expresses the human community as an authentic architecture and expresses an art that is not personal but collective and that is the product of faith, faith and a reflection of intellectual schools, Architecture is not the product of an individual's work but the result of the work of human societies and successive generations crystallized in their pursuit of values [43], and foundations

This proposal is supported by the assertion that the architect is responsible for devising appropriate solutions, specifying a set of steps that the architect must follow in order to achieve his goal:

First, to identify all that is consistent and fundamental and must be preserved from the heritage. Second: put aside all those elements that are lost and transformed. The Pakistani architect Gulzar Haider warns that the positive values of society must be distinguished from those of origin or ideological dimension. A society whose environment is based on indigenous cultural values is able to build from job space to beauty space.

Third: Analysis of elements of change using modern technical methods to develop elements of heritage.

Fourth: Innovate new solutions that meet contemporary and rooted needs in society's heritage warehouse.

The architecture thus bridged the gap between heritage and contemporary architecture and must be aware of the biosphere in which are designed to solve the problem [44]. Dr. Abdelhalim Ibrahim also points out that part of the architectural role within Egyptian society is to articulate and express users' needs and culture in the form of public and private spaces. and then adds another dimension of the architectural role in society associated with the direction and development of society because, in its view, architecture is not a neutral activity but an activity that can lead to the negative or positive development of society. Architecture has acquired this role because it is one of the few formulations that can express collective needs associated with how a particular society exercises its public life. This is in addition to trying to find common concepts of the connotations of building vocabulary between architecture and society And here he refers to one of his experiences in the Nile Hall where he reworked the precious entrance hall. (Old Arab Hall) By making the rib that leads to the main showroom fully transparent as well as the ceiling which enters the Nile Hall does not enter through a fixed, static or closed reference, But through a moving historical reference containing the development that makes the user interact with this product. This formulation also contains a communication dimension with members of society as reflectors. There is a language of communication between the architect and the community and its production is thus transformed into expressions of society's heritage and individuals. Dr. Mohammed Kamel, Professor of Architecture at the Faculty of Engineering, Ain Shams University, believes that the message of architecture and architecture lies in the service of society and the environment. Architecture lies in its value in the architectural and architectural elements that help it to accomplish its tasks in life with ease and ease and enjoy spending its time among its elements. and therefore the assessment of architectural work must be based on the efficiency of architectural spaces in providing the desired climates to man psychologically and functionally [45].

By analysing previous opinions, the owners of this trend see architecture as a social activity that interacts with society and engages all its members and architects as part of society that works to express it in all its features and coexists within it. He does not define but regulates and conforms. He is a person who has the ability to identify problems and find solutions and is familiar with everything he is about at all levels. Recognized by the past, its heritage, its knowledge of the present, its technology and its renewed visions, it also holds the capacity to advance society through its holistic vision of all aspects of life through its freedom space associated with its creativity; In order for architects to play this complex role, they must be reformulated at the scientific and professional level and their potential developed so that they can perform their role in a contemporary manner.

11. Applied aspect of study (Poll)

The applied side relied on an electronic test (survey - questionnaire) From architects (engineering offices, companies, engineering bodies, employers' insights, practising engineers, task force officials) As an attempt to monitor the reality and future of the architecture profession in Egypt, and to reach the form of contemporary architectural practice, the SPSS statistical analysis method was used, where the Krombach coefficient was used to measure internal consistency, to ascertain the quality of the data, and the Normal Distribution test was carried out, to verify the truthfulness of the study tool.

First: Identification and selection of sample questionnaire: Two models have been worked out:

1. The result of the questionnaire on practising architects:

A questionnaire was conducted to ascertain practitioners' views of the architectural profession in the labour market. The sample included a number of 50 government engineering bodies and the private sector.

2. The result of the employer's questionnaire:

A consultancy office holders' questionnaire was conducted and included a sample of 7 engineering office holders, marketing offices and contracting companies.

This sample is considered suitable for the questionnaire's objective, with the results being examined recording an internal stability and consistency rate of approximately 0.9, which is high.

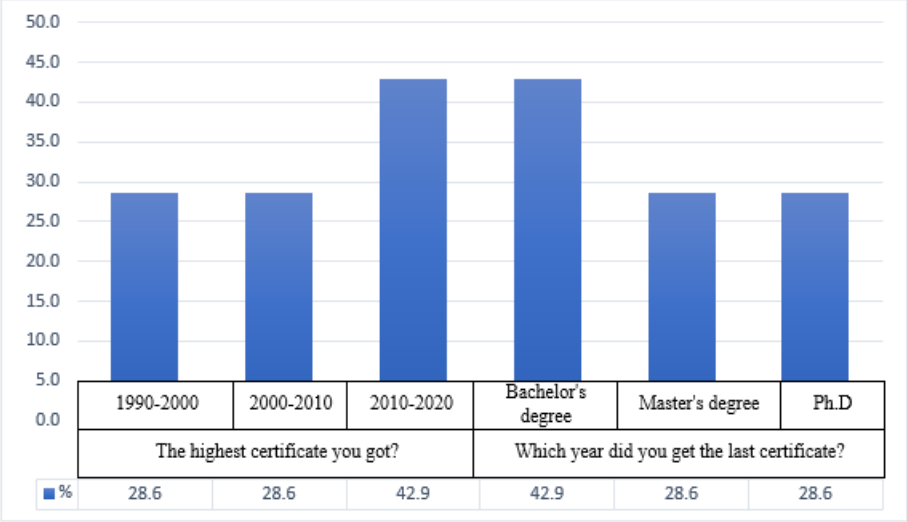

Figure (1) The normal distribution test of the questionnaire sample.

Fig (1) shows the normal distribution test in order to ensure the quality of the data and its subjection to a normal distribution. It appears from the figure that the frequencies of the study sample's answers are subject to a normal distribution, which confirms the validity of the study tool.

Secondly: the questionnaire addresses several questions in two directions:

The first trend is the nature of the architectural role imagined by the practitioner and employer before practice. The second trend is the reality of contemporary architectural practice, the patterns and spheres of the profession and the extent to which society's needs have been met,

the impact of globalization and information technology, and other variables on the role of architecture.

The multiple definitions of architecture and its role in society can be summarized in several key directions:

1. The Enabler architect
2. Architect Leader of the Task Force
3. Architect Professor and Technologist
4. Architect Artist and Poet
5. Architectural as an expression of society

Table (1): Perspectives on the role of architects in society. (by the researcher's).

The views of architecture professionals on the role of architects in society					
	Architectural Role In Society	**Description**	**The most important architect to adopt this role**	**Reason for this role**	**Some architects support this trend**
1	**The Enabler architect**	It helps the architect used to participate in the design and express his desires, including the design and construction stages.	Hassan Fathi and his attempt to reformulate the relationship between the trio (architect, owner, craftsman).	Reaction to problems in housing projects where the architect was separated from the user	Hassan Fathi Friedrich Hundertwasser Bela Borvendeg Mario G.Salvadori Fred Koetter & Colin RoWe
2	**Architect Leader of the Task Force**	The architect leads the team with all its specializations and experts in all areas that serve the construction process.	Jamal Bakri believes that the leader architect must have technical, scientific and artistic tools.	Organizational leadership owing to the multiplicity of specialists and fields, or technical leadership due to the increase in specialized branches.	Jamal Bakri Lajos Jeney Kevin Roche Georgi Stoilov
3	**Architect Professor and Technologist**	Architectural knowledge and technical means of implementation.	William Porter Professor of Architecture, Massachusetts Institute of Technology	scientific and technological revolution	William Porter Richard Rogers
4	**Architect Artist and Poet**	The architect is an artist who expresses the movement of the community and draws his vision through works and buildings.	Frank Lloyd Wright sees the creative artist as the qualified leader interpreted for nature in society.	The owners of this trend believe that architecture is an all-inclusive art with universal origin derived from an understanding of taste and culture.	Frank Loyd Wright Sullivan Le Corbusier
5	**Architectural as an expression of society**	Architecture needs to understand society as an integrated dynamic entity in which social, political, environmental and technical forces interact.	Spiro Costavo sees architecture as a collective struggle to express existence	As a result of the growing global interest in social and human aspects of contemporary architectural and urban thought.	Robert Stern Spiro Kostof Christopher Alexander Hassan Fathi

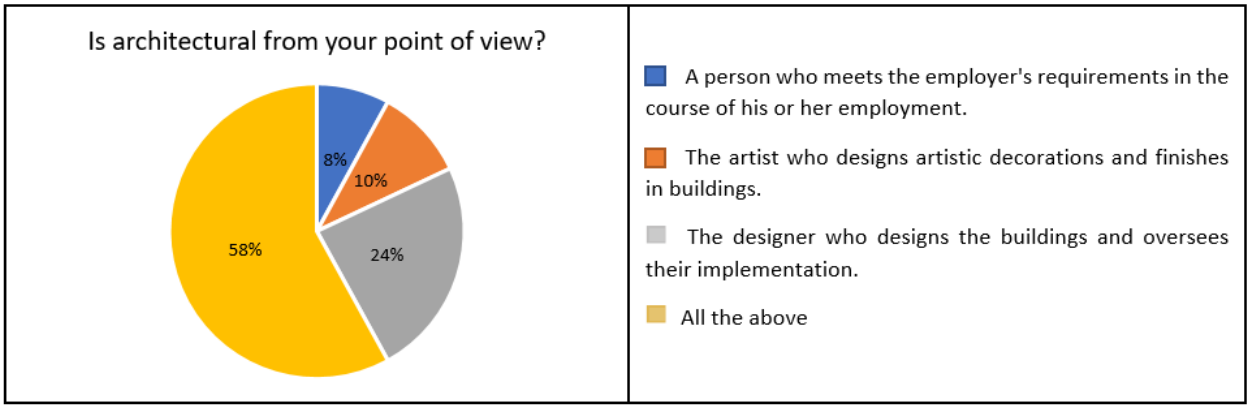

Figure (2) Who is an architect from the point of view of practising architects

Fig (2) In view of the results of the questionnaire, we found that the largest proportion, which is approximately 58% of the sample questionnaire, considers that the contemporary architect is the person who designs the buildings and oversees their implementation, and is also the artist who does the decorations and artistic finishes of the buildings It also meets the requirements of the employer in a currency, and to a lesser extent architects see the architect as the designer and supervisor of the execution of the buildings, an indication that the contemporary view of the architect - According to the results of the questionnaire, it still maintains a degree of stability and has not changed or changed according to theoretical data.

12. Implications of globalization

12.1. The impact of globalization on elements of architectural work:

There is no doubt that the period of modernity and beyond has over time devoted a new concept to architecture, where Charles Jencks sees in his book "The Architecture of the Jumping Universe" that there is a new vision that will become apparent to the world in the coming years that has come to light through what has been called "Science of superposition" or complexity, an evolution of the concept of postmodernism and a new phase of postmodernism and considers that they include overlapping theory, diaspora science, self-regulation methods and non-linear dynamics, as well as studies of the emergence of the universe, All this new science shows the world as a single creative event, which always reaches new methods and levels in the process of self-regulation, In addition, there has been terrible progress in computer science and the incredible development in genetic science, information technology and physics science. and underscores that the cosmic architecture that has been spread by globalization is the actual product of this science group, which has come to link more disciplines together in one episode, such as sport, physics, chemistry, philosophy and cosmology [46].

Charles Jenks asserts that looking at the laws of the new universe is the source and generator of thought and production in all fields and that it is the natural beginning of the thinking of my life and my architecture is different and architects now believe that architecture in an era of globalization is subject to the logic of liquidity, mobility and scientific discoveries. Digital technology has changed architectural practices in a way that only a few would have expected. and current practices, based on the dominance of the digital medium, severely challenge traditional construction and design processes, The tendency to leave a correlation between design and architectural product form has emerged in favour of digitally generated complexities In addition to reorganizing the relationship between perception and production, technology has generated a link

between what we can dream of and what we can create. This confirms the return of the separation between architecture and the concepts of culture, the environment and society and the full promotion of material values and a focus on the idea of appearance, Branco Kolarvik points out that there has been a radical shift from traditional styles of architectural design and digital forms are no longer designed and painted in the traditional sense, but are calculated by a digital generating approach boiled down by architects, adopting an internal generating platform that offers a number of possibilities for architects to choose and develop the most suitable ones [47].

Note here the decline of the intellectual process that is the basis of architectural work which we can call "Mechanization of architecture", and the fact that the innovations in digital software and the acceleration of their evolution are continuing and not only the discussion of it, the transformation of the working style of the shape, to the method of finding and modeling the shape, but as a generating tool for extracting the shape and its transformations, which is called digital morphogenicity, down to the so-called term "Bulge architecture". Although the term was heavily traded in architectural circles and conferences in the mid-1990s, it did not appear in architectural writings until after 2002, when it was first used in an article on a magazine. "The New York Times", after which it is often used to describe buildings with curved or circular forms in which architecture takes an organic or amoebian form. In spite of the weirdness of the term "bullying architecture", this word, especially in the rolling language, has become widely circulated in its exotic forms, including buildings designed by architect Frank Jerry. such as the Guggenheim Bilbao Museum in 1997 and the Music Experience Project in 2000 even though these buildings were not fully bulge buildings, even if they were designed through highly sophisticated engineering programmes [48].

The world's first fully bulging building was built in the Netherlands with the design of architects Lars kas Oosterhuis and spuybroek, and has been named Water Intermediate (1993-1997), which made its full form on computer and interactive and electronic interior design software where sound and light can be transmitted by visitors and there are other buildings that can be considered as examples of the amoebic shape, Such as the building of Xanadu House built in 1979 by architect Roy Mason By 2005, architect Norman Foster had followed the same approach to bloat architecture in several buildings in Europe, such as Sage Gichedd in England, and the Free University of Berlin in Germany.

Figure (3): Bulge Architecture Pattern, Sage Gichedd Building in Gichedd, England. Designed by Norman Foster [49].

12.2. The impact of globalization on the architectural and urban vacuum:

All the evidence and variables around us confirm that humankind is proceeding to a new phase that is completely different from what preceded it. which is not an extension of the age of industry or simply the use of the advantages of communication or computer technology but the coming era bears with it fundamental changes in ways of life, systems, human values, human dealings and patterns of education, What we are addressing in this section is the follow-up of transformations and the monitoring of changes affecting architects, especially its tools and architectural production. And certainly the architecture was inseparable from the revolution. It was influenced by the changes that took place after the domination of the information revolution and modern technology and the proclamation of the beginning of the information age based entirely on the availability of information sources and advanced means of communication as a basic single modern glimpse and architects anticipate foreseeable future changes in working methods, housing, education, media, social relations and human values, and the importance of developing architecture concepts to fit with future changes expected before they are imposed on them, as in the age of industry, modernity and post-modernity trends, by providing different architecture information systems and linking them to global and local information networks. There are conferences held by default and there are distance learning techniques and directions for integrated activities through digital communication, Ragi Inayet confirms "That what we are moving forward is not just an increase in electronic use for industrial technologies, not just further advances in communication technologies based on satellites and fiberglass cables, It is a human society that is qualitatively different from the society that prevailed in the era of industry and that what is being done is not just to develop and modify the realities of the industrialized society but to substitute for the logic of that society. And a new logic of the information society has crept up, so it has become necessary to develop the concepts of architecture so that it fits with the future changes expected before it is imposed on it as it did in the age of modernity and beyond. In addition, anticipate the emergence of new architectural and architectural patterns that did not exist before and study the possibility of utilizing existing architectural patterns to keep pace with the changes to come. IT has been able to reunite cognitively and has been characteristic "Synthesis of conflicts", such as the combination of material, non-material, factual, virtual, vital, physical, humanitarian and Alli [50].

In his book Time Space And Architecture, Sigfrid Giedion identified the important stages of the evolution of the architectural vacuum and considered it to have passed through three basic stages:

- Phase 1: It is the stage at which the vacuum is through interaction between the various blocks, namely the Egyptian, Sumerian and Ancient Greek architecture.

- Phase II: Began in the middle of Roman civilization when the problem of internal vacuum and capture began to take on great importance and continued until the end of the eighteenth century.

- Phase III: It began with the beginning of the twentieth century, which is to add time to the vacuum, where the vacuum is realized through movement and thus its vision from more than one point and one angle. At this time, the idea of perceiving the vacuum through a one-point perspective has been eliminated. Globalization has affected the concept of an overall architectural vacuum [51].

The thinking and philosophy of what are now known as digital forms, which have spread widely in various fields, and the thinking and philosophy of digital forms can also be included in the concept of modern cosmetic theories that respond to the requirements of this era in all its

renewed orientations and theories. Digital forms can also be considered as those forms based on their determination to use digital language and computer as the basis for design.

This was followed by the proliferation of these approved forms in various engineering and technical fields innovative experiences and theories in the art of sculpture, architecture and forms that have also become industrial, These digital trends have become one of the most important design references to a large extent. New direction is increasingly widespread and reflects a new modern generation of artistic thought, reflected in various areas of the urban and urban environment. This was reflected in urban and architectural design projects and the coordination of sites. and the reasons for the emergence of this new approach at the global level can be explained by the following points:

- The continuous development of computer software: it played a key role in clearly introducing this new thought, and Bill Gates informed the widespread dissemination of digital and computer, stating that this decade is the digital contract, virtual reality software and built-in reality.

- The growth of the local information network, which has created internal communication networks in addition to the global Internet, which has created some kind of communication between architects and has created a good climate for the activation of the thinking of globalization, which confirms its control over all areas of the day, including architecture and the contribution of advanced technology to the development of new technologies and industry systems.

- The emergence of new building materials: such as platinum was one of the reasons for a climate conducive to the implementation of works with complex digital forms which helped to confirm this new approach and the impact of the digital revolution is reflected in the works of Frank Jerry, whose architectural works and vacuums are particularly marked by a significant breakthrough in the use of iron construction capabilities in architecture, There is no doubt that Frank Jerry's use of Zaha Hadid for the potential of the digital revolution, especially the calculation and simulation software of architectural models s development ", had helped to achieve its intended production of these strange sculptural forms, which had contributed to the growing effects of the new globalization of space and the science of Shea [52].

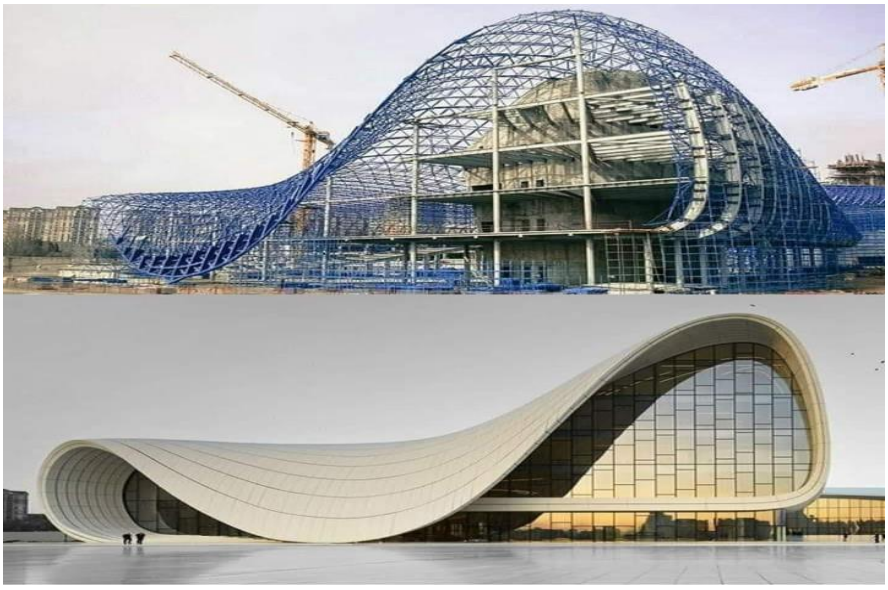

Figure (4): Heydar Aliyev Center is one of the world's renowned cultural centres, opened in 2012, designed by Zaha Hadid It is located in Baku, Azerbaijan [53].

12.3. The impact of globalization on modern concepts of architecture:

The world is now witnessing increasing attention to environmental, The common pressures of both increased awareness of the next scarcity and the worsening of the world's toxicity problem have contributed to the emergence of environmental conservation and sustainability as an important concept in both thought and politics and, more recently, architecture., Despite the intensity and intensity of criticism of that model and growing public interest in climate issues, society in general, as well as corporations and Governments, still lack any motivation to take those issues seriously and have therefore not engaged in effective action towards sustainable practice. and undoubtedly underscores the emphasis placed by architects on the affirmation and strengthening of architecture's formal language, influenced by the tremendous technical progress in the area of digitization and communication in the field of information and enhanced by the growth of communication owing to globalization, And with those concepts, we should assume a lack of design for sustainability requirements not only at the technology level, but also at the thought level. And we must bear in mind that, as the age of information and the evolution of ways and means of communication changed the concepts of space, time and human relations, it is therefore necessary to develop the concepts of architecture so that it fits into the future changes expected before it is imposed on it as in the age of modernity and beyond, By developing the concepts of city and housing planning so that it depends not only on what we inherited in the past, but also on what we need in the future, as well as expecting the emergence of new architectural and architectural patterns that did not exist before, and studying the possibility of taking advantage of current architectural patterns in keeping with the changes to come. s social and economic conditions at the time when they emerged, as well as the need to improve the architectural product to meet the challenges of the environment [54].

12.4. The problem of architecture and globalization and its impact on the role and occupation of the architect:

Architecture is essentially a group-specific human cultural product associated with an expressive system resulting from an intellectual process. This product contains many meanings and messages inherent in architectural work. reflects the expression of the place and age to which architecture and society belong with its concepts, culture and economic capabilities, This product must provide for spiritual material human needs through optimal use of technology in its holistic sense that architecture is never an art controlled by architecture based on its own convictions. s future as a profession, Indeed, embracing sustainability issues and moving away from the consumer globalization model will be the only option to sustain the profession and deepen its societal role. In this context, author Christine Taylor stresses that the challenge for the architecture profession now requires moving towards two key issues: sustainability and housing for less capable classes. so that the profession does not turn into part of the past [55], There is a sharp disagreement and contradiction between the images and concepts of globalization and between peoples' cultures and identities Culture, identity and the cultural context cannot in any way fall within the framework of stereotyping and modelling. It is understood and known that architecture in its spatial and technological technical sphere may accept stereotyping and generalization and may be subject to the principle of universality of knowledge In terms of environmental, cultural and civilizational aspects, architecture enters the allocation framework and emerges from the globalization framework characterized by inclusiveness And so there has been what we would call a contradiction and conflict between the specificity of architecture and the universality of globalization, which has led to many influences, including:

- Globalization, as previously observed, can be seen as a natural extension of the thinking of modernity in all aspects, including focusing on the functional values of the building, neglecting the rest of the architectural work and completely missing society's issues of achieving sustainability at all levels of environmental, cultural, social and economic domination throughout the architecture system.

- The absence and marginalization of the role of the local architect and society at large and the limitation of the architect's role to the mere provision of technical assistance in case of need which means a shift from being a profession with a set of values to a craft, Here, we can add a new role for architects in the aftermath of globalization, the logistics architecture [56], where architectural interests have shifted in their supposed essential role in the development of society, namely, to address the issues of society, translate the rules of the place and provide solutions and proposals to solve the housing problem. To pay attention to translating the physical needs of the market, which have grown as a result of globalization, into an architectural product characterized by luxury and good form, which means weakening the influence and professional influence of architects [57].

- Weakening the role of Governments at the levels of direction, control and guidance. With the pressures of the economic need for these major globalized projects, which give the impression that there is development taking place, the idea cannot be discussed whether they are beneficial to the community or not... whether these projects have a developmental economic return or contribute to maximizing society's consumption behaviour.

- Attention to issues of identity, privacy and cultural continuity has declined under the pressure of engaging in the new world order, which has led by extension to the absence and decline of current architects in these issues... They have become marginal and romantic issues if viewed from a globalized perspective, which is fundamentally contrary to the fact that architecture is already a social product.

- Egypt's architecture profession has fallen sharply and is confronted with a jarf global stream that helps it grow alliances, mergers and a competitive economic outlook in all sectors, including architecture. And here we have to think very well about how to deal with these challenges and look for mechanisms to address the marginalization of our professional market if it still operates individually and isolationally in the current situation and only responds to what I call "Responsive survival" of the values of consumption and leaving the urban environment and architectural product in the hands of foreign experts always and major architectural companies control the urban reality day by day. There is no doubt that the use of other expertise is required, but it must be based on unconditional participation. The entry of national engineering and advisory offices into local and regional partnerships and alliances may be the ideal solution to meet future challenges and develop areas of cooperation that enhance the position of these local and regional offices in our local markets and lead them to compete with global experiences.

At the positive level, we can determine it through the following points:

- Access to the latest global technologies in the field of sustainability technology, but with awareness of the achievement of the comprehensive concept of technology, which is the imperative of possessing knowledge tools and the possibility of producing them locally and linking these technologies to research and development centers.

- Cultural communication due to the development of technology means is an opportunity to upgrade the architecture, but with the need to pass the communication process with mechanisms

that allow the choice of what is appropriate and exclude the philosophy of transport and direct quotation.

- The possibility of using communication to highlight the features of heritage in a contemporary manner and thus the participation of Egyptian architecture in the construction system globally, but the problem lies in the way of architects' interaction with heritage and view of it falling within the scope of the form, which represents an intellectual stalemate.

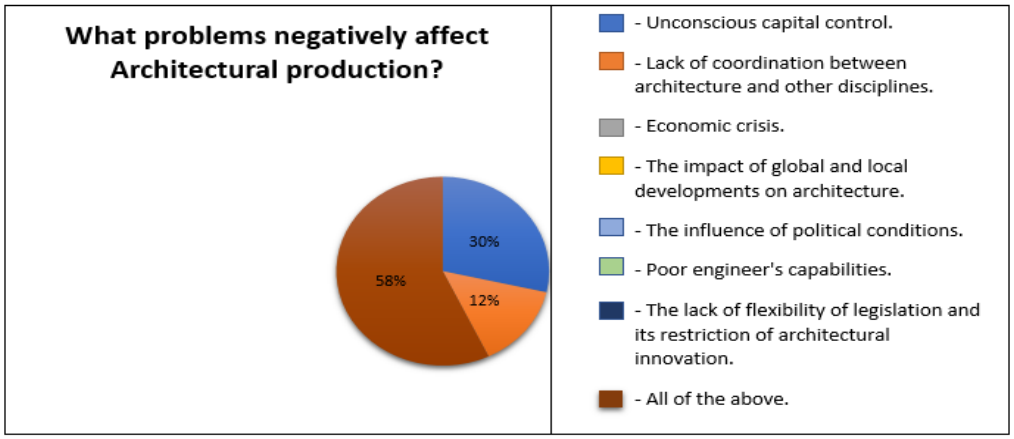

Figure (5): The reasons that negatively affect the architectural product.

Among the results of the survey, there are many reasons that adversely affect the architectural product, most notably the control of capital and investment thinking, as well as the lack of coordination among all disciplines involved in producing and directing the project. This is a form of problem of architecture and globalization with the variables that the architecture has not yet kept pace with.

13. The impact of technology on architecture and urbanization

Modern-day construction technology has relied on concrete construction, iron and steel, new materials, construction systems, multi-processed. Modern methods and means of implementation are drilling, transportation and mechanization equipment, as well as advanced organizational and measuring devices, as well as mechanization of installations' works at the site and pre-manufacture.

The possibilities of modern building technology materials, systems and methods in the second half of the twentieth century, namely speed, efficiency and increasing new dimensions of evolution in the features of the nautical, visual and physical composition, were given [58].

This was reflected in the physical composition of the architectural work through:

- The height and stability of neighbouring buildings are uneven.
- Universality and broad surfaces.
- Free construction limit line.
- The emergence of ideas of future cities that represent future technological development through the thinking of designers.
- This is reflected in the skyscrapers and large lounges, which are the distinctive buildings.

The application of technology is evident in some of the following actions, such as selected examples from Arab communities similar to Egyptian society's customs and traditions:

1. The iconic tower in Egypt.

2. Al Khalifa Tower, United Arab Emirates.
3. Kingdom of Saudi Arabia Tower.

Figure (6): The impact of technology on the development of Arab urban output [59].

When we import, we import the physical part, the machinery, the means, the experts who install, oversee implementation, teach people skills, and when technology is transferred, the three constituent things (knowledge, man, and material tools) must be transferred.

"The Kingdom Tower in Saudi Arabia is designed by the foreigner and all we gave to him is the land on which the building is built and implemented with skilled hands from different countries. The skill is imported from cultures other than the building country. New materials not available in the environment are imported and collected. Construction is commended by modern technologies imported, trained labour and materials imported from abroad. Construction ends. technology transfer ", and technology transfer by means of economic financial capacity does not mean entering the technology age.

The Burj Khalifa was designed by a team led by Adrian Smith of Skidmore, Owings & Merrill, the company that designed Sears Tower in Chicago, the former record holder of the world's tallest building, where the construction of Burj Khalifa began in 2004, and the exterior design was completed five years later in 2009. The infrastructure is made of reinforced concrete and some structural steel of the building, taken from the Palais des Républicains in East Berlin, the former East German Parliament. The building was opened in 2010 and is the world's tallest building.

The iconic tower is a tower under construction located in the financial and business district of the administrative capital of Cairo, Egypt implemented by the Chinese company CSCEC, the tower is 385 meters high and will become the longest tower in Egypt and Africa. The tower concrete was poured in February 2019. The tower then rose at a remarkable speed until the concrete structure of the tower was completed in June 2021 (according to the Chinese executing company) and the Chinese company hired several Egyptian engineers and workers in the implementation of the project [60].

Fig.(7) Showed the questionnaire sample, the largest percentage that determined the impact of modern technology on contemporary architecture is increased research, knowledge, cultural and information exchange, which is the most important result of globalization. and comes with less

speed in performance and in the delivery of projects and schemes, With it high precision which is the most important characteristic of the outputs and production of technology-based software and tools and essentially the top element.

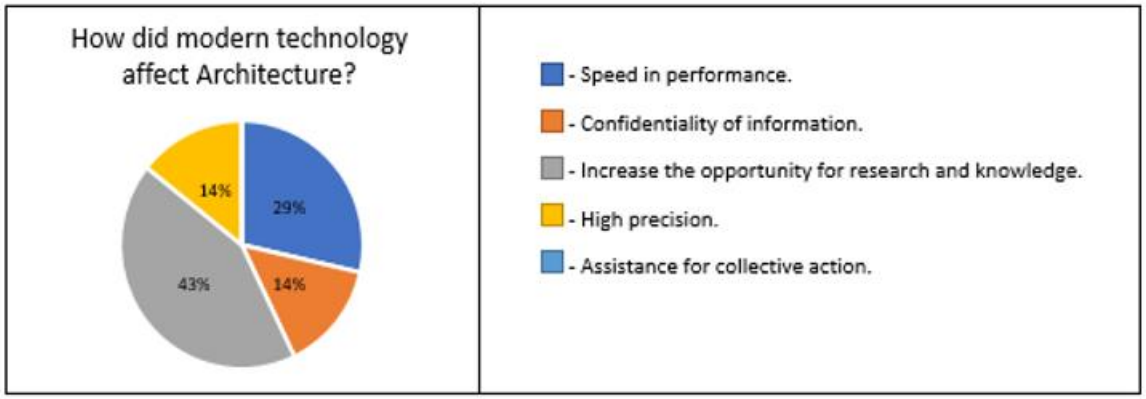

Figure (7) : The impact of technology on contemporary architecture.

14. The technological aspect of globalization

The first premises that we have and meet when we want to talk about the concept of communication is that this concept or this phrase, if you will, is a new phrase, a newfound euphoria, or a modern phrase. "Globalization abolishes the borders of States and establishes a connected world society without time or geographical intervals so as to reduce and achieve the limits of space and time and to promote the communication technology that gave this aspect to the process of globalization, It is advanced communication technology that has helped to unify space and time in the technology unit of globalization and its main aspect is not only communications technology but extends to all spheres of life [61].

Globalization's main aspect is not only communications technology, which is extremely important, but is one of the main bases on which it is built, but also extends to all spheres of life. Globalization is a natural development towards a world without spatial or temporal breaks, a world without geographical, political or social boundaries and has become a hallmark of the age we live.

Through fig. (8) show The results of the questionnaire indicate that the follow-up of developments in the profession and patterns of architecture is considered to exceed 45% through the Internet, communication and information and cultural exchange across borders and countries and follow-up on the latest developments of tools and programs as well as building materials and try to keep up with them and work to include them in the local architectural work And so in the context of globalization, our essence is to communicate, communicate, share knowledge and culture and try to create a global product by transmitting its ideas and trends across the digital space beyond the borders of States and countries, You just have to like these ideas and learn how to apply them and persuade venture capitalists and society to really implement them on the ground. Finally, we can talk about the fact that technology is the most important and rapid tool for spreading globalization in all spheres of life, notably architecture and modern architectural trends.

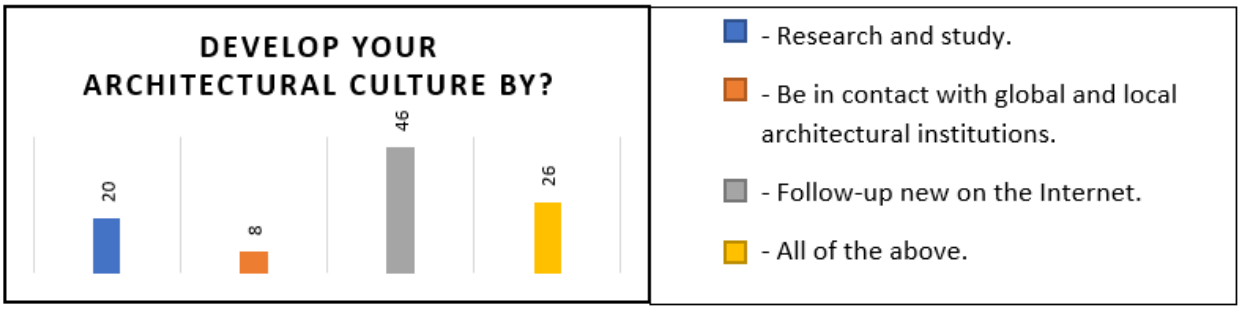

Figure (8) : Ways to follow the developments of the architecture profession.

15. Digital technologies and architectural role

The transition to digital technology looks like a phase of experimentation and research that must handle all its intellectual and practical gifts Others find that it resembles the late 19th and early twentieth centuries, when the shift towards an era of industry began. This poses a direct distinction between the assessment of industrial technical progress on the one hand. And under the authority of technology and mechanization on the other hand, there is a real similarity between the era of globalization and the excessive reliance on techniques in the field of architecture and the age of modernity and the excessive reliance on construction techniques, The industry also forms the environment in which the new digital technology has evolved. This is strongly related to the development of technologies: Computer-assisted design, most recently parameter software, computer-assisted manufacturing CAM which generated applications that included digitization of the entire architectural process, from the earliest stages of architectural design to complete the building, as information flows through the digital environment of the design software through the computer's digitally controlled machine software of various forms, sizes and capabilities Even the most precise details of the building are installed, and even large parts of some buildings are installed by digitally using robots instead of some workers specializing in complex installations s experience in implementing digital Malamese forms, Not only is the architectural design process, it goes beyond the emergence of new types of materials that examine their efficiency and suitability for construction and are fully developed digitally [62].

The overall scope of a project's architectural work includes seven steps (phases), including: programme, planning design, initial design, design development, executive drawings, contracting document and construction. At each stage there is a range of problem-solving needs to achieve a satisfactory outcome. The process itself can generally be seen as activities or actions taken to test successive ideas and determine the most appropriate of As digital technologies such as BIM technology and others grow, these processes will be produced automatically, which will subject the architecture to purely technical logic [63].

16. Architectural role and the future of architecture

The importance of thinking about the future of architecture, the future of the profession and the architect's role does not justify the importance of looking at the status quo and its realities at least at the local level. A pause is needed to reflect on the architect's history, legacy and role in society. Especially because modern society is in constant competition and challenges with many cultural, spatial and economic changes. By virtue of his education and vocational training, the architect has a social responsibility that goes beyond design and construction, and this

responsibility goes beyond the professional dimension and also includes social and ethical dimensions.The focus on discussing the role of the engineer or designer in society will serve as a reminder of the importance of self-criticism, rather than ignoring and emphasizing external variables beyond the engineer's control on which his influence is limited. Presenting and explaining the architect's role in society through some local and global architectural experiences can be an opportunity to reposition the architect and professional in the "right" place where he should be within his community.The architect's role in accurate science and the knowledge he acquires during his rehabilitation and architectural education takes shape. His qualifications differ from education, scientific qualifications and other knowledge in that they cover many creative, artistic, human, behavioral and technical aspects. The architectural school and surrounding scene provide an important start to this upbringing [64]. This was known from the follow-up of architecture pioneers, We could say that the architectural role in theory is shaped by four main factors as the table. (2):

Table (2): Elements that theoretically form the architectural role, by the researcher's

Theoretically changing architectural role is shaped by the following elements:		
1	**knowledge and skills**	- Familiarity with design principles and ideas and ways of implementing them. - Knowledge of computer science and drawing using the computer and its architectural and construction programs. - The architect must have scientific, artistic and intellectual creativity.
2	**personality traits**	- Have enough mental abilities to make sense. - Creative artistic capabilities.. - Scientific and professional courses. - To have the ability to manage and follow up on the site's work.
3	**Qualification and Practice**	- Education and training. - Specialization and classification. - Scientific research, authorship and publishing. - Monetary climate and competitions. - Legislative and administrative systems.
4	**Surroundings (influential factors)**	- Political and economic factors. - Social and environmental factors. - Cultural factors and certainty.

The architect's role today has changed dramatically and went beyond design to include thinking about the different requirements of the project. See fig. (9), finding sources of funding for projects, working as a team, bringing together the project partners and guiding them to work together as a coherent team. As for the project, this often requires careful, complex and multiple disciplines. This shift led to boredom, confusion, bewilderment and dress in roles between architects and people. What to do and what is the way out of chaos?

It is necessary to understand and recognize the architect's crucial role in society. Who are we? The architect already knew during his study that his job was to shape his environment "in terms of design" and prepare it in a way that would make people feel good, meet their needs and make their lives work. This space or environment that the architect seeks is a space in which everyone, the architect and his partners, shares, where life begins, begins with the individual and continues to create its social dimension.

While some architects are convinced enough to meet the interests and challenges of modern life and propose alternative designs, adapted to available resources and the environment, and to consolidate human existence and needs, others reflect the stalled trend between the modus operandi of modern architecture "stars" and the unassured and ecologically distorted work of "design". Such actions reflected the unstable and volatile feelings of their owners towards architecture.

The aim of the discussion and research on the role of the architect is not to accuse the architect of being the cause of many problems in society, but because he does not intend to undermine the creativity and excellence of the architect, or to market some "radical ideas", the goal is to emphasize the role and importance of the architect within his community, in the hope of restoring trust and confidence in the architect.

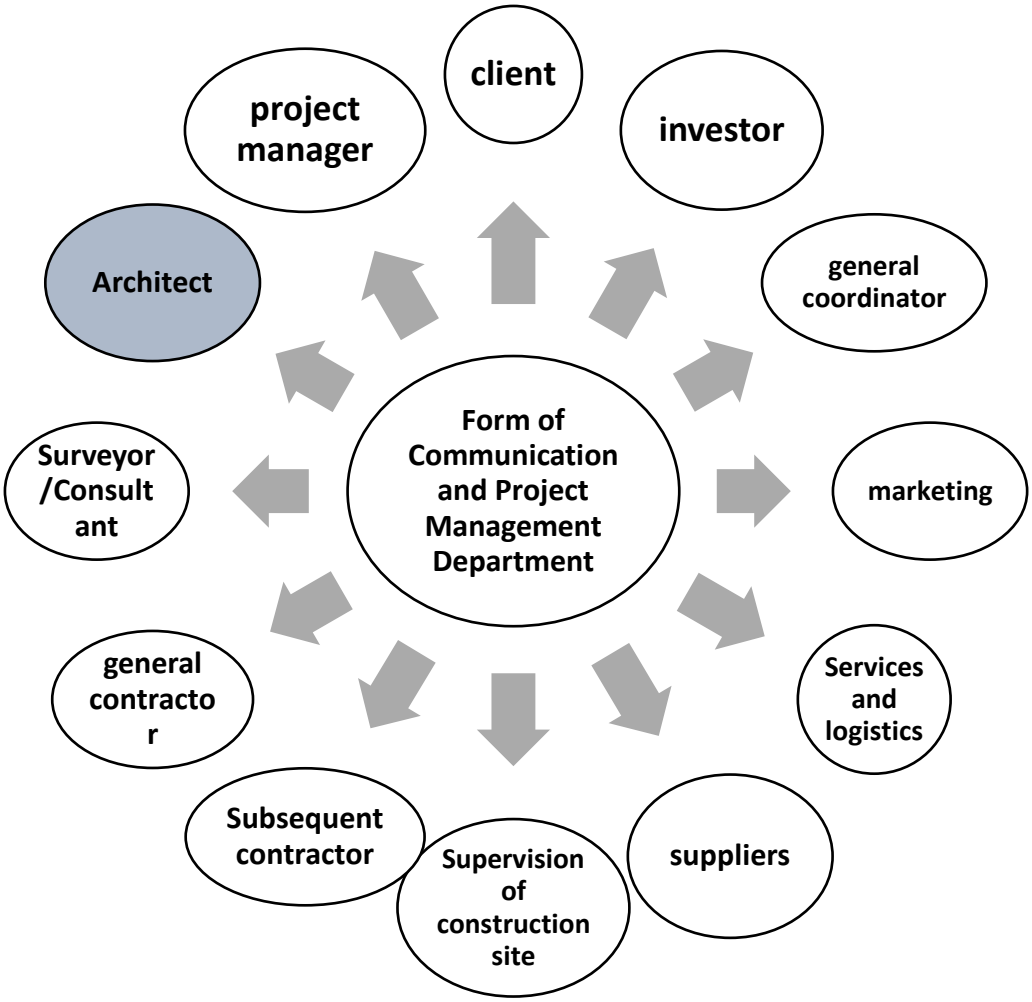

Figure.(9): The role of architect in the era of globalization in a project's working group (by the researcher).

The aim is to encourage debate on the role of the architect, and to contribute to building a high-level knowledge framework for architecture is certainly done by raising the architect's awareness theoretically and practically of his role in society and his responsibility for his heritage and professionalism. Community problems are not the work of architects but architects can contribute to providing "solutions" and proposals that address and mitigate the effects of these problems. Through his thinking and practical experience, architects can qualify for an active role, and architects have demonstrated this active and positive role throughout the evolution and relevance of architecture's history.

We can say that the functional architect's role is shaped by the following elements, This functional role is reflected in the architectural product, as in table. (3):

Table (3): Elements that shape the functionally changing architectural role.

The functionally changing architectural role is shaped by the following elements:		
1	**Architectural specialization**	- The enabler architect - Architect Leader of the Task Force - World Architectural and Technological - Architect Artist and Creator - Architectural as an expression of society - Logistic Architectural
2	**Intellectual trends and methods**	- Sustainable Architecture - Green Architecture - Inflatable Architecture - Earth Architecture - Parametric Architecture
3	**Tools & Programs**	- BIM Construction Information Modeling System - LEED Pioneering System in Energy and Environment Designs - NQC Quality System and Standard Conformity - GBCE Green Pyramid Assessment System.
4	**Time period**	- The era of globalization and information technology - Economic and cultural factors affecting the period

Conclusion and recommendations

The changing nature of the architectural role is mainly due to the multiplicity of factors influencing the formation and formulation of its role in society. Factors, whether political, economic, cultural or technical, contribute to the formation and crystallization of society's features.

The emergence of so-called logistical architects is the result of the absenteeism and marginalization of the local architect's role, and his role is limited to simply providing technical

assistance in case of need, which means the transformation of the architecture profession from one with a set of values to one, which means weakening the influence and professional influence of the architect and diminishing his role in society. The architectural role looks forward to criticism of his works or ideas, whether by endorsement or opposition or both. The architect in Egypt is pursuing his profession away from the intellectual participation of his colleagues. He is not subjected to negative or positive criticism. The absence of criticism leads to the absence of renewal and competition and the dissolution of the architectural idea and increases the commodification of the architectural product. Architects believe that the owners of engineering offices and those who work in the private sector; The problem of the architectural profession in Egypt is the lack of coordination between professional institutions, the absence of specialization, the weak scientific capital of urban workers and influencers, and the absence of conscience and awareness. They also consider that the profession in Egypt is moving behind investment, real estate marketing and capital.

The current market adheres to the determination of the specific character of architecture, despite the existence of architectural slopes, lacks a clear and specific legal officer, and takes in government bureaucracy which always causes the search for achievement without considering the essence or content of the architectural and urban product. The most important influencer on architectural work in Egypt and the world is the information revolution, which has made it less time to complete the work, and the development of artistic capabilities by inventing architectural programs and instruments, has made achieving the benefit at a cost of less effort, money and time one of the most important influences and contemporary variables in the form and essence of the architectural product.

- Research recommendations:

1. The architect must take care of increasing his skills and knowledge to keep pace with the global developments of architects to reduce neglect of his role and marginalization and continue to translate the needs of the community to benefit, function, beauty and sustainability without cost.

2. The need to create an environment conducive to coordinating the various areas of work in order to develop a vision for the development of architecture and architecture in Egypt in order to achieve sustainable development and improve the professional aspects of architectural work in the future.

3. The importance of the role of institutions that sponsor, qualify and assist the architect to keep abreast of international developments and changes, in order to create a true competitor and make the local architectural role confronting and equal to contemporary global architecture.

4. Legislation and commitment to work under engineering bodies such as the Association of Engineers and Architects and the Association of Architects and Engineers and work to develop their role to be more effective and impact on the role and production of architects.

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