

Image-Bearing Role of Dome in Traditional and Modern Arabic Architecture

Wail Houssin^{1*} Yulia Zhmurko²

1. AlUla Community College, AlUla City, Saudi Arabia

2. Department town planning, O.M. Beketov National University of Urban Economy in Kharkiv, Revoluzia Street, 12, Kharkov, 61002, Ukraine

* E-mail of the corresponding author: archiwail06@yahoo.com

Abstract

The article deals with the problem of image-bearing nature of Arabic architecture that is realized through symbolic dome's form. The dome is one of the most informative forms in the world culture including universal images within the national peculiarities. Practicing dome forms for the constructions of social importance and for the constructions presenting predominant ideology proves their universal image-bearing nature and their symbolic archetypical background. In Arabic architecture the dome form belongs to the forms molding mega-images. Metaphorically creating a shroud the dome specifically symbolizes broad expanse of heaven. It has a great attracting power fixing the center, creating the vertical that joins all the levels of the Universe into one integral whole. In modern architecture the dome, even adopting new forms which correspond advanced technologies, preserves its image-bearing qualities.

Keywords: dome, image, symbol, mosque, Arabic architecture

1. Introduction

Imaginative perception and imaginative cognition are the basics of architecture learning which reflect human attitude to the surrounding world. Authentic architectural surrounding of the Arab world together with set system of images and cultural dominants presents the unique ingredient of the world culture. Within the overwhelming process of globalization and westernization intensively developing Arab culture follows some principal changes. Wide usage of modernism ideas, of international architecture brings to life ultra-modern architectural forms which turn into catalogues of abstract symbols. They are to create multiplicity, a stream of flying away images that may bring to the loss of architecture language authenticity and puts sharp the question of national identity. One can't but agree that the level of modern architecture should correspond the level of modern science, advanced technologies, art, up to date means of communication. Thus, the historical heritage in this case is interpreted within the time span. And here symbolism as a backbone of architecture forms image turns into a crucial aspect of imaginative perception and imaginative cognition. "The image that is able to join dissimilar becomes an adequate gnosiological form to grasp national unity" (Gachev 1995).

Metaphor and image are the basics of Muslim artistic endeavor. Integrity realized by their means is characterized by its national quality, its unique contrast. At the very same time it is in harmony with other cultures. Universal images of one whole world civilization go through historic-cultural context of national peculiarities. As Jean Nouvel says "architecture is first of all a sequence of images and it's task is to awaken emotions in real life, to decorate and to refine it embodying cultural values of the civilization" (Riabushin 2005). At the same time the language of the architecture is to rely upon universal lexis that is clear for everyone. Abdel Wahid El-Wakeel once said: "Architecture is a collective task. This art is not an individual one. It has its dictionary that meaningfully goes together with an architecture image. Every word within this dictionary refers to the form" (Kahera 2002). The forms that get mega-image lexis serve to unite universal and individual aspects in general culture and national codes. The form of the dome is one of such symbolic forms which is embodied architecturally, which produces mega-images.

2. Value of Dome in World Culture

The dome is one of the most informative forms in the world culture which includes universal images as a reflection of national characteristics. The dome form as it is arises at prehistoric times. Present understanding of the dome followed the example of so called supposititious one that was quite popular in folk architecture of many countries. The dome was highly valued in the architecture of an ancient Rome where it intensified the space under it giving some solemn splendor, expressing the idea of "God's power". One of the most ancient is the Pantheon Dome in Rome (126 A.D.). Its peculiarity is the hole overhead that lets light in modeling within pagan pattern weighty forms of caissons. Another realization of the dome one can observe within Byzantine religious architecture. The dome of the Hagia Sophia Cathedral in Constantinople is observable from any spot of the city and it forms the image of its whole monumentality till now. Within the interior the hovering above dome intensifies the majesty of the huge dome hall that corresponds the Christian image of the Universe creation perceived now in a new light. After the conquest of the Sasanian empire and Byzantine Middle East by the

Muslim people the dome became a part of the Muslim architecture. Then adopted through the Arab culture the dome form came to life in West European middle ages architecture, that by that time was accomplished by the idea of Neo-Platonism. And the Renaissance witnessed the period of the dome form perfection as a symbol of “the Firmament on the Earth” (Gachev 1995).

The dome preserves its essence as one of the most symbolic forms in modern architecture too. Thus, dome-pyramidal form of the glass pavilion by Bruno Taut that was presented at the Werkbund exhibition in Cologne in 1914 is observed as an inherent element of the city and as a universal pattern of ideologically significant constructions. The author sets it as a sanctuary crystal of the biogenic Universe. The crystal dome lets the light in which then shimmering and being reflected in the waterfall “threads the world and bears the life within the crystal” as it was written in Utopian works of P. Scheerbart (Frampton 1991). Oscar Niemeyer gives his abstract-geometric vision of the dome form within the construction of the government building in Brasilia (1960) that is expressed through the powerful lines of the Senate Dome and hollow basin of the House of Representatives Dome.

The usage of the dome form for the buildings of social value and dominating ideology proves its universal image-bearing idea and archetypical background of its symbolism. These images, ideas, archetypes, schemes are created with the help of “the local Universe material, national nature: as outer, so inner” (Gachev 1995). Symbolic essence of the dome as a shroud, heaven, arch is investigated by M. Eliade, O.M. Freidenbeg, V.N. Toporov, etc. Its architectural archetypical image-bearing nature is described by N.I. Brunov, A.A. Barabanov, S.A. Shubovich, etc. The dome form means at the same time sanctuary-heaven, bosom that holds the whole mankind world. It is an archetype of an essence taken from the Chaos, and at the same time it is the universally ordered Space. The dome is the centre that “ties the whole world” at one spot under this very dome (Shubovich 2012). The dome as a symbol is connected with the our reflections on the tectonics of the Universe creation.

In Arabic architecture the dome form belongs to the principal forms creating mega-images. Giving the metaphor of a shroud as an immediate protector against outer influences the dome is at the very same time a symbol of broad expanse of heaven. This unique nature of the Islamic Universe that was investigated by G. Gachev within national world images, gives an opportunity to grasp image-bearing peculiarity of the dome form in the Arab culture. These peculiarities appear first of all due to the style of life and activities of people. The people of the Islamic world are initially nomads but not farmers. A nomad depends on cattle and bondless area, but not on fixed limits of a field and greenery. The very boundless area separates him from the Earth and makes him closer to the Heaven. The man of East feels closer to the broad expanse of heaven but not to the Earth. The second cultural dominant in the East is the Word that opposes European Form as a mass. As the Word marks it in the Arab culture: the Heaven is considered to be “an empty book where there are clear writings of stars, there are Testimonies, everlasting and increate Koran. The very destiny is given as a lot” (Gachev 1995). The Heaven within the Islamic culture is always clear and understandable, everything can be read there. Hence, there is that development of sciences and research work which are connected with the sky: astrology, horoscopes and so on. This interpretation of the Heaven in the East is principally different from that which can be observed in Germanic and Slavonic cultures: “One can’t read his destiny in obscure Heaven of Europe” (Gachev 1995) as it goes from the bottom, from the very bosom of the Mother-Earth. In comparison with the West cognizing process in the East by no means is a torment, vice versa, it is “a bliss of a spirit” observing the Heaven (Gachev 1995). Symbolic meaning of the dome as broad expanse of heaven in the Islamic culture is the basic but still not the single one. Apart from its joining idea working within vertical (the God – human being, the Heaven – the Earth) in the structure of the world creation it performs joining role within horizontal as well. The Arabic dome to the same extend as the Byzantine dome of the Hagia Sophia Cathedral in Constantinople is often a joining element not only for a city, country but for the whole civilization. As it is mentioned by S.M. Shukurov: “The dome is able to step above the civilizations, it is simultaneously an extra-dynamic and superstable element of material and spiritual culture molding” (Shukurov 2014).

3. Dome in Traditional Arabic Architecture

Without specification of the differences in semantic background of the dome in different regions of the Muslim world one can surely admit that it is an indispensable part of the Islamic architecture and it brings a sum of symbolic images. The dome is predominant in the architecture of the mosques as the most symbolic component of Arabic architecture that expresses collective identity. The dome form is present at one of the most sacred places for the Muslim people – it is the sacrarium over the stone where according to the sacred writing Prophet Muhammad made his “leap into the Heaven”. The golden dome of the Qubbat As-Sakhrah symbolizes that sacred Rock – the top of the mountain which according to the belief marks the world’s centre. It shapes the corner stone of the Universe creation that is so popular not only among the Muslim people, but also among the Christians and the Jews.



Pic. 1. Mosque the Dome of the Rock, Al-Quds

For the Muslim architecture the dome form is determining while modeling the flow of light. Light in Islamic philosophy is image molding substance which is vivid within traditional mosque. The first mosque was musalla which was just a fenced yard under the cover hung upon poles used for praying. Such a mysterious mosque was open for light and heaven. The influence of the antique and Byzantine traditions is visible within basilic mosque composition with lengthwise paces. And the yard that was preconditioned by the climate and ritual peculiarities was preserved as an important item of the whole composition. Square yard with some water basin in the centre used for ritual ablution is in front of the hall for praying. Thus, its sun lit area contrasts the dark hall due to the open arches of the paces. Since XII century there is mystique philosophic-theological school – Sufism. Its doctrine summarizes Neo-Platon idea of emanation, Hindu learning of human’s soul dissolution in God and Zoroastrian theory of radiance which asserts that God is present as within the sun light so in fire sparkling. Hence, general composition of mosques changes. The dome becomes its prime theme. Dome drum grows in size as light open is badly needed. It brings an impression of the dome hovering and increases measures of the dome drum. Meanwhile the yard loses its scope and leading compositional role. Zoroastrian ideas with worshiping fire and the sun light are followed by newly perceived Neo-Platonic ideas of the God-light emanation into the darkness of the human life. Previously dominant idea of contact between human being and God-light that is observed in the yard-mosque leaves place for the idea of something incomprehensible symbolized by the very light, when it can hardly get into the mosque through the open of the dome drum.

The Selimiye Mosque in the city of Edirne (1569-1575) is an example of a vivid light and space figurativeness. The Selimiye Mosque with its organizing power common for the Islamic world can be compared with the overwhelming energy of the Hagia Sophia dome for the Byzantine people. The mosque dome is kept by eight pillars creating such a gigantic rotunda where the whole space makes a single unity. Some festive and solemn atmosphere is created due to the general composition of the construction having storeys narrowing to the top and turning into a hemisphere of the dome. Dome space is full of light that is possible thanks to a great number of windows occupying several storeys and located in partition walls and in the dome drum. Thus, the dome of the Selimiye Mosque is brightly illuminated. This absolute and self-existent light is different from the one observed under the dome of the Hagia Sophia in Constantinople which makes an effect of “a hovering one”.



Pic.2. The Selimiye Mosque in the City of Edirne. Mimar Sinan, 1569-1575

Preserving their figurative qualities Muslim domes while their evolution get different forms. The most ancient dome form presented by significant architecture of Ancient Iran had prolong egg-like side-view based upon trumpet vaults. In XII – XIII centuries there was dominance of the Seljuks cone shaped domes which were plain and honeycomb. In XIV century there were pendentive domes in a form of trumpet vaults (the Hassan Mosque). The same epoch is marked by the domes with double jacket joined by means of special ties. Then XVI century brought onion dome borrowed from the architecture of India.

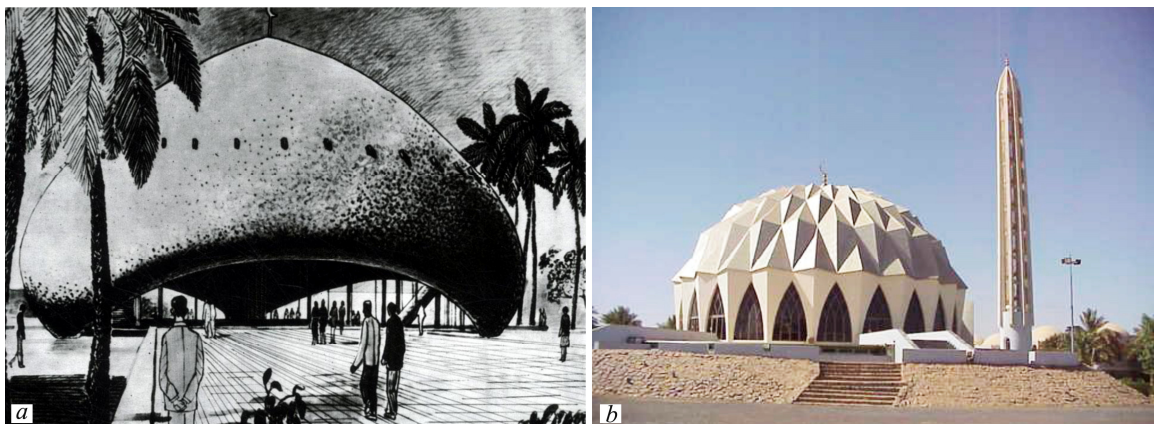
4. Dome in Modern Arabic Architecture

4.1. Domes of Modern Mosques

In the Arab world the dome is presented differently in the modern architecture continuing to set the realm of traditional architecture. Domes as before give their organizing principles. First of all they perform the role of a dominating form within the mosque construction and thus carry the function of town planning. For example, sky-blue dome of King Abdullah I Mosque in Amman supported by heavy footings and wall piers exhibits that organizing power to the whole surrounding world.



Pic. 3. King Abdullah I Mosque in Amman. 1989. Architect R. Badran



Pic. 4. a) The University Mosque near Baghdad. Project of W. Gropius. 1957; b) “The Nile Mosque”. Omdurman. Sudan. 1976. Architect G. E. Abdelgadir

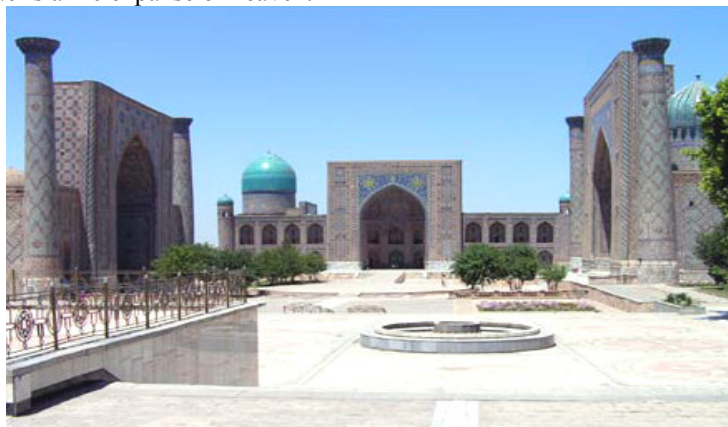
As an organizing item and a centre of the composition the dome form is used by W. Gropius to solve

the task of an architectural ensemble creation that is to synthesize two cultures – the Eastern and the Western one. In 1957 he makes a project of a University town near Baghdad. In the project he tries to join rational aspects and the latest achievements in science and technology of the Western world together with poetic symbolism of the Eastern world. Image-bearing and compositional idea of the complex is explained by the domination of the traditional dome form in the East. The mosque that has a form of a huge dome welcomes those who enter the complex and it is perfectly viewable from different spots of the complex. Stressing the importance of the dome form for the Islamic architecture the author takes away usual walls and sets the dome in three spots immediately upon the land. Nevertheless such a modernistic decision didn't help the dome form to acquire the whole complex of authentic Arab image. Within this solution the dome philosophy has nothing to do with the philosophy of absent dome space. Contemplative Arab image of the Dome-Heaven is separate from the Earth as a place to perform contemplation.

There are examples when the dome as a meaningful form substitutes the traditional volume of the mosque (Pic. 4 b). Here the absolute form of the dome dictates the role of the mosque as an organizing principle for the city environment. In comparison with the mosque projected by W. Gropius this dome form gives holistic space of the mosque, the place on the Earth to speak to God.

4.2. Dome Forms in Project of New Algerian Parliament

The dome form as a powerful organizing and image-bearing principle gets from religious buildings to the constructions used for absolutely other purposes. The project of the New Algerian Parliament includes the People's National Assembly, the National Council (Senate), the Chamber (Congress) which all together form a big municipal square. Square space of each building includes the core of a dome form. Such a compositional decision has ancient traditions fixed, for example, within the Registan architecture in Samarkand (XV century). Three all-in-one medrese constructions with high portals, minarets and domes all together line the square. The blue medrese domes shining in the sun light finish the idea of the ensemble harmonious composition and bear the image of the unique Islamic expanse of heaven.



Pic. 5. The Registan in Samarkand (XV century)



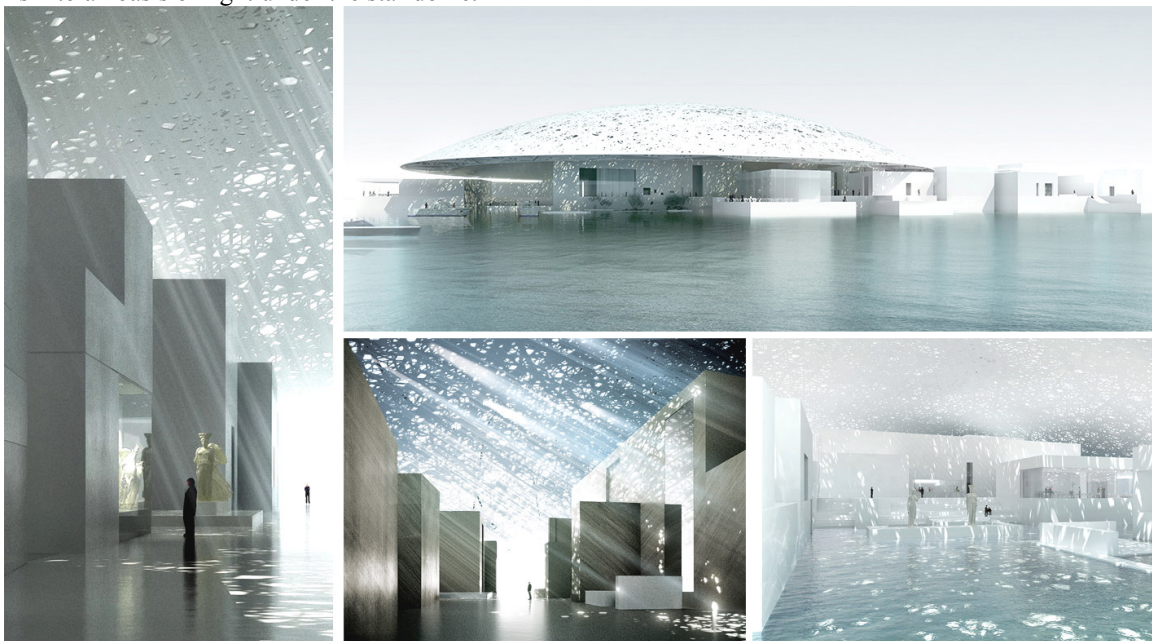
Pic 6. New Algerian Parliament. Bureau Architecture Méditerranée

The same square type molds the composition of the New Algerian Parliament. This composition is

realized on a huge, practically square-formed piece of ground and is East-West oriented. Thus, it symbolically unites East and West, modern-era of the new city and the tradition of the old one. The location of the Parliamentary Assembly and the National Council on either side of the square is determined by the monumental portal-gate. It is the entrance to the immense plaza fixing the North-South axis. The Conference-Hall accomplishing the main axis forms the eastern border of the plaza. All the buildings are joined by the same topic – the dome. The dome crowns the circular form of the Conference-Hall. In the plan of the Senate and Congress buildings there are assembly halls topped by the domes. These central spaces join numerous offices, lobbies, etc. Hence, three domed buildings traditionally shaped in a square form fix ensemble orientation within cardinal points and form its skyline against the background of historical monuments. The simplicity of huge forms belonging to the domes and their opposition to singular minor buildings fully corresponds to the traditions of Arabic architecture.

4.3. Dome in Project of the Louvre Branch in Abu-Dhabi.

An interesting example reflecting the whole complicated symbolism and image-bearing nature of the dome form is the project of the Louvre branch in Abu-Dhabi by French architect J. Nouvel. The dome as a dominant form that covers three thirds of the mini-town that is projected is chosen not by coincidence. One of the determinant factors is the location of the museum. It is at the seaside on an artificial island and thus, it is “an island on an island” Saadiyat. It is gathering of a great number of small constructions 4-10 m tall surrounded by water basins and greenery. The dome, underlining the location of the museum, at the same time stresses the idea that the town is on the East-Western route (joins Europe and the Indian Ocean, Asia and Africa), thus, marks crossing of civilizations. The dome as a basic symbol of the traditional Arabic architecture now is given within modern interpretation. It is presented by some odd intertwinemements that all together accumulate geometric holes as an interpretation of palm leaves which were traditionally used for roofing. Such a solution presupposes the creation of shadows within the space of the museum chaotically pinned through by the day light. At night the interior turns into an oasis of light under the star dome.



Pic. 7. Project of the Louvre Branch in Abu-Dhabi. J. Nouve

Thus, light solution within the museum gets architect-philosophical value. The light as a basic factor of an image uprise is mentioned by L. Corbusier: “The sun law predicted architecture since its first days” (Corbusier 1972). Within the interior light streams create an image of a light rain that changes its direction together with the sun motion. Light reflection in the water basins increases its shimmering effect. Modeling constantly changing light-shadow stream the author attaches modern interpretation to the dome space that corresponds to the present existence world perception. With the help of traditional symbolic forms of national Arabic architecture and advanced technologies J. Nouvel manages to render understanding of “modern changing architecture through transparent depth, reflections, form variations at different light angles”.

5. Conclusion

The dome as a meaningful form in Islamic culture that is vivid in traditional architecture keeps its image-bearing nature in modern Arabic architecture too. Expressing unique national specifics it produces mega-images.

Preserving its organizing power the dome is a symbol of all attracting center, thus, creating the image of the Universe center. The dome is the very expanse of the heaven, shroud and at the same time the Word, God's Message. Modeling light stream in the interior the dome expresses philosophic ideas taking into account as Neo-Platonism so the very ambiguity of existence.

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First A. Wail Houssin. Place and date of birth: Syrian 15.09.1961

M A. in Architecture " Kharkov Civil Engineering Institute, Kharkov / Ukraine. Ph. D in Architecture (2001) Kharkov State Technical University of Construction & Architecture, Ukraine. Theory of Architecture, Restoration of Architectural Monuments.

General Manager Assistant of Engineering Directorate, Restoration Department, General Directorate of Antiquities and Museums from 2002 to 2006. General Coordinator(Executive Director) of Arab Archaeologists Union, from 2006 to 2nd Oct.2007. Damascus- executive office/ Arab Archaeological Union/ Arabian Educational Scientific and Cultural Organization, Arab Countries Community. General Manager assistant of Historical monuments and Archaeological Documentation in Directorate General of Antiquities and Museums / Ministry of Culture – 2007. General Manager of

Historical Monuments and Archaeological Documentation in Directorate General of Antiquities and Museums / Ministry of Culture. from 7th Jen.2008 to 1st Oct.2009. Official Engineering Consulting Works, From 1st Oct. 2009. Professor of Alepo University, Department of Archaeology, 2007-2009. Professor of Applied Science Privet University, Jordan- Amman.from 2010-2012. Professor of Taibah University, Al Ula Community College, Saudi Arabia.from 2012 up to date.

Traditional and modern Islamic Arabic architecture, the problems and the ways for development. Architectural restoration and re-preparing historical old cities.

Second A. Yulia Zhmurko. Place and date of birth: Kharkiv (Ukraine), 15.06.1975

PhD in Architecture, Associate Professor, Department town planning, O.M. Beketov National University of Urban Economy in Kharkiv Since 2001 – Ph.D. in Architecture Since 2010 – Associate Professor

Spheres of research work: compositional-esthetic problems of modern architecture, philosophy of architectural environment perception.



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