

FORM AND FUNCTION IN THE CONGREGATIONAL MOSQUE

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A large number of scholars have argued that (a) Islamic architecture is hidden, in the sense that its interior is not articulated on the basis of its exterior; (b) the form of Islamic buildings neither expresses nor embodies its function; and (c) Islamic architecture is not tectonic or structural, but iconic in character. In this paper, we use Ernst Grube's analysis of these three claims and focus our attention on the design of the congregational mosques. This paper presents informed arguments against these claims. We begin the discussion with a clarification of the meaning of 'form follows function'. A clear understanding of the relationship between these two concepts is indispensable for evaluating the claims that Grube makes in his analyses. Then we argue that the form of the congregational mosque embodies its function in a significant manner. Finally, the paper explains in some detail how the function of a mosque is the basis on which its formal structure is designed. The proposition that we defend in this paper is that Islamic architecture exists and expresses the spirit of Islamic culture.

I. INTRODUCTION

Some of the prominent writers on the question of the identity of Islamic architecture, whose views remain influential in contemporary discourse on this question, have argued that, firstly, Islamic architecture is hidden, in the sense that its interior is not articulated on the basis of its exterior; and consequently the exterior of the building does not reveal its interior or identity;¹ and that, secondly, the form of the Islamic building does not express or embody its function; that is, there is no causal relation between its form and function.² In the words of one critic, there is a total absence of Islamic architecture. This means that the buildings that Muslims use are not Islamic in terms of their physical structure. Thirdly, and a corollary to the preceding two claims, Islamic architecture is

¹ Oleg Grabar, 'The Iconography of Islamic Architecture', in *Islamic Architecture and Urbanism: Selected Papers from a Symposium Organized by the College of Architecture and Planning*, ed. Aydin Germen (Dammam: King Faisal University, 1983), 6–16; 'Symbols and Signs in Islamic Architecture', in *Architecture and Community: Building in the Islamic World Today*, ed. Renata Holod (Millerton, NY: Aperture, 1983), 25–32; Ernst Grube, 'What Is Islamic Art?', in *Architecture of the Islamic World*, ed. George Mitchell (London: Thames and Hudson, 1978), 10–14; see also other essays in Mitchell, *Architecture of the Islamic World*.

² Ernst Gombrich, *The Story of Art*, 16th ed. (New York: Phaidon Press, 1995); Basil Gray, *Persian Painting* (New York: Skira, 1961); Keith Critchlow, *Islamic Patterns: An Analytical and Cosmological Approach* (London: Thames and Hudson, 1976); 'Astronomical and Cosmological Symbolism in Islamic Patterns: The Objectivity of Sacred Geometry', in *Theories and Principles of Design in the Architecture of Islamic Societies*, ed. Margaret Sevckenko (Cambridge, MA: Aga Khan Program for Islamic Architecture, 1988), 47–56.

allegedly not tectonic. We identify an Islamic building not by its formal structure, but by a multiplicity of symbols, representations, mosaics, colourful configurations, Qur'anic inscriptions, and other iconic devices. In this paper, we argue against that view, and the architectural type we select for analysis is the congregational mosque (*al jame'e*). We hope that the conclusions of this research will shed light on all types of Islamic architecture.

The paper comprises three parts. In the first part, we present a brief analysis of Ernst Grube's view of Islamic architecture, mainly because his discussion of the three claims is both comprehensive and systematic in nature. In the second part, we present an in-depth, yet new analysis of the concepts of form and function. A clear understanding of the relationship between these two concepts is indispensable for evaluating and rejecting the claims of Grube. Moreover, as we argue, the claims that the Islamic architecture is hidden and that it is non-tectonic in nature, are founded on the assumption that the form of an Islamic building does not embody its function. In the third part, we critically evaluate Grube's three claims. Here, we argue that the form of the congregational mosque embodies its function; and we explain in detail how the function of the congregational mosque is the basis on which its formal structure is designed. The research we present defends the presence of Islamic architecture and signifies the spirit of Islamic culture within the form of mosques.

II. GRUBE'S VIEW OF THE CONGREGATIONAL MOSQUE

It is, we think, appropriate to begin our critical evaluation of the widely held view that Islamic architecture (a) is hidden, (b) disregards the generally recognized principle that the form of an architectural work expresses, follows, or reveals its function, and (c) is non-tectonic in character, with a brief analysis of the main arguments advanced in support of these propositions, primarily because we cannot, and should not, accept or reject any claim, regardless of its absurdity, without examining the validity of such arguments. In addition to Grube's view, we will refer to other scholars when necessary.

The first argument centres on the contention that Islamic architecture is *hidden*. 'One of the most striking features of all Islamic architectural monuments,' Grube writes, 'is their focus on the enclosed space, on the inside as opposed to the outside, the façade or the general exterior articulation of a building.'³ By 'the inside' and 'the outside' of the building, Grube means the formal structure we experience when we perceive a building from the inside and the outside. These spatial dimensions, which are supposed to be *of the same* building, are not causally

³ Grube, 'What Is Islamic Art?', 10.

related to each other, in the sense that the one does not influence the other. The absence of this relation is what accounts for the preeminent emphasis of one over the other, that is, it explains why Islamic architects have tended to disregard the exterior of the building in favour of its interior, and this is why architectural monuments, such as congregational mosques, are 'completely hidden by being totally surrounded by secondary adjacent buildings (for instance, a *bazaar*). This "hiding" of major monuments goes hand in hand, with a total lack of exterior indications of the shape, size, function or meaning of a building.⁴ But this hidden design betrays the absence of any causal relation between the exterior and interior of the building, in the sense that the exterior neither articulates its structure or formal design, nor reveals its purpose. Grube illustrates this point with an example. A dome may come into view from a distance, but it sinks into a maze of domes, cupolas, and roofs of other buildings when one approaches it. However, regardless of the role that the dome plays in the structure of the building, it can signify 'power, the royal city, the focal point of assembly; it can therefore serve both religious and secular purposes. Its outward visible appearance does not truly help us to understand, interpret or identify any building.⁵ Although there are exceptions, for example, the Dome of the Rock, the dominant type of architecture that is truly Islamic is hidden architecture, one that is discovered, interpreted, and appreciated when we experience its interior, not its exterior. But if the building does not express or articulate its interior structure, it should follow that, taking into consideration a few exceptions to this general phenomenon, its exterior, as a general architectural dimension, is separate from its interior. This type of relationship is what makes Islamic architecture hidden; it is also what makes it immune to external influence and, according to Grube, to Islamic culture, in the sense that the buildings the Muslims built did not assimilate their culture, and remained uninfluenced by it. In other words, Islamic architecture is not an expression of Islamic culture but of the cultures that were incorporated into the Islamic world. In Grube's words,

Always and everywhere in the Muslim world, forms of architecture were built that remained basically unaffected by the process of Islamicization of pre-Islamic and non-Islamic cultures; unabsorbed by Islamic art, these forms were consequently not an expression of Islamic culture but of the cultures from which they were originally derived.⁶

A corollary to the idea that Islamic architecture is hidden is a disregard, if not a negation, of the fundamental architectural principle that form follows,

⁴ Ibid.

⁵ Ibid, 11.

⁶ Ibid, 12.

expresses, or articulates function – or in Wright’s view, that the form of a building represents its function. The claim that an architectural work is hidden logically implies a discontinuity between its interior and exterior. There is almost a total absence of specific architectural form for a specific function. There are many forms in Islamic architecture that cannot be adapted for a variety of purposes; conversely, a Muslim building serving a specific function can assume a variety of forms.⁷ Accordingly, an Islamic building is not a spatial formation designed around a focus that reveals or serves a particular function, but a structure that can serve a variety of functions. With a few exceptions, this feature, Grube writes, applies to all Islamic buildings. For example, when a visitor enters a mosque and finds himself in the courtyard, he is

generally drawn alongside the prayer hall, down the width of the courtyard. This is often at right angles to the true metaphysical ‘direction’ as indicated by the qibla and, in turn, by the mihrab, the absence of which would in many cases leave the visitor unsure of his orientation – something that would never happen in a basilica or a Classical temple.⁸

But the absence of a focus in the Islamic building reveals another feature – namely, fluidity or absence of balance –, which is a basic feature of European architecture. We say ‘fluidity’ mainly, because Islamic buildings lack a basic, stable structure, according to the research of Grube. This is why one can add or modify the space of an existing building without undermining its architectural integrity. There is always a possibility of new spatial arrangements within this structure.

But if Islamic architecture is hidden, if the building we perceive when we approach it does not reveal its function or identity, how do we know that it is an Islamic building? Can we know? Furthermore, if the exterior of the building does not reveal its Islamic identity, can its interior reveal it? The answer is yes, but the point of the identity is not its structural form; that is, the building is not architectural or tectonic, but symbolic, or iconographic, in character. When we are inside the building we know that it is Islamic not by experiencing the formal structure of its interior, but by the symbols, representations, Qur’anic inscriptions, mosaics, colourful configurations, and figures that are meaningful to Muslims. In contrast to Western architecture, which is fundamentally structured, Islamic architecture is fundamentally iconic. In this context, we are reminded of Grabar’s questions: ‘What distinguishes a minaret in Cairo from the tower houses of San Gimignano in Italy or Big Ben in London? What makes the former Islamic and the latter non-Islamic?’⁹ Implied in these questions is the claim that the feature that makes the minaret Islamic is not its formal structure, since it does not differ

⁷ Ibid.

⁸ Ibid, 13.

⁹ Grabar, ‘Iconography of Islamic Architecture’, 52.

from that of the Big Ben, but from the Islamic symbols attached to it. Grube expresses this point lucidly, when he writes: 'Islamic architecture at its best, and its most Islamic, is truly a negation of architecture; it aims at a visual negation of the reality of weight and the necessity of support.'¹⁰

III. THE CONCEPTS OF FORM AND FUNCTION

Regardless of whether it is a house, a bank, or a temple, architectural forms are a *spatial formation*. The walls, floor, roof, façade, and ornaments are not what define architecture, but just the means by which a dimension of space is *transformed* into a physical structure or a building. Accordingly, any discourse about architectural works is in effect a discourse about space; and because 'architecture' is a general or abstract concept, meaningful discourse about any architecture always proceeds with reference to particular architectural works or particular architectural forms and the kind of tectonic, functional, stylistic, or aesthetic qualities they manifest or express. Next, unlike any other type of art, architecture is a functional art. Although some arts, such as music, can be used for therapeutic purposes, works of fine art are created for the sake of aesthetic appreciation and contemplation. We do not create architectural works in order to contemplate them the way we contemplate paintings, symphonies, or poems, but in order to perform certain functions in them, for example, dwelling, playing, working, socializing, or studying in them. But, although functional, an architectural work is a creatively made object like any other object in the fine arts. The process by which the architectural work is produced is the one in which an indeterminate magnitude of space is formed, according to a certain design whose purpose is to serve a particular function. But how does the design, which first emerges in the mind of the architect as an intuition and then become a kind of schema, or a plan, on paper, *become* a three-dimensional structure or building, or how does it step into actuality in the mode of a *particular* spatial formation?

The relation between the form and the function of the architectural work is intimate, indeed organic, primarily because the work is intended, indeed exists, to serve a specific function, and without this function it would not exist. We would not be mistaken if we said that the function is the *reason for being* of the architectural work. Now, what do we mean when we speak of 'form' in architecture? How is it related to the function it is supposed to serve?¹¹ We raise this question because we cannot adequately evaluate Grube's claim that Islamic

¹⁰ Grube, 'What Is Islamic Art?', 13.

¹¹ On the topic of function, see Glenn Parsons and Allen Carlson, *Functional Beauty* (Oxford: Oxford University Press, 2012); Glenn Parsons, 'Design', in *The Routledge Companion to Aesthetics*, ed. Berys Gaut and Dominic McIver Lopes, 3rd ed. (New York: Routledge, 2013), 616–26.

architecture is a negation of structure, or of form; if we do not proceed with this evaluation from a clear concept of form, function, and the relation between them. What gives an architectural type or building its religious, cultural, political, or industrial *identity*? Or, what is the origin of such a form or building?

It is not our purpose here to discuss the historical development of the formula of 'form follows function' or how this underwent a diversity of interpretations and refinements in the hands of writers on architecture, nor to participate in the numerous controversies that surround them, for this task is beyond the scope of this paper, but simply to use it as a *conceptual framework* for a logical analysis of 'form', 'function', and the relation between them.¹² Such an analysis would, we believe, pave the way for evaluating the validity of the claim that the form of the congregational mosque does not express or reveal its function and that it is not tectonic but iconographic in character. Our primary objective in this paper is to provide a reasonable explanation for the *identity* of the congregational mosque.

We begin with Sullivan's statement of the formula 'form follows function', primarily because his articulation of this formula is the source of all subsequent theorizing and criticism of the analysis of the nature of architecture as an art form. The insight implied in it remains a rich source of understanding in the analysis of the concepts of form and function:¹³

Whether it be the sweeping eagle, in his flight, or the open apple-blossom, the toiling working-horse, the blithe swan, the branching oak, the winding stream at its base, the drifting clouds, over all the coursing sun, *form ever follows function*, and this is the law. Where function does not change, form does not change. The granite rocks, the ever-brooding hills, remain for ages; the lightning lives, comes into shape, and dies, in a twinkling [...]. It is the pervading law of all things organic and inorganic, of all things physical and metaphysical, of all things human and of all things superhuman, of all true manifestations of the head, of the heart, of the soul, that the life is recognizable in its expression, that form ever follows function. *This is the law.*¹⁴

Although Sullivan articulated this formula in 1896 in 'The Tall Office Building Artistically Considered', it did not gain general acceptance in the architectural

¹² For some context, see John Hendrix, *Architectural Forms and Philosophical Structures* (New York: Peter Lang, 2003); Jan Michl, 'E. H. Gombrich's Adoption of the Formula Form Follows Function: A Case of Mistaken Identity', *Human Affairs* 19 (2009): 274–88; 'A Case against the Modernist Regime in Design Education', *International Journal of Architectural Research* 8 (2014): 36–46.

¹³ See Parsons and Carlson, *Functional Beauty*.

¹⁴ Louis Sullivan, 'The Tall Building Artistically Reconsidered', *Lippincott's Magazine*, March 1896, 408, <https://archive.org/details/tallofficebuildi00sull>. See also his *The Autobiography of an Idea* (New York: American Institute of Architects, 1924), and Horatio Greenough, *Form and Function: Remarks on Art, Design, and Architecture* (Berkeley, CA: University of California Press, 1958).

community, and did not become the basis of modernist theory, practice, and pedagogy in architecture, until the second quarter of the last century. It was an attempt to explain (a) the relation between form and function and (b) what it means for a building to be an architectural work. The first key word in this formula is 'follows', primarily because it (a) points to and (b) defines the relation between the form and the function of a building, and it would not define or even relate them if they did not either logically or existentially imply each other. The formula is not only *descriptive* in character, in the sense that the form of an architectural work always follows its function, a phenomenon we can observe in nature and architectural works, but also evaluative, since it (a) defines the task of the architect – namely, to make sure that the design they are about to create will perform the function it is intended for adequately – and (b) functions, as Parsons and Carlson have cogently argued, as a basis for the evaluation, identity, and aesthetic worth of a building.¹⁵ But what does the term 'follow' connote in this context? Let us at once state that by this term Sullivan does not mean merely 'utility' or 'practical purpose', but something deeper and more generalized in context. It implies that the relation between form and function is dynamic and causal. The function of a building determines, to a large extent, the kind of form it should, or can, have; and the kind of form the architect conceives will, under certain technical and material conditions, transform the design from an abstract schema into a three-dimensional reality. Without this intimate causation, Sullivan would not, and could not, have articulated the formula as a universal principle that applies to every type of structure in the spheres of architecture and nature. This is why it is reasonable to hold that the function of a building is the ontological source from which it arises, not only as a design but also as a spatial formation; it is equally reasonable to hold that the building *flows* from this origin.¹⁶ Was it an accident that Frank Lloyd Wright tried to capture the essential meaning of 'follow' in 'form follows function', when he said that the architectural work should flow from its environment, where the impetus of this flow is the function of the building? (The third part of this paper will seek to shed more light on this.)

Now, the form of the architectural work is not identical with its appearance, or with a particular shape, but with the way its elements are structured; it represents their *mode* of organization. The experience of the building as an architectural work is an experience of a three-dimensional object composed of certain

¹⁵ Parsons, 'Design'; Parsons and Carlson, *Functional Beauty*, chaps. 2, 4, 6.

¹⁶ Frank Lloyd Wright, *The Natural House* (New York: Bramhall, 1954); *A Testament* (New York: Bramhall, 1957); *An Organic Architecture: The Architecture for Democracy* (Cambridge, MA: MIT Press, 1970).

elements. It is an experience of those elements in a structured manner, describing their dynamic interrelatedness. This is the reason why we are able to perceive or intuit its identity, as a particular building or as a building that exemplifies a certain type of architecture, through experiencing it. It allows us to articulate and apprehend it as an aesthetic identity; and makes us comprehend that the relation between its identity and form is not arbitrary. Next, when we speak of the function of a building, we mean the function for which it was designed. As we indicated earlier, we do not erect buildings merely to appreciate them aesthetically, for if we did this, we would interact with them as sculptures, rather than as architectural works; mainly because we would not experience them from the standpoint of their functional aspect. But function is an essential ingredient of the experience of the building as an architectural work. We sometimes erect buildings that serve more than one function. This fact is consistent with the claim that a building is erected to serve a particular function.¹⁷

Sometimes we use certain buildings to serve different types of purposes by default. In such cases, the building is used as a utilitarian object the way we might, in an emergency, use a jacket to mop a wet floor. These and similar cases fall outside the parameters of our discussion. The question at hand is what do we mean by 'function' when we say that a certain building follows its function? We should first point out that 'function' is a general concept. It does not and cannot refer to a building that serves a general function, primarily because such a function does not exist. Moreover, it would be strange, if not improbable, for a person to ask an architect to design a building that performed a general function. Normally buildings are designed to perform particular functions: building X is designed to perform function Y, for example the Palais Garnier opera house in Paris, the Al-Aqsa Mosque in Jerusalem, or Lincoln Center in New York. We mention these examples because they are famous, but our question refers to every case in which an architect is asked to design a certain building, regardless of whether it is a hospital, a community centre, or a library. What is the source of the design – that is, the form – of such a building? We can say, as we have already explained, that the source is its function. But how is this function *articulated* into a design, so that it reflects, or objectifies, the logic or structure of the function, so that the function *becomes present in* the design? The idea of the function of a building originates in a particular environment – physical setting, a social context, a specific need, particular technological resources, people who will use the building, types of materials, in short, a particular *cultural milieu*. The challenge for the architect has always been to articulate the design of the building on the basis of a *synoptic vision* that comprehends these elements

¹⁷ Parsons and Carlson, *Functional Beauty*.

as a whole, or as Wright would say, as an organically interrelated whole, to discern the relation between them, to intuit the logic implicit in them, and to weave the kind of design inherent in this logic. The intuition of this logic is the *inception* from which the design of the building *emerges*. Accordingly, a need is articulated, or translated, into a design when the demands implicit in its structure are reflected in the structure of the design; that is, when it is the result of a comprehensive vision of the elements from which it arises. How this articulation takes place and the assessment of the extent to which it is successful are not concerns discussed in this paper. What matters to the current discussion, and also to the architect who is charged with the design of a certain architectural work, is that the locus at which the design process originates constitutes the function the building is supposed to perform. Concerning this, we would make two brief remarks. The first concerns loyalty to the design. The loyalty of the design to itself describes the logic used in the inception of the building. It defines the honesty of the building: an architectural work is honest inasmuch as it grows from its environment, or inasmuch as the design that actuates it also embodies the function that occasions it. It is reasonable to view the design as a 'response' to a problem in need of a solution. It is adequate inasmuch as it succeeds in solving the problem. The second remark is that we *read* the function of the architectural work in the process of experiencing it. This implies that the work is a kind of language – an *eidetic* language. For example, the composer thinks musically, the painter thinks pictorially, the dancer thinks dynamically, that is, in terms of motion. The architect thinks spatially. What is the alphabet of the language of architecture? The elements of this language are the functional aspects of the building, which are in turn reflected in its formal structure. These elements differ from one architectural form to another, from one style to another, and from one building to another. The kind of environment in which the building grows and the nature of the creative process through which the design is born determine the quality and quantity of the difference. We learn to read the function of the architectural work the way we learn ordinary language – by practice – in the process of social growth and development. Here we learn that certain types of building perform certain types of function. For example, we learn to identify a house, a library, a mosque, a church, a gymnasium, or a department store by conducting certain types of activities in them.

IV. CRITICAL EVALUATION

The propositions that Grube defends, as we saw in the first part of this paper, are: (a) Islamic architecture, and consequently the culture in a congregational mosque, is hidden; the interior of the building is not articulated on the basis of its exterior.

Accordingly, there is no necessary connection between the look of the buildings on the outside and the inside. (b) There is a general absence of Islamic architectural form. An Islamic building can easily serve more than one function. Accordingly, the relation between form and function is not causal in character. (c) The Islamic building is non-tectonic; it is a negation of strong architectural structure. Its identity is defined by its intention – by Islamic symbols, representations, figures, mosaics, Qur’anic inscriptions, and similar iconic devices. A careful yet critical examination of these propositions will show that they are based on one primary assumption: that the form of the congregational mosque does not follow, express, or embody its function. That is, Grube can logically say that the focus of the mosque is on its interior and that it is non-tectonic in character, because he assumes that the relation between its form and function is not causal in character, for the existence of such a relation would undermine the claim that its interior is not articulated on the basis of its exterior and that it is not an organically interrelated whole. But asserting that the focus in the mosque is exclusively on its interior and that it is non-tectonic is tantamount to asserting that the formal structure of the building is not causally related to its function. Let us defend this assertion in more detail. This defence will be based on two lines of reasoning, the first on an empirical observation of the congregational mosque as an Islamic phenomenon and the second on a direct aesthetic analysis of the mosque as an architectural work.

What does Grube mean when he says that the mosque is hidden? Is it hidden from its exterior? Yes, because the interior is not articulated on the basis of its exterior. Is it hidden from the observer? Yes, but in what sense? It is hidden in the sense that the exterior does not indicate, reveal, or point to its interior. Why? It is hidden because it is surrounded by adjacent buildings. It is difficult for a stranger who happens to be in the vicinity of a congregational mosque to recognize it, because (a) there is no façade or particular architectural form that reveals its existence or identity, and (b) even if a stranger were to stand before its façade they would not recognize it. This is because an Islamic architectural form is absent. This second reason reflects Grube’s claim that the mosques Muslims built were not Islamicized. But are these reasons cogent or satisfactory? Our answer to this question is in the negative.

Firstly, contrary to Grube’s claim, the majority of the mosques in the Islamic world from the eighth century to the recent past were not totally ‘surrounded’ by adjacent buildings, nor is it true that their façades did not reveal or indicate their Islamic identity. We aver that some mosques were overwhelmed by their urban environment, for example, the Umayyad Great Mosque of Damascus, but this is not a typical representation of the majority of the mosques that punctuate

the Islamic world. An analysis of the historical conditions under which they were built and necessitated this type of 'hiding' cannot attribute those to architectural *intentions*, but to the economic, security, technological, political, and natural conditions under which they were built; that is, they were not designed *on the principle* that the exterior would not be an integral part of the interior. Whenever these conditions did not prevail, the congregational mosques stood as monumental works of architecture, works that clearly revealed their Islamic identity. Not only the mosques, but the Christian churches too were influenced by these conditions; they were part and parcel of the life of all the religions that thrived in the Near East during the Umayyad and the Abbasid periods of Islamic civilization. For example, most if not all of the Christian churches in the major cities of what was then Syria were, like the mosques, surrounded by adjacent buildings; they were integral parts of their urban environment. But from the fact that the mosque is co-extensive with its urban landscape, it does not necessarily follow that as an architectural work it is hidden from its exterior, in the sense that its exterior does not indicate the shape, function, or identity of the building, so that there is no dialogue between them, as if the two were unrelated structural forms.

Moreover, in his attempt to establish the validity of his claims, Grube focuses on the Umayyad Great Mosque of Damascus as a typical example of hidden architecture, in contrast to the Al-Aqsa Mosque in Jerusalem, as an exception to the hiddenness of the Islamic mosque. But is the Great Umayyad Mosque typical while the Al-Aqsa Mosque is an exception? Again, did Muslims borrow their architectural structures from non-Islamic and pre-Islamic cultures? We are inclined to think that Grube's characterization of Islamic architecture is simplistic, naïve, and in fact mistaken; mainly because it strongly resists empirical verification and sound critical analysis of the mosque as a manifestation of Islamic culture. It is true that the Umayyad Great Mosque was erected on the structure of St John's Church, in the sense that it is hidden from its exterior, which, in turn, was erected on the structure of a Roman temple; it is also true that the mosque is co-extensive with souqs or bazaars around it, although there is a big square in front of the façade – but does this two-fold aspect make it (a) hidden, in the sense that it is hidden from its exterior, and (b) un-Islamic, in the sense that it does not embody Islamic culture? Firstly, we should remember that Damascus is the oldest inhabited city in the world. If we take this into consideration, as we pointed out earlier, the economic, security, technological, political, and natural factors that prevailed during its erection in the reign of Caliph Al-Walid I, it would be logical that not only the mosque, but any religious building were erected in the midst of an urban setting. But this necessity is exactly what makes the Umayyad Great

Mosque an atypical example of 'hiddenness'; it is mainly because the mosques that were built later on in Iraq, Egypt, Persia, and North Africa are not hidden in Grube's sense of the word. On the contrary, to a large extent and in principle, they followed the example of the Al-Aqsa Mosque, which was and remains a model in the design and construction of a typical mosque.¹⁸

However, the claim that the Umayyad Great Mosque is an integral part of its urban setting does not necessarily entail, as we have already indicated, that its interior is hidden from its exterior qua architecture. It only means that it is difficult to recognize the mosque in a densely populated setting, such as Damascus. We discuss this point in greater detail in the second part of this section. But the more serious claim that Grube makes is that, like the rest of the congregational mosques in the Islamic world, the structure of the Dome of the Rock is not Islamic; it is borrowed from non-Islamic architectural forms in Syria, Persia, India, and North Africa. This is a serious claim; but it is incorrect, even baffling. We will begin our response to this claim with an empirical observation of the congregational mosques in the Near East, since this region was the cradle of early Islamic architecture.

Contrary to Grube's claim,¹⁹ the Dome of the Rock and soon afterwards the Umayyad Great Mosque came to be the models emulated by the majority of Islamic architects in the early centuries of the Islamic Empire and, later on, in the Ottoman Empire. When we say 'model', we mean the *kind* of design or structure that embodies the basic beliefs and values of Islamic culture. This structure, which may differ artistically from one mosque to another and from one country to another due to aesthetic, economic, social, technological, and personal factors, always took into consideration the basic architectural elements of the Al-Aqsa Mosque and the Umayyad Great Mosque, which can be traced in their basic outline to the house Muhammad built in Medina and which served religious, political, and social functions.

Next, it is true that the Umayyad Great Mosque was built on the structural foundation of a Christian church; it is also true that Muslim architects employed the vocabulary of non-Islamic architecture, such as dome, tower, capital, base, minbar, and pointed arch. But does the use of this vocabulary imply that their work is not Islamic? No. We should recognize that when Islam moved from

¹⁸ Jonathan Bloom and Sheila Blair, *Islamic Arts* (New York: Phaidon Press, 2012); Robert Hillenbrand, *Islamic Art and Architecture* (New York: Thames and Hudson, 1999); D. Fairchild Ruggles, ed., *Islamic Art and Visual Culture: An Anthology of Sources* (Oxford: Wiley-Blackwell, 2011); Oliver Leaman, *Islamic Aesthetics: An Introduction* (Notre Dame, IN: University of Notre Dame Press, 2004).

¹⁹ Grube, 'What Is Islamic Art?'

the Arabian Peninsula northward into Syria, Byzantine culture was the established culture of the region. The architectural vocabulary that prevailed in the Near East was a continuation of the architectural tradition that began in ancient Greece and continued in Rome. It was only logical, indeed realistic, that Muslim architects would employ this vocabulary, not only because it was readily available, but also because there was no better alternative. However, the mere employment of a historic vocabulary is not what gives an architectural work its cultural or religious identity and character. These are the instruments that give the building its particular structure. What gives it its particular identity is *the way this stuff is formed* or structured; put differently, the *locus* of this identity is not merely the kind of vocabulary the architect employs in the erection of the architectural work, but the *creative activity* by which the design of the building comes into existence. Artistic creation is the ultimate source of the design and consequently, of the cultural or religious identity of the building. Yes, Caliph Al-Walid I used the enclosure of St John's Church to build the Umayyad Great Mosque, and his architect employed Byzantine vocabulary in erecting the mosque, but its design originated in a Muslim mind. The Roman temple was transformed into St John's Church and the church was transformed into the Umayyad Great Mosque. If, as Grube claims, Muslim architects used non-Islamic buildings and made them mosques by attaching Islamic symbols, representations, mosaics, Qur'anic inscriptions, and similar emblematic devices to them, why did the caliph pull down the church structure and replace it with a new one? And, yes, the Al-Aqsa Mosque employed Byzantine vocabulary in its construction, but it was an Islamic building. The dome that sits on a set of powerful columns over the rocks where, according to tradition, Muhammad ascended to heaven, is an architectural yet dramatic expression of an Islamic belief, one infused with a central religious value, nothing similar to which exists in non-Islamic architecture. It is a place where the human and the divine forms intersect – where the divine embraces the human on earth.

It is now appropriate to respond to the claim that architectural elements, such as dome, minaret, minbar, and entrance, which figure prominently in Islamic architecture, are not Islamic architectural forms. While Grube focuses attention on forms, such as the dome, Grabar focuses his attention on the minaret. He asks, as we mentioned earlier, what distinguishes a minaret in Cairo from the towers of San Gimignano in Italy or Big Ben in London? But the claim implied by this question, which is shared by many critics of Islamic architecture, betrays a gross misunderstanding of the use of such elements, not only in a mosque but in general architectural practice. For example, consider the cross as a basic symbol in Christian architecture. Christianity did not create the cross; it simply used it as

a symbol because Christians believed that Christ was tortured and died on the cross. The cross derives its meaning from this event. A church signifies its Christian identity in so far as it embodies the form of the cross in its structure. A structural element need not be created *ex nihilo* in order to acquire a cultural or religious character. In asking what distinguishes a minaret in Cairo from the Big Ben tower, Grabar, along with Grube, implies that there is no difference between them. But there is in fact a very big difference. The minaret is an Islamic architectural form; Big Ben is an English architectural form. Firstly, a 'general tower', a tower in itself, does not exist in the scheme of reality; it exists only in the mind of a philosopher. What we encounter in the sphere of reality are different *types* of tower – watchtower, lighthouse, and so forth. The form of each of these types is determined by the function it performs. The Big Ben tower acquires its identity from (a) the clock that is placed on its highest level, close to its steeple, which symbolizes the infinity of time as a cosmic category and perhaps the belief that scientific time is derived from this infinite time, and from (b) its formal design, which is completely English in character. The tower we see in some Christian churches is Christian simply because it helps to perform the function of calling the faithful to the prayers *by means of a bell*, and because of the artistic values of the cultural context in which it was designed. Similarly, the tower we see in the mosque throughout the Islamic world is a minaret simply because it helps to perform the function of calling the faithful to prayer *in person*, not by means of a bell, and the artistic values of the cultural context in which it is designed. What makes the minaret an Islamic tower is not merely the fact that it is a relatively tall structure, for such structures have always existed, even during the formative period of human civilization, but the fact that it is an integral part of the mosque, and especially the fact it helps to perform a particular function: calling the faithful to prayer. This applies to the analysis of the dome, the minbar, the entrance, and every other element of the formal structure of a congregational mosque.

When we enter the Umayyad Great Mosque, stand in its courtyard and in its prayer hall, and feel the *aesthetic presence* of the building, do we feel that we are in a church, although the tomb of St John occupies a prominent place in its enclosure? No: we feel, and know, that we are in a mosque, primarily because the structural form within which we move is *essentially* Islamic in nature. The centre of this presence is the qiblah that points in the direction of Mecca. This centre performs the same function as the altar in a Christian church. This and other congregational mosques in the Islamic world – Egypt, Iran, Turkey, Pakistan, India, North Africa, Indonesia – employ different types of architectural vocabulary, depending on the economic, artistic, historical, social, and

technological factors particular to the local culture; but this is a universal architectural practice. Isn't this what happened after the collapse of Athens and Sparta, when the Greeks moved to Syria, Egypt, Persia, and North Africa, intermixed with the cultures of these lands at the political, social, religious, cultural, economic, and intellectual levels, and after one hundred years the outcome was the creation of *Hellenistic* culture? Isn't this what happened when the builders of some of the monumental churches in France, England, Italy, Germany, and Spain employed the architectural vocabulary of Greek, Roman, and Hellenistic art in building their churches? Let us reiterate: it is not merely the elements employed in constructing a building that determine its cultural or architectural identity, but the way these elements are organized into a novel and expressive whole. The birthplace of this organization is the mind of the architect. But the architects are always the children of their culture. They think, feel, act, and consequently design their works from the bosom of the culture that nourished their spiritual heart.

Now the time is ripe to ask: What makes a building Islamic? A mosque is Islamic inasmuch as it *embodies* in its *formal structure* the basic beliefs and values that constitute the fabric of Islamic culture. We underscore the aspect embodiment in the formal structure only to emphasize the fact that a building cannot be Islamic if it does not declare its Islamic-ness in its structure. We are human beings not because a sign or a symbol or some token is attached to our heads, but because we reveal our humanity in what we think, feel, and do. These three types of activities constitute the formal structure of our humanity. Similarly, an Islamic symbol or a sign may signify or say that a certain building is Islamic, and people may worship in it and respect it as a religious place, but this does not necessarily make it Islamic. To be Islamic, it must have an Islamic identity, and it needs to have this identity inasmuch as it embodies Islamic culture in its formal structure: we experience the Islamic-making aspect of the mosque in its formal structure. Thus, if we can show, as we seek to do in the remainder of this paper, that the mosque *actually embodies* the basic beliefs and values of Islam and that we experience these beliefs and values in its formal structure, we will *ipso facto* have shown that Grube's claim that the mosque is not an Islamic architectural work is mistaken.

It is, we think, reasonable to say that the Islamic beliefs and values that are relevant to the analysis of architecture are the following: (a) faith, which means a firm, unwavering belief in God, that God is absolute in power, wisdom, and compassion, that the Word (*kalima*, the Qur'an) emanates directly from him, and that His Word is the basis of political, religious, educational, and social organization; (b) infinity, which is an essential aspect of God and consequently of the Islamic view of the world; (c) worship, which Muslims should do five times

a day by means of prayer; (d) simplicity, which means that the relation between a Muslim and God is direct, and does not involve intermediaries such as a clergy, icons, effigies, choirs, or symbolic rites; (e) community, which means that all Muslims constitute one community (umma) and that the bond of this community is the attestation that there is no god but Allah and that Muhammad is His messenger; and (f) universality, which means that Muhammad is the last and the seal of all the prophets and that Islam is a religion not only for the Arabs, but for all human beings on earth.²⁰

Now, if a mosque is Islamic to the extent that it embodies the basic beliefs and values of Islam in its formal structure, *in what sense* does this structure embody them? First, the key concept in this question is 'form', because unlike any other type of art but sculpture, architecture is a three-dimensional art. Thus, any discourse about form in architecture is one about formal structure. Accordingly, when we ask about the sense in which a mosque embodies the Islamic culture, we are in effect asking *how* its formal structure embodies its basic beliefs and values, that is, how certain beliefs and values become, or get translated into, a three-dimensional structure. In our discussion of this question, we assume the analysis of the concepts of form and function which we performed in the second part of this paper. This analysis is based on the fact that architecture is a functional art and that the function of the architectural work plays a decisive, if not the central, role in the design of a building, mainly because, as we argued earlier, the performance of a certain function is the reason for creating an architectural work. If this is the case, and we think the majority of architects would say it is, then the focus of this discussion should be function: what is the function of the mosque? Although it is designed to serve primarily as a place of worship in which the faithful pray and express their devotion and reverence to God, it is also designed to serve as an educational place and a community centre. The emphasis of these functions varies from one community to another and from one historical, cultural, and social setting to another. But, broadly speaking, worship seems to be the dominant function that this structure performs. However, it is not enough for the mosque to serve one or more religious functions, it is also important for it to be Islamic, that is, for it to serve people in the *Islamic way*, and it is Islamic inasmuch as it is designed to function as a place where the faithful worship God and interact as a Muslim community. This implies that the formal structure of the building should enable the faithful to pray the Islamic way and that the building should express the basic beliefs and values of Islam, so

²⁰ *The Qur'an*, trans. M. A. S. Abdel Haleem (Oxford: Oxford University Press, 2008); Karen Armstrong, *Muhammad: A Prophet for Our Time* (New York: HarperCollins, 2007); *Islam: A Short History* (New York: Modern Library, 2002).

that not only the faithful, but any person who is knowledgeable of Islamic culture, would recognize the building as a mosque when they experience it. In other words, the mosque should declare, by virtue of its formal structure, that it is an Islamic place of worship.

Second, how is a dimension of space transformed into a mosque? The principle of this transformation is, as we argued earlier, implicit in the primary function of the mosque: a place for prayer. This entails the creation of a place where the faithful can pray in the 'Islamic Way'. Thus, the mosque will derive its formal structure from the *demands implicit in the prayer and the conditions under which it takes place*. The discussion of this point is crucial to our argument against Grube's view that the mosque is not Islamic, for we are anxious to show that the formal structure, which is basically uniform throughout the Islamic world, originates in the function it is intended to serve and that this function is what gives it its Islamic identity: we know that a mosque is Islamic by experiencing its Islamic-ness in the building, not by anything external to its structure. We should here recall Bloom and Blair's assertion that 'it was the function that made a work of art Islamic'.²¹

Now, the demands and conditions under which the Islamic prayer takes place are the following. First, there is a need for a place where the faithful can pray, that is, a prayer hall. But Islamic prayer is a direct encounter between the individual and God. It does not involve, as we pointed out earlier, intermediaries of any kind; it is, in short, simple and non-ceremonial. But although it is an individual experience, prayer takes place every Friday together with other Muslims, which means that it is also a communal event. Community is a basic value in Islam; it is dramatically symbolized by the congregational mosque. The word 'congregational' translates the Arabic *jame'e*, which in turn comes from the verb *yajma'a*, meaning 'to bring together' or 'to unify'. Although the dome is practically a universal architectural element and is used as a symbol in different types of building, both religious and secular, it acquires a special symbolic function in the culture in which it is employed. In a congregational mosque, it points to the heavenly dome and the community of the faithful under God's watchful eyes. Second, the faithful should, when praying, face the Kaaba in Mecca which is a shrine that houses a stone revered by Muslims. We may describe this shrine as the ontological centre of Islam and the line that connects the mosque with it as the ontological line; it connects Muslims with that centre and signifies the unity of the Islamic umma. Accordingly, in addition to the prayer hall, there should be a place that points towards Mecca, mainly because it is often difficult

²¹ Bloom and Blair, *Islamic Arts*, 28. See also Hillenbrand, *Islamic Art and Architecture*; Leaman, *Islamic Aesthetics*.

to identify a particular direction. This place is called the qiblah. Third, the faithful are required to pray together on Friday noon in a mass gathering. On this occasion a member of the community, the Imam (see below), leads the congregation in prayer and delivers a sermon. There must therefore be a place for the Imam to deliver it. That is the minbar. Fourth, because prayer is a religious obligation, and because it was difficult until recently to determine the exact time of prayer, a tower called a minaret, similar in function to the Christian bell tower, was added to the formal structure of the mosque. A muezzin, who stands on a balcony near the top of the minaret, calls the faithful to prayer. But 'minaret' comes from the Arabic word 'manara', which means 'lighthouse'. This is why, as a symbol in Islam, the minaret performs not only the function of calling the faithful to prayer, but also that of illuminating their way and the way of the stranger to the mosque. Fifth, co-extensive with the prayer hall is a courtyard. It is usually surrounded by a wall, mainly to indicate that it is an integral part of the formal structure of the mosque. The function it plays in the life of the mosque, regardless of whether it is communal or pedagogic, has evolved; but regardless of this evolution, which varies from one culture to another, it expresses an essential Islamic value: infinity. The boundary of the mosque is not exclusive to the prayer hall but includes the open, infinite space of nature. In the prayer hall one stands under the dome, which symbolizes the heavenly realm, but in the courtyard, one stands under the infinite sky that arches over one's head as a divine dome; put differently, *the sacred* is not exclusive to the prayer hall, but includes the infinite space that streams into the prayer hall. Sixth, although it was not an element of the mosque in the second half of the seventh century, ornament became one of its basic elements during the reign of Caliph Abdul Al-Walid I, especially after the erection of the Al-Aqsa Mosque and the Umayyad Great Mosque. In decorating their mosques, Muslim architects shied away from imitation, especially of human and divine figures, and covered the interiors of their mosques, at least in part, and sometimes their exteriors, for example the minaret, the dome, and the entrance, with Qur'anic inscriptions, mosaics, and various colourful configurations. They always aimed at the abstract, the universal, at that quality which lifts the mind of the faithful upward towards heaven. The addition of ornament as a basic element of the mosque was a reflection of the belief that beauty is an essential aspect of God's essence.

An investigative look at the preceding elements will readily show that the formal structure of the mosque embodies the following basic beliefs and values of Islam: (a) *simplicity*, which reflects the simplicity of the event of worship; (b) *community*, which reflects the bond that constitutes the Muslims as a community; (c) *universality*, which reflects the absoluteness of God and

the universal message of the Qur'an; (d) *faith*, which reflects the absolute devotion and loyalty of the faithful to God and Muhammad as his messenger; and (e) *beauty*, which reflects the belief that beauty is an inherent aspect of God's essence. If we were to express metaphorically the thesis we have been elucidating and defending in the preceding pages, we would say that the *function* of the congregational mosque as an architectural work *springs* from the core of Islam as a religion and as a way of life, and that its *formal structure* springs from this very function. It is this intimate, indeed organic, two-fold relation which endows the congregational mosque with its Islamic-ness. It is naïve, indeed misleading, to think, as Grube has done, that a discussion about an architectural work can be reduced to only viewing its interior and exterior walls or shape. Although these are elements of the mosque, as we argued in the second part of this paper, the mosque is a spatial formation. The organic unity of all the tectonic and aesthetic elements, which flow from its function, is the soul of a congregational mosque.

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