FURTHER NOTES ON ARCHITECTURAL REPRESENTATION IN MINIATURES: THE CASE OF HEXAGONAL BUILDINGS*

Okan ÜSTÜNKÖK

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My interest in the subject has long been more than peripheral, but the present form of this essay has evolved only through the helpful suggestions and recommendations made by my wife whose views, thankfully, have always been crisper than mine. In the latter half of this century, a wealth of classificatory, descriptive, and interpretative material has accumulated on Eastern miniature painting. There is still a certain degree of persistent overlook, however, in identifying the technical manner of representation of architectural objects found in a large number of these miniatures. The particular reference here is to depicting in miniature paintings a building, a part of a building, or a free-standing object like a tent, a canopy, a throne or sometimes even a simple utilitarian table either as background or appurtenance to a scene. Although it is widely acknowledged that Eastern miniature painters represented reality in a way that was different from what was developed by the Renaissance artists in the West, the exact nature of the difference hardly seems to have been explained technically. This essay attempts at reexamining the representational technique used by the 15th and 16th century miniature painters in the depiction of a simple rectangular building or object in frontal view in a way that it would appear to have a hexagonal top view or plan form.

1. Special mention may be made of the pilgrims' paintings of Kaaba on the walls of their houses in Cairo and elsewhere, made upon their return from Mecca. For a specially relevant analysis of the representation techniques employed in these, see Michot (1978).

- 2. 'Quite recently, an experimental psychologist said to me, 'I would very much like to see the way you painters see'. This remark raises two points: first, that the demand of painters and psychologists may be different, and second, that individual visual experience is in some sense irreplaceable by the visual experience of another individual' (Finkelstein, 1979, 61). For some reason or other, the same perceptual discrepancy is also found in studies on many earlier art forms like those of ancient Mesopotamia and Egypt. Gombrich relates this to '...the mental set we have all derived from the Greeks...' and continues to suggest that 'so long as we assume that images in Egypt mean much the same as they do in the post Greek world, we are bound to see them as rather childlike and naïve... So we are accustomed to looking at all images as they were photographs or illustrations and to interpreting them as the reflection of an actual or imaginary reality (Gombrich, 1972, 104-105). Needless to say, Eastern miniature painting seems to have been subject to a good measure of this misfortune.
- 3. However, the proper medium for the representation of a building, at least at the design stage, was considered to be the three dimensional model and Renaissance painters were better skilled in the realistic depiction of buildings on two dimensional plane than their counterparts in architectural practice.
- 4. Mughal practice of the time, on the other hand, is mentioned by Smart (1974, 22-23) with a miniature from a manuscript of the Waqiat-i Baburi, illustrated for Akbar in Lahore in the late 1580s which, appropriately, shows an architect supervising a construction with the plan stretched before him. Contemporaneous practice of map-making may show even further similarities. For a short account of the Western and Eastern cartographic illustrations of the same period, see Rogers and Ward (1988, 90-91).

From Çatalhöyük to Pompei, and from countless churches to the 19th century mosques and mansions of Anatolia and the Balkans, a proliferation of real or imaginary architectural and urban portraiture in wall paintings and mosaics is considered to reflect an urge to capture and bring indoors the elements of the outside domain in a myriad of styles, compositions, and details or techniques of rendering (Ettinghausen, 1972, 28) (1). As stated by Erzen, a more intimate, almost personal exposure to architectural objects, however, is achieved through manuscript illustration due simply to the small size of the miniature paintings of the East (Erzen, 1991, 10-11). The same may be said of a certain genre of map illustrations as well.

When any illustration is in question, it is commonly accepted that the representation of an object is largely a matter of expression, whatever the size and the medium used, in that the artist essentially depicts the object in a manner that is possibly different from the way the beholder may be perceiving it (2). As such, it must be true also of the Eastern art of miniature painting despite the expectation that representation of the real object must carry a degree of documentary quality and, therefore, present a reliable level of objectivity, authenticity, and truthfulness. In order to discuss this point further, one wants to look first at certain technicalities.

In the West, what were to become the viable norms of representational techniques, like most tenets of architectural professionalism, were first recorded by Vitruvius. He defined a suitable picture as the realistic image of something that could or did exist in the physical world (Forseth, 1984, 14). The rediscovery of the linear perspective later in Renaissance firmly established the theoretical formulations of perspective construction in order to guarantee the truthfulness in representations of nature (Benevolo, 1977, 83). Along the Vitruvian definition, truthfulness for the Renaissance artists meant a theoretically correct representation of three dimensional forms to be made on a two dimensional plane (3).

Although not based on Vitruvian canons, Eastern architectural and engineering practices, too, are known to have possessed a level of professionalism not unlike that of the West. It is known, for instance, that technical, architectural scale drawings as well as realistic models of wax or other materials were made in the 15th and 16th century Ottoman Empire and the collection of the drawings in the Royal Architectural Workshop survived well into the 19th century (Necipoğlu-Kafadar, 1986; Ccrasi, 1988) (4). Art in Islamic countries, on the other hand, was not recognized necessarily as an imitation of reality like it was in the West (Ipşiroğlu, 1980, 113). Erzen still argues, however, that in the classical Ottoman period 'artistic work was conceived in a network of relations with a world already supplied and ordered with meaning' and that 'the artist was there to perform on an already ordered stage and to match his creation to an already perfect organization handed down to him' although this was all within a 'clearly theatrical atmosphere that may be rooted in the artist's world view' (Erzen, 1991,6). This must be true in the world of the miniature painter, too, and injects a certain twist to the documentary quality of his work depicting architectural and urban features, especially if one allows for the 'relational approach in which things... may change appearance according to how they are viewed' (Erzen, 1991, 7). The chosen tools of the miniature artist in his representation of the outside world are not, therefore, expected to be the same as those of other disciplines or those prescribed for contemporaneous Western painting. Orbay-Grignon connects this to an attitude which is said to lie at the base of the 'quasi-unanimous assumption that pictorial coherence can only be achieved with linear perspective' and, hence, of the reluctance to study the Eastern miniatures as an alternative pictorial system (Orbay-Grignon, 1996, 45-46). Although a detailed account of 5. There are of course a number of other theories on how a representational painting works perceptually. The Constructivist theory of Gombrich and the Gestalt theory of Arnheim are by no means dismissed by this statement and neither is the general validity of Gibson's Perspectivist theory. It should be noted that the specific focus here is not the perception itself, but the perception of the layout of space or of the architectural feature as depicted. E. Panotsky's (1991, originally 1924) seminal essay on perspective should perhaps be especially mentioned.

this argument remains outside the intent of the present writing, the fulcrum of challenge directed at the said attitude must be close to the claim that perspectivist theory is the only one to explain how the layout of space is to be perceived in pictures (Haber, 1979, 85). Therefore, scholars looking at Eastern miniature paintings must have long felt seriously restricted for proper means of assessment (5). In addition, the fact that practical aspects of the geometrical optics of perspective were originally proposed by Euclid millenia before the Renaissance may impede its universal validity further. However, the theory's critical shortcomings are not due primarily to its archaic roots, but more to its peculiar handling of the act of vision itself. In Haber's words, the rules of perspective work only for a one-eyed, motionless, and properly placed observer, because

'the pattern of light reflected to the eye from a scene will match that reflected from a proper depiction of the scene only if the observer uses one eye -the other eye, because it is in a different place in the observer's head, will receive a different pattern of light-, if the observer stands still, and if the observer stands with an eye exactly in the same position in space as the painter's eye when he depicted the scene' (Haber, 1979,85).

Many artists of the Renaissance were obviously aware of these shortcomings, like foreshortening, and tried to avoid them by sometimes interrupting the converging lines before they reach the vanishing point (Orbay-Grignon, 1996, 47). In order to correct some of the inherent or consequential distortions of perspective drawings, architect and painter Viola-Zanini suggested in the 17th century a method of representation based on the idea of a 'travelling vanishing point' rather than a fixed one. The method was adopted by many painters of the time and eventually gave way to what is now known as the 'glide projection' which is essentially a measured pictorial drawing system which consists of combining several optically correct views, instead of only one, placed on a shifting vantage point along a discernible viewing path (Forseth, 1984, 13).

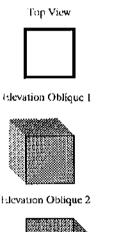
Inadequacies of the perspectivist theory, if adhered to as the sole truthful means of representation in evaluating depictions produced according to other norms and intents, will also hamper a proper appreciation of their meaning, whatever the period or style. Mention is often made of ancient Egyptian art, which easily falls outside the scope of Western canons of artistic comprehension. Hagen explains the difficulty with Egyptian art as being a consequence of the assumption that the eye works like a camera fixed to one point in space. 'Abandon that notion' she says 'and the perceptual validity of Egyptian art is immediately apparent' (Hagen, 1979, 209). She also proposes that there are three perceptual ways in which one representational system differs from another. First, one style differs from another in the station point assumption made by the artist, be it one station point versus many, central versus eccentric, or near versus far. Second, styles differ in their relative emphasis on the variant versus the invariant properties of objects and scenes. Third, paintings and styles can be categorized according to the artist's relative degree of interest in the three (versus the two) dimensional components of the painting' (Hagen, 1979, 201). Furthermore, there is always the cliché question: Does the artist represent what he sees, or sees what he or she represents? If one elaborates more on this and recognizes that phenomenal and cognitive elements of perception are differently weighted vis-à-vis varying pictorial purposes, several varieties of pictorial realism may in fact be distinguished. A. Tormey and J. Tormey refer to 'cognitive realism', for instance, which they say is the representation of objects as they are known or believed to be rather than how they simply appear or are seen. It is the result of an attempt to depict objects in such a way that their most important, defining, unique, or essential characteristics are represented with all the details actually in existence, not only those



Figure 1. 'A Party at the Court of Sultan Husayn Mirza': from a copy of Sa'di's Bustan, dated 1488. Cairo, General Egyptian Book Organization, MS Adab Farsi 908, fol.2r. Sec Orbay-Grignon (1996, 48).

6. The sharply contrasting Renaissance view is expressed by no other than Alberti himself: ... the things which are not visible do not concern the painter, for he strives to represent only the things that are seen! (Alberti, translated and edited by C. Grayson 1972, 37).

7. A somewhat rare reference to the term 'oblique projection' in connection with Eastern miniatures is to be found in De-Angelis and Lentz (1982, 8).





1+2 Combined (Double Oblique?)



Double Oblique (?) Drawing extended to give a hexagonal top view

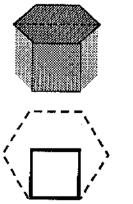


Figure 2 Schematic explanation of the system of representation of buildings and objects in miniature paintings by which the artist shows three elevations simultaneously and, adding also a top view, causes the depicted to appear as if it has an hexagonal plan form.

the artist can see at the moment, but those he knows are there as well (Tormey, Tormey, 1979, 290). The Eastern miniature painting exhibits this attribute at a fairly complex level which it shares with Cubism on one hand, and the so-called 'x-ray drawings' of the Australian aborigines on the other. Concerning Cubism, Gombrich states that it is also an attempt in compensation for the shortcomings of the one-eyed vision. Referring to Braque's 'Still Life: The Table', he argues that 'the picture embodies clues of which we could become aware only through movement or touch. We are made to see the outline of a table even under and behind objects, and it can be claimed that this corresponds to our actual experience in life' (Gombrich, 1972, 239) (6). In the case of the aboriginal drawings, too, the artist depicts every detail of the body, including the ordinarily unexposed backbone, ribs, and internal organs, because he knows they exist and regards these as no less important than the characteristic features of a man's or animal's outward appearance (Adam, 1958, 37). The argument may even be further traced through some of Henri Matisse's later works which reflect his exposure to and interest in Eastern miniatures (Bloom and Blair, 1995, 309).

A cross-reference may usefully be made here to the use of the term 'axonometric projections' in connection with architectural and urban depictions in Eastern miniatures. Axonometric drawings are indeed special techniques of showing unexposed parts, like the side elevation of a building, which would otherwise be excluded from a truthful delineation of the frontal view especially in strictly orthographic representations. It must quickly be added, however, that a side elevation casually added to a frontal view in miniature paintings is just that and, as such, should not be confused with what are technically known as axonometric projections, whether isometric or dimetric. Axonometric projection is but one of the two categories of paraline drawings. The other is known as 'oblique projection'. Both categories are useful tools of constructing an object in three dimensions on the page. Oblique projections can be generated off plans and elevations because of the procedure of their projection, by which one face remains parallel to the picture plane like in the miniature depictions (Cooper, 1992, 139-141) (7). In axonometric views, on the other hand, the depicted object is viewed as tilted relative to the picture plane, which is not the case in miniature paintings. Elevation oblique, therefore, is a more appropriate term to refer to the technical character of the miniature paintings, although this too falls somewhat short of a full comprehension at times. For example, depending on the amount of information intended to be given by the representation, the miniature painter often adds a second side elevation as well, making the scene as if it is drawn by not one, but two oblique projections superposed. This may stem from the artist's effort to include as much knowledge about the scene or the object as he may possess. It may also be relevant to the significance of the depicted object or it may be due to the detail of the survey work required, as in the case of the map drawings and urban views which accompany accounts of military campaigns or trade missions. In any case, the practice makes it possible to show three elevations, as well as the top view, to be seen all at once in such a way that the building thus represented appears as if it has a hexagonal plan layout, whereas in actual fact it is a simple rectangle (Figures 1, 2). Not only generally overlooked and taken perhaps for granted, this practice even seems to be somewhat misleading. Orbay-Grignon, for instance, states in reference to the building depicted as part of the venue for the scene shown in Figure 1 that 'the use of an axonometric form is more likely to be related to a desire of clearly explaining a particular shape, such as the hexagonal pavilion or its three sided bay window' (Orbay-Grignon, 1996, 48-49). That there are hardly any free standing hexagonal buildings recorded to exist in any credible survey of Islamic architecture is support enough for the explanation offered here for the disproportionate profusion of hexagonal buildings in hundreds of miniature paintings regardless

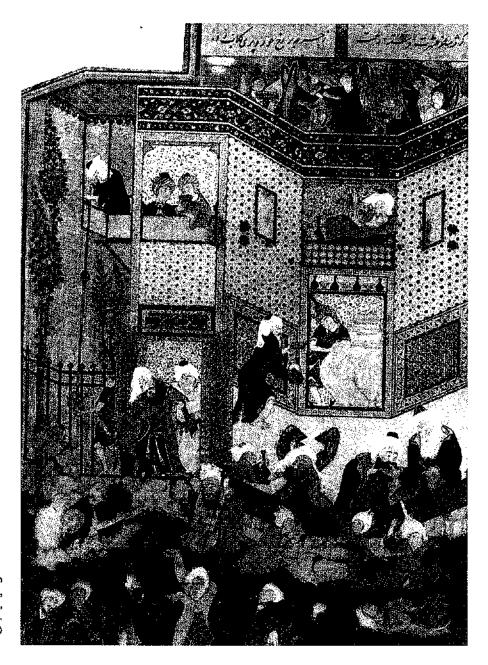


Figure 3. 'Allegory of Drunkenness': from Divan of Hafiz, dated 1525. Fol. 135r., jointly owned by Harvard University, Metropolitan Museum of Art, and S. C. Welch. See De Angelis, Lentz (1982, 20) and also Blair, Bloom (1995, 169).

Figure 4. Explanation for the way in which the building in Figure 3 is represented with all four elevations seen simultaneously.

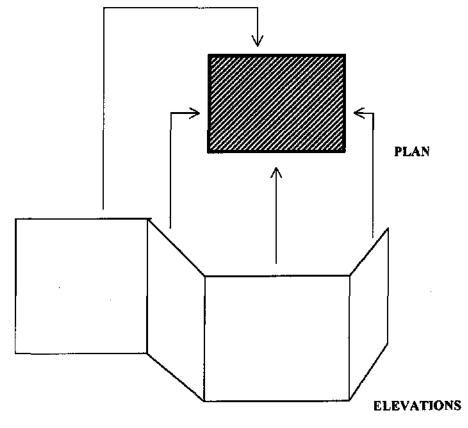




Figure 5. Ardashir Ceding The Throne To Shapur.

8. An especially telling but not necessarily exceptional case is seen in Fol. 319 r. of Firdawsi's Shahnama, which depicts Ardashir ceding the throne to Shapur. Not only the throne room, but also the throne which Shapur has taken as well as the lesser couch that Ardashir appears to be sitting on are all shown as having hexagonal plans. See E.J. Grube (n.d., Figure 139) (Figure 5). It should be mentioned for the record, however, that the frontally correct, orthogonal representation of a building with octagonal plan form would be very similar to the miniature artists' depiction of a rectangular building with all three sides seen. The difference is the inclusion in miniatures also of a top view which is what implies the hexagonal form of plan layout.

of whether or not these may mostly be imaginary or symbolic structures. The same may also be said of other smaller objects like chairs, tables, thrones, canopies, gazebos, and the like (8). On the other hand, Orbay-Grignon's statement that the apparent 'shift of viewing direction...not only underlines the significance of the individual parts of the composition, but also suggests that these objects are seen from different angles in space' is an important one (Orbay-Grignon, 1996, 49). It then follows even without a full acknowledgement of the glide projections mentioned earlier that the dependence on multiple viewpoints secures a truer representation of space by implication of movement "... not related to an illusionistic pictorial structure, but rather to a virtual one" (Orbay-Grignon, 1996, 49, emphasis added). It is as if the representation thus becomes a continuing narrative or a serial documentation of as many aspects of the building or the object as can be depicted through the knowledge of the artist, all at once and juxtaposed to give maximum information on the exterior or interior, or sometimes even both together. This may occasionally be overdone to the extent that even something like the rear elevation of a building, not only visually hidden from the view, but also made physically inaccessible by a surrounding garden wall, is shown almost like a natural extension of what is represented in already distorted orthogonality (Figures 3, 4). More often than not, this additive, sequential quality further enables the artist to include in his composition a complete string of the calligraphic or other decorations. A sudden, almost abrupt upward swing of the viewing direction to show the frontally invisible underside of the shading canopy with all four overhanging folds opened up, as in Figure 1, must be intended as much to show its ornamentation in full as to flaunt the intimacy of the artist to the scene.

9. At the risk of stating the obvious, one is compelled to quote Arnheim in this connection: "... artistic activity is a form of reasoning, in which perceiving and thinking are indivisibly intertwined...This union of perception and thought turns out to be not merely a specialty of arts...the remarkable mechanism by which the senses understand the environment is all but identical with the operations described by the psychology of thinking (Arnheim 1972, v.). This statement is as true for artistic or otherwise representation of the outside world as it is for the perception and interpretation of it. At another level, it is even true for the perception of the representation itself.

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10. 'Conceptual representation' may be considered as another term suggested. See De Angelis and Lentz (1982, 8). Benjamin Martinez and Jacqueline Block offer 'structurally logical' as a possible alternative, mentioning the paintings of Andre Derain as well as ancient Egyptian art and children's drawings in which a house may sometimes be shown almost always with three of its sides, one of which would normally be lost in a correct perspective rendering (Martinez, Block, 1985, 84). The important issue here is that all of these essentially enable the beholder to become aware of more than what would actually be visible from any single point.

Understandably, the effort to include things that are not necessarily parts of the view from a particular station point may be outside the realm of the classical foundations of Western representations before the 20th century. Wherever it occurs, however, there is a logical enough and equally understandable reasoning behind it (9), be it an ancient Egyptian drawing, the aborigine's representation of a fish, a cubist still-life, or an Eastern miniature. In all, the fundamental objective is to convey more cognitive information which leads to a different kind of truthfulness from that provided by the stationary point perspective, and which may merit the term 'intellectual representation' as opposed to the purely optical one (Tormey and Tormey, 1979, 291) (10). It affords an almost virtual movement around the scene with a number of different views to be had simultaneously, including a hint of the plan. When viewed in this light, Eastern miniatures are seen not as simplistic, esoteric representations of the physical world, but as highly sophisticated and intellectually laden, complex way of documenting it, possibly because they do not conform to the stricter, more restrictive norms of depiction.

The Renaissance-based stationary point perspective had found its climactic perfection of truthfulness perhaps in the medium-range lens of the single exposure reflex camera. The multi viewpoint representations of Eastern miniatures, on the other hand, may belong to a world of intellectual experience, a unique expression of virtual reality, that is presently becoming more and more a part of our lives with the advent of the microchips.

MİNYATÜRLERDE YAPILARIN GÖRÜNTÜLENDİRİLMESİ: ALTIGEN GÖRÜNÜMLÜ YAPILARA İLİŞKİN GÖZLEMLER

ÖZET

Alındı : 21. 4. 1998 Anahtarsözcükler: Doğu Resim Sanatı, Minyatür, Görüntülendirme Yöntemleri, Yapı Görüntülendirme, Oblik Çizim.

Onbeş ve onaltıncı yüzyıl minyatürlerinin çoğunda, görüntülendirilen yapı ya da masa, sandalye ve benzeri nesnelerin, plan görünüşleri altıgen imiş gibi biçimlendirilmeleri yaygın bir uygulamadır. Mimarlık tarihinde belgelenmiş, gerçekten altıgen planlı yapı sayısının genelde dikkat çekecek denli az olduğu anımsanırsa, durum düşündürücü bulunacaktır. Söz konusu altıgen görünüm, belgesel nitelik taşımasa bile, gerçek ya da düşsel bir çevre görüntülendirilirken olabildiğince kapsamlı bir tanım yapmak için yapı ya da başka nesnelerin aynı anda üç ya da daha çok görünüşünü birden verme çabasından kaynaklanıyor görülmektedir. Minyatür sanatına ilişkin çok sayıda ve kapsamlı yayın bulunmasına karşın bu konuya pek değinilmemesi, yirminci yüzyıl öncesi görsel sanatlarının Batı'da hemen hemen yalnızca Rönesans sonrasının perspektif kurallarına göre uygulanmış ve değerlendirilmiş olmasıyla açıklanmaktadır. Oysa minyatürler, anılan kurala uymayan eski ya da yeni başka sanat akımları (örneğin Kübizm) gibi, görüntülendirdikleri nesnelere ilişkin olarak, gerek teknik, gerekse algısal açıdan farklı bir yaklaşımla, daha çok bilgi aktarabilmektedirler. Şimdiye dek üzerinde pek durulmadığı sanılan bazı açılardan incelenince, değinilen sözde altıgen görünümün salt minyatürlere özgü bir sanat özelliği değil, daha yaygın olarak bilinen görüntülendirme tekniklerinin (örneğin, oblique projection) minyatürlerde de kullanılması sonucu ortaya çıktığı anlaşılmakta ve bu bakımdan belki de özellikle anlamlı bulunması gerekmektedir.

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