The city and the mosques

The principles and design techniques which characterize the Islamic city are still an issue to be studied. The attention of western historiography to the cities of Europe has actually relegated a great part of the urbanized world to a peripheral position. The assumption about the remainder of the urban world appears to be the spontaneity of formation of residential fabrics, the detachment of monuments from street networks, and the lack of specific town planning regulations and building practices. ¹

Traditional Islamic cities are considered by the majority of art and architectural historians to be marked by recurring functional, representative, economic and ethnic-religious needs; they are usually not included in the category of cities designed with accuracy and intelligence. Each location and formal articulation of the Islamic city appears therefore to be produced by intuition or chance, rather than by a specific cultural tradition; and the city, even in its most specific qualities seems subordinated to the monument or single architectural project.

Writers who have considered this global urban issue identify elements of both differentiation and similarity between Islamic and Christian cities. They point out that the residential fabric, in particular the cul de sacs, are specific topics of historical town planning research, valid throughout the Islamic world. This perspective permits an evaluation of the influence of Islamic Mediterranean townplanning on Southern Europe, in particular on Italian cities. ¹ In this study we propose a step toward identifying the design criteria which have causal relevance to the siting of principal monuments, especially mosques, and their reciprocal relationship to the pre-existing urban fabric as well as to the landscape.

The case of Turkish Istanbul seems to be the most appropriate for this new interpretation in which we suggest a perspective which, on one hand, rediscovers design rules and decisions and, on the other, establishes a historical relationship and a possibility of comparative studies with European cities. Dense commercial exchanges, development of weapons, medieval and classical heritage, and tendencies toward a global renewal of the structure and the image of the city bring together Turks and Christians in the Mediterranean, at least after the conquest of Constantinople (1453). Although the diversity between these two cultures might seem at first sight to be deep, important elements of comparison emerge when an analysis of the urban context becomes more specific and detailed.

Istanbul has an originality of its own and was for centuries the greatest urban agglomeration in the Mediterranean zone. To avoid the local, purely topographic perspective, it is necessary to reconstruct the essential moments of its urban design on the basis of universally valid criteria. An issue which should be immediately introduced is whether there is an order in the disposition of monumental elements, mosques in particular, in the Islamic city. This order can only be recognized in a specific sphere of experiences: that is, of optical alignment, of reciprocal distances between monuments, and of correspondence of single localization to a complex order. The relationship between the residential fabric and the mosque remains vague, at least in the medieval period. The technique of alignment, triangulation and spacing is a widespread device in the Western design of the city, since the paleochristian period. It recalls the spatial and design model of the "cross churches", and the later extraordinary device of siting based on reciprocal distances, used by the Mendicant Orders since the 13th-century. ² The way monuments are inserted on the city does not imply a substantial modification of urban fabric, and is particularly efficient and economic. Their impact on the built complex is essentially visual and symbolic, and produces a monumentalization that does not affect the pre-existing fabric. If the monument is a religious building, it inevitably refers to a "superior" sphere rather than to the worldly sphere of the city.

One approach to the study of the siting of the mosques in the Islamic city considers other specific features which are highly characteristic: thus the "centrality" of the mosque, which means, above all, a greater power of hierarchy in comparison to any other urban element and of internal hierarchy between principal sacred buildings and secondary ones as well as the orientation towards Mecca. In this we easily find a Western parallel to the siting of the cathedral in relation to the Christian city as a whole and to the other minor churches; there is also the orientation of the churches towards Jerusalem, a common feature in the early medieval period. ⁴
THE VISUAL CENTRAL AXIS FROM GALATA TOWER (A), THE PRINCIPAL POINT OF VIEW (C) AND THE SÜLEYMANİYE (B), THE AXIAL VIEW OF SÜLEYMANİYE FROM THE GOLDEN HORN (D), THE RADIAL VIEWS OF THE PRINCIPAL MOSQUES OF THE PANORAMA OF ISTANBUL FROM THE POINT OF VIEW OF GALATA TOWER (C), THE LOCATION OF THE PROJECT OF THE BRIDGE BY LEONARDO DA VINCI: 1) AYA SOFYA CAMİ; 2) FATİH CAMİ; 3) BEYEZİT CAMİ; 4) SÜLEYMANİYE; 5) ŞEZADE CAMİ; 6) MIHRİMAH CAMİ; 7) SELİM I CAMİ; 8) RÜSTEM PASHA CAMİ; 9) YENİ VALIDE CAMİ; 10) AHMET CAMİ; 11) GALATA TOWER; 12) TOPKAPI; 13) GALATA BRIDGE; 14) ATATÜRK BRIDGE.
In conclusion, we propose to subject Turkish Istanbul to a methodological experiment of historical-town planning research. This should lead to a comparison with other urban realities and to an appreciation of the extraordinary originality and importance of this metropolis. It is evident that a new approach to the study can be further developed and discussed in order to achieve a better comprehension and appreciation of town planning traditions.

The thesis discussed here assumes that the siting of the principal mosques of Istanbul played a determining role in the panoramic view of the city. The monumental city was substantially built to be observed from a precise point. Not to look out, as Mantran suggests, to give "the impression that each element of the city tries to look out to the sea and in order to achieve this goal tends to surpass in height its inferior neighbour", but to appear, as Grelot would put it, as "the enchanted city", more represented than real.

Recovery of the Byzantine Metropolis and its new optical alignment

The tumultuous repopulation of the conquered city, in which all the monumental elements and defensive apparatus were substantially reconfirmed, proceeded according to a criterion of progressive "Turkization". The remaining foreign and non-Islamic population were concentrated in the Galata-Pera area, while the great body of Byzantium was left partly unpopulated, as was Rome during the exile to Avignon. It was a territory too chaotic and vast to be subjugated to unitarian regulations of town planning. The population grew from 100,000 to almost 500,000 in less than a century, leading to a reorganization of the urban fabric: churches were transformed into mosques, and a new system of monuments progressively transformed the appearance and structure of the Imperial capital.

It is necessary to comprehend the fundamental character of the Byzantine city before the Sultanate. Istanbul belongs, as most important Mediterranean and European set-
tlements to the category of "cities on a river," which far from being a typological schematization a posteriori, represent a functional, symbolic and landscape model, connected closely to design intentions. Although the bridges across the Golden Horn were built only in the 19th-century — It is necessary to recall that the metropolis had an analogous relationship, though mediated, with the Asiatic side across the Bosphorus — the intensity of the traffic between the two shores, in correspondence to precise docks, was extraordinary. According to Mantran in the 17th-century the crossing was provided by almost 15,000 boats. This situation clearly affirms the commercial role of the city, which was situated at a crossing point of goods and men, and explains the tight relationship between the two parts of the waterway, the unbalanced density of functions and monumental buildings towards the Golden Horn, and the relative subordination of half the declining city towards the sea of Marmara. This situation bore consequences, shown in the irreversible choices made in the first half of the 16th-century, and is implied by the confirmation of the international role of Galata-Pera as a growing commercial, cultural and political centre from the 15th to 19th-centuries.

Decisions of Muhammad II (1453-81)

Among the many initiatives of Muhammad II regarding the reconstruction of the metropolis, we are particularly interested in those which determined the future character of the city of Istanbul. As mentioned, there was a continuity with the existing city, expressed by the confirmation of the great urban and representative axis, which developed along the ridge of the hills, and by a first attempt to occupy the central area, in front of Galata-Pera, on the top of the highest and most visible hill. The first Sarai of Muhammad II, in the area of the Forum of Theodosius, is sited as a visual and panoramic centre of the city. Later on, due to its particular situation, a tower for watching fires was erected here. The Sarai was located exactly in front of Galata, almost in a line across the Golden Horn in direction of the Galata tower (1348). This site was aban-
doned for a more spectacular though private site on the promontory of Topkapi, showing the Sultan’s desire to separate from a landscape view point the imperial residence from the mosques which were intimately inserted in the urban fabric.

The monumental structure of the new capital essentially refers to the great axis linking Hagia Sophia to the gate of Hadrianopolis. It also confirms and exalts the orthogonal axis of the terminal hill of the Hippodrome and of the palace of Topkapi. It is however the first axis that we are interested in. Evidently this is a Byzantine system, linking Hagia Sophia to the forum of Theodosius (in a central position), and to the Basilica of the Holy Apostles. The construction of the first great külliye around the mosque of Fatih, near the destroyed church of the Holy Apostles, sacred to the tombs of the Byzantine emperors, though it confirms and accentuates the view of Galata with the great symmetry of the principal mosque in relation to the central hill, yet it does not imply particular landscaping decisions, as the position of the Fatih mosque is also central and dominant to the entire urban setting of the Golden Horn and the walls of Istanbul along it.

Bayazid II (1481-1515); a crucial step towards the unique viewpoint

Three determining elements of the future town planning of Istanbul belong to the reign of Bayazid: the construction of the külliye named after him, defining a precise centre for the urban panorama as viewed from Galata; the intent to commission a bridge from Leonardo da Vinci in 1502; and finally the catastrophic earthquake, which destroyed a great part of the residential fabric of the capital on 14 September 1509. Let us take into consideration these three events and see their effect on the development and design of the Ottoman capital.

The Bayazid Mosque occupies the central part of the city and of the evermore privileged panorama from Galata. It is situated on the axis of Hagia Sophia and the Hadrianopolis gate and inserted between the great Bazaar and the first palace, both works
of Mehmet Fatih. The mosque materializes architecturally the physical centre of the city and its image. Its situation “in the centre” confirms with great force and consciousness the indications of the conqueror, by creating a sort of umbilicus urbis for the city which by this time extended also across parts of the Golden Horn. In fact the mosque is visibly equidistant from the Fatih, the palace of Topkapi, and the tower of Galata, the only observatory in relation to which the construction of Bayazid occupies undoubtedly a central position. The mosque is in fact placed in the centre of the panorama of monuments. This has as its extreme ends the palace and the Fatih, and is situated exactly on the axis of symmetry of the old centre of Galata. It confirms the choices of the Conqueror, leading to the emphasis of the panorama from the Golden Gate. The point of view of this panorama varies little from the top of Pera to the tower of Galata or the port embankment, and is always characterized by the territorial quality of the references, as the distance between these monuments is more than a mile. The intention of building a bridge over the Golden Horn recalls the foresightedness of the Sultan, and confirms the deeply “fluvial” nature of Turkish Istanbul. The bridge would have certainly rendered more evident the symmetry of the system, by giving a precise architectural focus to the flow of exchanges between the two shores, and by imposing a more constrained view of the monumental city. The bridge is indeed a technological marvel, illustrated synthetically in a sketch and short note by Leonardo: “Bridge from Pera to Constantinople; wide 40 braccia; above the water 70 braccia; long 600 braccia; that is, 400 above the sea and 200 built in the ground making the supports of itself.” Finally, the earthquake of 1509, with its symbolic coincidence (at Hagia Sophia the plaster coat given under Mehmet II fell and the Byzantine mosaics reappeared) not only produced destruction but also gave a hint for heavy interventions on the city needed in a further phase of monumental construction. The new works, beginning with the siting of the Selimiye Külliye (1512-20), and finishing in 1522 complete the panoramic horizon of Istanbul as viewed from Galata. They respect a more accessible point of view than the tower, which can be sited on the port embankment, near the gate of Galata — meant to be connected with Leonardo’s bridge, in a central position between the two modern bridges.
tlemens. Together they compose the facade of the city, its exterior appearance and its figurative mark.

Süleyman the Magnificent (1520-78) and Mimar Sinan: the Completion of Istanbul and its principal panorama

By the time of the advent of Suleyman the main elements of Istanbul’s townscape and the view from Galata were already established. Sinan’s numerous architectural projects introduce in the relatively simple urban system, a strong component of hierarchical depth in the perspective, a full understanding of the reciprocal relationship between monumental complexes and urban views. According to this principle the most important building should not be located in the centre of the city, but rather in a dominant position, in order to pull together all the other monuments. It should be in the foreground with respect to the privileged view point to highlight it from the other elements in the landscape.

These principles might be theoretically valid for any city. They were however codified and prevailed in Istanbul between the sixteenth and seventeenth centuries, due to its vast panorama. According to the first principle, the dominant building should be built on a hill; but that would not be the case if the hill did not occupy a foreground position in the perspective observed from a point, that could be common or ritually codified and internationally advertised by drawings and engravings. The rules of perspective impose optical implications, which in our case are clear town planning and landscape devices. The siting of the Süleymaniye (constructed 1550-56) involved these and other issues. It reveals itself as one of the masterpieces of an urban science, based on visual and townscape values, which are still to be discovered, and not only in the Islamic world. The panorama of Istanbul was trasformed by the siting of the Süleymaniye: it gained perspective, became three dimensional, was entirely rearranged in a symmetrical way into a new and solid central figure. Like an advancing character detached from a group, the Süleymaniye gains the foreground and relegates the others to the background. It succeeds in overwhelming any other monument and becomes the new hinge of the panorama from Galata. Its siting calls for other considerations, which further consolidate its quality as a central monument not only for its topographic position, but more for its capacity to capture the scene. A first consideration is that despite its appearance the great Külliye does not contradict the preceding tradition of the reinforcement of the Byzantine axis of the city. It does in its own way confirm and exalt the axis from Hagia Sophia to the gate of Hadrianopolis. What had been up to that moment an interior passage of the city, becomes now an optical alignment of great precision linking Hagia Sophia, Süleyman and, through the gate of Hadrianopolis, the adjacent Mihrimah Camii, also designed by Sinan (1562-65). In this way, the reunification of the entire axis of the Byzantine city is accomplished by following the principle of distant alignment.

An even more important relationship is also established. The mosque occupies an absolutely central position regarding the access from the Golden Horn, which is comparable to the relationship between the street and its background in Italian cities of the same period. From a mile off, a ship entering the Golden Horn can perceive the
Süleymaniye as a dominant and almost modern monument, towering gigantic and “out of scale” above the sea, the embankment, the walls and the houses. Naturally, a tight relationship is formed between the Süleymaniye and the view from the embankment of Galata. The force of its architectural presence seems to modify the geography, imposing a new direct axis between the Galata tower and the hill of Pera. Its remarkable size is emphasized by threedimensional, height and foreground effects. Compared to the other monuments of the panorama, the Süleymaniye is halfway from the point of view: the Fatih complex has a fading appearance on the horizon. An analogous device was used by Sinan in the location of Rustem Pasha mosque climbing up the hill, while the Sehzade Mosque, situated in a recessed position, takes admirable advantage of the visibility consensed by the valley.15

After Sinan: The Yeni Valide Cami and the Külliye of Sultan Ahmed (Blue Mosque)

The city of Sinan, with its principal view dominated by the Süleymaniye, and its peninsular profile regularly punctuated by minarets and mosques, was known best in the West through drawings and engravings constantly done from the Galata tower. The view by Melchior Lorichs uses the height of Galata as a observation point corresponding to the predetermined centre view, and replicates almost graphically the very long facade of the city dominated by the Süleymaniye. But this pan-view does not coincide with a real optical perception from the embankment — far more restricted and constrained. It is precisely this lower point of view, which was considered in later sitings for monuments in the 16th and 17th centuries, that completes and partly contradicts the work of Sinan. The new element in this view of Istanbul is undoubtedly the Yen Valide Mosque. This is located outside the western angle of the walls of Galata, near a dock later transformed by the Ataturk bridge. Its siting derives from Sinan’s expedient, recalling the Sokollu mosque (1577), and creates a new attractive element in the foreground. It marks a new axis of interest and traffic. The Yeni mosque, built on the walls and almost on the level of the water emphasizes, together with the market, the port in the region of the Khans and the Great Bazaar. It follows the great urban and architectural build-up of the area, and the development of the greatest mercantile metropolis of the world. It is not, therefore, by chance that the Yeni mosque later becomes the backdrop for the first permanent bridge across the Golden Horn which connects Galata and Istanbul and enhances the beauty and grandeur of the mosque sited to control the principal “entrance” to the city. The Sultan Ahmet mosque (1609-17) is near the Hippodrome on a promontory over the Marmara sea. But it is also part of the principal view of Istanbul, due to the valley between Hagia Sophia and the Great Bazaar that opens the views from the embankment of Galata. This mosque has great symbolic importance as the departure point for pilgrim caravans to Mecca. It succeeds in giving, from the perspective of the Golden Horn, a direction, size and monumental consistency to the Hippodrome, an area of intense evaluation during the 17th-century.

Conclusion

The symbolic character of Turkish Istanbul coincides with its visual image achieving an extraordinary overlay of urban landscape and figurative synthesis. Nevertheless, this urban image is not under a formal profile adaptable to an iconic simplification. The complex Byzantine form of the city, described as a triangle, a trapezoid or a sail can be paired to the partial but more pertinent shape of a “crescent moon”(panorama) and “the star” a point of irradiation, to identify its essential monumental features. The symbolic interpretation, which is necessary to identify and recognize this urban reality, also suggests some comparisons, notwithstanding the absolute individuality of Istanbul. Here it is not possible to extend the comparison to other cities in the Islamic world except to Erdine which has already been mentioned. It is useful to hint at the rich framework of cultural exchanges with cities of the Christian Mediterranean area. In the 15th to 16th centuries these cities show a precise element of siting in the design of their principal monuments, rigorously relating them to the landscape. Among the most immediate examples are the Italian port cities: Genoa, Venice and Messina. Genoa is important for its hill landscape, a dominant presence in Galata; Venice for the evident effect of the lagoon views on the 16th-century
EDIRNE. PLAN OF THE SARAI (FROM RESTLE) SHOWING THE SYMMETRY OF THE WHOLE SUBORDINATED BY THE VIEW FROM THE ENTRANCE (2) AND FROM THE TOWER ACROSS THE BRIDGE (7)

1) FATIH BRIDGE;
2) DEMIR KAPI;
3) CIHAN - NUMA KASRI;
5) KUM KASRI;
6) BATH
7) ADELET KASRI.

THE PANORAMA OF EDIRNE FROM AN OLD ENGRAVING (XIXTH CENTURY)
monumental centre (Piazza San Marco seen from the island of San Giorgio). Finally, Messina possesses three elements which we find in Istanbul. The natural site arch-shaped (sickle-like); the hilly perspective and the presence of a fixed privileged view point in front of the principal part of the city (the end of the sickle where the citadel and the lighthouse were). All of these elements help to define the "facade" of the city, the famous "palazzata" of the early 17th-century. They impose a view different from the official image of the city. It is in a way a Christian "reply" to the grandious "artificial landscape" of Istanbul achieved with Western architectural techniques which seek to embrace an urban dimension.

Enrico Guidoni

1 A substantial inversion of this tendency, which also characterises the Italian school of historiography, is contained in P. Cuneo, Storia dell'urbanistica. Il mondo Islamico, Roma-Bari, 1986.
3 Guidoni, La città europea.; id., La città dal medioevo al rinascimento, Roma-Bari, 1981.
4 On this issue and also for the possible influence on the West, see E. Guidoni, Urbanistica Islamica e città medievali europee, in "Storia della città", 7, 1978, pp. 4-10.
6 On the geographical configuration see the notes of Janin, op. cit., pp. 1-8.
7 Guidoni, La città dal medioevo al rinascimento, op. cit., chapter I. The relation between the dominant view and the urban situation is crucial in the case of cities built along rivers (the view across the river), and is valid also for monumental complexes. In Turkish architecture before the monumental reconstruction of Istanbul, the Saray in Edirne, the Ottoman capital from 1366-1453, assumes a remarkable significance. Here, as in the Topkapı in Istanbul later, a series of paved streets radiate in the direction of the principal buildings disposed according to a fan-shaped layout. The view is dominated by a belvedere tower built, as many of the structures of the Saray, under Mahmet II (1451). The symmetrical axis continues with the contemporary bridge over Tunca and, across the bridge, with the tower of Adalet Kastri, from the period of Süleyman. The latter materializes the privileged point of view of Istanbul see Restle, op. cit., pp. 513-519.
9 On the street layout of Istanbul, quite analogous to layouts of the principal Islamic cities in the Mediterranean area, see the accounts of Mantran, op. cit., pp. 25-28. The majority of the streets are "tight, tortuous and irregular", badly paved or unpaved, and the only great street wide enough for carriages to pass is the one linking the Saray of Topkapı to the gate of Edirne.
10 In the Byzantine period the navel of the city is already represented by the quarter of Shehzade, between, the third and the fourth hill. See Janin, op. cit., pp. 7-8.
11 According to Baratta, op. cit., p. 456, the mosque rises on the third of the six hills called the "hinge of the capital".
12 According to Vasari, Bayazet had also invited Michelangelo to Istanbul to "make a bridge from Constantinopolis to Pera". Leonardo's project is curiously not mentioned even in the most recent historical works on Istanbul. See F. Babinger, L.H. Heydenreich, Vier Bauvorschlage Lionardo da Vinci's an Sultan Bayezid II, "Nachrichten der Akademie der Wissenschaften in Göttingen", 1952, pp. 1-20; and, for the reconstruction of the bridge with 233 m. span, see: F. Schettini, "Istanbul/Constantinopoli: un ponte di Leonardo sul Corso d'Oro", Parametro, 10, 1972, pp. 68-79, and C. Pedretti, Leonardo Architetto, Milano, 1979, pp. 170-71.
13 The change in the landscape perception of Istanbul is perfectly achieved through a series of 15th- to 16th-century representations. In the initial period the metropolis is represented without emphasizing at all the view from Galata. The famous engraving "Byzantium nunc Constantinopolis" of the late 15th-century is a bird's eye view of the Bosphorus. In the extraordinary miniature of 1536, (see Cuneo, op. cit., pl. 26) the city is seen toward the Bosphorus; Galata is represented frontally, as it appears from Istanbul. The oldest 16th-century view representing the projects of Süleyman and Sinan is that of Melchior Lorich (c. 1560, 11.45 x 0.45 m.; Muller-Wiener, op. cit., p. 59) and is done from Galata; a similar view of 1580 (various authors, Istanbul, op. cit., pp. 2-3) constitutes the reference model for a great part of later views.
14 Guidoni, La città dal medioevo al rinascimento, op. cit.
15 In Edirne (Selimiye, 1568-74) Sinan repeats with analogous precision the same fundamental urban-landscape components of Süleymaniye (1550-56) in Istanbul. The identification of an elevated and central place in relation to the principal views and not in relation to the plan of the city, the Selimiye was aligned with some of the most important pre-existing monuments in Edirne, in order to synthesize in a single monument the preceding landscape order. The Selimiye is situated on the alignment of the most important pre-existing monuments in Edirne, in order to synthesize in a single monument the preceding landscape order. The Selimiye is situated on the alignment of the most important pre-existing monuments in Edirne, in order to synthesize in a single monument the preceding landscape order.
SECTIONS OF THE PANORAMA BY MELCHIOR LORICH, A.D. 1559, IN THE LIBRARY OF THE ROYAL NETHERLANDS UNIVERSITY OF LEIDEN.