Summary

The four-ḵwān scheme, marking the four cardinal points with majestic porches surrounding a courtyard, has been traced down to the Parthian palaces of Hatra and Assūr, 2nd c. AD and is associated with the Sasanian period (224-637 AD). Originally, the scheme was used as a palace plan representing royal and divine power. Later on, with the advent of Islam and after the 10th c. AD, the four-ḵwān plan was widely adopted for religious compounds such as open-courtyard mosques and madrasas, and centrally-domed mausoleums, tombs and Sufi ḵānaqāhs.

Initially, the ḵwān was associated with a gate or an arch into a sanctuary, going back to the first fire temples from the 5th c. BC; it developed in later times as a sacred passage to a holy site. A passage, related to crossing the border between the profane (the urban fabric) and the sacred (the holy building). Although the religious reality of the ḵwān in the four-ḵwān mosque is very different from the Zoroastrian fire temples, the reality of the holy gate, transpositioning the human being from its temporal realm into the divine realm, has remained intact. Similar to other religions, the religious essence of Islam can be found exactly in the intersection of those two worlds: the divine and the temporal. This makes the ḵwān the most appropriate choice of an architectural feature to mark the sacred space of the mosque and to define it strictly from the profane surroundings of the hectic outside world.

Current architectural theory analyses the existence of the four-ḵwān compounds mostly within their regional historical scope. This leads to misinterpretation of the architectural plan, which is associated with local architectural heritage symbolism, limited only to Islam. The building tradition of the four ḵwāns remained virtually unchanged after the 2nd c. AD. No attempts have been made to explain the invariable usage of the four-ḵwān scheme, since the structure has been widely used for palaces, open courtyard mosques, madrasas and caravansarays and for centrally domed tombs and ḵānaqāhs. Although the debate on their aesthetic appeal is not essential to the meaning of the four-ḵwān plan, aesthetics has been put forward in mainstream scholarly architectural analyses by O’Kane, Golombek and Wilber, Pugachenkova, Ettinghausen, Grabar and Jenkins-Madina.

Godard explains the ubiquitous utilization of the four-ḵwān plan as a tool for representing Iranian national identity and attributes the origin of the four ḵwāns to the private houses of Khurasan. This justification, used previously by Van Berchem and Herzfeld, is untenable when applied to sacred buildings such as mosques and madrasas. Furthermore, it does not reflect the deep religious and social changes that lead to the establishment of the four-ḵwān plan as the main architectural choice of the ruling dynasties in Central Asia as late as the 19th c. AD.
Although the cosmological aspects of the four-iwân structures have been analysed by Hillenbrand, Vogt-Göknïl, Ardelan and Bakhtiar, they have never been explored in detail. What is more, the relationship between the Sufi tradition and the four-iwân plan has never been regarded as a possible explanation for the wide-spread usage of the four-iwân khânaqâhs, i.e. as a representation of a Sufi reality.

A plausible explanation shedding more light on the presumable lack of evolution in the four-iwân building tradition is the fact that the four-iwân plan was used only for representational buildings, commissioned by the supreme imperial and local rulers. The four-iwân plan was a power statement, rediscovered by the subsequent ruler trying to relate his power to a previous undisputed chief patron. Since the Timûrids fostered good relations with the Sufi community, the four-iwân compounds were a symbolically acceptable setting both for the Sufi orders and the 'ulamâ'. For the four-iwân plan is an architectural representation both of the cosmologies of Sufism and of orthodox Islam.

The methodological approach in the current thesis is based on the representational theory by Mekking. Further parallels are drawn with existing architectural theories regarding the use of cosmological schemes and realities as discussed by Snodgrass, Koch, Ardelan and Bakhtiar, and Petruccioli.

The dissertation analyses how architecture represents sacred realities. It is an architectural rather than a historical study and is only partially based on historical data. The main focus is on the architecture of the Timûrids as an instrument to legitimize extreme and universal power. The four-iwân plan is examined as a dynastic architectural tool marking the centre of the world, from which power spreads along the cardinal points to all corners of the macrocosmos. Examples of Timûrid mosques, madrasas and tombs are used to illustrate this approach. The concept of recreating Paradise on earth is further developed in line with dynastic supremacy and the role of the ruler as cosmocrator. To exemplify this concept, the architectural heritage of Timûr (1336-1405 AD), his son Shâh Rukh Mîrzâ (1377-1447 AD) and grandson Mîrzâ Muhammad Târegh bin Shâh Rukh (Ulugh Beg) (1393-1449 AD) are discussed. Their building activity is analysed in the triad: grandfather (King of the world, i.e. Timûr) - pious son (i.e. Shâh Rukh) – grandson (reviving the iconography and aspirations of the grandfather, acting as King of the World i.e. Ulugh Beg). The geographical focus is on Transoxania (present day Uzbekistan) and partly on Khurasan (present day Afghanistan).

For the first time, the four-iwân plan has been discussed in terms of the hierophanic and architectural palimpsest. This approach offers comparative analysis with Buddhist and Hindu cross-axial monuments, encompassing the current theories that regard the four-iwân plan only as
strictly Islamic phenomena. The first main conclusion of the dissertation is that the origin and the essence of the four-īwān plan are not Islamic.

The concept of the hierophany is used to differentiate between the elements of sacred order (the ideal world believed to be created by the primordial God) and the items of profane experience (the perception of the real world as seen by man). Further, the hierophanies are the means of man to construct a “sense of cosmic harmony” as put by Coupe. This cosmic harmony is opposed to the experience of profane time according to Eliade, whereby the sacred and the profane are dichotomously interrelated. So, the hierophany is a tool to experience sacred order in a profane reality. Via the hierophany, the human transcends time and space and is transpositioned into the \textit{illo tempore}, the mythical time when the world was created. In a way, the hierophany in itself is a microcosmic \textit{Axis Mundi}, a sacred channel that assures man's access to the realm of God's creation. The visual representation of the hierophany is a mimetic process that denotes either a certain aspect of God (manifestation of the sacred) or an element of God's creation (sacred rivers and mountains, the cosmic ocean, etc.). The process of hierophanic visualisation can be thus regarded as an attempt to reproduce God's creation on earth by profane means and in a profane environment. Once the visualised hierophany is perceived by man, it acquires the status of a sacred entity and the previously profane environment is also attributed qualities of the sacred.

The basic hierophany of the four elements combined with a central element can be found in all mythologies and religions of the world. The most prominent representations are related to the four cardinal points: the Cosmic Cross and the cosmic centre: the \textit{Axis Mundi}. The hierophany of the four has anthropomorphic origin that can be explained with the symmetry of the human body and its position and orientation in the horizon. Furthermore, the number four derives from the symmetry of the human body, which suggests a quadripartite division of the horizon: a front and a back, left and right side. It might have been an attempt to describe the “unknown” world in a manner closer to man in order to understand the primordial world and to come to terms with the fears and the calamities related to the powers of nature. The hierophany of the four can be further interpreted within the long-cycle Anthropomorphic traditions and short-cycle theme of the \textit{Axis Mundi} and the Cosmic Cross, developed by Mekking to analyse the built environment.

In the mythological thought, the hierophany of the four can be found in the representations of the four winds, the four seasons, the four elements, the four humours of the human body, the four regents of the world, four giants holding the world, etc. In the polytheistic thought, the hierophany of the four evolved in the representation of the four major deities plus one omnipotent central deity, the four castes; the four Vedas, etc.
Upon the ascension of monotheistic beliefs, the hierophany of the four developed further as a representation of the four evangelists (Christianity), four pillars (angels) holding the Throne of God (Islam), etc. In the Old Testament and in the Quran, there are the four rivers of Paradise, emanating from one source (Genesis 2:10 and Sūra 47:15), the four “animalia” and the four major prophets. In the New Testament, there are the four evangelists and the four Gospels that spread across the world, the four mysteria Christi, the four cardinal virtues and the vision of the Throned Being amid the four living creatures (Revelation 4).

In the mystical beliefs that accompanied monotheistic thought such as Manichaeism (Christianity), Sufism (Islam), the hierophany of the four remained constant and acquired extra imagery such as for example The Universal Tree and the Four Birds discussed in a treatise by Ibn `Arabī. In Sufi cosmology, the fortification of the four world directions has cosmic dimensions, whereby the four spiritual masters (awtād, “pegs” or “pillars”) are related to the east, west, north and south. Ibn `Arabī postulates that God preserves one pillar for every direction and one central “pole”, al-qutb, which can be interpreted as the cosmic axis (in terms of the representational themes, the equivalent of the hierophany of the Axis Mundi).

Along this central axis, humans can transcendent through the three cosmic zones: starting from the underworld, the unholy zone (as in the case of tombs, in which the sarcophagus is placed underground, as for example in the Ishrat Khaneh in Samarqand), experiencing the horizontality of the earthly world, the first holy zone, where the earth meets the Heavens (i.e. the building itself, the intersecting axes of the four īwāns marking its centre), and proceeding to the verticality of the Heavens, the second or heavenly holy zone (which can be associated with the dome, rising above the point of the intersecting axes as in the khānaqāhs). Akkach argues that the verticality in Sufi teachings (the representation of the hierophany of the Axis Mundi) is an expression of human uniqueness, while the stressing of the geographical directions (i.e. the representation of the Cosmic Cross in terms of the terminology used in this dissertation) stands for the comprehensiveness of human reality.

Since the origin of the hierophany of the four is related to the spatial orientation of man in the world, it acquired spatial, strictly geometrical, representations that were adopted in the construction of quadripartite cities (e.g. urbs dei), palaces, temples (e.g. Buddhist stupas, Hindu temples, Christian cruciform churches and martyria, Islamic four-īwān mosques and madrasas, and Sufi domed four-īwān khānaqāhs, etc.), tombs and gardens (e.g. čahār bahrs). All these architectural and landscape sites had clear rectangular boundaries, defined by two intersecting orthogonal axes marking the four corners of the world. The geometrical principles of symmetry were applied everywhere to create a representation of the built environment as similar as possible to the creation of the world by God. The geometrical organisation of space (as attributed to God)
is opposed to the chaos of the profane, unorganised space (in opposition to God's perfection). Creating order in the chaos by means of symmetry is regarded as an ideal topography, the only one that fully represents order and is subject only to God's rules of perfection.

The architecture of the four-īwān compounds can be also analysed as a representation of the hierophany of Paradise, which is derived from the hierophany of the four (i.e. the four rivers of Paradise springing from a central source). Paradise is directly associated with Islamic prayer and it is in Paradise, where the human Muhammad reaches Allāh. In a similar way, the human worshipper, who will never visit the real Paradise in his/her lifetime, can reach Allāh only in prayer, in a setting, similar to the domain of Allah, e.g. Paradise. So, the four-īwān plan, based on the four rivers of Paradise seems to be the most suitable setting for prayer that presupposes and allows for direct contact with Allāh.

I argue that the four-īwān plan with the four gates (īwāns), ideally denoting the four cardinal points, is a visual representation of the hierophany of the four: the Cosmic Cross and the hierophany of the cosmic centre: the Axis Mundi. As I have shown above, the hierophany of the four is very complex and includes many different visual representations, which have evolved in a hierophanic palimpsest throughout time and beyond mythological and religious thought. In their sacred essence, the four īwāns are no different from, for example, the four pillars supporting the Throne of God in Islam. That is why, to analyse the existence and the quintessence of the four-īwān plan in terms of exclusively Islamic iconography and architectural morphology would be a limitation, depriving the hierophany of the four of its broader and extremely complex meaning.

The construction of the four-īwān compound can be regarded as a sacred act, repeating the creation of the world by God. The vertical aspect of the hierophany of the Axis Mundi coincides with the geometrical centre of the compound and creates a representation of cosmogenesis: the single point of all creation (as static dimension). The orthogonal axes, radiating from the centre as a Cosmic Cross, mark the created world in its totality; they can be analysed as cosmogenic evolution. The hierophany of the Axis Mundi can thus be interpreted as a clear spatio-temporal representation of the built environment as it defines space, vertically emanating from the centre and spreading along the horizontal axes of the hierophany of the Cosmic Cross.

Since the geometric centre is atemporal and defined by the intersecting axes, it can be ubiquitous, without any direct reference to a certain point in time or space. As such, the centre, i.e. the Axis Mundi is identified with the primordial unity of the creation. On the other hand, the radiating axes from the centre represent the multiplicity and plurality of the world as a divine, time-governed manifestation by using the human coordinates as an architectural tool.

"The Architecture of the Four-Īwān Building Tradition as a Representation of Paradise and Dynastic Power Aspirations"
Another aspect related to the symmetry is that God’s perfection, evoked and represented by perfectly organised building and landscape schemes, is in contrast with humanity’s imperfections. The human being is seen as subordinated to the divine organisational principles. The four-ḵwān plan, as opposed to the sporadically evolved urban fabric, can be regarded as a perfectly organised system based on geometrical symmetry. In this way, we have two juxtapositions: on the one hand, human imperfection in contrast to divine symmetry; and on the other hand, the urban, quasi-unstructured frames in contrast to the place of divine presence and worship i.e. the mosque or the madrasa. Further, the asymmetrical “chaos” of the urban fabric versus the symmetrical “cosmos” defined by the four-ḵwāns. The cosmos (from the Greek κόσμος, meaning “ordered world”) being created by God to generate order is recreated on earth by the commissioner of a four-ḵwān compound, who in turn assumes the role of God on earth in a sort of hierophanic mimesis. With regard to the cycles, presented by Mekking, the “unstructured” urban fabric can be explained and compared in the frame of the shorter-cycle ‘Excluding – Including’ theme as the excluded world, while the symmetrically-structured compound with four ḵwāns is the all-encompassing perfect Paradise.

The four-ḵwān plan is based on a geometrical grid, very similar to the grid of the mandala. This relates automatically the four-ḵwān plan to Buddhist, Hindu and Jain sacred monuments also based on the mandala. All these settings have cross axial design based on the hierophanies of the Cosmic Cross and the Axis Mundi.

The geometrical similarities between the mandala and the four-ḵwān plan are:

- the orthogonal symmetrical outline,
- the grid, based on which the compound is organised,
- the central organisation and cross-axial design (stressing of the four cardinal directions, be it with deities, staircases or colours in the buildings based on the mandala in stupas, Hindu and Buddhist temples; or with pishtaqs in the case of the ḵwāns),
- the anthropomorphic organic unity and four directions of the world.

The closed rectangular ensemble, both in the Buddhist stupa and in the four-ḵwān compound is based on orthogonal symmetry. The spatial controlling factor of hierophanic geometric patterns is symmetry. The metaphorical interpretation of architecture has generated orthogonal symmetry to God’s perfection and transcendent purity. The straight lines in Islam have been considered to represent tawhid – the divine unity and sacred order between man and nature. This order, created by the divine geometrical patterns was expressed in mathematical regularity. Another aspect related to orthogonal symmetry is that God’s perfection, evoked and represented by perfectly organised building and landscape schemes, is in contrast with human’s imperfections.
The human being is seen as subordinated to the divine organisational principles. The four-īwān plan within the urban fabric can be regarded as a perfectly organised system based on orthogonal symmetry.

While in the Hindu temple the *Axis Mundi* is clearly represented by the horizontal centre of the mandala and by the verticality of the mountain-like tower, the four-īwān plan reveals two potential *loci* for the *Axis Mundi*. The one is of course in the centre of the courtyard, which is the geometrical centre of the compound and the intersecting point of the two orthogonal axes, the second one is the *mihrāb*, situated in the sanctuary. On the one hand, the imam or the shaykh carrying out the service assumes the function of the cosmic man in the *mihrāb* and connects metaphorically with the Heavens. On the other hand, the congregation in the courtyard as a whole acts as an *Axis Mundi* and unobstructed by any architectural settings (lack of a cupola) directly connects with the divine reality. These two architectural centres: the centre of the courtyard and the *mihrāb* can be explained with the hierophanic palimpsest. Primarily, the orthogonal centre of the courtyard was also the locus of the *Axis Mundi* and the most sacred place. However, with the advent of monotheistic thought and with the Islamic necessity to incorporate the *mihrāb* in the *qibla* as the most sacred locus in the compound, the four-īwān plan acquired two hierophanic centres: the centre of the courtyard, marked by the water basin, and the *mihrāb* niche as the most sacred part of the *qibla*.

This schematic comparison between the Hindu temple and the Buddhist stupa with the four-īwān plan shows that the basic compositional features such as the orientation along two orthogonal axes, situation of the sanctuary in their crossing point, four massive gates, etc. are similar. Although there is not a direct historical link between the two architectural settings, the hierophanies of the *Axis Mundi* and the Cosmic Cross, of the navel of the world, of the holy mountain, etc. are basically the same. They represent two architectural traditions based on the same anthropomorphic and physiomorphic beliefs and cosmological schemes.

In order to exemplify the orthogonal sacred nature of the geometry of the four-īwān plan, several Islamic imperial capitals have been analysed as well. All these cities have a rectangular (in the case of Harāt and Parthian Marv, a square) urban plan, divided into four quadrants by four main roads stretching between four gates in the middle of each city wall. The roads and the position of the gates are oriented along the ideal cardinal points. The streets are defined also by a geometrical grid and sometimes follow the natural flow of local rivers or canals, thus reinforcing the imagery of Paradise and the hierophany of the Cosmic Cross.

These cities are also covered in the dissertation because they contain a cross-axial four-īwān compound at their urban centre (a four-īwān palace, a four-īwān mosque or a four-īwān
madrasa), which reinforces their imagery as the centre of the world. The capital as the seat of the ruler, from whom divine power emanates, is based on an orthogonal grid which can be analysed as a microcosmic representation of the macrocosmic world. Staging the ruler at its centre reinforces the divine origin of political/royal power.

The aim of this dissertation is to analyse the four-īwān plan as a representation of Paradise and dynastic power aspirations. The four-īwān kosh ensemble (two four-īwān compounds built across each other) represents new political and spiritual realities as early as the 11th c. AD. The two and three-fold kosh ensembles formed by four-īwān buildings were erected to manifest the power aspirations of the ruling dynasties in Khiva, Bukhārā and Samarqand as late as the 19th c. AD.

The majority of the four-īwān kosh ensembles were built on sites previously occupied by other sacred buildings. As such, the site was used in the frame of the architectural palimpsest and offered new rendering of religious views, both of orthodox Islam and Sufism. Some Sufi sites were used for kosh buildings of orthodox Islam and vice versa. The fact that building material of one building was reused for another (kosh) building can be analysed within the framework of the architectural palimpsest.

The kosh ensembles were erected on major urban axes that defined the market routes. These market routes were essential for the economies of the cities and were seen as the main representational arena of the political relations between local ruling dynasties and the growing economic and political power of the Sufi shaykhs.

The intersection of the longitudinal axis of the two-fold kosh ensembles and the axis of the trading routes formed a new urban Axis Mundi. This new Axis Mundi transferred the urban importance from the old palatial structures, defined by the citadel, to the new non-palatial structures, e.g. the kosh ensembles, that developed along the new trading routes. The citadel as an isolated domain of the ruler was substituted by the kosh ensembles erected by the ruler along commercial junctions, joining forces with the Sufi shaykhs. The rulers did not build isolated palaces anymore; instead they built religious institutions such as mosques, madrasas and khānaqāhs in the thriving economic centres of the new growing cities. These non-palatial compounds reflected the shifts of power from the old image of the ruler as a sole representative of God on earth to the pious ruler who needed the support of the multi-cultured population in order to avoid unrest, as well as the support of the economically influential Sufi shaykhs in order to secure the booming trade and its revenues and the support of the ‘ulamā’ in order to promote their political ideology (including Sunni revival). Here it should be noted that Sufism and orthodox Islam coexisted peacefully and contradictory affiliations were quite common, given the close connection of ‘ulamā’ to Sufism.
An attempt has been made to determine the orientation of the qiblas of the major four-iwan compounds in the cities of Samarqand and Bukhârâ. For this reason, the respective mihrâbs were measured with a hand compass in the autumn of 2006.

The compass results lead to the major find of this dissertation, namely, that none of the qiblas is oriented towards Mecca. This can be explained with the political context of the Tîmûrid empire. A hypothesis has been proposed that the qiblas of the Bîbî Khânûm Mosque (the major monument erected by Tîmûr) and of the Ulugh Beg Madrasa (the major monument erected by Ulugh Beg) in Samarqand could be oriented towards Baghdad. Such orientation would be in line with Tîmûr’s attempt to affiliate his empire to the ‘Abbâsid Caliphate in Baghdad. Further, the latter two compounds have geographical orientation almost as similar as the orientation of the Ka’ba in Mecca. By copying the orientation of the Ka’ba, the Bîbî Khânûm Mosque and the Ulugh Beg Madrasa in Samarqand acquire the status of Axis Mundi, i.e. a cosmic centre of the Tîmûrid empire. The empire, in turn, gains the status of the most prominent Islamic empire of the 15th century with the capital of Samarqand, surrounded by villages bearing the names of former glorious Islamic capitals: Damascus, Baghdad, Cairo, and Sultaniya.

The late 14th century AD innovation of situating the main mosque sanctuary along the main longitudinal axis of the four-iwan mosques and madrasas can be also explained with the attempt to rotate the whole building similar to the orientation of the Ka’ba. The qibla in the southwest is thus situated “as closest” to Mecca and is parallel to the respective wall of the Ka’ba.

The main aim of the dissertation, then, is to show that the four-iwan plan was used to represent political agendas and imperial ambitions. Its hierophanic essence has been utilised to relate to the glorious imperial past by re-evoking the imagery of Paradise in a four-iwan setting. The ruler professes his omnipotent divine power as a commissioner of a pious building based on a paradisiacal plan, situated at the centre of an orthogonal imperial capital, representing in turn the totality of the macrocosmic world on a microcosmic scale.