

DESIGN ARCHITECT'S STATEMENT

Countless generations of architects and artists have been and continue to be inspired by the aesthetic challenge offered by the spiritual dimension of existence that transcends life's material limitations and go beyond them.

For over fifty years the illuminated wisdom and visions of Mawlana and Shams-i Tabrizi, to the extent that I have been able, have inspired the creative imagination and intuitively motivated my designs as an architect and teacher through a Khalq-i Jadid process.

Although my manifested works have inevitably fallen short of the profound depths of these inspirations, the timeless principles they have nurtured in me during the process have provided a consistent and strong quest to shift architecture from the dominant, contemporary, materialistic & machine-inspired functionalist aesthetic to a more holistic, environmentally sustainable, human scaled and spiritually inspired design approach.

Therefore, kindly accept the donation of these preliminary design refinements for the mausoleum as meditations on a place suitable for a memorial to commemorate and keep vital the sublime sense of the 'Alam al-Mithal' that Shams-I Tabrizi and Mawlana inspire.

Sincerely,

Nader Ardalan
Nowruz 1398

بیانیه معمار طراح

معماران و هنرمندان بیشماری همواره از چالش های زیباشناسانه ای که بُعد معنوی زندگی را به ماورای محدودیت های مادی اوج میدهند، الهام گرفته و می گیرند.

بیش از پنجاه سال، عقلانیت روشنگرانه مولانا و شمس تبریزی، تا آن میزان که قادر به الهام گرفتن از آن بوده ام، مشوق تخیلات خلاقانه و طراحی حسگرایانه من، بعنوان معمار و آموزگار، در پویش یک "خلق جدید" بوده اند.

گرچه بدون شک کارهای به ظهور رسیده و جان گرفته من از رسیدن به ژرفای عمیق این الهامات قاصر بوده اند، مبانی زمان ناپذیری که آنان در من بارور کرده و پرورده اند، محرک تلاشی مداوم و قدرتمند بوده اند که من معماری را از یک قالب سلطه گر، این زمانی، مادی، و ابزار-محور با جریانی قدوسی، زیست محیطی پایدار، با مقیاس انسانی، و ملهم از معنویات جایگزین کنم.

از این رو، خواهشمندم اهدای این طرح های اولیه پالایش یافته برای مزار شمس تبریزی را چون تفکراتی عبادت گونه در مکانی در خور یک بنای یاد بود برای به یادآوری و زنده نگاهداشتن حس متعالی "عالم المثل" که شمس تبریزی و مولانا الهام بخش آن بودند، بپذیرید.

با احترام

نادر اردلان

نوروز ۱۳۹۸

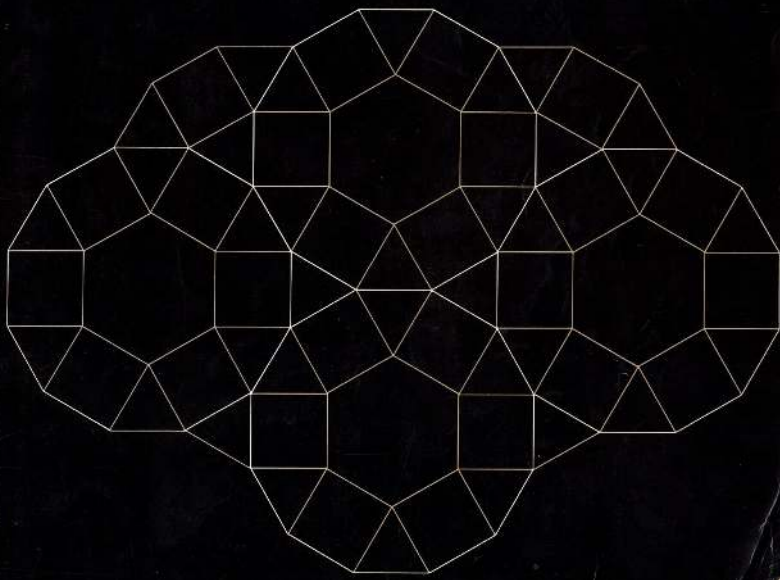
P783 B17.E5

A Publication of the Center
for Middle Eastern Studies

The Sense of Unity

The Sufi Tradition
in Persian
Architecture

Nader Ardalan and
Laleh Bakhtiar



The Sense of Unity The Sufi Tradition in Persian Architecture

Nader Ardalan and Laleh Bakhtiar

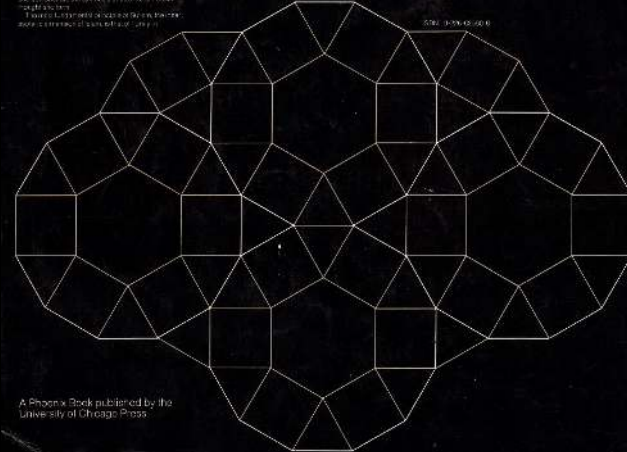
This book presents a new perspective on the history of Persian architecture, one that is rooted in the Sufi tradition. It explores the relationship between the Sufi tradition and the architecture of Persia, from the early Islamic period to the present. The authors argue that the Sufi tradition is the key to understanding the unique character of Persian architecture.

The book is divided into three parts. The first part, 'The Sufi Tradition', discusses the history and development of the Sufi tradition in Persia. The second part, 'The Architecture of Persia', discusses the history and development of Persian architecture. The third part, 'The Sense of Unity', discusses the relationship between the Sufi tradition and Persian architecture.

Translated by Laleh Bakhtiar and Nader Ardalan
with the assistance of Laleh Bakhtiar and Nader Ardalan

The book is a new perspective on the history of Persian architecture, one that is rooted in the Sufi tradition. It explores the relationship between the Sufi tradition and the architecture of Persia, from the early Islamic period to the present. The authors argue that the Sufi tradition is the key to understanding the unique character of Persian architecture.

The book is a new perspective on the history of Persian architecture, one that is rooted in the Sufi tradition. It explores the relationship between the Sufi tradition and the architecture of Persia, from the early Islamic period to the present. The authors argue that the Sufi tradition is the key to understanding the unique character of Persian architecture.



A Phoenix Book published by the
University of Chicago Press

Space

The Structure of Space

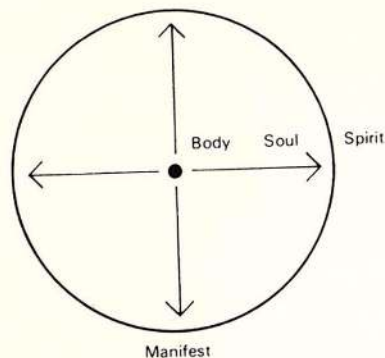
Space is one of the most direct symbols of Being. It is primordial, all-pervading, and, in the cosmology of Islam, the "locus" of the Universal Soul.

Traditional man tends towards a mode of comprehension which provides a metaphysical interpretation of life, an interpretation that precedes and goes beyond all external perception. This mode of comprehension, or initial interpretation, affects all of man's perceptions because it begins by situating him in the universe (fig. 13). Initially this interpretation determines his awareness of cosmic space as an externalization of the macrocosmic creation which is analogous to his own microcosmic self (fig. 14). This traditional Hermetic concept forms part of the world view incorporated into the Islamic perspective, a view in which the universe is composed of a macrocosm and microcosm, each containing three great divisions: the body (*jism*), the soul (*nafs*), and the spirit (*rūh*).

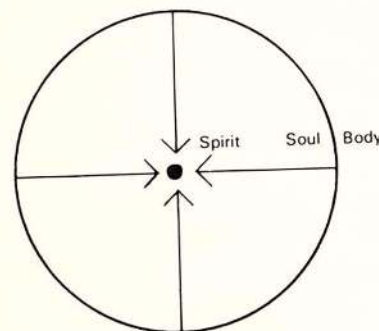
Two interpretations of this concept arise which, although apparently different, are essentially the same. In the first, God as Manifest (*Zāhir*) (fig. 15), is the reality of universal externalization. From within the concentric circles of the macrocosm, there is an outward movement from the earth as corporeal manifestation through an all-pervading soul to the enveloping Heavens, viewed as the seat of the Divine Spirit.¹ In the second, complementary view of God as Hidden (*Bāṭin*) (fig. 16), there is an inward movement within the microcosm of man, beginning with his physical presence and moving towards his spiritual center, the "Hidden Treasure." The two schemes correspond to each other, at the same time that one is the reverse of the other.

Orientation in Space

In structured space, man knows where he is; direction is meaningful to him. Reinforcing this universal order are the corporeal creations of the macrocosm and the microcosm which exhibit



15



16

ساختار فضا

فضا یکی از نمودارهای صریح جوهر هستی است. از عنصرهای اولیه فراگیرنده و نمودار هستی در فلسفه آفرینش برای اسلام است. انسان معمولاً تمایل به فهمیدن زندگی از طریق تفسیر ماورا طبیعی دارد و ادامه این تفسیر فرای مشاهدات و ادراک و آگاهی است. این نحوه تفسیر و فهمیدن در ابتدا تأثیر اساسی بر نگرش انسان در آفرینش و برقراری وجود دنیا است. در ابتدا این تفسیر از عالم هستی نمودار خارجی آفرینش عالم هستی و نمودار آفرینش انسان در میان عالم هستی محسوب می‌شود. این سنت سحر آمیز و عرفانی از فهمیدن جهان هستی در چشم انداز اسلام گنجانیده می‌شود. این نگرش جهان را از وجود یگانه انسان و عالم هستی میسازد که هر دو از سه عنصر اصلی جسم: (بدن) - (جان یا نفس) - (روح ماورا مادی) تشکیل می‌شوند.

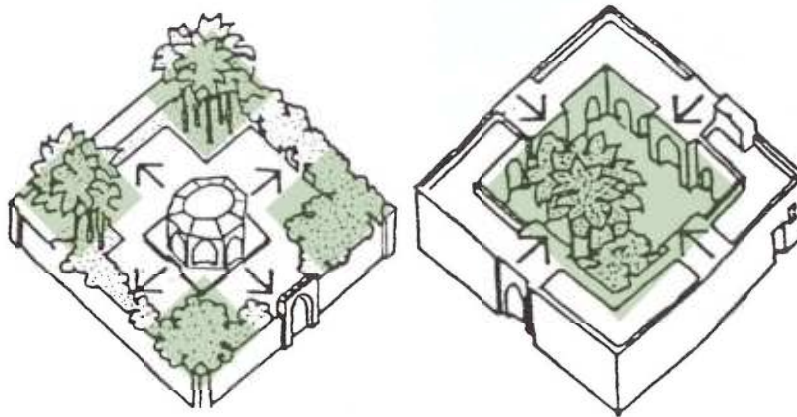
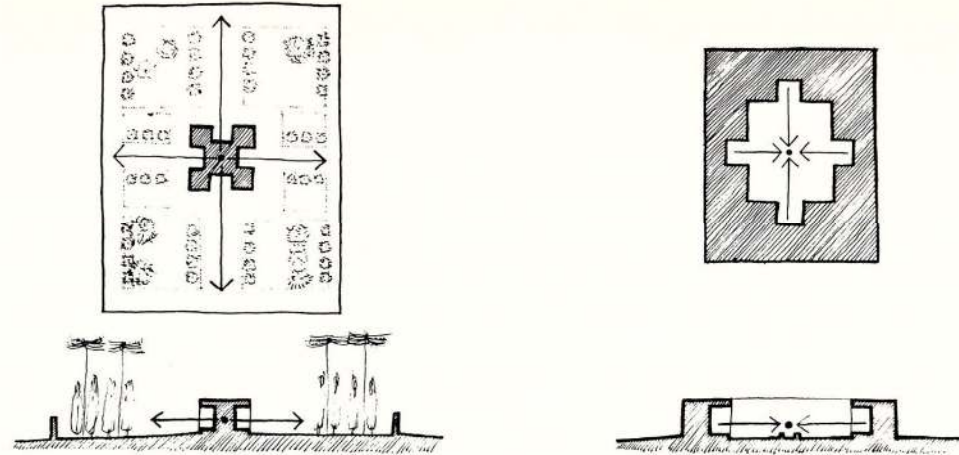
دو گونه تفسیر نا همگون وجود دارد که در واقع اساساً یکی هستند: تجلی خدا ظهور خارجی در واقعیت می‌شود. دنیا مثل حلقه‌های هم مرکز کوچک تا بزرگ، کره زمین در مرکز و ادامه تا کیهانشان به جایگاه الهی محسوب می‌شود.

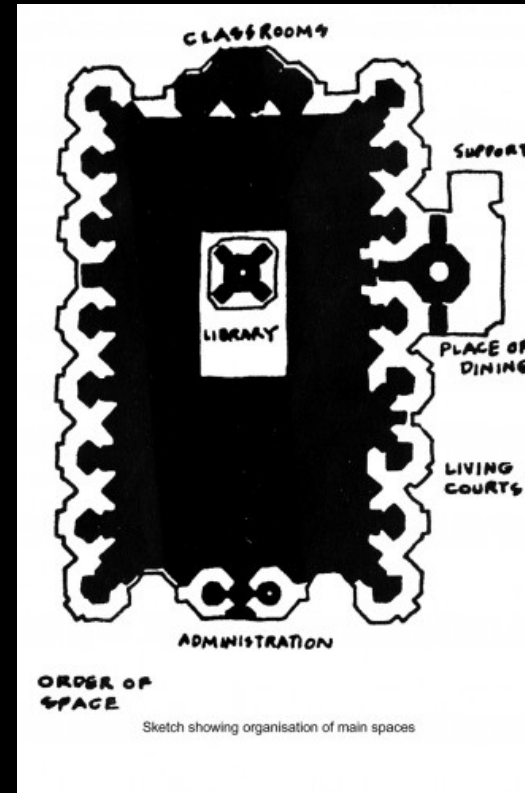
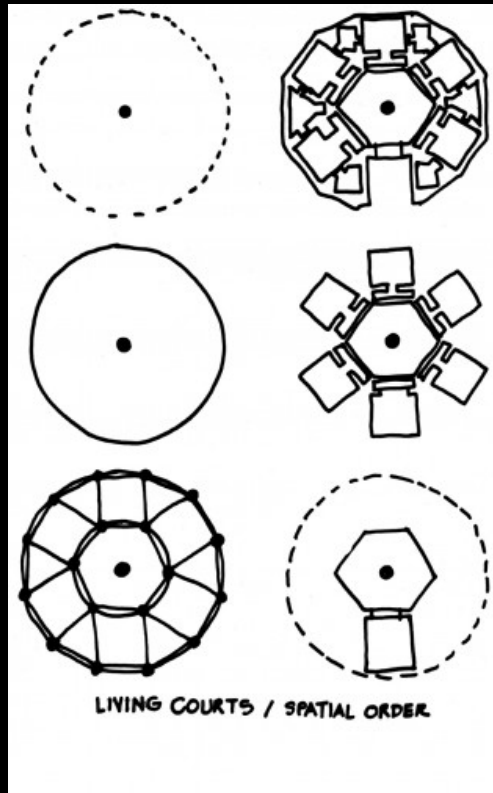
تفسیر دیگری هست مبنی بر پنهان بودن خدا در وجود انسان. انسان از جسم شروع می‌شود و به تدریج به عمق انسان و به مرکز معنوی ختم می‌شود.

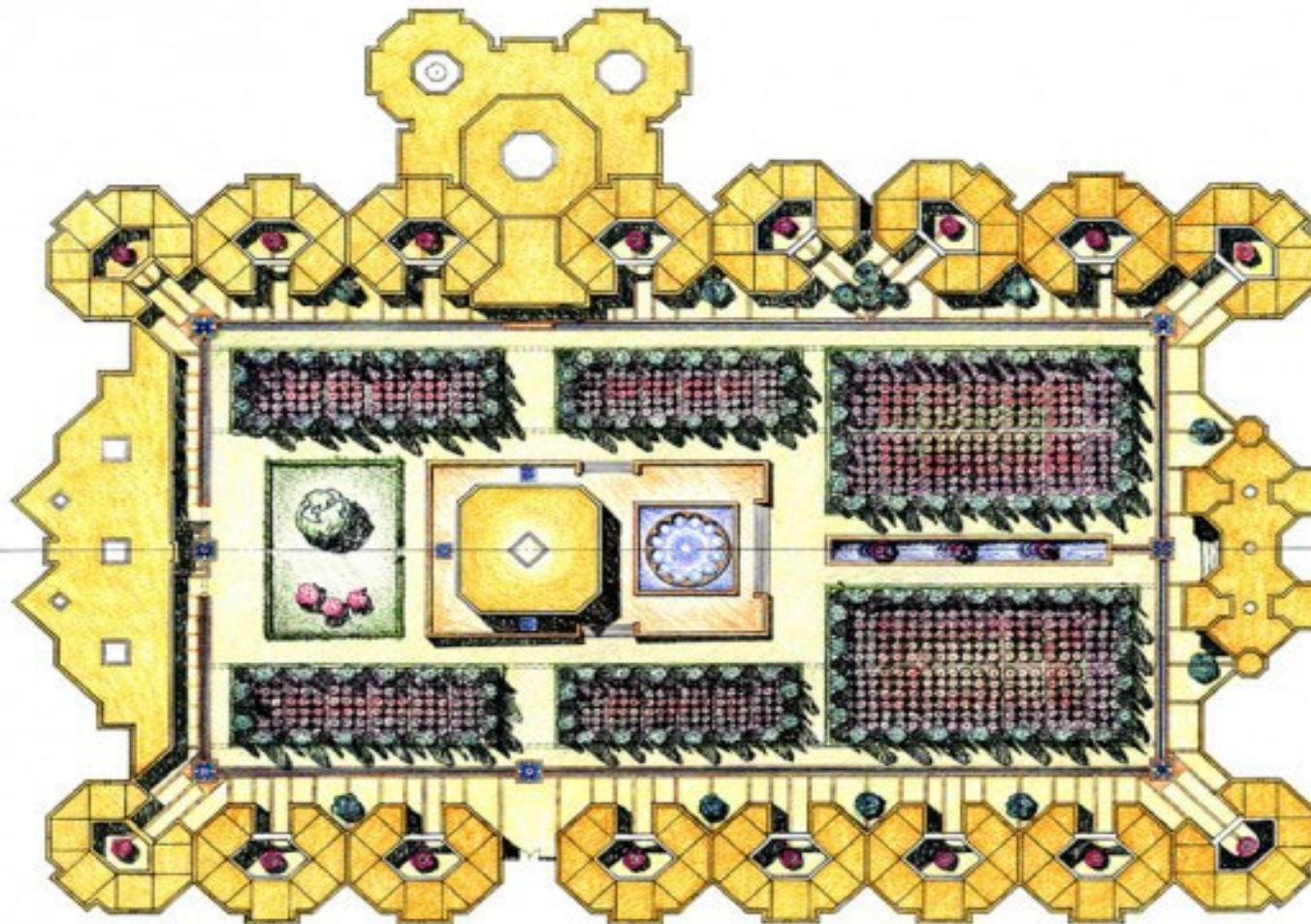
این دو گونه تفسیر در غین مرتبط بودن معکوس یکدیگر هم محسوب می‌شوند.

Table 4: Traditional Forms

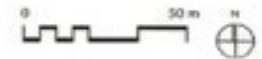
Archetype	Form	Style
1. The Recapitulation of Paradise	Garden (<i>Bāgh</i>) Courtyard (<i>Hayāt</i>)	Bāgh-i-Fin Madrasah-yi-Nimāwar
2. Sacred Mountain	Socle (<i>Takht</i>)	Takht-i-Jamshīd (Persepolis)
3. Transition—the Way	(<i>Īvān</i>) Porch (<i>Tālār</i>)	Masjid-i-Jāmi', Chihil Sutūn Sanctuary Portal
4. Hierarchic Demarcation (of time and space)	Gateway (<i>Darvāzah</i>)	ʿAlī Qāpū
5. Multiplicity	Room (<i>Ṭāq</i>)	Madrasah-yi-Nimāwar
6. Unity	Sphere Dome (<i>Gunbad</i>)	Masjid-i-Jāmi', North Dome Chamber
7. Reintegration	<i>Chahār Ṭāq</i>	Sasanian <i>Chahār Ṭāq</i> Masjid-i-Shāh main sanctuary chamber
8. Ontological Axis	Column (<i>Mill</i>) Minaret	Manār-i-ʿAlī







IRAN CENTER FOR MANAGEMENT STUDIES • TEHRAN • IRAN • ILLUSTRATIVE SITE PLAN • NADER ARDALAN ARCHITECT, 1972







SHAMS-I TABRIZI MAUSOLEUM KHOY, IRAN

PRELIMINARY DESIGN REFINEMENT DOCUMENTS

INTERIM PRESENTATION, 2019

A DONATION OF NADER ARDALAN, DESIGN ARCHITECT

CLIENT: MIRAS I FARHANGI MARKAZI

DESIGN CORE [4s], PROJECT CONSULTANT

DESIGN FOR ISHQ :

A Mausoleum for the Mystic Shams i Tabrizi in Khoy, Iran

A design donation by
Nader Ardalan

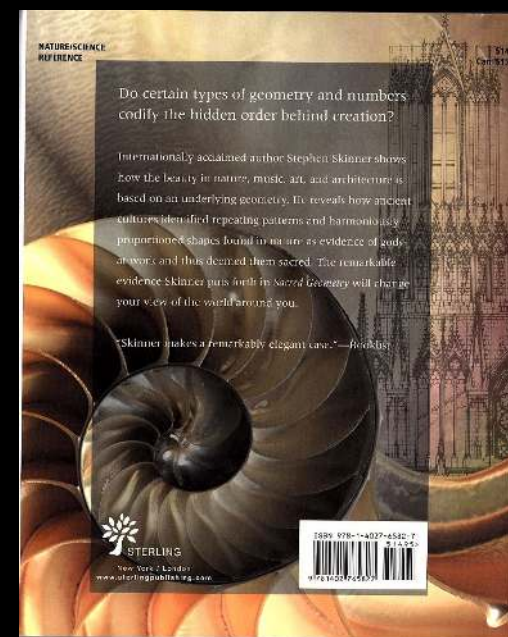
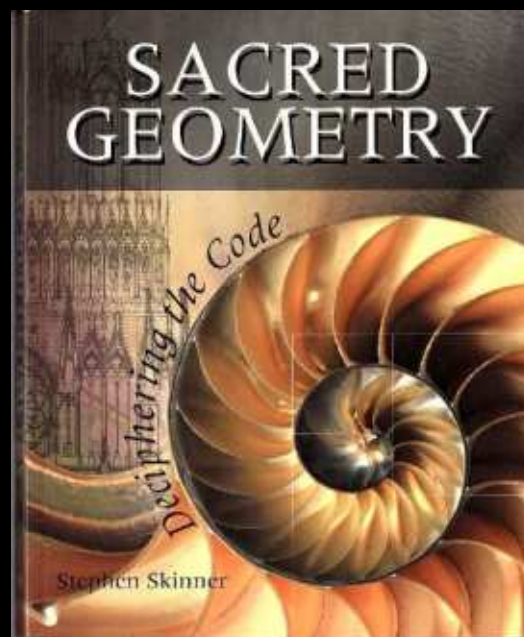
Rumi is one of the most respected and popular mystical love poets of Iranian Culture and in the 21st c. he has also become one of the world's most celebrated metaphysical love poets.

But who transformed this pious 13th century scholar into this transcendent mystical lover? It was his "soul friend," Shams of Tabriz who was indeed Rumi's "Sun" that illuminated in him the evocative and deeply spiritual dimensions of transcendent love of the Divine.

The site has already been nominated for the UNESCO World Heritage List

تقدس هندسه و رمز اعداد:

چگونه برخی از اعداد و قوانین هندسه، رمز پیدایش و نظم جهان را برای ما می‌گشایند. در این نوشته، نویسنده سرشناس "Stephan Skinner" رابطه مستقیم طبیعت، موزیک، هنر و طراحی را بر اساس قوانین هندسه و علم اعداد به ما نشان می‌دهد. جالب این است که فرهنگهای باستانی هم در اقصا نقاط جهان رمز اعداد و نسبت هماهنگی شکل‌ها را با یکدیگر کشف و آنها را مظهر وجود خدایان میدانستند و آنها را مقدس می‌پنداشتند. نمونه‌هایی که "Stephan Skinner" در کتاب "Sacred Geometry" حقایق زیبایی را بر روی شما می‌گشاید.



Constructing a logarithmic spiral

1 Start with a square with sides of one unit (be it inches, centimetres or whatever, it does not matter) and call it ABCD. Mark the midpoint of DA with an X (see diagram 1).

2 Anchor the compass at X and, with radius BX, draw an arc. It will cut DA, extended at point E. Use point E to construct a new rectangle, EFBA (see diagram 1). This construction produces a Golden Rectangle EFCD, and has resulted in several magical results. For example, DE is now cut by A in the Golden Mean proportion.

3 If you now draw the diagonals BE and DF they will always meet at right angles (see diagram 2). This is why the particular logarithmic spiral generated from this is called a right-angled logarithmic spiral.

4 Now take the long side, DE, of the Golden Rectangle just created and add the square HEDG. Continue adding squares, each time taking the long side of the Golden Rectangle just produced - HE, JC, LG and NI - to produce new Golden Rectangles, HFJC, IJCG, IKLG, IKMN and PKMO respectively (diagram 3).

5 Finally, draw by hand a smooth curve that joins the outer corners of each successively added square. The squares 'whirl' outwards, but each time keep the Golden Mean proportion (diagram 3).



Diagram 1



Diagram 2

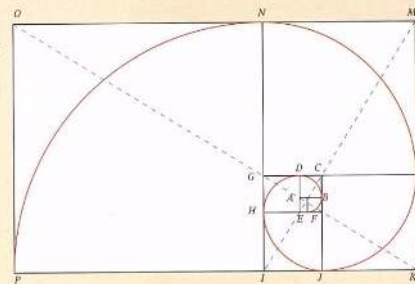


Diagram 3

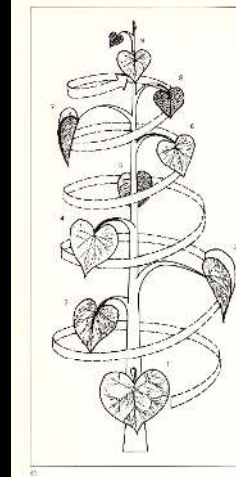
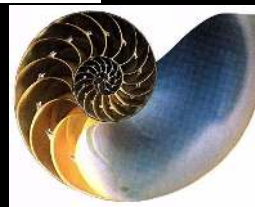
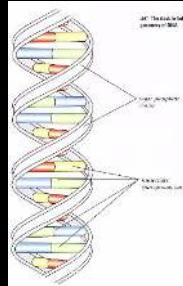
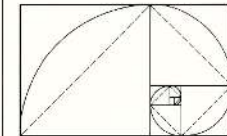
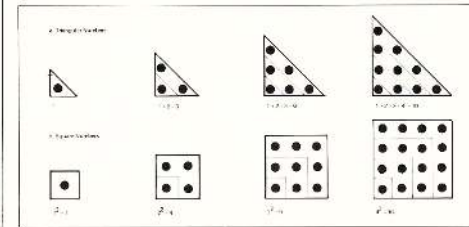


FIG. 1. Plant Growth



42



43

42. Loaves and Their Growth

The growth of loaves comes from the division of a cube of an even number of cubes into two cubes. The growth of loaves from one loaf to two loaves is a simple case of the Fibonacci sequence. The Fibonacci sequence is a series of numbers in which each number is the sum of the two preceding ones, usually starting with 0 and 1. The sequence is named after the Italian mathematician Leonardo Fibonacci.

43. Spiral Forming a Golden Rectangle

The logarithmic spiral is a curve that winds outwards from a central point, with the distance between successive turns increasing as the spiral moves outwards. The spiral is a natural form, found in many biological structures, including shells, nautilus, and galaxies.

44. Diagrams

The diagrams show the construction of a logarithmic spiral. The diagrams show a square divided into four quadrants, with a spiral path drawn through the corners. The diagrams are labeled with numbers 1 through 12, showing the progression of the spiral.

Diagram 1 shows a square with side length 1. The midpoint X of DA is marked. An arc centered at X with radius BX intersects the extension of DA at point E. A new rectangle EFBA is formed, creating a larger Golden Rectangle EFCD.

Diagram 2 shows a Golden Rectangle EFCD with diagonals BE and DF drawn. The diagonals intersect at a point, demonstrating that they meet at right angles.

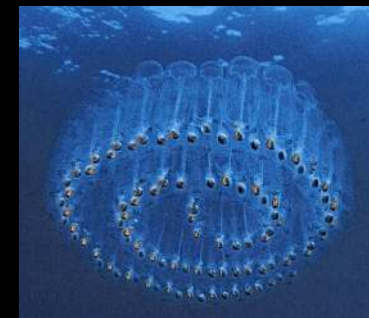
Diagram 3 shows a series of nested Golden Rectangles and squares. Starting from a central square, squares are added to the sides of the rectangles, creating a spiral pattern. The rectangles are labeled HFJC, IJCG, IKLG, IKMN, and PKMO. The squares added are HEDG, JC, LG, and NI.

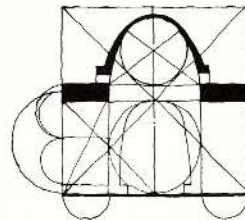
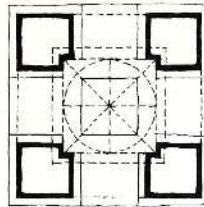
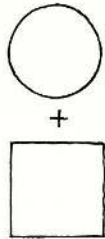
Finally, draw by hand a smooth curve that joins the outer corners of each successively added square. The squares 'whirl' outwards, but each time keep the Golden Mean proportion (diagram 3).

The growth of loaves comes from the division of a cube of an even number of cubes into two cubes. The growth of loaves from one loaf to two loaves is a simple case of the Fibonacci sequence. The Fibonacci sequence is a series of numbers in which each number is the sum of the two preceding ones, usually starting with 0 and 1. The sequence is named after the Italian mathematician Leonardo Fibonacci.

The logarithmic spiral is a curve that winds outwards from a central point, with the distance between successive turns increasing as the spiral moves outwards. The spiral is a natural form, found in many biological structures, including shells, nautilus, and galaxies.

The diagrams show the construction of a logarithmic spiral. The diagrams show a square divided into four quadrants, with a spiral path drawn through the corners. The diagrams are labeled with numbers 1 through 12, showing the progression of the spiral.





Chahār Tāq

The place of worship of the sacred fire, the *chahār tāq* (fig. 36) has existed in the Iranian plateau since mythical times. The particular form of this structure has undergone no significant change since then. Its metamorphic constancy is a testament to its primordial validity, and it remains today as the most powerful integration of traditional forms and symbols put together by man.

In shape, it is a dome resting on a square of four arches. In plan, it is a mandala. Its best antique remains are to be found in the Sasanian cult temples, in the center of which burned the symbolic fire; or in the royal throne chambers such as the Takht-i Taqdis; and perhaps, best of all, in the analogous *chahār bāgh* plans of the Sasanian paradise parks. In all three examples the common element is the idea of mandala as cosmogram.

As a traditional concept of great profundity, the *chahār tāq* was incorporated into the world of Islamic forms where it reassumed its former pre-eminence. Viewed through Islamic esotericism, it becomes and remains today the architectural manifestation of reintegration and of creation itself. In its forms, it embodies the most basic resolution of the square and the circle.

The cubical volume of the base, viewed as man, earth, or the earthly paradise, is the supreme symbol of immobility and the most externalized manifestation of the Creator. By its four pillars it evokes the four elements, the four directions, the four winds, the four seasons, and the four colors.¹ In short, it presents to the imagination those basic and, apparently, most stable aspects of temporal life.

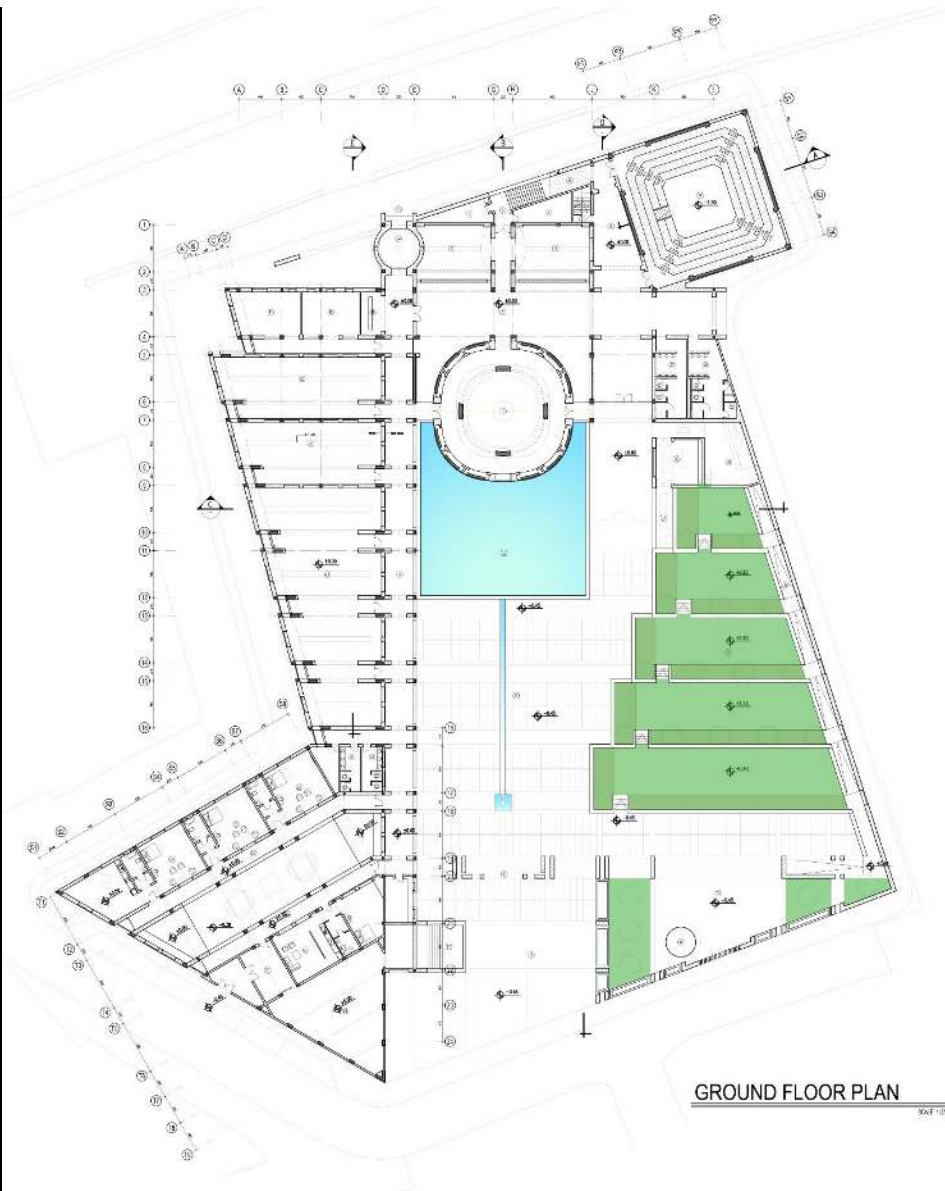
Superimposed upon this rectangular space is the circular or spherical dome, representing the world of pure quality. Symbolizing the lightness and total mobility of the Spirit, it is a form that has no beginning and no end. Its sole point of reference is its center, through which develops the metaphysical axis that links it with the axis of the square resting below it. This Vertical Cause

unites the two forms qualitatively, and the transformation of the circle into the square represents a quantitative unification. The latter is the symbolic reintegration of the earthly square into the circle of the Heavenly Jerusalem.

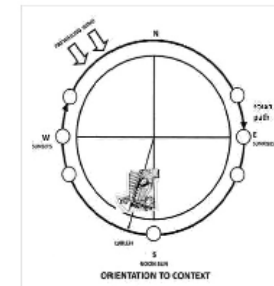
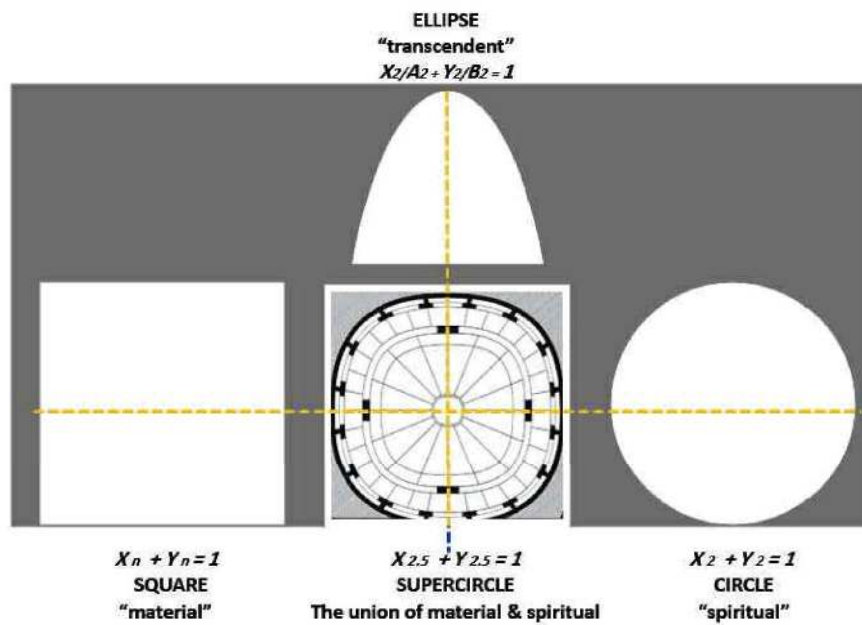
Within the space that witnesses this resolution and echoes to the cosmic rhythm of the transformation, the Islamic architect places his point of emphasis. In the *chahār-tāq* mosque,² this point is the *mihrāb*, in the garden pavilion it is the central font, and in the mausoleum it is the tomb of a saint. Here, then, within the primordial forms of the circle and the square traditional man finds his spatial locus. The *chahār tāq* shelters his place of spiritual birth, life, and death.

unites the two forms qualitatively, and the transformation of the circle into the square represents a quantitative unification. The latter is the symbolic reintegration of the earthly square into the circle of the Heavenly Jerusalem.

Within the space that witnesses this resolution and echoes to the cosmic rhythm of the transformation, the Islamic architect places his point of emphasis. In the *chahār-tāq* mosque,² this point is the *mihrāb*, in the garden pavilion it is the central font, and in the mausoleum it is the tomb of a saint. Here, then, within the primordial forms of the circle and the square traditional man finds his spatial locus. The *chahār tāq* shelters his place of spiritual birth, life, and death.

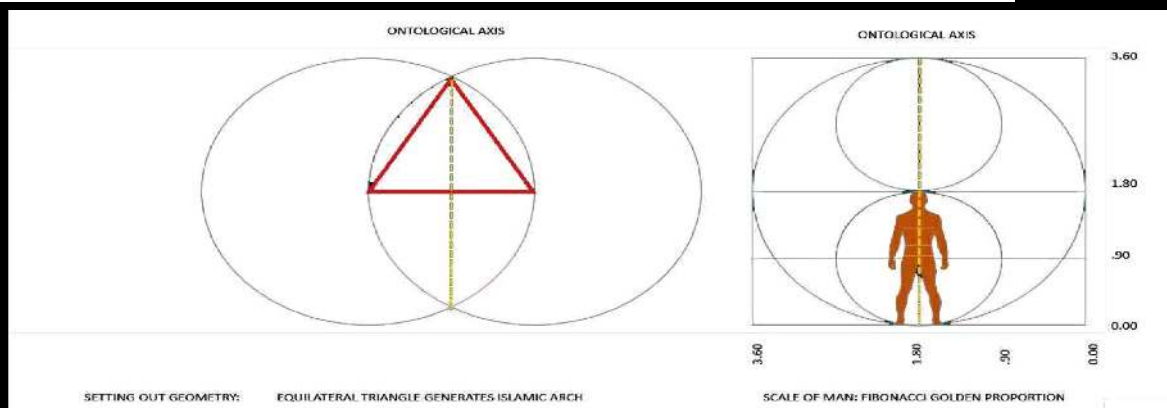






SHAMS-E TABRIZI MAUSOLEUM, KHUY, BASIC PRINCIPLES OF URBAN FORM, NADER ARDALAN, DESIGN ARCHITECT, DESIGN CORE [45], CONSULTANT, NOWRUZ 1398

EVOLUTION OF THE SUPERCIRCLE ELLIPSOID





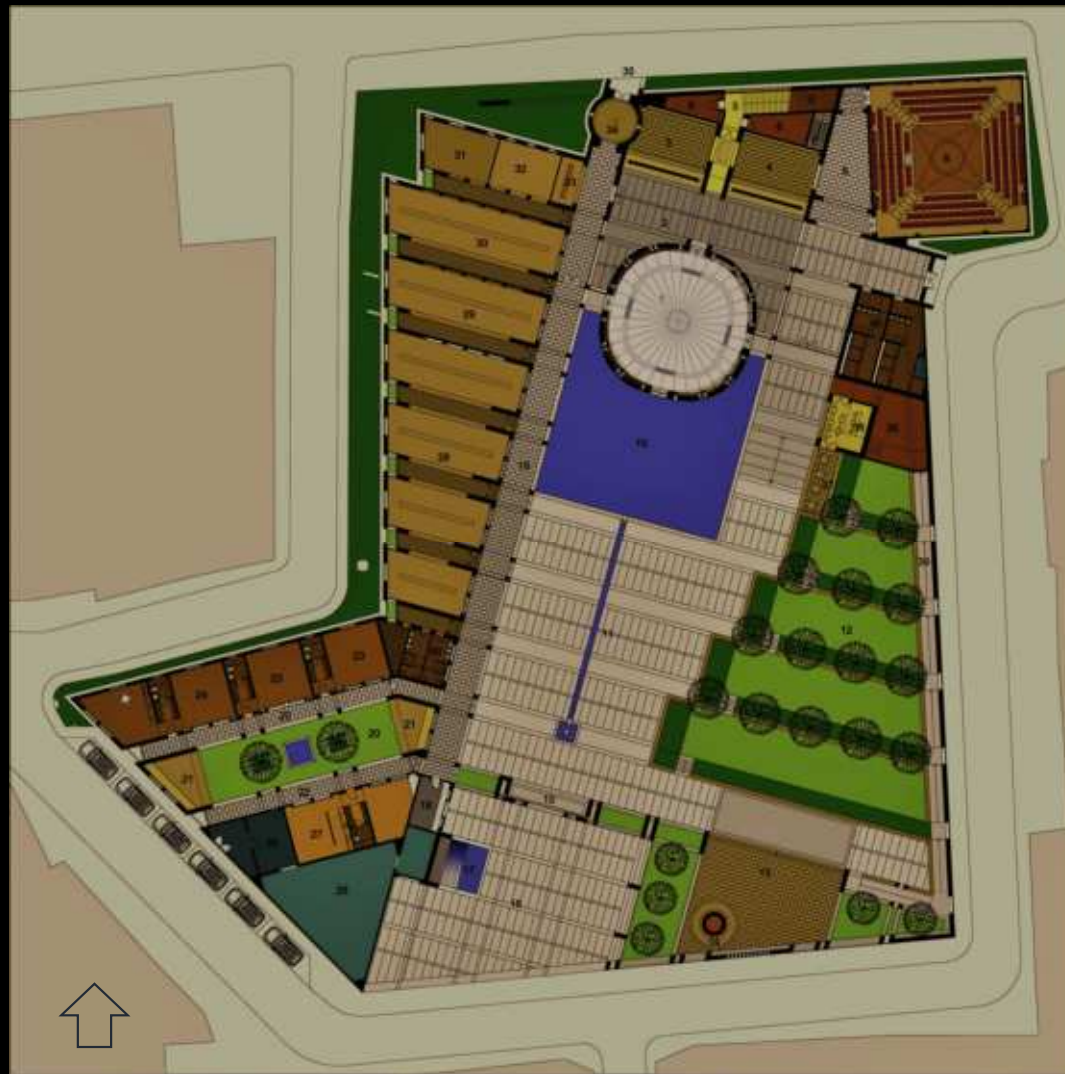
SHAMS I TABRIZI MAUSOLEUM, KHOY . AERIAL PERSPECTIVE FROM THE SOUTH . NADER ARDALAN, DESIGN ARCHITECT . DESIGN CORE [4s], CONSULTANT



SHAMS I TABRIZI MAUSOLEUM, KHOY . SITE ROOF PLAN . NADER ARDALAN, DESIGN ARCHITECT . DESIGN CORE [4s],CONSULTANT.

LEGEND

1. MAIN SANCTUARY
2. LOBBY
3. SHAMS EXHIBITION
4. RUMI EXHIBITION
9. AUDITORIUM
10. REFLECTING POOL
11. ENTRY COURTYARD
12. TERRACED GARDEN
14. OLD SELJUK MINARET
16. SOUTH ENTRY PLAZA
17. SALSABIL FOUNTAIN
- 20-24. VISTING SCHOLARS COURT & QUARTERS
- 25-27 KADIM & SERVICES
- 28-30 LIBRARY/RESEARCH
- 31-33 INFO/SHOP/ADMIN.
- 34-35 NORTH ENTRY & ROTUNDA
- 36-40 TEA ROOM & SERVICES



SHAMS I TABRIZI MAUSOLEUM, KHOY . SITE GROUND PLAN . NADER ARDALAN, DESIGN ARCHITECT . DESIGN CORE [4s],CONSULTANT.





SHAMS I TABRIZI MAUSOLEUM, KHOY . NORTH /SOUTH SECTION VIEW WEST . NADER ARDALAN, DESIGN ARCHITECT . DESIGN CORE [4s],CONSULTANT . SCALE APPROX. 1:200 AT 175%
NOWRUZ 1398

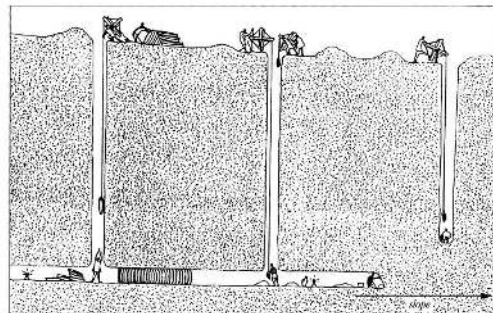
HISTORY AND HERITAGE

were spread throughout his empire—as far as Oman and even Egypt. In the centuries that followed Achaemenian rule, the system would be expanded to the point where on the plateau alone it covered 250,000 square miles and produced ten million gallons of water a minute. It was, the French geologist Henri Goblot observed, “one of the greatest civil engineering projects in the history of the world.” It still supplies Iran today, although its use is diminishing as dams and wells lower the level of the water table.

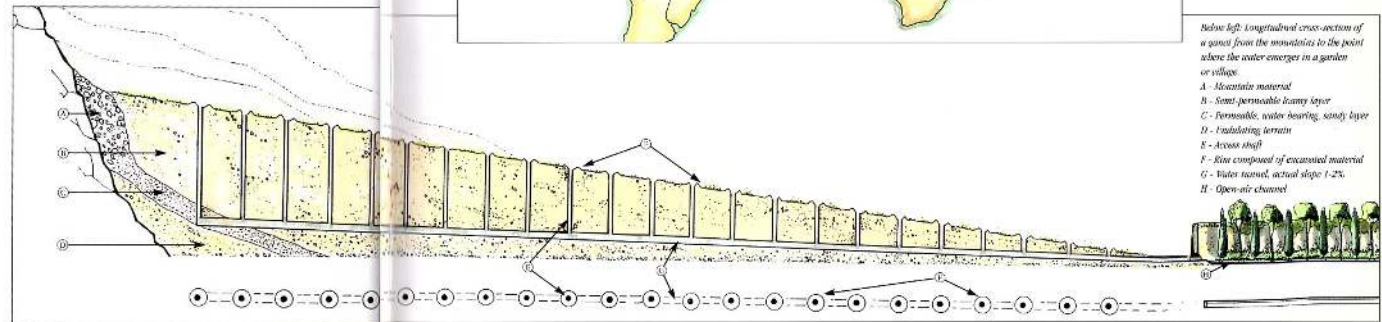
These underground irrigation channels are known as *qanats*. They are brilliantly simple in concept and require armies of labor to build and maintain. They depend on the snow-fed subterranean water at the base of the Iranian mountains. To reach it, a master shaft, sometimes as deep as 150 feet, is driven at the source. Then a tunnel is dug from wherever the water is needed, which may be many miles away, to the master shaft. The tunnel is slightly inclined, so that the

water is propelled by gravity, and it is interrupted at intervals of about fifteen to sixty feet by shafts from the surface that permit the removal of excavated dirt, not to mention the introduction of air for the laborers. After the qanat is complete and, in areas where the earth is porous, the tunnel lined with ceramic rings called *kaval*, the shafts provide access for maintenance work, which is demanding and continuous. As late as the 1930s, one-third of all qanats were in use. The Iranian desert is laced with lines of these shafts. From the air they look like the hills of giant moles.

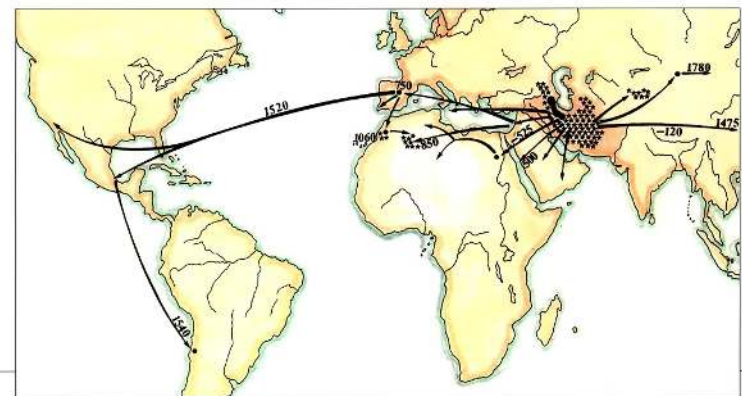
When it reaches its destination—a village or a city or a palace complex—qanat water is fed directly into the shorter irrigation ditches known as *jubes*. Thus directed, the water may flow through a garden, pausing in basins, rising in fountains, and from there run out to fields to water crops or even, as streams, to turn mill wheels. Nothing is wasted. Water is sacred.



Right: Illustration showing the method used to construct a qanat and its access shafts.



Left: Map showing area where the technique of qanat construction originated in northeastern Iran around 500 B.C. The technique was exported to other parts of the world, first by Arabs of Great the Great, to Tunis and then, under Islamic, to the Egyptian oases of Siwa.



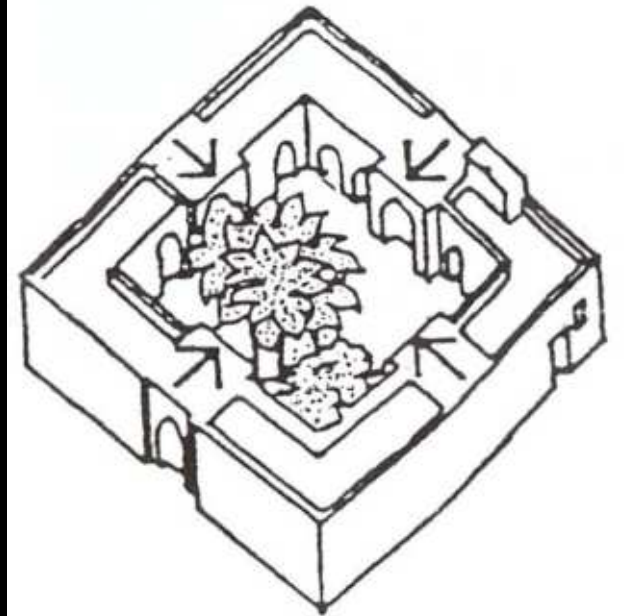
Below left: Longitudinal cross-section of a qanat from the mountains to the point where the water emerges in a garden or village.

- A - Mountain material
- B - Semi-permeable leamy layer
- C - Permeable, water-bearing, sandy layer
- D - Fracturing terrain
- E - Access shaft
- F - Kist composed of excavated material
- G - Water tunnel, actual slope 1-2%
- H - Open-air channel

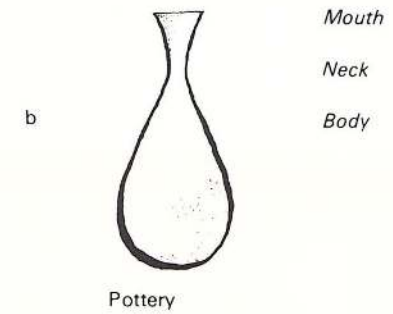
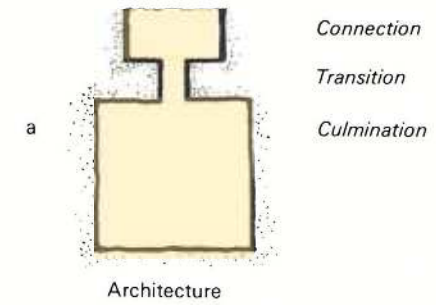
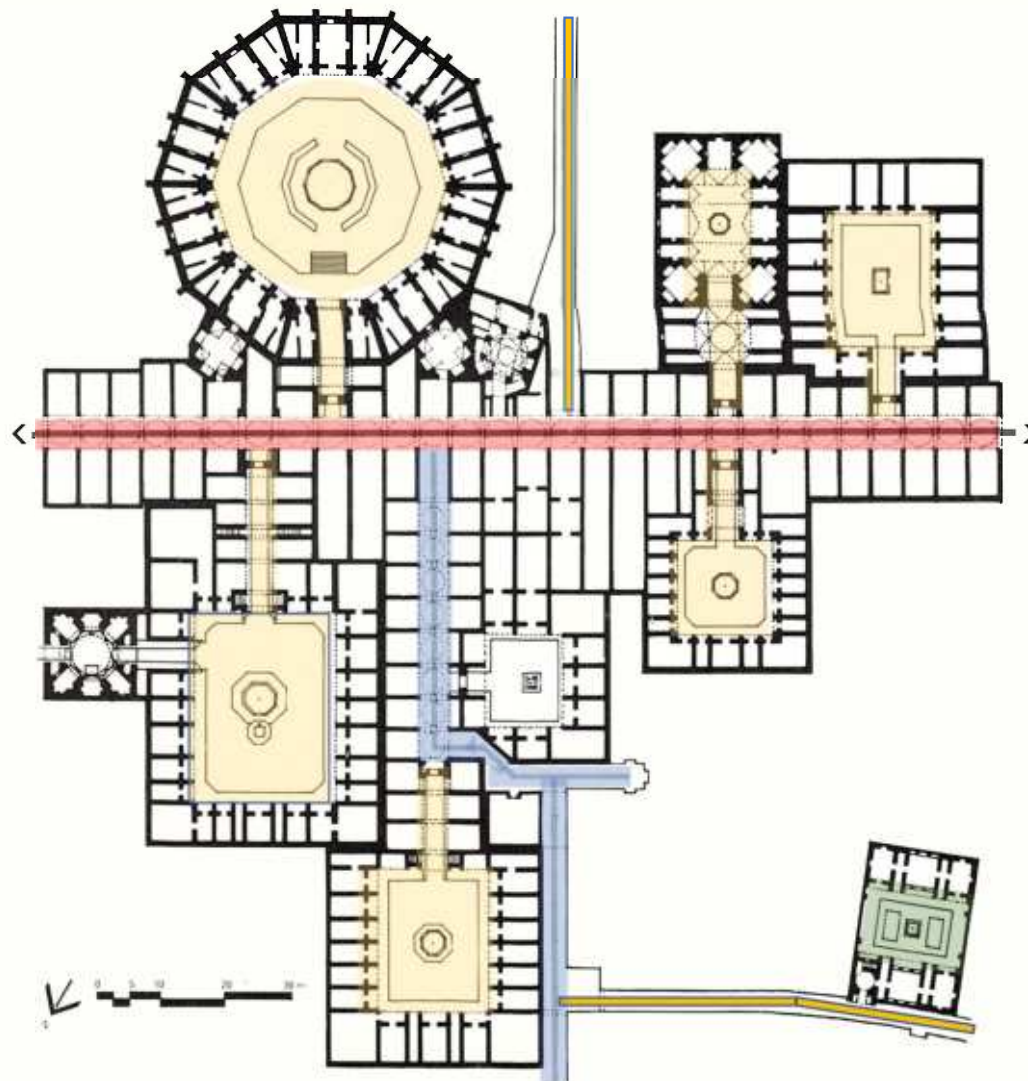












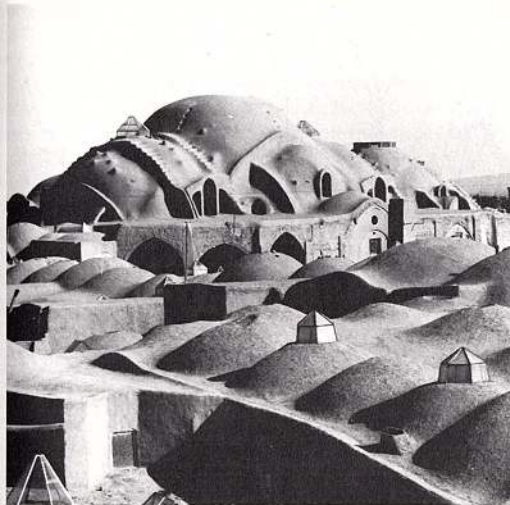
-SPACE Positive
 Negative

-Movement Macro
 Micro

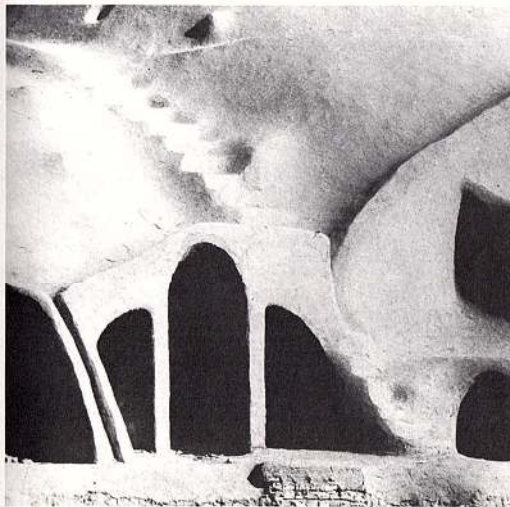
-ORDER

-LIGHT

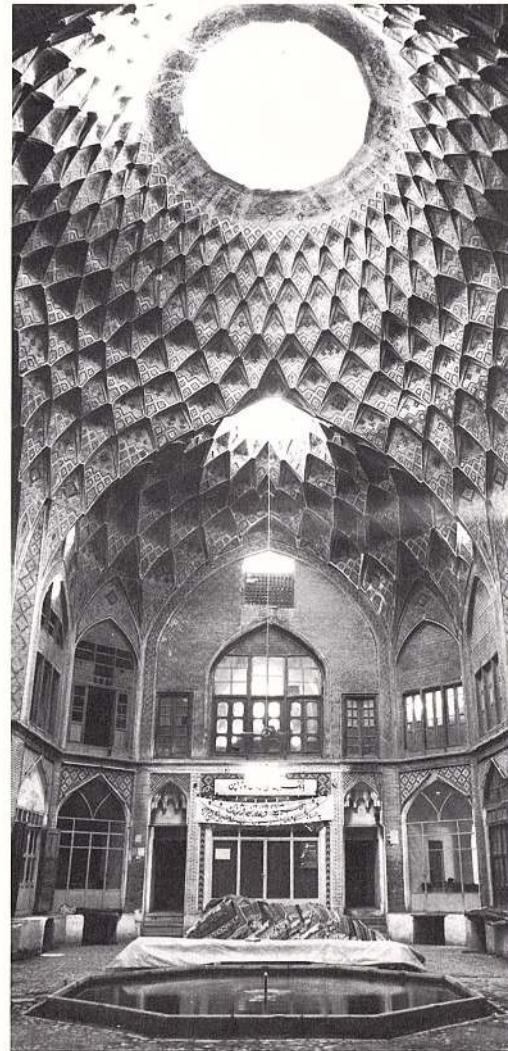
Secondary shapes determine the particular architectural expression. Creative excellence



31a



31b



31c

Positive Space Systems

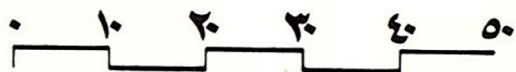
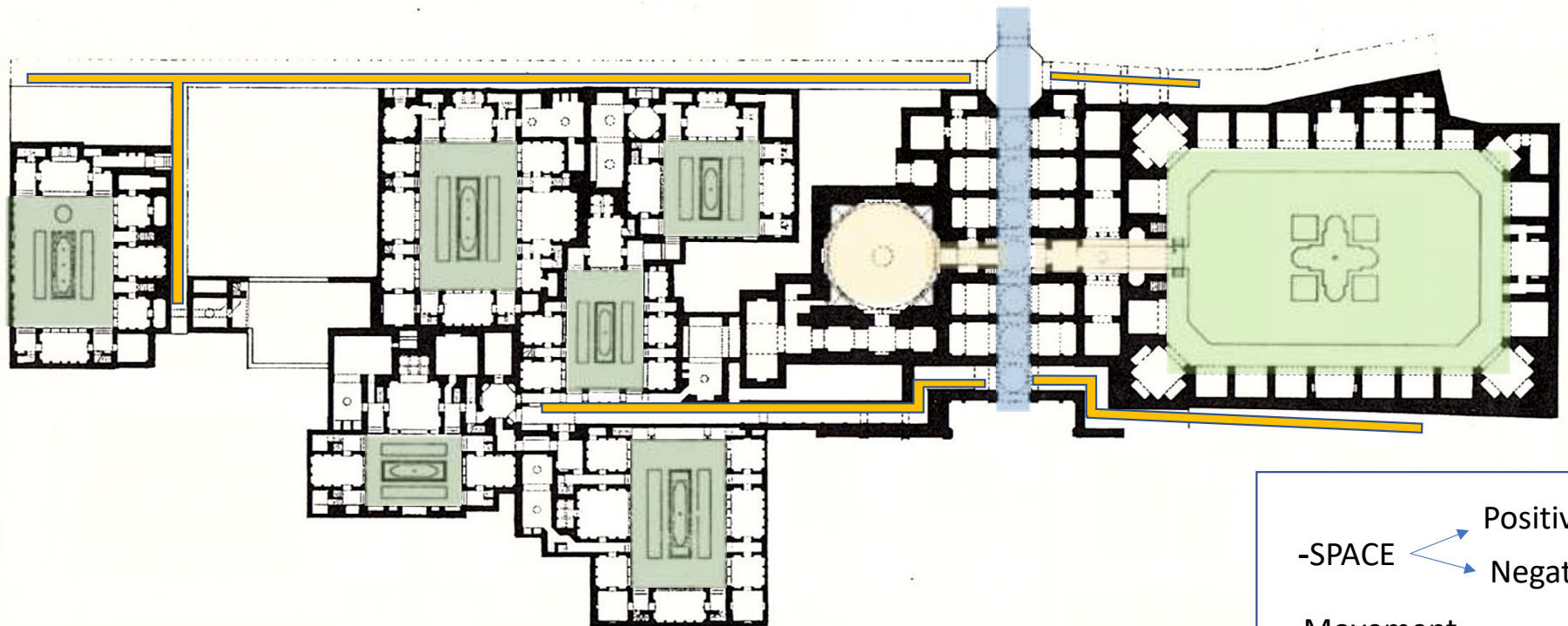
A hierarchy of spatial linkages provides an orderly system that allows for both constancy and change (fig. 29). The primary space system relates to the main flow of the bazaar route which traditionally begins at one of the main city gates and frequently continues through the city to the opposite gate or culminates in the nodal space of either a palace precinct or a royal mosque.¹⁰ Secondary space systems, such as pathways into residential quarters, spring from the main bazaar route as tributaries from a river. Dependent spaces, such as shops along the bazaar and rooms around the courtyard of *madāris*, caravanserais, or even residences, rely on primary, secondary, or nodal spaces for their existence. The linkage of one space to another inevitably follows the basic pattern of connection, transition, and culmination (fig. 30). The active quality of positive space carves the spatial connection, flows rapidly through the transition, like air moving through a venturi tube, and expands into the culminating spaces, pushing the membrane of domes outward and making them taut; transforming the walls of rooms into transcendent niched volumes; and turning the ornament of surfaces into poetic testaments of the will of the soul to return from whence it has come.

The result is an internal architecture inseparable from the fabric of the cityscape, an architecture indicating that the creative act is less concerned with objects in space than with the preservation of space itself (fig. 31). Just as the Spirit defines the universe in which the soul moves, so sedentary man creates shapes which enclose spaces within which man's essential soul can breathe.

The Space of Man

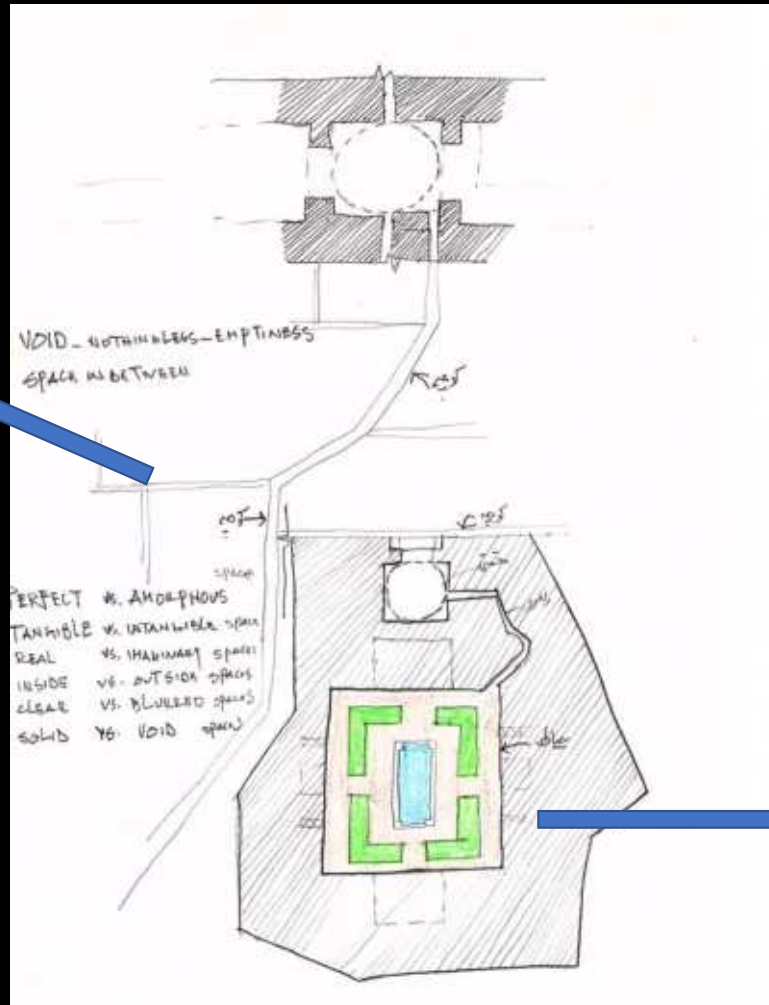
Man's perception of "social" and "personal" space is an essential aspect of his use of space. The architectural and urban environment created by traditional man, is, in part, an expression of these perceptions.¹¹

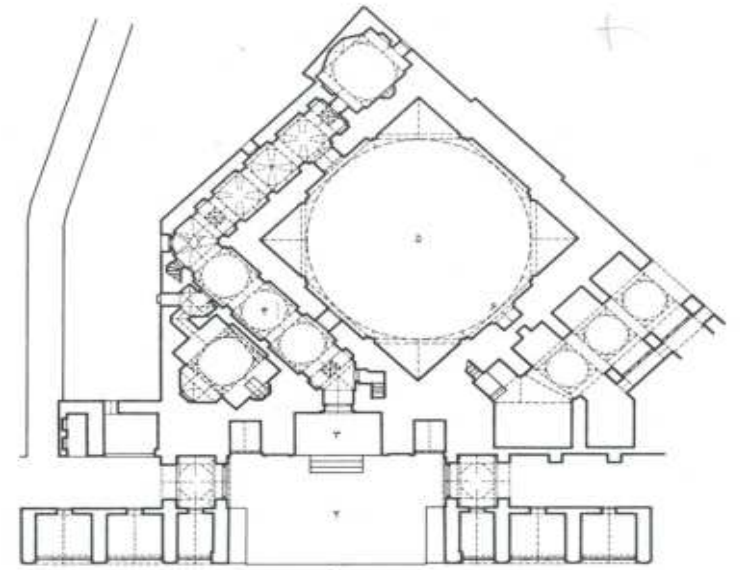
Intrinsic to the proxemic patterns of traditional man, is his concept of "person" in relation to the confines of the body. Unlike in northern Europe,



- SPACE
 - Positive
 - Negative
- Movement
 - Macro
 - Micro
- ORDER
- LIGHT







نقشه مسجد شیخ لطف‌الله، قزوین
 1. حیاط داخلی
 2. ورودی مسجد
 3. سردر یا طاقین اریزهای آید
 4. سالن درودی
 5. گنبدان مسقف زیر گنبد
 6. محراب















