

NAWAZISH G. NANJI

GIVING ARCHITECTURE TO FIRE





GIVING ARCHITECTURE TO FIRE

Nawazish G. Nanji

Thesis submitted to the Faculty of
Virginia Polytechnic Institute and State University in
partial fulfillment of the requirements for the degree of

Master of Architecture

Hans Rott - Committee Chairman

Michael Ermann - Committee Member

James Jones - Committee Member

May 17, 2006
Blacksburg, Virginia

Giving Architecture to Fire
Nawazish Godrej Nanji

Abstract

For centuries, fire has been a sacred symbol from the eastern cultures to western regions. As one of the four states of matter, fire represents the great essence in our daily lives as an energy source with its warmth, light and aura, kindling feelings of truth and spirituality within us. In his poetic verses, fire was venerated by Zoroaster who led mankind to believe that there is one supreme lord that we may follow; a being that can only be known by the quest for truth (Asha). For Zoroaster truth was symbolic with fire as it brought people together in prayer. With the passage of time fire became consecrated in different orders with the higher ones being placed within covered buildings for protection. These buildings became temples of fire or Fire Temples where an eternal flame was kept and looked after by a priest so as to keep alive the salvation of humankind and continue our journey towards righteousness with the blessings of the supreme. With this, faith stayed alive as long as the Fire burned.

Herein lies my celebration of fire where I announce it to the follower on the path to truth as an eternal flame burning, yet resting in a place worthy of all its glory; an ambience created to venerate the flame and reassure the traveller that its light has more to offer than meets the eye.



Fig.1.1



NAWAZISH G. NANJI

GIVING ARCHITECTURE TO FIRE

ATASH BEHRAM

A PERSIAN FIRE TEMPLE



Contents

<i>7</i>	Acknowledgments
<i>9</i>	Preface
<i>11</i>	Asha Vahishta - The lord of Fire
<i>15</i>	A Glimpse of the Past
<i>24</i>	Atash Behram - The Temple
<i>52</i>	Fire for the Senses
<i>60</i>	The Architecture and the Hill
<i>72</i>	Reflections
<i>74</i>	Bibliography



Acknowledgements

Life has its own way of throwing circumstances at us, some of which are crests and some troughs. These troughs or the downsides were the ones that seemed to stick in my head and as a result of a childhood dilemma, I was once advised, “ You do your best and God will do the rest”. Of course, it’s meaning remained ambiguous for long, till I started holding my own and making crests out of troughs. For myself and others to follow, faith in righteousness and belief in ourselves to be able to attain it, is a fact of life I have stumbled upon and am proud of.

The energies of my peers and equals have allowed me the freedom to reach out and gain; to break out of the shell of controlled thoughts in Architecture and feel with the heart what the mind is trying to see. Pr. Hans Rott with his wisdom of words has indeed opened such doors for me and for that I am very thankful. No less will I be grateful to Dr. James Jones and Michael Ermann who have constantly brought out my most rudimentary thoughts with their down to earth advice and interest in my interests.

No picture is complete for me without a family of friends who have even in the most troubled times of mine, tried and have been helpful with their patience, thoughts and actions . Hasan, in particular I thank for his precious time spent on our long discussions on fire and Architecture and for his unselfish help in the closing days of my thesis. Courtney, Darshan, Davide, Maurizio and Sibel too have my gratitude for their presence.

A heartfelt thanks to my family in India who have spent many a day, with me in their thoughts and prayers and have always been there by my side. Three cheers to my parents Firuze and Godrej Nanji, who although so far, have been so close in my heart and mind and have been through many troughs to make me stand on this crest. I thank you all.





Fig.1.2



Preface

Light is the only memory we have outside and inside us of an alienated god; a god who was banished from the kingdom of our hearts.

Zarathushtra or Zoroaster as the Greeks called him lived in approximately 2500 B.C. in the region of central Persia now called Iran. The pioneer of revolutionary religious beliefs, Zoroaster, in his sublime hymns, *the Gathas* (the holy text of the Zoroastrians), revealed to mankind the presence of one supreme, all-knowing and just god, Ahura Mazda, translated as 'Wise One', and in doing so tried to unite the faithless practices of idol worship, sacrifice and witch doctrine in the love toward a single faith. In his verses, Ahura Mazda created the world, mankind and all the good things in it with the rest of it being created by the six other spirits, the *Amesha Spentas* (holy Immortals). This sevenfold creation was threatened by *The Lie*; (Ahriman) and mankind would have to support an ongoing struggle to make truth and good prevail (Asha - the cosmic order). It was these Zoroastrian teachings that help us to live in peace and harmony with all other religions and faiths as long as they all pray toward one Lord and be good to other human beings.

These seven stages of creation begin with the formation of Sky protected by *Sharivar*, followed by Water (*Haurvatat*), Earth (*Spenta Armaiti*), Plants (*Ameratat*), Animals (*Vohu Manah*), Humans (*Ahura Mazda*) and Fire (*Asha Vahishta*). The last creation fire, is a potent symbol of Zoroaster's revelations which embodies the physical representation of truth (*Asha*) and a source of light, warmth, protection and life. This light is eternal; everlasting in its glory and luminance and unprecedented in its scope and originality. In Zoroastrian cosmogony, this fire created and protected by Asha Vahishta with the help of an old Persian fire-god 'Atar', is therefore the primary element of truth, the principle of the cosmic order, which controls the material world and represents righteousness and moral standards by which mortals are judged. Zoroaster's original doctrine of eschatology influenced Semitic religions and this relation of fire to the judgment of mortals made the word 'hell' synonymous with fire; a paradox within itself.

Fire was a sacred symbol long before Zoroaster's revelations. The sacredness of the hearth fire was an Indo-Aryan custom before the division of that civilization into the Indian and Iranian peoples. Fire is celebrated in the *Vedas* (*ancient Hindu Scriptures*) and is a part of Persian and Hindu ceremony even to this day. It is natural to revere fire, for it is one of the primal elements of nature (in modern terms it is 'plasma', one of the four states of matter) and is one of those things that makes civilization possible. It drives away the cold and wild beasts, sheds light in the darkness, serves as a signal to travellers, cooks food and brings people around a hearth. It is Light, Warmth and Energy. Herein lies my celebration of fire where I announce it to the follower on the path to truth as an eternal flame burning, yet resting in a place worthy of all its glory; an ambience created to venerate the flame and reassure the traveller that its light has more to offer than what is perceived.



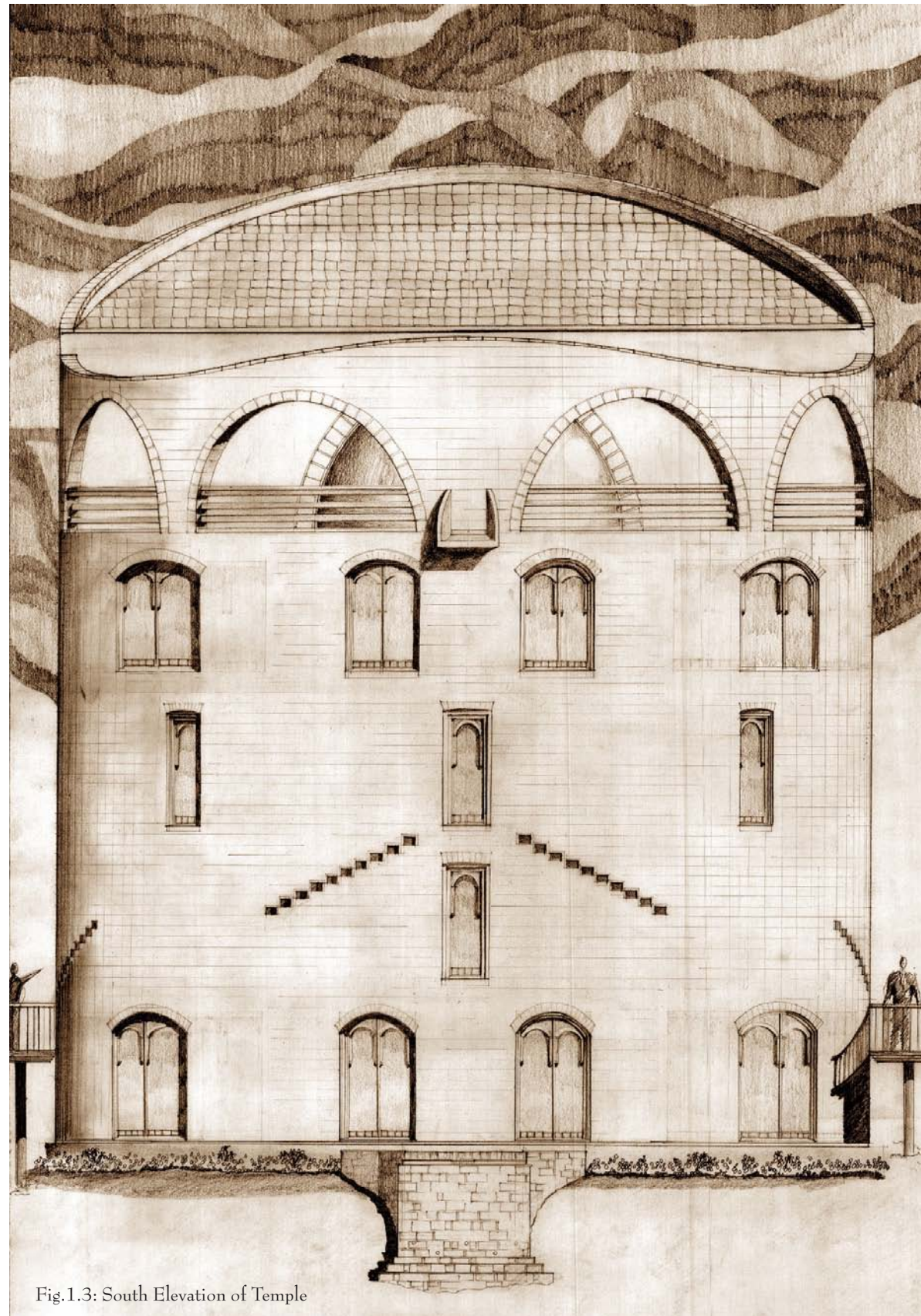


Fig.1.3: South Elevation of Temple



Asha Vahishta - The Lord of Fire

Fire is an essential element in the mythology of the Indo-European peoples, and there is irrefutable archaeological and historical evidence of its veneration by the Hittites, Indians (Agni, the fire god of the hearth, possessed the dual aspect of being venerated for itself, and consuming the offerings on behalf of other gods), Iranians, Greeks (Hestia, the goddess of the hearth, was the centre of the daily life). Her ever-burning fire was carried away to rekindle fires in her temples throughout the Greek colonies), Celts and Germans. However, the prominence given to fire by Zoroaster is unprecedented in its scope and originality. In Zoroastrian cosmogony, fire is protected by Asha Vahishta - the Lord of Fire, with the help of the old Iranian fire-god, Atar. Fire is, therefore, the basis for all truth, the principle of cosmic order, which represents all living matter, and is a symbol of righteousness and a link between man and God.

One could logically deduce from the above that the Gathas (*the Zoroastrian Holy Text*) should have contained references to a consecrated fire, and to a sacred place for its safe-keeping. It is also reasonable to assume that at least a primitive temple cult of fire must have existed in pre-Zoroastrian times which gradually developed into the fire-temples. Unfortunately, one cannot substantiate either of these two assumptions with irrefutable evidence.

1) Nomadic Period - Scythians revered fire and carried it in clay pots. Nomadic Iranians continued with this practice until modern times. Used primarily for heating and cooking, the fire commands, nonetheless, an enigmatic reverence which must be a mystic legacy from a distant tribal memory. Wherever they pitched their tents, the Scythians, like their modern counterparts, must have started a larger fire on the ground, some of which was "put to sleep" under a thick layer of hot ash ready for the following day.

2) Hearth Fire - Household hearth fires not only acted as sources of warmth and places of cooking for early settled Iranians, but as with other Indo-Europeans, they were also a focus of veneration. Chieftains and petty kings, having audience halls, must have had larger fire hearths. In these halls warriors would assemble and hang their weapons on the walls, and a few would say prayers to the hearth fire ("Cyrus went home to pray to ancestral Hestia", Xenophon, *Cyropaedia* 1.6.1). This may have led to the modern practice of hanging weapons around the fire-temples. It is also reasonable to assume that people gathering in priests' houses stood round their hearth fires. The hearth fires of the rulers and the clergy, therefore, can be seen as early places of indoor communal veneration, which may have contributed to the eventual establishment of the fire-temples (royal tradition versus ordinary people).

3) Consecrated Fire - The growth of the dominions of the kings and the congregation of the priests must have increased the size of their houses and hearth fires. These, can be safely assumed, were no longer used for cooking, but may have been a source of warmth in winter. However, their purpose during the rest of the year must have been ceremonial. They may have given rise to the faith of a consecrated fire, i.e., fire placed on a pedestal, or in a container, or carried outside to a hilltop or a raised platform for no other purpose than religious ceremonies. This attitude seems to have led to the establishment of royal fires.



4) Regnal and Dynastic Fires - Several rock carvings from the Achaemenian and Sasanian periods, and countless seals and coins depict the king standing before a pedestal supporting a flaming fire. Fragments of some of these fire-holders have actually been found in Pasargadae, and dated to the 6th century BC. They are waist-high (112 cm) with a bowl hollowed out 13 inches, which is deep enough to hold a thick bed of hot ash, and therefore capable of sustaining an ever-burning fire (Boyce, M., *A History of Zoroastrianism* vol II, (HZII) Brill, 1982, pp.51-53). Such fire-holders were evidently representative of the king's own hearth or personal fire. Later, they became the monarchs' dynastic or regnal fires. These fires were put out for the duration of the king's funeral (Diodorus of Sicily, XVII.114.4), and rekindled at the succession of their heirs (Boyce, M., *Zoroastrian Temple Cult of Fire*, "Journal of the American Oriental Society" (JAOS) 95.3; 1975, p.461). It is assumed that these holders were surmounted by a metal fire-bowl, as the examples from Pasargadae show no signs of charring (Boyce, HZII, pp.52-3). This would have enabled the fire to be moved. Quintus Curtius Rufus describes the army of Darius III carrying a fire upon a silver altar at the head of its march (III.iii.9). Xenophon reports that the army of Cyrus the Great carried fire in a brazier (op. cit., VIII.iii.12). Boyce believes that the same emperor moved his father's fire from Anshan, the provincial Achaemenian capital, to Pasargadae, the newly-built centre of the Persian Empire (op. cit., p.53). Later, at the beginning of the Sasanian times, we have the evidence of the letter of Tansar, the chief minister of Ardashir I; it states that after the death of Darius III, each local king built his own dynastic fire (Boyce, M., *The Textual Sources for the Study of Zoroastrianism* Manchester University, 1984, p.109). Sasanian emperors regarded the dynastic fires as the main symbol of their kingship.

5) Open Air Fires - Hearth fires of the priests, and royal dynastic fires were often, placed on hilltops, man-made mounds, stone terraces and plinths for the purpose of communal public worship (A large number of archaeological discoveries associated with the open air fires has been examined by Boyce; see JAOS 95.3, pp.456-7). Strabo describes the 6th century BC Persian sanctuary in Zela (now Zila in northern Turkey) as a heaped up mound of earth over a rock which was walled in, but open to the sky (XI.viii.4). Two stone plinths recorded by Herzfeld in Pasargadae, and excavated by Stronach, were evidently never roofed and their enclosed walls are considered to be a later construction. Stronach regards them as fire-altars (Stronach, D., *Excavations at Pasargadae*, "IRAN" 3, 1965, p.28).





Fig.1.4: Holy Fire, Yazd
Courtesy: www.livius.org



Fig.1.5: Earliest image found of Zarathushtra



Fig.1.6: Oldest surviving Atash Behram (Fire Temple), Yazd



Many scholars consider these open air fires as forerunners of modern fire-temples, others disagree. In order to understand the controversy surrounding the genesis of the Zoroastrian fire-temples, one must bear in mind Professor Mary Boyce's logical assertion on this subject. She stipulates that a fire-temple must be capable of sustaining an ever-burning fire, and that none of the open fires mentioned above possess such a facility, therefore, they cannot be fire-temples (JAOS 95.3, pp.456, 457, n.18, 459). As far as she is concerned the only ever-burning fires before the 4th century BC were the hearth fires. As was mentioned earlier, the available literary evidence seems to support the 4th century dating of fire-temples.

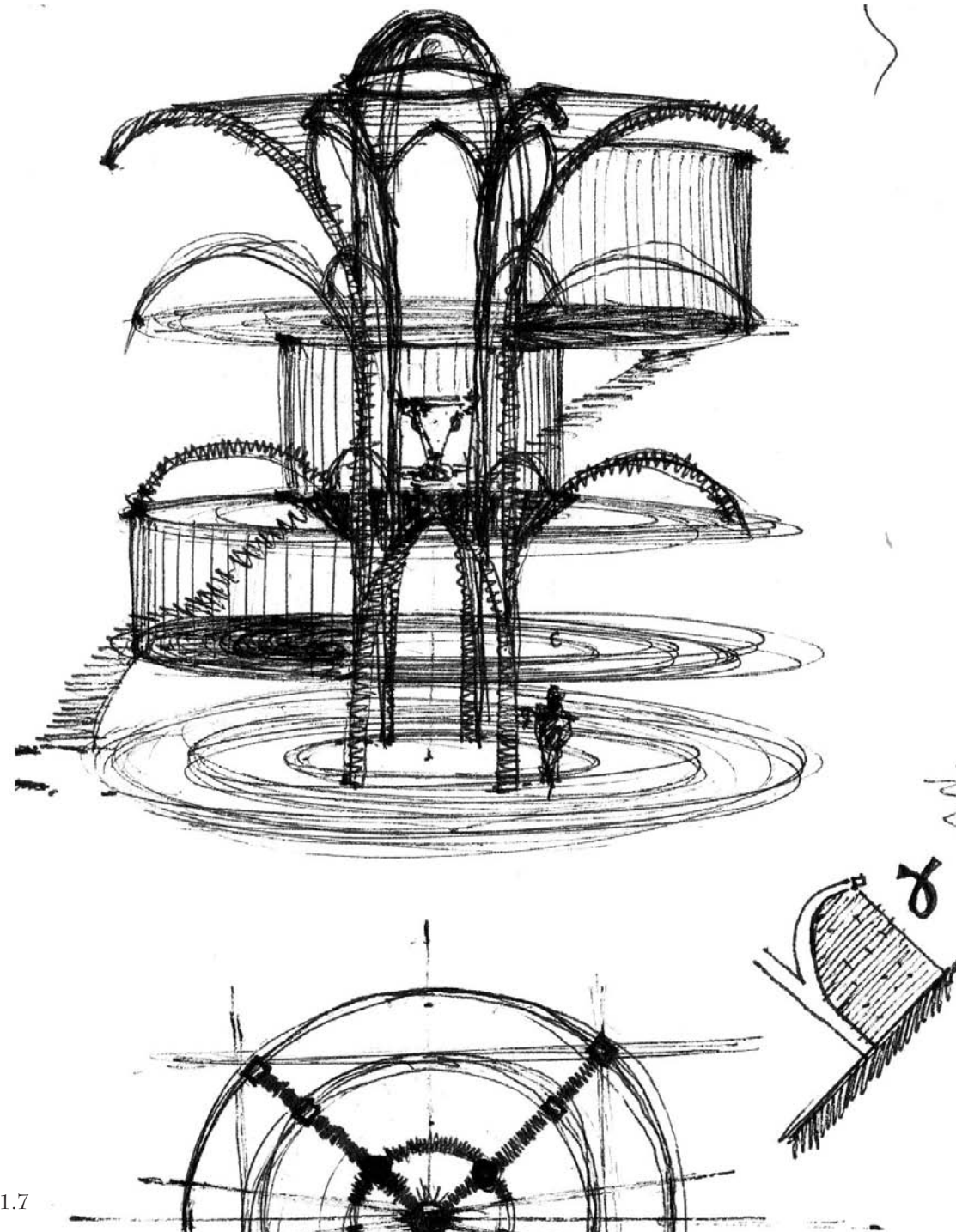


Fig.1.7

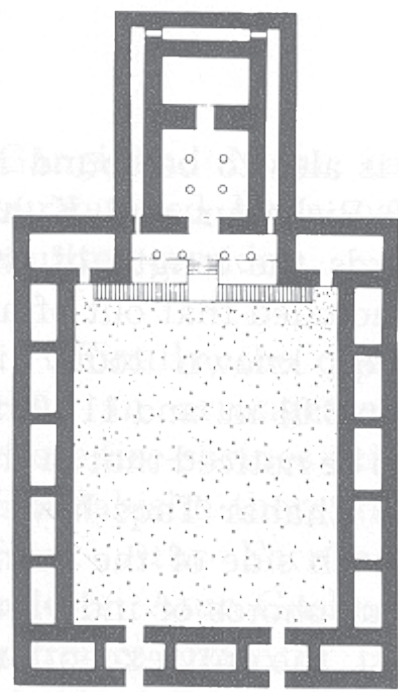


A Glimpse of the Past

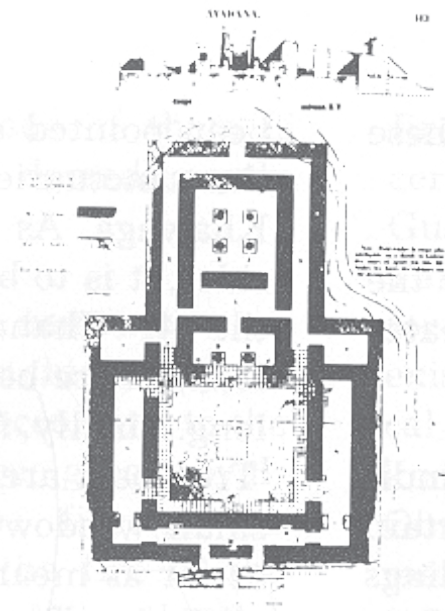
Archaeologists are quite positive and some emphatically state that roofed and enclosed fire-temples have existed amongst the Iranians since the prehistorical times.

- 1) *Kuh-i Khwaja* - Aurel Stein discovered this roofed fire-temple on the Lake Hamun in Sistan in 1916. It was excavated by Herzfeld and Gullini, and dated to early Achaemenian times. Schippmann, however, has brought this date forward to Seleucid or early Parthian period (Schippmann, K., *The Development of the Iranian Fire Temple*, "5th International congress in Iranian Art & Archaeology" Tehran, 1968, pp.353-362).
- 2) *Tejen Delta* - Soviet archaeologists have discovered several fire-temples in this area, giving some the staggering date of the fourth millennium BC. These temples possess rectangular and circular alters showing traces of fire (Khlopin, I.N., *On Genesis of Fire Temples in Ancient Iran*, "5th Congress in Iranian Art & Archaeology", Tehran, 1968, pp.276-281). Some have been compared with the late Achaemenian temple in Susa, and with the Fradadara temple discovered by Herzfeld in Persepolis and later dated to the Seleucid period. Most western scholars, however, doubt the accuracy of the dating of these finds.
- 3) *Tepe Nush-i Jan* - Stronach excavated this eighth century BC Median site near Hamadan; he uncovered, in the lowest room of a tower-like windowless structure, a massive plastered mud-brick altar; the waist-high, four-stepped top, shaped like a shallow bowl, showed traces of burning. He admits that the bowl is too shallow for an ever-burning fire; nonetheless he insists that it belongs to an early Median temple housing a permanent fire (Stronach, D., *Tepe Nush-i-Jan*, "IRAN" XI, 1973, pp.129-138). Boyce regards this building neither Zoroastrian nor Iranian, but probably Urartian.
- 4) *Ka'aba-i Zardusht and Zindan-i Suleyman* - These two sixth century BC tower-like, windowless buildings are in Naqsh-e Rostam and Pasargadae respectively. They have been compared with Tepe Nush-i Jan (Yamamoto, *ibid* (n.2) p.34). Many scholars, however, such as Wikander, Henning, and Boyce do not regard them as fire-temples.
- 5) *Dâhân-i Ghulâmân* - Scerrato uncovered in 1962-3 an imposing 6th-5th century BC temple in Sistan on the holy river Helmand (Av. Hâtumant) (Scerrato, U., *Excavations at Dâhân-i Ghulâmân (Sistan-Iran)*, First Preliminary Report (1962-3), "East and West" 1966, pp.9-30). The temple, once evidently roofed, contains 3 large rectangular, 7 feet high altars built out of mud-bricks, showing signs of burning. He called it a Zoroastrian fire-temple. Both Schippmann (*ibid*) and Boyce (HZII, pp.128-31), however, doubt its Zoroastrian identity, with the latter regarding it as Elamite.

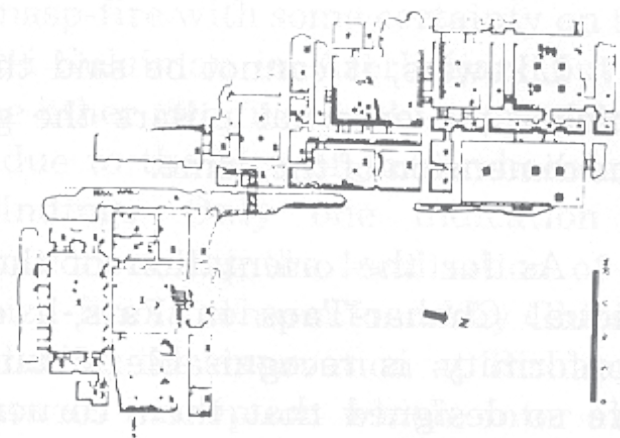




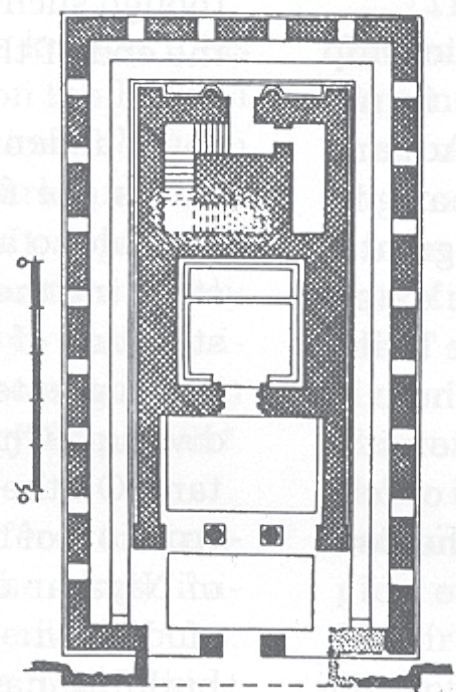
KŪH-I ḤWĀĠĀ



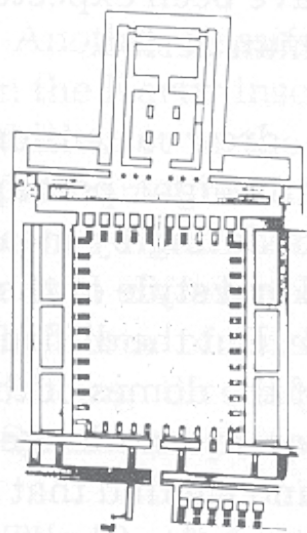
SUSA



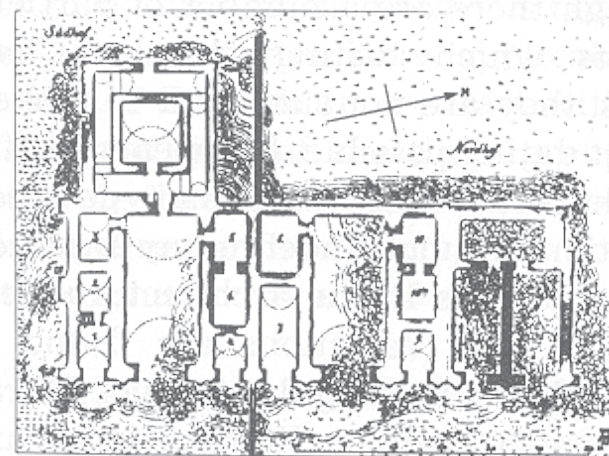
FRĀTADĀR TEMPEL



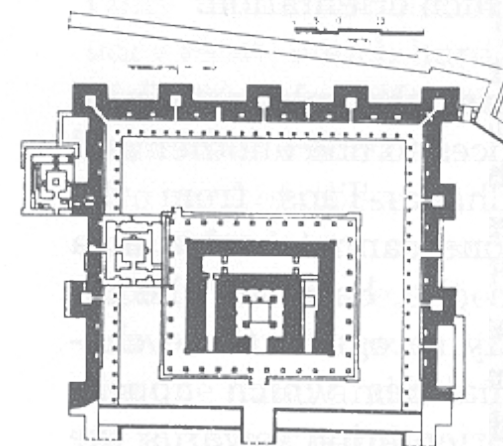
JANḌIĀL



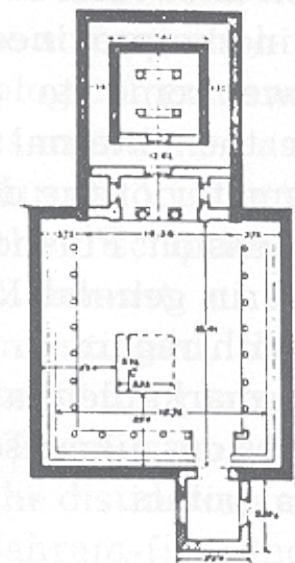
KŪH-I ḤWĀĠĀ



HATRA



SURḤ KOTAL



SAḤR

Fig. 5. Main temple and courtyard, showing additions (hatched), with temples D (in the courtyard) and B (outside). (Drawn by M. Le Berre.)

Fig.1.7.1



Ateshgyakh Fire Temple

The Ateshgyakh Fire Temple is located within Greater Baku in the village of Surakhany (15 km from Baku). The historical roots of the monument go back to the hoary past, to the days when Azerbaijan statehood was only taking shape and establishing itself and Zoroastrianism, the central part in whose ritual is played by fire, was the dominant religion in the country. The flaming torches of gas escaping from under the ground and burning in many places all over the Apsheron Peninsula were believed to have miraculous divine power.

People worshipped fire, seeking its protection against adversity and oppression and begging it for happiness and well being. These ancient fires are believed to have given Azerbaijan its name, which is thought by some researchers to mean "a land of fires". Centuries passed. Islam was adopted as the country's official religion. Medieval Azerbaijan carried on trade and exchanged cultural values with many countries. One of them was India. Indian trades-people brought to their home-land, where fire today is still regarded as sacred, the news about the ever-burning Apsheron fires. From then on the Great Silk Road merchant caravans were followed by pilgrims flocking to the "sacred flames". Silk Road merchants, busy about their trade, did not stay long here. They paid money to the local ruler for the right to build cells, prayer rooms, stables, and a guest room (balakhane) at the temple. Thus it happened that these structures were built one after another for a century and a half, from the late 17th to the mid-19th century. That is why the Ateshgyakh Temple looks not unlike a regular town caravanserai (a rest place for travellers)- a kind of inn with a large central court, where caravans stopped for the night. As distinct from caravanserais, however, the temple has the altar in its center with tiny cells for the temple's attendants - Indian ascetics who devoted themselves to the worship of fire - and for pilgrims lining the walls. The inscriptions on stones set in the walls, made in Sanskrit and Hindi, testify to the Indian origin of the fire-worshippers' temple at Surakhany. In the course of time, the "eternal fires" of Apsheron ceased to be viewed as divine. The heat they give has been placed at the service of the people, and today gas serves people economic and every day needs. And only the place where the fires used to burn still remains in the memory of the people under the name of Ateshgyakh (home of fire). Today the temple is a unique monument from the past that still burns on the natural oil from the land where it rests. As the name suggests, the temple is a link between the people of many nations who met in congregation during their travels to this point that served as a beacon and inevitably became a significant symbol in a land that already had a past in which fire was revered and looked upon as a holy symbol for the path to good and righteousness.



Fig.1.8: Atashgyakh Fire Temple



Fig.1.9: Atashgyakh Fire Temple



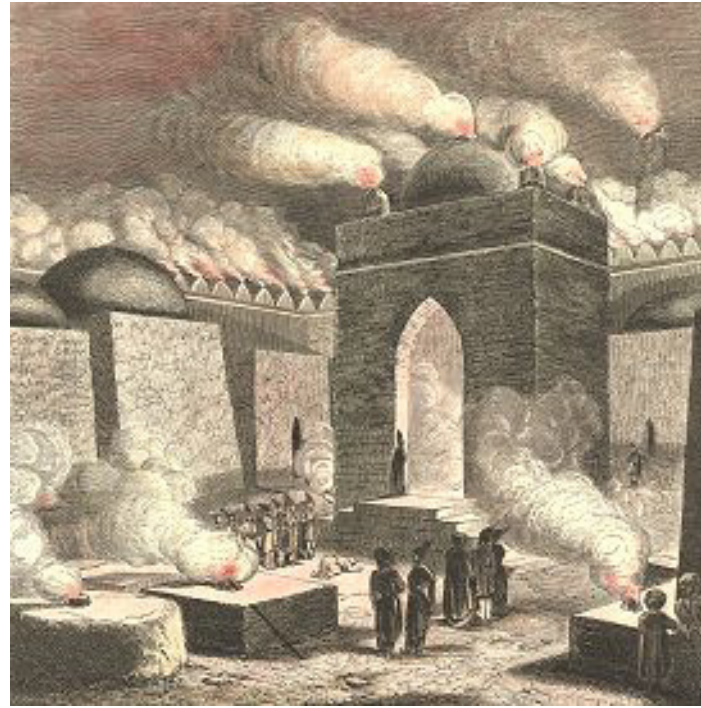


Fig.2.0: An engraving from the 1850's depicting a fire temple (showing the fire temple in Baku, Surakhany region, Azerbaijan)

It was in the Achaemenian times that permanent altars appear to have been adopted for the veneration of fire. With their rise to power they adopted an elaborate court ceremony and apparently, with it, a more stately approach for their religious devotions. Such a development explains the 'Fire-Altars' depicted in carvings over the tombs of Darius and his descendants. These have a three-stepped top with fire shown leaping up in a pyramid of flame at the top.

One cannot tell from these representations whether the bowl holding the fire was shallow or deep, but in the light of Herodotus's statement, it is possible that these 'altars' were pedestals on which fire was set for occasional prayers, as when the king said his five daily prayers, he made his devotions with greater dignity. Similar 'fire-altars' are to be found in the outer rooms of all old Zoroastrian fire temples in the Yazd area. Even now, during festivals or at other special times fire is kindled in them, or embers are brought and placed there. There is no need for a deep layer of ash, as a priest kept constant attendance to feed the flame when needed.



Fire Temples on hills or mountains

As the temple of fire enjoyed royal patronage, sacred lines could be expected to be founded near kingly residences, but their immediate location may have been affected by the Iranian tradition of going up to high places for communal worship. This custom seems to explain the existence of a number of stone terraces built high in the mountains of Iran in ancient times (probably Medean times 614 BC - 550 BC). This tradition persists and similar terraces for festive gatherings have in fact been constructed in the present century at mountain sanctuaries by the Zoroastrians of Yazd.

There could never have been a question of establishing eternal fires at lofty and remote sites and only one of the terraces, that at Tamar, has a structure associated with it; for an ever-burning fire needs constant fuel and its servitors likewise require sustenance. A fire temple must be set within the reach of regular supplies and can be established at only a modest height. Yet it is a fact that at three most sacred and probably oldest temple fires of Iran, all burned on low hills, as if orthodoxy was striving in this too, to maintain old traditions.

These were *Adur Farnbag* (fire having a share through fortune) for priests at Kariyan in Pars, *Adur Gushnasp* (fire at the stallion) for warriors at Takh-I-Sulaiman in Media and *Adur Burzen Mihr* (fire of the Exalted Mihr) for farmers at Nisapur in Parthia, whose foundations were lost in the legend and were associated with the origins of the world from the Sassanian times. In greater Bundahishn, there is a legend in which is outlined the creation of these three fires. It is said that Ahura Mazda himself created these three fires.....like three lights for the watching of the world, they glittered....

Perhaps political considerations also played a part, in the veneration accorded to these particular fires, for they were established one in each of the homelands of the three imperial peoples of Iran - Media, Pars and Parthia.



Fig.2.1: Ancient Fire temple, Esfahan, Iran



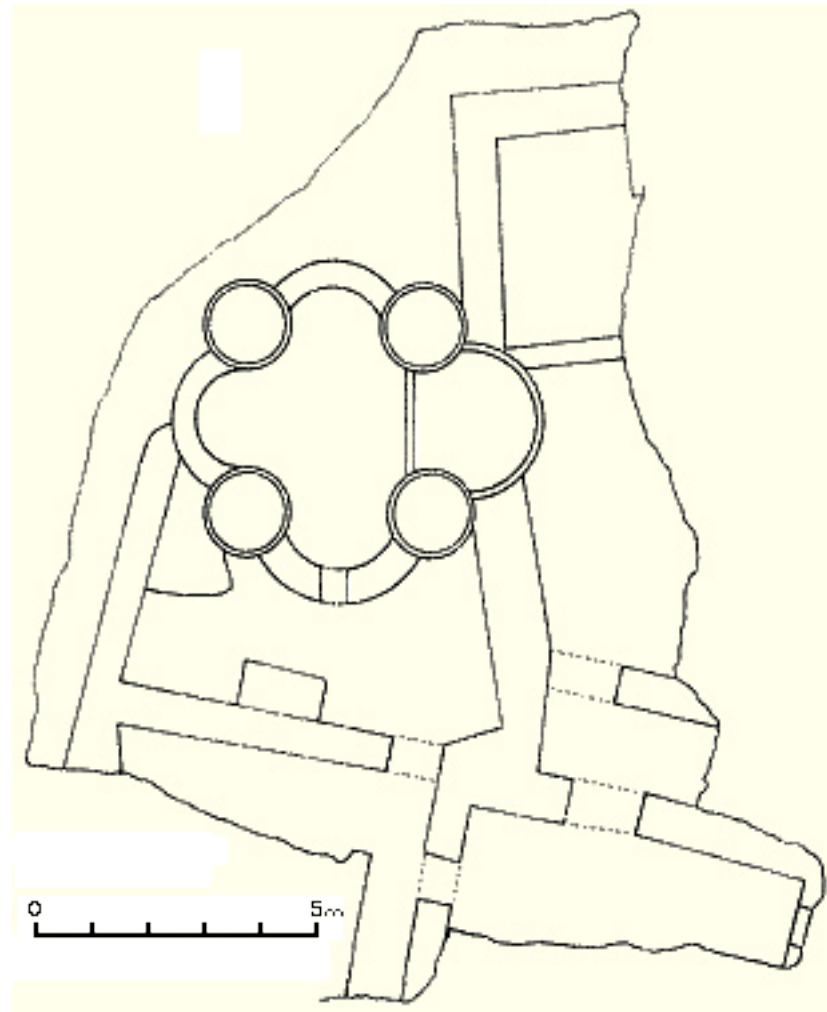


Fig.2.2: Fire Temple Plan, 'The Four Columned Structure', Armenia



Fig.2.3/Fig.2.4: 'The Four Columned Structure', Armenia



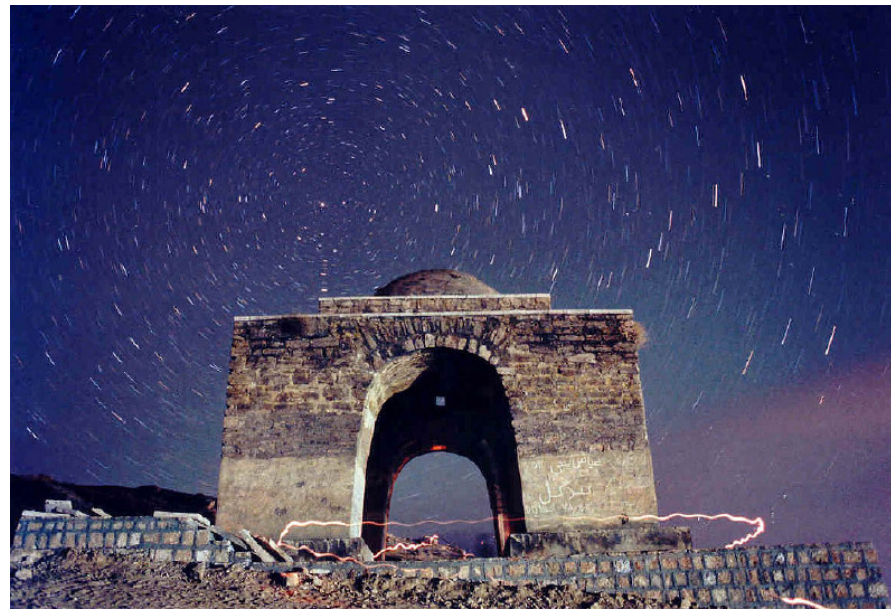


Fig.2.5: Niasar Fire Temple

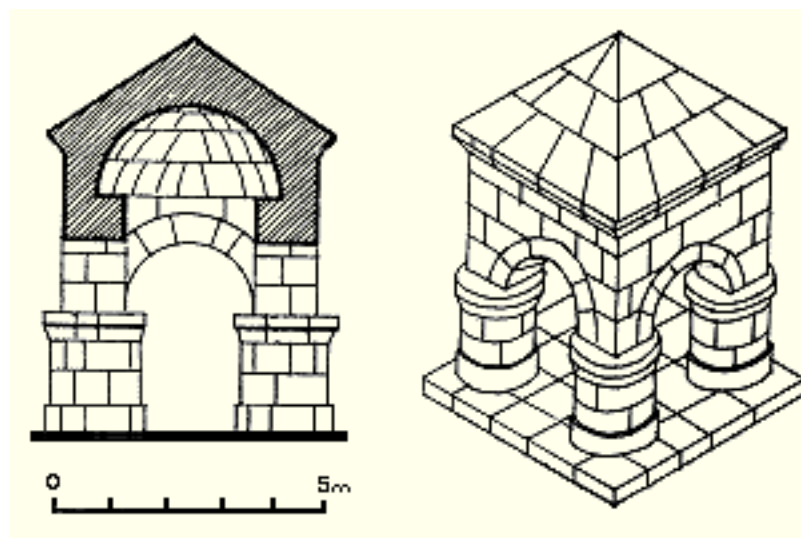


Fig.2.6: 'The Four Columned Structure', Armenia



Fig.2.7: Fragment of Fire Bowl, Inverted, Pasargadae





Fig.2.8: Dual Plinths, Sacred Precinct, Pasargadae



Within a few years of their landing at Sanjan in Gujrat, in 938 AD, the Parsis established a sacred fire in the form of an Atash Behram. Once they had enthroned it, which took months to complete, the Parsis were content to let this be their only temple fire for hundreds of years. A second Atash Behram was not installed until 1785 AD. For nearly eight centuries, the Parsis, struggling to establish themselves in another land, were content to let their one sacred fire suffice them.

As their settlements spread, they went on pilgrimages to the fire as regularly as possible, but the daily prayers and offerings were made to their own hearth fires, which were themselves ever burning and kept in a state of strict purity. Thus one *Atash Behram* and many hearth fires were sufficient for the veneration of fire as needed by the religion. But wherever Parsi priests went to serve a new colony, they needed a structure where they could perform the higher rituals in seclusion and strict purity. These ritual structures of worship were called *Dar-i-Mihr* in Persian or *Agiari* in Gujurati (language spoken on the west coast of India).

Dar-i-Mihrs, also used by Irani Zoroastrians, always have an ever burning, consecrated fire burning within, whereas the Gujurati word *Agiari* simply means 'house of fire'. Nevertheless, the early Parsi Dar-i-Mihr/Agiari was a building in which no fire was permanently kept. They contained only certain essentials for the Zoroastrian act of solemn worship that is, a paved area marked out into separate enclosures or *Palvis*, which could be purified and consecrated; a well, both for supplying pure water and for receiving the offering to water made after each *Yasna*; and a patch of ground in which to grow a palm and one or two pomegranate trees. Fire must always be present during the solemnization of the rituals, but any grade of consecrated fire could be taken for this purpose. So generations of Parsi priests brought embers from their own hearth fires daily to burn in their *Palvis*, and carried these home again when the day's work was done. The fact that there was fire burning each day in these buildings evidently sufficed to allow them to be called *Agiaris* or *Dar-i-Mihrs*.

In North America, there are a few Dar-i-Mihrs that are spread over the country but these are purely utilitarian where they serve the purpose of being present only for the small number of Zoroastrians who need a place to worship and hold their ceremonies. These are not consecrated fires and they burn with gas as a fuel that may be turned on only at the time of need during the day. These fire temples, therefore, are not venerated as Holy fires. They are a result of small groups of Zoroastrians who realize that it is important to have a fire in the vicinity to remind them of their roots. Having an Atash Behram consecrated and maintained is an expensive affair and a hefty task to carry out. Financial constraints tend to make the idea of having a consecrated fire a hurdle but it is my belief that there shall be one that could be built in North America where all Zoroastrians unite in one cause and try to keep up the quest for being good human beings.

