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**THE CALLIGRAPHY AND  
ARCHITECTURE OF THE  
NOMADIC TUAREG WITHIN THE  
GEOMETRIC CONTEXT OF ISLAM**



A Map of the region highlighting the eight Tuareg subgroups as well as the geographical division between skin covered and mat covered tents.<sup>1</sup>

The Nomadic Tuaregs of the Western Sahara are described in H. T. Norris' *The Tuaregs: Their Islamic Legacy and Its Diffusion in the Sahel* as "nominally Muslim."<sup>1</sup> While Tuareg religious beliefs center around Qur'anic teachings many interpretational details of Tuareg worship differ from strictly Arabic Muslim standards. One rarely noted similarity is the use of calligraphic and geometric elements in architecture.

Rock engravings indicate that the Tuareg or "People of the Veil" had occupied central Saharan Africa by the first millennium BC.<sup>2</sup> Within Tuareg society origins are placed predominantly matrilineally to the North African Berber population. They then progressed steadily southward to occupy large parts of Algeria, Niger, and Mali. Their nomadic lifestyle has placed them on

many of the trade routes across Northern Africa and put them in contact with a wide range of peoples.

"The Roman punitive expeditions of Cornelius Balbus, Septimus Flaccus, Julius Maternus and others against the Garamantes of the Fezzan assuredly left their mark on the Tuaregs in those regions."<sup>3</sup>

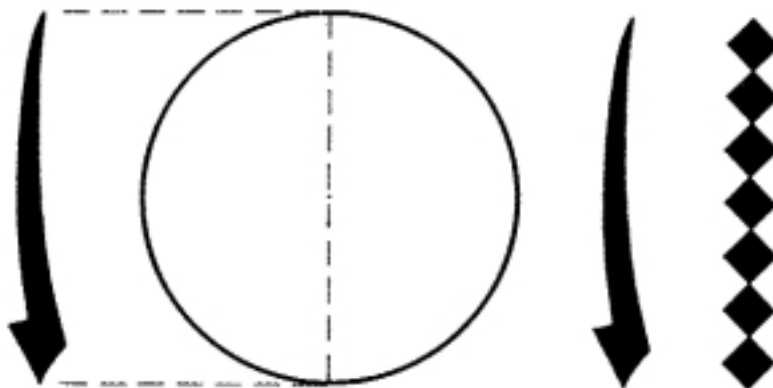
Along with Roman came Byzantine cultural contact. In 569 AD, under Justinian, the Garamantes of Garama adopted Christianity. It is believed that much of the Christian symbolism in Tuareg culture, such as some Tamachek words (the spoken language of the Tuaregs) like "mesi," "angèlus," and "abekkah," meaning master, angel, and sin, respectively, as well as the prominent use of the ornamental cross come from this era.<sup>4</sup>

By 700 AD, Islamic rule had

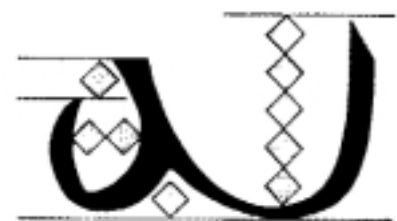
encroached upon the Byzantine and the Tuareg conversion to Islam had begun.<sup>5</sup> Johannes Nicoliason has suggested that this conversion can be traced through the Northern Tuareg use of black tents raised on T posts after the those of the Arabian Islamic tribes.

"If it is possible to trace any direct link between the first impact of the Arabs and their Islamic way of life in the Tuaregs then it may have begun with the adoption of elements of material culture..."<sup>6</sup>

One of those aspects of Arabian Islamic material culture is the art of Islamic writing and the ideas and power embedded within it. According to Muslim belief, Arabic writing is considered part of the miracle of the Qur'an. It is said that the holy book of Islam was revealed to Muhammad in pure perfect Arabic. Writing is



A Lesson in Arabic calligraphy. Very strict mathematical guidelines form the shapes of the letters.<sup>2</sup>



therefore not only the word, but also the face and medium of God.

Allah created the angels according to the name and number of the letters, so that they should glorify him with an infinite recitation of the Qur'an. Allah said to them: 'Praise Me! I

am Allah, and there is none other but I.' The letters prostrated themselves before him, and the first to do so was the *Alif*, whereupon Allah said 'You have prostrated yourself to glorify My Majesty. I appoint you to be the first letter of My Name and of the alphabet.'<sup>7</sup>

Of course, historical analysis reveals that "pure" Arabic did not come about spontaneously, but morphed gradually from Nabato-Aramaic, and therefore from Phoenician.<sup>8</sup> A likely predecessor, or at least a contemporary, of Arabic characters are those of Tifinar, the Tuareg script. "Early accounts suggest that the script was better known by Tuareg women who taught their daughters, just as it is also the Tuareg women musicians and epic poets who have transmitted oral traditions."<sup>9</sup> This is in contrast to the patriarchal generational passage of Arabic script throughout its history.

Alphabet. Single Letters.		
Tifnagh	Name	Value
•	Tararit	A
⊙, ⊙, ⊙, ⊙, ⊙	leb	B
+	let	T
Λ, V, U, n, O, U, N, V.	led	D
○, □	ler	R
#	lez	Z hard
+, I, X, Y	lez	Z soft
⊙, □	lea	S
:::	lekh	Kh
H	lej	J
•••••	lek	K
∩, E, W, M, ∩, ∩	ledh	DH. T
	lal	L
[, ]	lem	M
	len	N
∩, ∩, ∩	lesh	SH
•••••	leh	H
∩, ∩	lef	F
•••••	leg	G
•••••	ler	Rh
∩, ∩, ∩, ∩	leg	G hard
x, x, x, x	leg	G soft
∩, ∩, ∩, ∩	ley	Y.L
•••••	lau	U.O.W.
⊕, ⊕, ⊕, ⊕, ⊕	IEBET	BT {Ligatures or Double Letters.
#, #	IEZET	ZT
⊕, ⊕, ⊕	IERET	RT.
⊕, ⊕, ⊕	iest	ST
∩, ∩, ∩	IEGT	GT hard
∩, ∩, ∩	IEGT	GT soft
∩, ∩, ∩	IELT	LT
∩, ∩, ∩	IENT	NT
∩, ∩, ∩	IESHT	SHT
∩, ∩, ∩	IENK	NK
∩, ∩, ∩	IEDHT	DHT
∩, ∩, ∩	IEFT	FT

∩ U : + ∩ S O : Twaregk right to left writing. From Plate VII. of 'Le Sahara Français,' by Houdot.

Twaregk circular writing. From 'Le Sahara Français' p. 179.

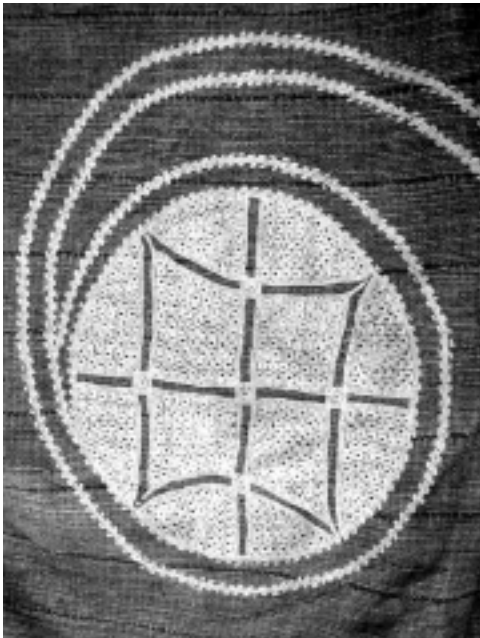
Examples of Tifnagar directional use: Right to left, Boustrophedon, and Serpentine.<sup>1</sup>

The Tifnagar Alphabet as compared to the Roman in sound quality.<sup>2</sup>



Above: A Khatem in Arabic Square Kufic. It may be read in any direction as “Al hamdulillah” or “God be praised.”<sup>5</sup>

Below: A Hatumere design on a Hausa robe.<sup>6</sup>



Between the two scripts there are certain similarities. They are similar in their beginning order with A, B, T, D or TH. They are also similar in their directional adaptability. Both may be written in Muthanna, mirror image writing, allowing the text to read in any direction, and Boustrophedon, literally “as the ox plows,” read in alternating directions, sometimes even following the curve that forms at the end of each line creating a serpentine style.<sup>10</sup> These elements are common to most early writing systems, including early Phoenician, Greek, and Arabic, and indicate Tifinar’s early point of origin. “Letters (and words) can be arranged so that the various signs and graphemes of the writing system are not only reversible but can be written in different directions.”<sup>11</sup>

It is reasonable to theorize, though not documented in any contemporary findings (perhaps due to the secrecy that surrounds the intricate usage of the script), that Tifinar characters, like Arabic, Roman, and Ge’ez, have numbers assigned to them, probably comparable to the numbers assigned to related Arabic characters. “What Islamic *geometria* does is to establish a geometric link between the symbolic aspects of the written word and the system of symbolic numbers that are used to explain the structure of the cosmos and the hierarchy of the universe.”<sup>12</sup>

Graphic patterns formed into squares or rectangles according to the mathematical formulas of Arabic calligraphy “khatem” (meaning “seal”) can be traced as the root of the Fulbe “Hatumere” or magic square in linguistics as well as in form.<sup>13</sup> Both the Khatem and Hatumere can have several levels of meaning dependant on the direction of reading, the spatial context, and the readers knowledge of Islam and any other belief systems



Above: Another Arabic Square Kufic design. It marks the belongings of Mahmud Yazir with his stylized name.<sup>7</sup>

Below: Interwoven Arabic Floral Kufic.<sup>8</sup>





within that context. All verbal messages presuppose the literacy of the viewer, giving it an even more powerful meaning to the largely illiterate majority as a symbol of unintelligible knowledge and divine inspiration.

In Islamic Calligraphy and in North African Hatumere, the numerical associations of the characters, and of the design as a whole, may be observed by otherwise illiterate viewers as a reminder of the verbally learnt tenets of Islam. Certain numbers reoccur in these designs: Five, as the five pillars of Islam and the five daily prayers; thirty-four and its numerological reduction of seven, as the seven heavens, the seven seas, the seven hells, and the seven angels; and sixty-six as the numerological sum of the letters in the name of Allah.<sup>14</sup> Numerically powerful calligraphic designs serve as powerful Islamic symbols even in a non calligraphic context.

In more traditional Islamic Architecture, painted, carved and incised messages, blessings, prayers, glorification of Allah and statements of ownership are omnipresent.

No doubt one can concentrate... on the geometric interweaving, and trace the combinations of letters and their stems in relation to geometric and natural ornamentation. Or better still, one can try to work out the connections between decorative epigraphy and architecture as properly designed.<sup>15</sup>

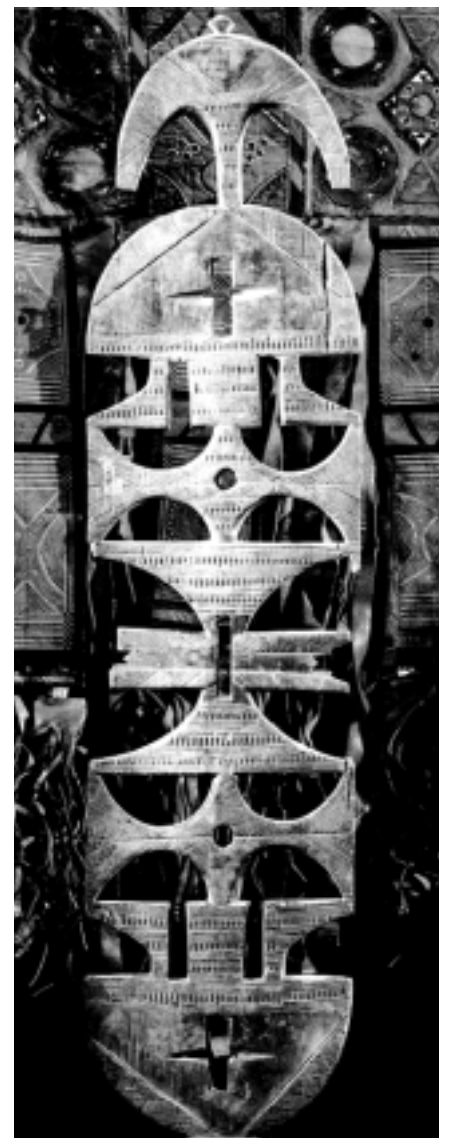
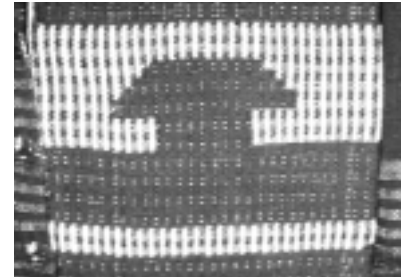
The inscriptions spiritually raise the building to a place in between heaven and earth. Places of worship in most organized religions are considered liminal spaces, in Islam it is the written word that positions it so. While taking different forms that may

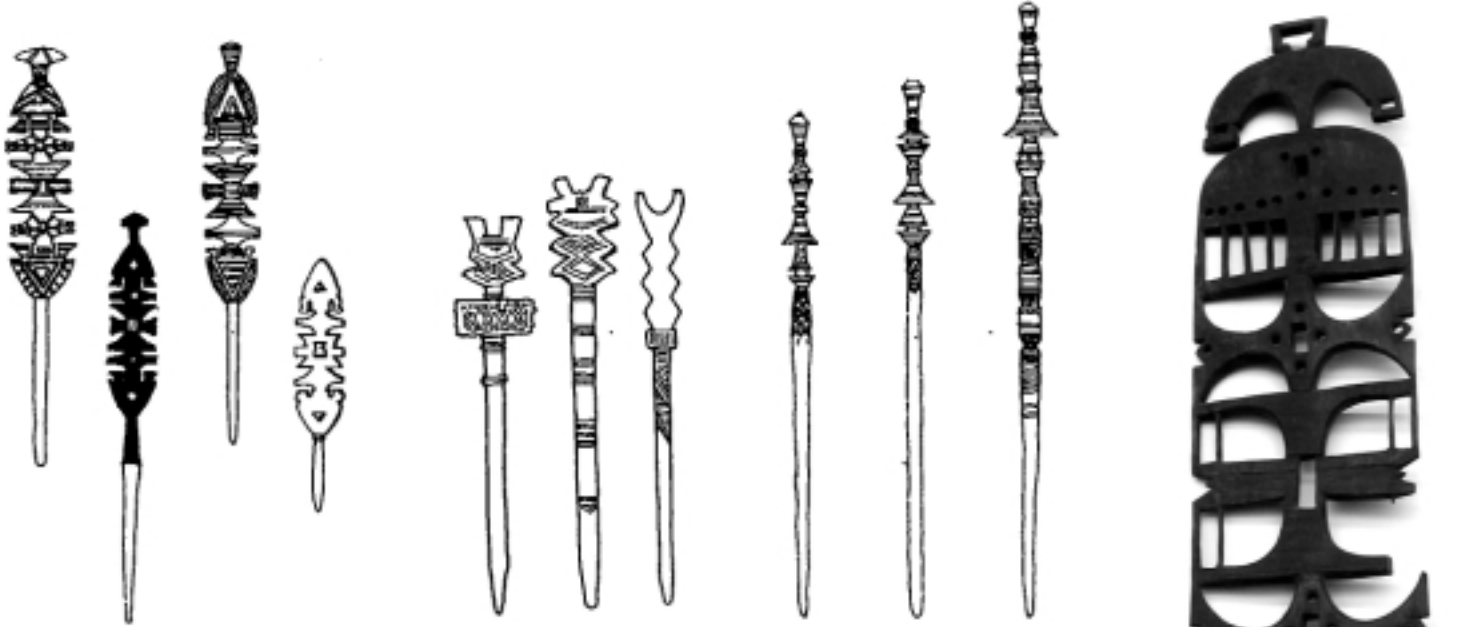
*Left top: A Tuareg key, in the shape of a Qur'anic board with negative shape tifinar letters.<sup>9</sup>*

*Left bottom: A typical Qur'anic board used by school children in learning Arabic.<sup>10</sup>*

*Right top: The Hausa textile design that is an abstraction of the Qur'anic board.<sup>11</sup>*

*Right bottom: A mat supporting pole in the shape of an abstracted Qur'anic board, with negative shape tifinar letters.<sup>12</sup>*





lend themselves better to the Tuareg nomadic lifestyle, the Tifinar alphabet is used in a similar architectural and calligraphic context. The use of magic squares and numerical elements are also present in Tuareg physical forms.

In African Nomadic Architecture, Labelle Prussin notes the use of Tifinar in a magic square motif on saddlebags, and in a more linear form on the “tamankayt” or central tent poles of the Kel Dennek Tuareg.<sup>16</sup> Because Tifinar characters are essentially geometric in nature, much of the calligraphy is lost to an untrained eye. Also because it is primarily a matriarchally dispersed custom in the context of a predominantly patriarchal religion, it goes further unnoticed. It may be said, however that the women of the Tuareg mark their space, (there is little dispute that the Tuareg living tent is a distinctly female space) in much the same way that male Muslims mark their Mosques and meeting places.

This claiming of female space through Tifinar calligraphy may be seen in almost any aspect of the Tuareg tent, from the tent poles and mats that make up the physical structure of the tent, to the bags, saddles, bowls and bed that it contains. The Tamachek word for tent doubles as the word for marriage.<sup>17</sup> The Tuareg courting ritual, Ahal, which could be considered the initiation of a tent, is marked by the female dominated Tifinar script. In the ritual, hand signals are given between a woman and her suitor.

If a man would like to be alone with a woman, he draws the tifinar letter “S” on her palm, if she does not return his affections she politely turns him down with the Tifinar letter “N,” a line drawn from wrist to fingers. If she consents, she instructs him to leave with the other suitors and come back alone with the letter “L,” by drawing the same line and then another in the opposite direction.<sup>18</sup>

*Top Left: Three types of Tuareg tentpoles: (left to right) mat holders, forked, and entrance.<sup>13</sup>*

*Top right: A mat holding pole in a typical qur’anic board shape. The letters “A” and “L” can be picked out, possibly abstracting the Tamachek word for Allah, Ialla (mesi is only used for a generic God).<sup>14</sup>*

Once a marriage is arranged, a crucial symbol of the union is the tent itself. There are three types of poles that make up most Tuareg tents. The most structurally important is the Tamankayt, or center pole. Sometimes supporting a carved ridgepiece, sometimes standing alone, this pole may be incised with geometric designs or linear tifinar script. They are generally not carved very intricately, presumably because of the physical stability that is needed, for it is the main support and carries much of the weight of the tent covering. The second type of poles are the secondary interior supports. The poles that hold up the wall mats are shaped to resemble a stylized Qur'anic teaching board. The board is intricately incised with linear designs and carved in a manner that allows the negative spaces to resemble Tifinar letters. Whether these negative space characters are associated with words or just an abstraction of the script requires further investigation. A written association with a meaningful word, phrase, or number would not be surprising considering the contextual association with Arabic Islamic teaching boards and calligraphic decorative architecture. Another type of secondary interior support is the tigettewin, the fork topped pole seen in the Kel Ahaggar and Kel Denneck Tuareg tents.<sup>19</sup> The forked top, while utilitarian in its function of supporting additional poles or ropes is also significant in its shape as the Tifinar letter "M," the first letter of the Tamachek word "Mesi," meaning God or Master.<sup>20</sup> There are four of these forked poles that aid the tamankayt in the central tent support. The third and final type of pole is the igem, which marks the entrance, and supports the vellum in order facilitate entrance in to or out of the tent. It also points out the

direction of Mecca. These are also incised but not very intricately carved in their need to support a fairly heavy weight. It is difficult to analyze the inscriptions on any of these poles due to the purely geometric nature of the script, the level of abstraction, and the insular nature of the passage of Tuareg knowledge.

Prussin has established the view of the Kel Ferwan Tuareg tent as a view of the cosmos.

The polygon formed by the anchor points of the four stakes and the arches approximates the form of a circle. The circle, it is said, is similar to the circle of the world and the rounded form of the roof of the tent replicates the vault of heaven. The four corner stakes are considered analogous to the four pillars that superset the vault of heaven.<sup>21</sup>

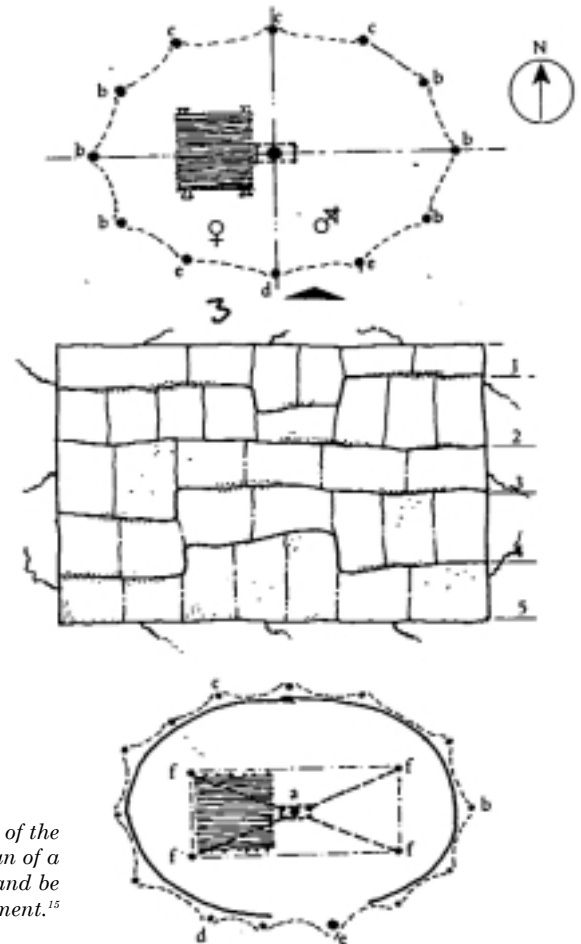
The square is also significant by its association with the Kaaba, the cube shaped building at the heart of Mecca. It represents the spiritual center of the cosmos, the origin of civilization, completeness and perfection. Pilgrims circumambulate the Kaaba seven times, again relating the square to the circle in Islamic idea as the difference between the physical world and the spiritual realm.<sup>22</sup> It may be further conjectured that the inscribing of the tamankayt and secondary supports are a symbolic attempt to replicate the Muslim belief that the word is the image, message and medium of Allah. If the tent is the dome of the heavens, and angels inhabit those heavens, it follows that the angels, which, as stated above, may be considered letters themselves, would be inscribed on the supports. Additional religious affiliation may be found in the five "tarda," strips of velum that make up the "ehakit," the stretched skin covering of the Kel

Ahaggar Tuareg tent and the connection of the number five to the pillars of Islam.

Geometry and math are very important in Islam, as mathematical perfection is a sign of Allah's divine presence. Hatumere or magic squares are symbols of this perfection. There are two types of common functional magic squares used in North Africa. Functional here implies that the squares are not merely suggested by the layout but also contain some numeric element such as words, numbers, or symbols. The first and simplest are the three by three squares. Each of the nine sections is comprised of values that add up to the same number in each direction.

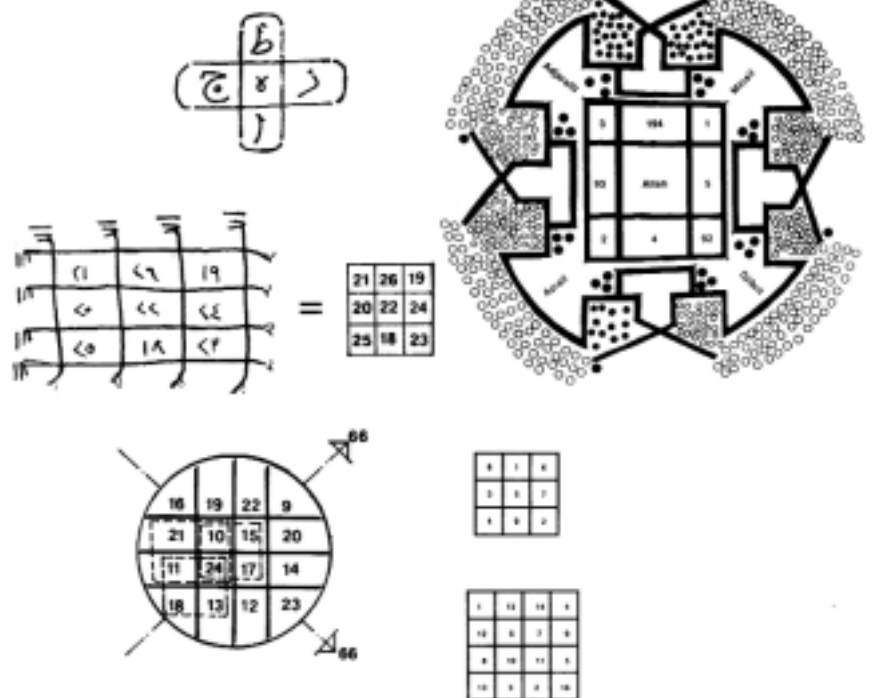
These numbers are usually consecutive, with a scripture related number, such as five, thirty-four, or sixty-six in the center. In some cases this center square, referred to as the "mosque" is left blank, since it is there that Allah is thought to reside. The other common type of magic square is the four by four square, comprised of sixteen separate sections; it functions in much the same way on a larger and more mathematically complex scale. Magic squares can grow exponentially in this manner (for example five by five, six by six, etc.) but these types are rarely seen, presumably because of their size and complexity.<sup>23</sup>

The physical layout of the Kel Ahaggar peripheral tentpoles, with three supports in each cardinal direction provides a basic layout for a three by three magic square. It is further possible that each of these engraved peripheral poles may be associated, by way of their Tifinar calligraphy with a magic square appropriate number, and create a powerful and protective environment by their placement in the tent-square. The adherence of the tent to the



Top: A plan of a Kel Ahaggar tent, a plan of the skin velum covering (ehakit), and the plan of a Kel Denneck tent. Both plans show pole and be placement.<sup>15</sup>

Bottom: Some variations on the North African magic squares.<sup>16</sup>





cardinal points associates the tent-square to the tetrad that connects Intellect, Soul and Nature to the Creator. It is also possible that the poles at the cardinal points are related in inscription and numerically to the four archangels: Mikail, Djebril, Azril, and Israfil.<sup>24</sup>

If Magic squares were, in general, small models of the Universe, now they could be viewed as symbolic representations of Life in the process of constant flux, constantly being renewed through contact with a divine source at the center of the cosmos... some more devout Muslims considered the middle number as a symbol of Allah.<sup>25</sup>

This view of the magic square stretches the geometric format of a square into that of a dome or circle. If the tent were also an image of the cosmos, with the cardinal direction as support for the heavens and the stretched-square domed skin vellum as the vault of the heavens, this image would correspond to the layout of a magic square.

Though the Kel Ferwan tents differ from the Kel Ahaggar in orientation, direction, and outer covering, the attachment to sacred numbers and cardinal points remain. The inside layout is relatively the same in most Tuareg tents, with the bed in the center, either between the dual center posts, or to the female side (west) of the singular center post. In the Kel Ferwan the married couple sleeps in a position also oriented towards the cardinal points.<sup>26</sup> If the tent is formulated around a magic square, this places the couple in the direct center of the square underneath the vault of the heavens, with Allah (inherent in the pole or ridgepiece calligraphy) above them, in the most

spiritually protected area of the tent-square.

The danger to which women are exposed during moving... and seems to have something to do with the evil spirits which usually stay outside of the tent and become suddenly more menacing for women unprotected by their tents. The precautionary measures incumbent on Tuareg women when moving through dangerous space finds quintessential poetic and material expression in their... palanquins—miniature moving tents—used by every respectable wife for every move.<sup>27</sup>

These palanquins use the same circle-on-a-square framework as the tents that are absent. The female domain of the tent serves as the Tuareg wife's divine protection, to the extent that a tent-like structure is needed while travelling. It should be suggested that while the unveiled Tuareg woman finds divine protection in the magic square and dome of the tent, the Tuareg man finds protection in the famed veil he wears at almost all times.

The male Tuaregs veil serves as his tent, and therefore, as his protection. More transient than his female counterpart, male Tuaregs also require the geometry based protection that the tent provides. The veil, a narrow rectangular band of cloth is wrapped around the head and face in a very ritualized circular fashion.<sup>28</sup> This forms the square cloth into a dome, just as in tent construction. It is also of note that the cloth is commonly left a natural white or dyed or pressed with indigo, all of which, it may be argued are colors of the vault of the heavens.

There are some male Tuaregs that are

absolved from the social obligation of the veil. Pilgrims, those who have completed their journey to Mecca, wear no veils or have a very careless manner of wrapping them.<sup>29</sup> The mentally ill also go unveiled, perhaps because of the Islamic belief that they are close to God. (Among the Tuareg the mentally handicapped are well taken care of and enjoy a near sacred status.)<sup>30</sup> These two subcategories of Tuareg society, along with children who have not yet spiritually come of age, do not need as much protection due to their inherent closeness to God. They have no need for the liminal tent or veil, as they are considered liminal beings themselves—in Pilgrims by way of their proven faith, and in children and the mentally ill by way of their ignorance of sin. The veil is so pervasive in Tuareg men because it is his sacred space, just as the tent is the sacred space of the Tuareg women.

Geometry, while already possessing a sacred presence in Islamic society, takes on an even more powerful meaning in the organically shaped landscape of the Sahara. Tifinar, one of the few purely geometric scripts, and its use in the geometrically enhanced architecture of the nomadic Tuareg reflects their Islam belief system.

## Endnotes

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29. Nicolaisen, Johannes and Ida Nicolaisen. The Pastoral Tuareg: Ecology, Culture, and Society. Volume 2. New York: Thames and Hudson. 1997. p. 687.
30. Ibid. p. 685.

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