Geometric Vowels – Movement Vectors

Geometric Alphabet {Taha} {ﮬﺐﮬ}						
32 Consonants Letters	=	22 Phoenician	+	6 Arabic	+	4 English
18 Vowels	=	6 Arabic	+	4 English	+	8 French

3 Arabic basic horizontal short movements: Fathah, Dummah, Kasrah

3 Arabic basic vertical long movements: Mad Fath, Mad Dum, Mad Kasr

$$(a, u, i) - (A, U, I) = (\underset{=}{} , \overset{=}{} , \underset{=}{}) - (\bot , \bar{q} , \top)$$

2 English additional horizontal short movements: Kashah, Offah

2 English additional vertical long movements: Mad Kash, Mad Off

$$(e, o) - (E, O) = (\underline{m} , \overline{m}) - (\exists , \dashv)$$

2 French additional horizontal short movements: Summah, Lammah

2 French additional vertical long movements: Mad Sum, Mad Lam

$$(X, Y) - (J, R) = (\underline{u} , \overline{n}) - (\exists , \dashv)$$

4 French additional horizontal nasal movements: Naf Fath, Naf Dum, Nah Kasr, Naf Off

$$(L, M, N, G) = (\equiv , \underline{u} , \underset{=}{=} , \overline{m})$$

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1- The Basic Movement Vectors

{**Taha**}, "**Tareeqah Handasiyyah**" in Arabic, is the **Geometric method of writing** using Geometric consonant letters and vowels while {**wAw**}, the **writing Arabic way** method, is similar but using small and capital Latin matching letters.

A **consonant letter** represents a specific human **sound** while a **vowel** is a **movement** vector for launching this human sound from the mouth in a certain direction within a certain period of time.

In Arabic classic: There are three basic directions (**up, front, down**) and two basic periods of times (*short, long*) for launching a consonant letter. Therefore, there are 3 short vowels (**Fathah, Dummah, Kasrah**) and 3 long vowels (**Mad Fath, Mad Dum, Mad Kasr**) in addition to 28 consonant letters.
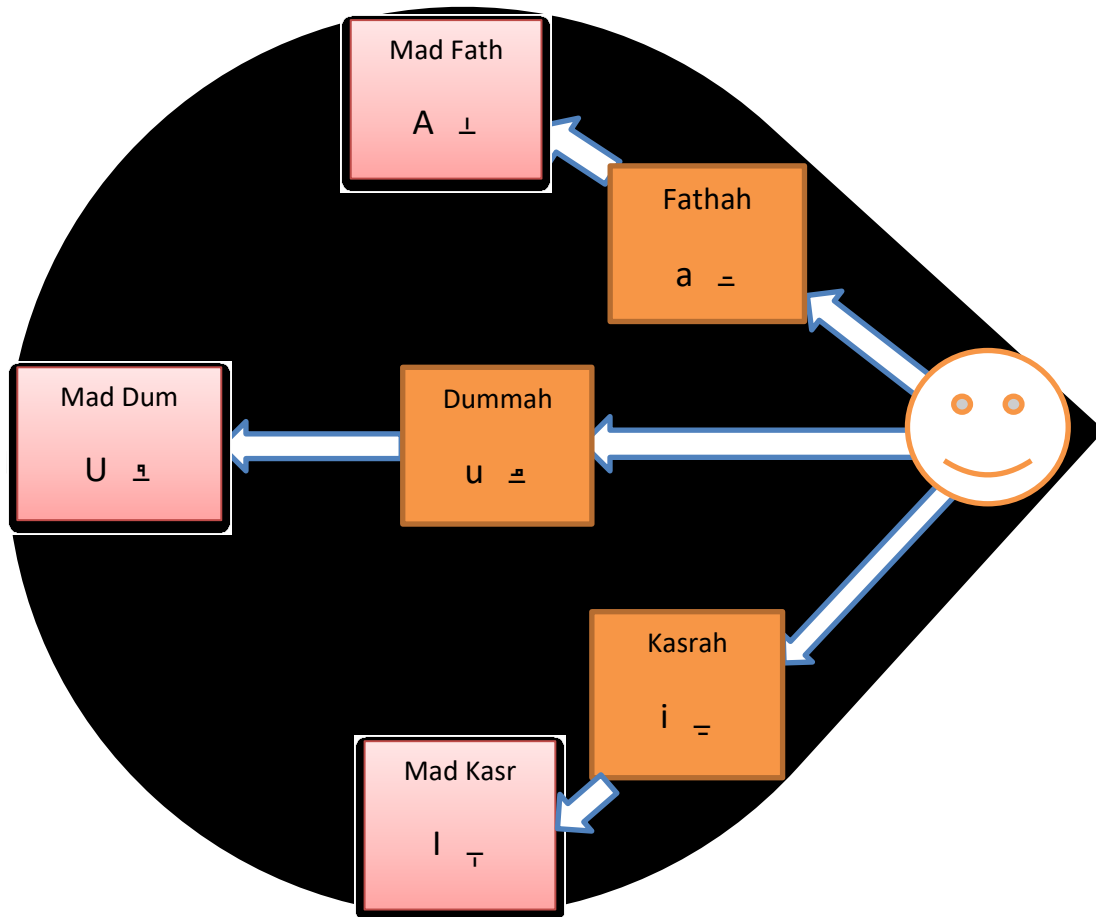
In Taha and wAw methods: The **3 short vowels** are denoted by **horizontal** geometric shapes and **small** Latin letters while the **3 long vowels** are denoted by **vertical** geometric shapes and **capital** Latin letters.

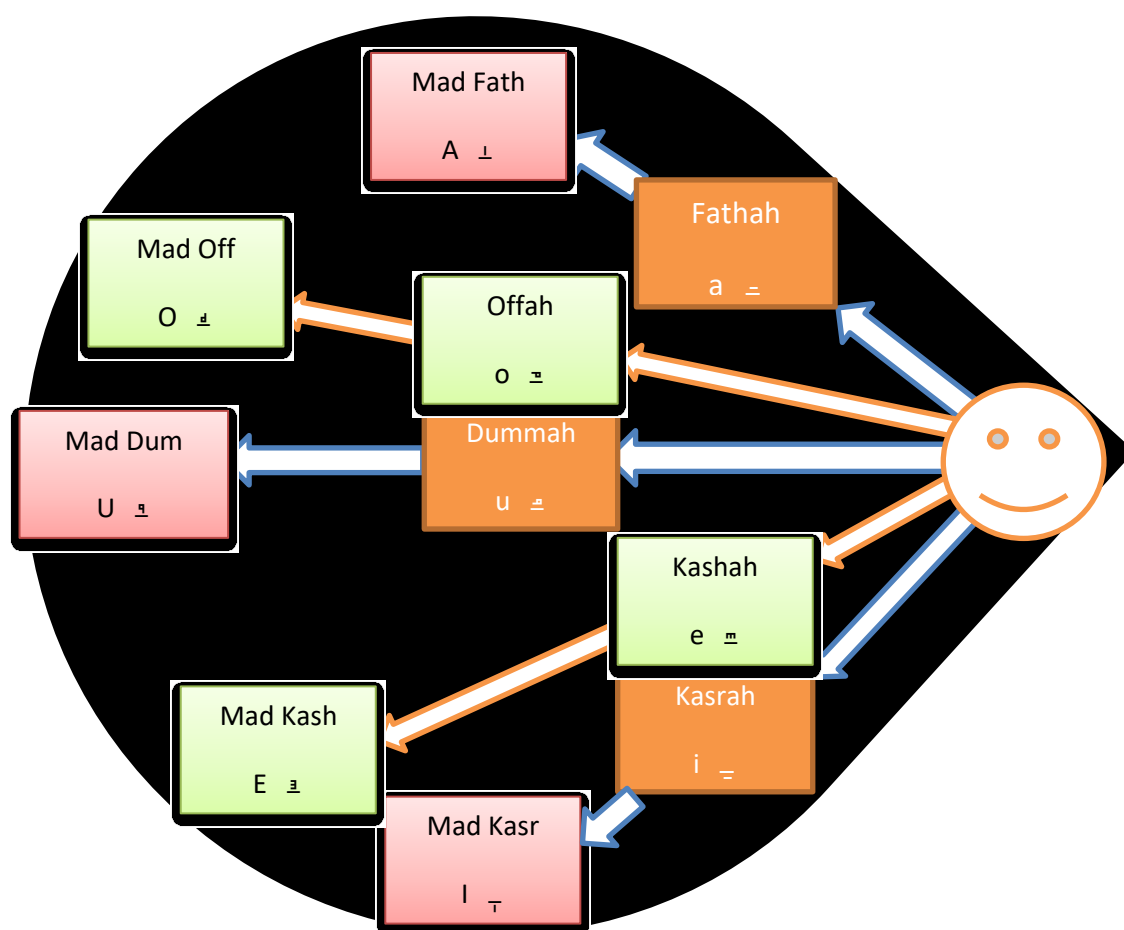*Arabic short & long vowels in Taha and wAw*: { ⸗ ، ⸗ ، ⸗ } {a, u, i } & { ⟂ ، ⹁ ، ⟂ } {A, U, I }

2- The Additional Movement Vectors

In English: There are 2 additional short movements (*Kashah, Offah*) and 2 respective long movements (*Mad Kash, Mad Off*) in addition to the 3 basic movements (**Fathah**, **Dummah**, **Kasrah**).

The direction of (**Kashah**) is between (**Kasrah**) and (**Fathah**) but closer to (**Kasrah***) while the* direction of (**Offah**) is between (**Dummah**) and (**Fathah**) but closer to *(**Dummah**)*.

In French: There are 2 additional short movements (***Summah, Lammah***) and 2 respective long movements (***Mad Sum, Mad Lam***) and 4 nasal movements (**Naf Fath, Naf Dum, Naf Kasr, Naf Off**).

In Arabic, the **additional movements** are not used because their direction are close to the direction of basic movements and the sound launched by **Kasrah** and **Kashah** can be confused as in words (**lift, left**), (**sill**, **sell**). However, the long additional movements are widely used in spoken Arabic.

In Taha and wAw methods: The **5 short vowels** are denoted by **horizontal** geometric shapes and small Latin letters while the **5 long vowels** are denoted by **vertical** geometric shapes and capital Latin letters.

English short & long vowels: {≐ , ▫ , ≑ , ▫ , ▫} {a, u, i, e, o} & {⊥ , ﺃ , ┬ , ﺇ , ﺩ} {A, U, I, E, O}

The Greeks were the first to introduce the two additional short movement **Kashah** and **Offah** and called them **Epsilon** and **Omicron** and the two long movements **Mad Kash** and **Mad Off** and called them **Eta** and **Omega**.

Unfortunately, the **Greeks** dropped many Phoenician **Abjad** consonant letters or transformed them to vowels including **guttural consonant** letters and the letter (j) and created Greek **Alphabet** accordingly.

The Romans borrowed the Greek alphabet including the Greek vowels or the additional movements. However, due to the shortage in consonant Latin letter, the **French** used further additional movements.

3- The Phoenician Guttural Consonant Letters

The Arabs preserved the **4** Phoenician **guttural consonant** letters (ﻉ, ﺡ, ﻫ, ﺃ) and added two additional **guttural** letters (ﻍ, ﺥ) while the Greek transformed two letters (ﻫ, ﺃ) into vowels and dropped two letters (ﻉ, ﺡ) but added other four vowels.

The Greeks transformed the **first guttural consonant** (ﺃ)**,** called **Alef,** into a vowel called **Alpha** which is identical to the basic movement called Fathah in Arabic. However, when Alpha is written at the beginning of a word the movement becomes associated to a hidden Phoenician consonant Alef.

The concept of hidden Alef was adopted by the Romans in Latin and in all descendant Alphabets as in the English word (Africa) {xafrika} where the first (a) is a movement to a hidden consonant Alef.

The **second guttural consonant** (ﻫ) (**H**) was transformed into a long vowel (Eta) in Greek. This letter appears as a silent letter in French similar to Latin but as an English consonant letter in the same words of Latin origin as in (hotel). It is also used in combined letters as in (mathematics) and (chair) or(chaise).

The other **two guttural consonants** (ﻉ, ﺡ) which were later confused with (h) and (i) were also dropped.

4- The Phoenician Non-Guttural Consonant Letters

The Arabs preserved the **18** Phoenician **non-guttural consonant** letters and added four additional letters (ﺙ, ﺫ, ﺽ, ﻅ). They used three consonant letters (Alef, ﻭ, ﻱ) as well as vowels instead of long movements.

The Greek dropped 6 consonant letters (ﺝ, ﻭ, ﻱ, ﻁ, ﺹ, ﻕ) and added seven vowels including five short vowels (α, υ, ι, ε, o) called (**Alpha, Upsilon, Iota, Epsilon, Omicron**) and two long vowels (η, ω) called (**Etah, Omega**). The short Greek vowels became (**a, u, i, e, o**) in Latin but used as long vowels.

The Greeks influenced by the Egyptian spoken accent replaced the letter (**j**) by Gamma pronounced as (g). Thereafter, the **Abjad** letters were called **Alphabet**. **The Romans** used the letter (**C**) as a third Latin letter to play the role of (**g**) or (**k**). Then they introduced the letters (g), (j), (k) gradually at later stages.

The Greeks then the Romans replaced the consonant letters (ي ,و) (w,y) by vowels and used these vowels or combinations of them to reproduce the consonants (w, y) which is the big historical miss. Finally these two letters were introduced in Latin and therefore in English and French.

In English, the Latin letter (**y**) assumed to be a replacement of the Phoenician consonant letter (**yad**) but confused with the vowel (**i**) which was a replacement of the Phoenician consonant (**ayn**) and called **eye**.

Most of the dropped Phoenician consonant letters and the additional Arabic letters were restored in English by using certain arrangements or combinations of consonant letters and vowels. Currently, five vowels (**a, u, i, e, o**) are used to represent somehow the short and long movements.

Some Abjad letters missing in Latin were restored as combined English letters as (**ch, dh, kh, gh, sh, th**).

Only, three Arabic consonant letters (ع ,ح ,ء) are still missing in English while three English consonant letters (x, c, q) became redundant and can be retired and replaced by other letters.

In French, the consonant letter (**y**), called the **(i) Greek** in French referring it to the Greek vowel (Iota) is still often used as a vowel and rarely as a consonant. But in (wAw), (y) is strictly consonant letter.

Most of the dropped Phoenician consonant letters and the additional Arabic letters are still ignored in French. The consonant letters introduced at later stages (w, g, j, k) in Latin found less and slower acceptance in French compared to English.

Due to the shortage in consonant letters in French, The extensive usage of certain arrangements or combinations of consonant letters and vowels was unable to fulfill the need of French vocabulary. Therefore certain accents and additional specific French vowels were introduced in French.

5- The Specific French Oral and Nasal Vowels

Vowels are **movement vectors** used for launching human sound known as consonant letters in certain **direction** within a certain period of **time**.

The **duration of a vowel** lasts from the time of sending a stream of air from the lungs to keep the oral cords vibrating in order to generate a sound modulated in the oral cavity and launched out from the mouth until its hearing vanishes in the ears.

In Arabic, the three basic movement vectors have dispersed directions upwards, front and downwards, therefore the short vowels (**Fathah, Dummah, Kasrah**) are well distinguished as well as the long vowels.

In English and in Greek two additional directions were created by the displacement of the heads of the front movement vector {Dummah) and the downwards movement vector (Kasrah) slightly upwards. Therefore, two additional short vowels called **Offah** and **Kashah** (**o, e**) were generated and used in English in addition to the three short vowels (**a, u, i**) used in Arabic.

In French, the same Greek approach was applied on (Kasrah) and (Kashah) movement vectors by rounding the lips (Dummah) when launching the sounds to generate two additional specific French short movements called (**Summah**) and (**Lammah**).

The symbol of English vowel (**Kashah**) (**e**) was assigned to the **French (Dummah)** as in (le, je, me, se, que) while an **additional accent** (aigu, grave or circumflex) was added above (e) to make it a **French (kashah)** as in (été, lumière, fête).

The English vowel (**Dummah**) (**u**) was assigned to the new **French vowel (Summah)** as in (du, dur, sur) while the vowel (eu) combined from the English (Kashah) and (Dummah) was assigned to the new **French vowel (Lammah)** as in (peu, peur, deux). In general, these two vowels are short in open syllables and long in closed syllables. Therefore, **four additional specific French oral vowels** were created.

The **nasal cavity** situated on the top of the mouth was used in addition to the oral cavity to generate new movement vectors. However, only two new movement vectors can be generated using the **nasal (Dummah)** or **nasal (Fathah).** A nasal vowel is designated by an oral vowel or a combination of oral vowels followed by unpronounced (**n**) or (**m**).

The **nasal (Fathah)** can be split into three vowels sharing the same movement vector but having different levels of sound softness varying from **soft** sound using oral vowel (i or y), to **semi-hard** sound using the oral vowel (u), then to **hard** sound using the oral vowel (e or a) before (n or m).

Therefore, **four additional specific French oral vowels** were created. These vowels are called in Arabic (**Naf Off**) (on), (**Naf Kasr**) (in or yn), (**Naf Dum**) (un), and (**Naf Fath**) (en or an) as in (bon, fin, un, blanc).

In general, the nasal vowels are **short** in **open syllables** and the final n or m is unpronounced as in (vin, vent, vingt, demain) while the nasal vowels are **long** in **closed syllables** and the (n or m) is pronounced as in (vingt et un, ventilation, dimanche).

The French **nasal rules are ignored** and not applicable if the letter n or m is duplicated or followed by another oral vowel as in (bo**nn**e, fe**mm**e, da**me**, lu**ne**tte, di**ma**nche).

In French, **combination of vowel and silent letters** are used extensively as in (temps, champs, vingt, eaux, oui, que) which are pronounced as one dynamic letter each.

In {Taha} and {wAw}, nasal vowels share the same symbols used for Arabic marks of **Tanween** and **Sukoon**. **Two identical oral vowels** were assigned to each specific French **nasal vowel** while **two different oral vowels** were assigned to each specific French **oral vowel** as in the following table.

French Vowels	Naf Fath	Naf Dum	Naf Kasr	Naf Off	Summah	Lammah	Mad Sum	Mad Lam
ح علّة فرنسي	نف فتح	نف ضم	نف كسر	نف أوف	صمّة	لمّة	مد صم	مد لم
Latin Font	L	M	N	G	X	Y	J	R
Geom. Font	≡	⊞	⹀	⊡	⹀	⹋	ᗴ	⹁
wAw letters	aa	uu	ii	oo	iu	eu	Iu	Eu
French words	an, en	un	vin	nom	du	peu	dur	peur
wAw words	aa	uu	vii	noo	diu	peu	dIur	pEur

The specific French nasal and oral vowels

A **{Taham} text** consists simply of dynamic and static reversed Geometric letters which means consonant letters and movements called vowels. A **French {Taham} text** does not contain any accent, combined letters or silent letters and it is an easy human and machine readable text.