Writing Tools in Calligraphy with a Focus on Font Mode Cutting

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INTRODUCTION

In the tradition of previous graphology large and small and different staff and the different changes that arise in the territory of the whole line and in the result of transformations of mentioned species and other types will emerge from the line and main line. Each of the types and mentioned species, is so-called pencil of calligraphy.

In pencil's definition in Sobhol Asha book, there is a definition as follows: pencil (shaving cream) and its name is because of its strength or because, they are cutting the head of the pencil.

Scribes and calligraphers know pencil as one of the main tools of calligraphy in way that they stated: without a proper pencil, the good line will not come from the scribes and calligraphers fingers and in Persian language, Predecessors called pencil as estate beautician and heart ambassador.

In relation to the pencil and its types, various papers and articles are written in different terms and periods of Islamic history which its subjects and contents are mostly similar and repetitive. Here we refer to some types of these articles and papers that have a particular importance.

Soltan Ali Mashhadi in his article on the path of the line that wrote in 920 lunar year and described pencil. Generally in his idea, the pencil should not be thick and thin, but it also should be moderate and the color in it should be white not black. The pencil also should not be both rigid and loose. Then different parts of a pen or pencil of calligraphy, its size and pen dengue were studied. Then after that the custom of pen cutting in different parts of the pen was mentioned.

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The size of the pencil should also have moderation, so that from the fourth century till the recent years, knows the length of the pencil from twelve to sixteen finger and have recommended its robustness to the size of index finger till the fourth finger.

Therefore, by regarding importance of the pencil, appearance and its size in calligraphy, therefore this paper has investigated the way of cutting the tip of the pencil in a correct way.

Types of pencils:

Types of pencils that are famous between scribes and have most attention by them and applying are such as:
- Vaseti's pencil
- Basri's pencil
- Mazandaranian or Amolie's pencil
- Persian pencil or Shirazis pencil
- Dezfoolis pencil
- Askar Ahvazis pencil
- Egyptian pencil
- Indian pencil
- Chinese pencil
- Sasers pencil
- Saaf and Metal pencil.

In Iran, the best pencils are obtained from the Dezfool city in Khozistan. The calligraphy's pencil have seen in two kinds in our country, one of them is the Dezfooli's pencil in the south west of Iran and the other one is Khizran's pencil in northern regions of Iran such as Mazandaran and Gilan that can be seen in it in terms of various rigid till average. Dezfooli's pencil are mostly used for medium sized dust till average calligraphy and bamboo pencil is proper for writing coarse and inscription writing, and pencils which grows in central regions of Iran have a high quality for coarse writing and inscriptions are more convenient and proper than bamboos pencils.

Method of getting of the pen:

In relation to holding a pencil they are presented some recommendations and approaches in papers and articles that we refer to some of them:

In the third article of Gavaninol Khtot of Mohammed Mahmoud circa The Timurid era, these recommendations have presented in relation to holding of pencil: professors have mentioned that this matter is in the holding of pencils and directing of their tip, but mention matter that he is hearing from the master's.

Know that if the pencil is firm and straight and its square is short, the pencil should be held overthrown and if the pencil is tilted and its square is long, the pencil must be held as straight and long and should be held in the direction of pencils Bransy. And the other matter is that the pencil must be held among three fingers so that from each side pencil does not have a weak movement and also must know that what each finger does in the direction of the pencil and in the rising time what should be done with the middle finger and in the decline time must confidence to index finger and should do ambiguity.

Fathollah Sabzevari in article of rules and regulations of six lines that author in its writing, has an attention to the works and writings of Ibn Almoghale, Ibn Abvb, Jamal Aldin, Abdullah Sirofi and in 930 Hegira has written and wrote such as this... But getting a pencil and putting on insertion, Author must hold a pencil in his finger and must do the middle finger till the license of an index finger and ambiguity in putting pencil as vertical so that from each side that pencil knows, there is not any weakness and mistake in lines and hold pencil in fingers so strong not loose so that holding loose of pencil will be the cause of anxiety and holding too rigid will be the cause of line dryness.

Abdollah Seifofi, the scribe of Mongolian era in his article of lines custom in relation to the holding, directing and pencil's circulation has written such as this:

Know that the author must know these approaches because of that the most of the rules and regulations of this science that happening, is in general. But must hold a pencil in three fingers, so that each finger is around the pencil so that from each side that he drives, there is no mistake and weakness in the line. Middle finger must be upper than conquered finger and must hold a pencil stronger and drive a pencil firmly that the rigidity of the line is according to the rigidity of the pencil.

But we refer to the way and method of holding a pencil and their direction, in the ideas of contemporary professors, some of them are such as:

Professor Habib Allah in his teaching method mentoined that we hold pencil a little upper than the shaving or cutting place so that the fingers are in the position of vast and free, takes the around of the pencil (if in the manner of vast and without a shrinkage, the pencil's movement will be easy).

Pencil in writing with the three middle fingers under the pencil and index finger and ambiguity, are placing on it that these three are effective in hand's order and pencil's circulation. The pencil's reliance is on the middle finger and is with two other small fingers and the small finger is on the paper.

In holding of pencil, moderation is proper, neither rigid nor strong and not loose and pencil's drive on paper must be without pressure, especially because the right part of the tip mostly used, we should not push the pencil on the paper because it becomes corrupted very soon and damaged the line.

Naming the various parts of the pencil:
1- The right part of the pencil's tip in terms of idiom is called Vahshy
2- The left part of the pencil's tip in terms of idiom is called Annecy
3- The width of the pencil in terms of idiom is called form (Top)
4- The pencil's tab, is the narrow part of the pencil (Jalfe or Helfe is the Persian word of it)
5- All of the cutting or the shaving surface of the pencil is called a pencil's square (pencil's width). (they say pencil's house or kelek's house that is in persian)

Dengue and font sizes:
1- Dust 2-khafi 3- scribe 4- seasonal head 5- mashqy or piece 6- furtive page 7- inscription
row1: the name of the pencil is Ghobar and its size and centimeter is from the smallest size is 5/0 Mm
row2: Name of the pencil is Khafi and its size is from 5/0 Mm to 4/3 Mm
row3:Name of the pencil is Scribe and its size is from 4/3Mm to 5/1 Mm
row4: Name is Seasonal Head and its size is from 5/1Mm to 2Mm
row5: Mashqy pencil and its size is from 2Mm to 6Mm
row6: Furtive page pencil and its size is from 6Mm to 2Cm
row7: Inscription pencil and its size is from 2Cm to up
with keeping and respecting to these idioms, their approximate equivalent is to centimeter and millimeter that you can observe in the table that we mentioned. According to what has been said, some of these divisions in their scope is divisable and special naming

Font's cutting custom:
A) picking up the pencil's surface (pensil's conquered): The width of the pencil's square according to the principal professors must be in the size of pencil's environment; means that if we rotating a string around the brush or pencil, pencil's square mus it be determined in the size of string's length
We consider the main and very important factors such as: 1- The entrance's angle of cutting blade on the pencil 2-The blade's aslant ratio to the horizontal motion of it
The height and the shortness of the length square of the pencil depends on the two mentioned factors. While removing the pencil's square surface, brush cutting blade is laterally recumbent and to symmetrical withdrawal of the pencil's square surface, it must come down vertically on the pencil's length and also pressure on the brush cutting blade exactly applied to the pencil's length so that is caused the asymmetry picking up in the surface of the pencil.
Pencil's picking up is done to parallel to the flow and descend of the brush cutting blade. The angle of the blade and its cutting for Mashqy's pencils(2-6Mm) approximately recommended 20 to 25 degrees. Whatever the angle of the blade's putting is more vertical, the pencil's square length is shorter and whatever the angle of blade's putting of brush cutting blade is more lying, the length of the pencil's square becomes more.
Blade's base down ratio with a desired slope in the pencil with the next horizontal motion to the end of the pencil's square is at the rate of five to three.
The proper curvature in picking up the pencil's square if we look from the side, it should be completely compatible stretch with the curvature of the (S).
If the arc of this stretched "S", is low and flat, reasonable and necessary flexibility in the pencil vanished and inappropriate stiffness and hardness appear in the pencil.
This kind of blade cutting brush is usually due to the least attention to the angle of the blade cutting brush that often laid horizontally and also a little blade's circulation during picking of it and also if the arc of this stretch (S) is large and hollow, the font is becoming too flexible and its high flexibility makes it difficult to write and the line will get the smoothly and high curvature.
But other important matters are the amount of pencil's tip picking and the rate of the tip is directly proportional to the size of the pencil's tip so that if we assume a rectangular cross-section of the pencil's tip, the ratio of the length and width of the rectangle should be a five to six.
Of course the pencil's tip ratio in a different items can make some changes to more suitable use of it
B) Flank cutting: flank cutting according to the professors ideas should be in a form that will be empty to the equal ratio of the sides of the square and it is better that to less removed from the right part of the brush or wild brush. Since equal picking and the simultaneous symmetry of the sides with respect to the size of the tip are a bit difficult, the following procedure recommended to the calligraphers to perform this step that inevitably and it will reach the goal in this way being a circular cross section of the pencil's tip are necessarily required and must pay enough attention to it. For Cutting side brush is needed pencil and Cutting blade at first as the stage of Cutting pencil's square means while cutting blade items with that mentioned angle is side-lying and perpendicular to the pencil's length and the pencil's square is completely toward up, rotate the pencil a bit in the hand and the blade is still side-lying and perpendicular to the pencil's length, and with taking a picture of the square of the pencil with uniform pressure, perfectly to move in the way of pencil's length and doing of this act exactly with that rate of pencil's circulation in other side, if these acts done correctly, the pencil's sides moreover that will empty uniformly and symmetrically, the size of the pencil's tip will determine itself.
C) Crotch or head slot font:
Crotch due to its various applications, has a significant importance and one of the important aspects of cutting font, is preparing for it. And the way of establishing it by the olders performed by the way that during it, lying the font from the back after picking it or cutting the pencil's square and before cutting the sides of the font and with the index finger's pressure that has done on the pencil's chest and slightly forward, it established with the cracks or gaps in the tip, in this method, the tip of the pencil due to the curvature of its back that lied on a rigid and flat surface, has been quit under hand's pressure; but now this action is applying for performing faster of it by font cutter. The proper size of the crotch's length is usually to the rate of 3/2 on the surface of the region or the tip of the font.

Cutting the font:
Put the small and medium-sized tail font on the cutter and put the left thumb on the font and put forefinger and the middle one under the cutter and hold the font as firmly and then we cut its tip diagonally and anytime that the font is too large that it's holding is out of the cutting power on the hand, we put the bigger and vaster cutter on the table or flat ground and then we cut it.

Dip of the font: if we assume a square on the tip, the average dip is the one that is linked from the middle of the left lateral side to the cross center
Jack knife: small penknife to cut the font is called jackknife(moien, Mohammad, vocabulary).
Gazlak is the type of small knife and it's a kind of penknife that it's head is toward the back and its tail is slim. Have said that they have brought this kind of jackknife more from Egypt

In the way of former authors, this name belonged to the knife that has a long handle that by this, they were cutting the tip. Penknife is different according to cutting types of font and scribes are commonly used the two kinds of jackknife. One of them is small to shaving the tip and cutting its carving, and the other one average to more cut and scribes recommended that penknife should be in the shape of lily leaf and its blade should not be neither long nor short, and neither too wide nor too narrow

Picking up the back of the font:
In different approaches and naturally different applications of font, different parts of the font are using. For instance, in some methods, the back of the font has not any special application and all the attention is to inside of it. Because of this issue, the surface or level, which should be inky is inside of it.

Penner:
Penner is a box or a cylinder or a cube is composed of two internal and external parts. Internal or inner part that is the place of the standing cane fonts, ink well and ink, scissors, penknife, cutter, pen table, stone Fsan (Roman stone), etc., that all of these which have been placed in the Penner.

Penner has a different type includes of:
1-Cardboard cloudy font:A kind of pen, that its outer and inner surfaces of the fragments cloud covered with paper, and the paper has to be illuminated, the name that is known as comb illuminated. This type of penners arrangement has attributed to Abu Talib teacher.
2- Inlay penner: A kind of penner, that its cover is provided to the art of seal-making procedure, so that its body is made entirely of seal in its layout and sides of the shell and ivory are used for decoration, and variety. Sometimes have positioned the name of the person who's the penner is made for him with oyster or ivory with hieroglyphics on the side of the penner
3-Wooden Penner:the type of a font that its separate dual pieces provided by a very tiny wood and often flowers and leaves have been role on it as wood carving
4-Kiani's penner: type of the penner that it shapes composed of faces and the delegation of mythological heroes and Khosrow Iranian.The images has been draws at the top and bottom of the drum penner and on both sides of it and skilled and professional painters have painted all parts of the tab from inner and outer part full of faces and pleasing forms that tells the anecdote of Masnavi Malawi and five Nizami's treasure and etc.
5-Kobe mosaic silver penner: the type of penner that painted its outer cover piece with mosaic and have established it by the silver formed of khataie arabesques. Canvas and background of these types of penner are in the black color and this is because of that its silver and siminshapes be manifested.
6- Minaie penner: type of penner that its surface decorated with enamel practice. The body of this type of penner is from silver and sometimes the main body is provided from wood or pulp of the paper and was capped by a thin layer and then enamel have been done on it.

Conclusion:
Generally, In author’s opinion, font Specifications must be according to what follows:
1-The length of the font must be perfectly flat and not have any node and wave, and inside of it is empty, because the air passes through the font, helps a fine stream of ink.
2. The font point is completely circular because it is very important and the font which don’t have this form, are not suitable for artwork and original calligraphy.

3. The font skin is completely smooth and clear and its vein is smooth and flat and are in the way of the fonts length and are perpendicular on the circular shape of that (fonts that their viens and fibers are twist, their tips are quickly worn out).

4. The font color should be completely transparent and refreshing because refreshing color of the font is due to its ideal moisture in its context, so that in a very high grade reached fonts, they have adequate moisture, against of this issue, moisture of the ink does not show any reaction and essence cannot be absorbed by its tissue. Finally, the fonts that are red jujube and white, have such conditions and the font that are opaque in color, it is because of that they have not been of adequate moisture and the fonts that are raw, due to the high humidity, are not suitable for calligraphy and raw fonts have the colors of greenish or are not have any color. All received complete fonts in addition to their feature, their inside is completely white.

5. One of the other font feature is its heaviness and its full ink on its side and this feature is evident in the ripe fonts and in the examination of the font and its crush to the ground, the small or tiny voice is coming from it or similar to glasses and this feature in raw fonts and slight and loose is not evident and the loud bass and hollow sound is coming from it.

6. The font should be moderate in terms of elasticity and flexibility this means that the fiber texture of the font has a good density and the fiber of these fonts is tiny and their extures is barely visible. As well as the scattering strands (fiber) in the font body is proportioned So that the fiber rate with the rate of wood tissue that filling the spaces between the fibers is almost identical. The rise of the fibers ratio to the wooden fiber is a cause of sluggishness of the font and the lack of the reactionary of its quality. As well as correspondingly increased texture to the wood fibers will be the cause of excessive font strength and its flexibility. As a result, font that is in moderation and medium density fiber, their texture penknife blade is easily moved. And the hollow font that is loose and cause the trim to be suddenly cut and font that are strong and tough (to have a firm texture) blade Cutting font will engage more with the font body.

REFERENCES