THE MAKING OF THE TURKISH NEY

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Introduction

The Ney is an ancient flute made from a length of bamboo reed. A man playing the Ney is represented in a tomb painting from the Egyptian fifth Dynasty, dating from over 2,000 years B.C. (Fig. 1). We can also clearly see nine sections of the reed, a detail of importance in the facture of the Ney.

Figure 1.

In the photograph of the Neys in the Konya museum, (Fig. 2) there are examples which are between 700 to 800 years old. All of these have nine sections of reed and a noticeable taper from top to bottom. This taper is also an important factor of identification for the choice of reed used. In the Anatolian Sufi tradition, the Ney is sacred, since it was clearly linked to man's spiritual progression, in the well known opening 18 verses of Rumi's epic, the Mathnavi.

Should we compare the scope of the modern flute with the Ney we would find 14 scales on the modern type with more than 200 on the Ney. The modern flute has a span of twelve notes in the octave while the Ney has at least 34. In melodic terms this shows that the Ney responded to a micro-tonal system which should not be considered as primitive or less sophisticated, but rather, that we should consider that early Ney music was very developed and used a complex melodic system, a fact which might be difficult to understand in terms of modern Western music theory.

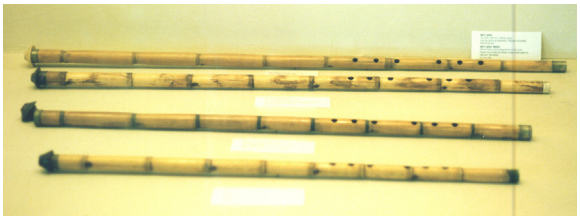

Figure 2.

Sourcing the reeds and making the Ney

The reeds from which the Ney is made is the Arundo Donax variety. It is the same material which is used for clarinets, oboes and saxophones reeds. It is a member of the grass family. This type of reed was originally growing in the Mediterranean perifery. Therefore Ancient Egyptians, Babylonians and cultures in the Near and Middle East would have had abundance of them for their flutes. In modern times the rhizomes have been exported to round the world and reeds grown from them are now used for fence making, basket weaving, ethanol bio-fuel production, paper making and other purposes. Not all the sub-varieties are suitable for making Neys. Reeds must be carefully selected. The best reeds are found in the Hatay and Izmir provinces of Turkey and around Aleppo in Syria.

The process starts by the selection of a suitable section of reed which might be suitable for making a Ney. After removing the outer sheath, which hides the sectional divisions, we can see where the reed sections are positioned. Using prepared gauge rods and callipers we can check the positions of the joints and the taper of the reed for its suitability. The dimensional parameters for these checks are handed down within the Ney playing oral tradition

and are not really of any value to those who are unable to play a Ney, so they are not generally given out.

Some information has been published in various books on Ney playing and also on the internet. These parameters may well assist in making a bamboo flute, but as we shall see, they cannot be used to make a ney.

When the pieces of reed have been selected they need to be stored in the dark for about a year, until the colour becomes golden yellow; with no traces of green reed showing.

The reason for carefully checking the reed joint positions is that various sizes of reed can be found useful for the range of different Ney sizes which are traditionally used. There are 8 basic sizes of Ney ranging from approximately 1.0m to 0.5m in length. Their pitches differ by 9, 5, 8, 9, 8, 5, 9 commas respectively. (9 commas being one Pythagorean whole tone). The names given to each of these Ney sizes are also often used to describe the pitch level at which a music group would chose to play. A point which is often not appreciated by Western musicians, is that the whole Makam system can be played at any suitable pitch level. The Makam, tetrachord and note names are all retained at whatever pitch they are played at; since it is the interval system which is at the heart of the Makam system and this does not have a fixed pitch level for its integrity to be maintained.

After choosing a matured piece of reed to make a ney from, the first task is to decide where top and bottom areas on the reed will be, which best suit the position of the intervening sections for the position of the finger holes to be cut later; the section positions usually become wider apart towards the wider end of the reed; hence the selection is done by sliding the gauge rod along the reed to find the best fit. After this the end parts of the reed not required are cut away.

Then the intervening membrane which closes each section of reed needs to be removed using a long tool for the purpose. The top intervening membrane is not removed yet. After this the position of the first hole (note name dugah) needs to be estimated and cut with a hole cutting tool. The reed material can split along its length so care

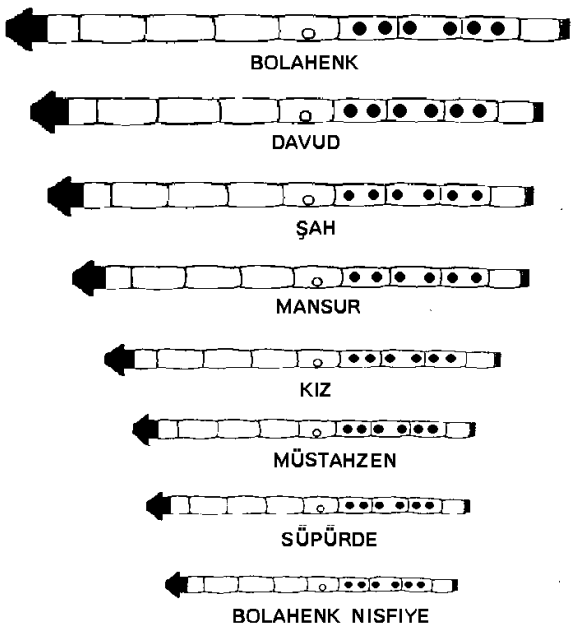

Figure 3.

needs to be taken in this process. Then the top intervening section needs to be centrally bored out to about 6mm diameter. The pitch of the note, from the Dugah hole bored, needs to be checked to within ¼ of a comma accuracy. This can only be done by a ney player who can not only get a good note but whose sense of hearing has been trained to that level of accuracy. Hence Neys are only makeable by Neyzens, and this is one of the reasons that certain information is not told to others. This process may take some time as the top of the reed will need to be slowly trimmed shorter and shorter until the pitch is correct; thus ensuring that all other holes will be in the correct position.

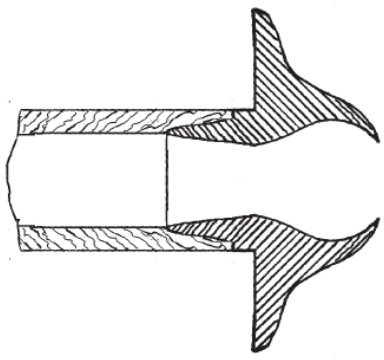

Figure 4. Mouthpiece.

Each reed is a different case as the length of the Ney will vary with the diameter of the reed. Narrower reeds will make longer Neys for the same pitch level. Fatter reeds will become shorter Neys. After the first hole is considered correct a formula is applied and the other holes can be cut in sequence. Each note pitch being carefully checked before the next one is cut. When the Ney is basically finished it needs to be put into a bath of oil (almond or sesame seed) for about one month. After this a mouthpiece (bashpari) will be required so that the Neyzen can get control and accuracy of the required micro-tones from the curved shape and the sharp edges provided by the mouth piece design.

Microtonal values

The trained human ear can distinguish approximately ¼ of a comma difference between two notes. This is about 1/36th of a whole tone. This has been verified by a long term experiment carried out at Washington University in the 1970s and 1980s. A Turkish long necked lute player, an exponent of the microtonal Makam system, was found to have the finest ability to distinguish tonal subtleties. His accuracy has been documented to be in the range of 1/5th of a comma[1].

The following quote points to the ancient value found in the use of micro-tones.

> *'In the legend of Orpheus there are hints of objective music, for Orpheus used to impart knowledge by music. ...Very often it is simply one note which is long drawn-out, rising and falling only very little; but in this single note inner octaves are going on all the time and melodies of inner octaves which are inaudible to the ears but felt by the (higher) emotional centre [2].'*

Compare the above to the quote which links Pythagoras to a higher use for melody:

> *'Pythagoras related that his Soul rose as far as the higher world. Due to the purity of his being and to the divinatory power of his heart, he heard the melodies of the Spheres and the sonorities produced by the movements of the heavenly bodies; at the same time he became aware of the discreet resonance of the voices of their Angels. Afterwards he returned to his material body. As a result of what he had heard he determined the musical relation-ships and perfected the science of music[3].'*

The aim of Pythagoras was to develop a music system to connect others with this experience. His vision saw that through a system of intervals employing just intonation intervals and other intervals derived by combining the just intervals from the full range, certain combinations could appeal to higher human emotions and thereby generate a spiritual possibility for melody. These special intervals are arrived at by combining adjacent just intervals such as 4:3 and 5:4 to get 5:3 and so on. These new kind of intervals will be found to appear within the thirds of the Pythagorean tetrachord ranges[4] and in many other places within the Makam system of melody. Melodies created which use the full possibilities of the Pythagorean system of intervals bring about the potential for a spiritual side to melody.

Playing the Ney

If we follow the above concepts we may get closer to understanding what the ney player on the Egyptian tomb painting was playing; especially if we remember that Pythagoras spent more than a decade studying within the Egyptian temples.

The Ney has the possibility of seven notes from the normal holes used in playing, if we include the situation with all holes closed (i.e. the full length of the Ney). The lowest register of the Ney produces notes which are separated by 9, 4, 4, 5, 4, and 5 commas between them. These are the notes which come from the holes with no inflections from finger or breath modifications. The next range is one octave above the first with the same intervals between the seven notes. This leaves four notes missing between the two ranges. The third range is a perfect 5th above the second, also with the 9, 4, 4, 5, 4, and 5 comma interval gaps. This gives one note common to both ranges. The fourth range is a perfect 4th above the previous range giving two notes which are common with the third range. The 4 missing notes are provided with the use of the hole at the back of the Ney. Altogether this gives a range of two and a half octaves. The various ranges are provided by an over-blowing technique. Many micro-tonal possibilities are arrived at by skilled Ney players to produce around 35 notes

1 Signell, K., Makam
2 Ouspensky, *In Search of the Miraculous*
3 Godwin, J., *Music, Mysticism and Magic*
4 Wenham-Prosser, A., The Music of Rumi

within an octave range. All these notes are required at various times during the playing of the many Makams and their transpositions which are used within the Pythagorean melodic system.