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POLYPHONY IN *TOULOUM* PLAYING BY THE PONTIC GREEKS

by Christian Ahrens

The Pontic Greeks, refugees from their traditional homelands that today lie within the borders of Turkey and the USSR respectively, brought with them two folk music instruments, aside from other widely diffused instruments that are almost unknown in present-day Greece: the *lira* ('a three-stringed, bowed lute') and the *touloum* ('bagpipe'). While the Greeks clearly distinguish the *lira* from the remaining Greek instruments by calling it the 'Pontic Lira,' the Greeks from Pontus simply call it *lira*. On occasion, mainly in song texts, one discovers the Turkish designation *kementze* (*kemençe*). The name *touloum* (Turkish *tulum*) originally meant "... a tube or sack made of sheep or goat skin which serves as a vessel for oil, cheese and the like."¹ Curiously, in western Macedonia the ancient Greek word *angion* ('vessel') is often used in place of *touloum*, which, on the other hand, is totally unknown in eastern Macedonia. The reason for this difference in terminology cannot be clarified.

The Laz, a non-Turkish ethnic minority, who reside on the Black Sea coast of Turkey, the former homeland of the Pontic Greeks, also play the *lira* (*kemençe*) and the *touloum* (*tulum*). In spite of earlier, apparently quite close musical relationships between the Laz and the Pontic Greeks, proven by a great number of similarities in dance and music, the Pontic Greeks rarely speak of "Laz" pieces or instruments. Moreover, they designate almost everything that is not Pontic as simply being "Turkish."

In Northern Greece, where the greater part of the Pontic Greeks have settled, both the *lira* and the *touloum* are played only by them. The Macedonians have, for example, their own type of bagpipe which corresponds to the *gaida*, known throughout the Balkans, and which also carries the same name. Both types are totally independent of each other: Macedonian bagpipers use the *gaida* exclusively even though they have essentially taken over the repertoire of the Pontic Greeks; the latter, on the other hand, use the *touloum* even when they play widely known Greek or Turkish pieces.

The *lira* was and is still the most important and most played folk music instrument among the Pontic Greeks. According to statements given by informants and confirmed by our own observations, *lira* playing today makes up for approximately seventy per cent of the entire musical practice, the *touloum* about ten to fifteen per cent. The remainder is taken up by other instruments, like the violin (occasionally played instead of the *lira*), the double oboe, or clarinet-drum, while pure unaccompanied vocal music is hardly of any consequence percentage-wise.

The figures for the *touloum* are much lower today than previously, since its use is continually and rapidly declining. In addition, there is a rather reserved attitude among 'official' circles (such as, for example, radio, recording industry or cultural societies of the Pontic Greeks) toward the bagpipe which resulted in its lack of representation at organized festivals, radio broadcasts and sound recordings. Hence, there are hardly a half-dozen individual sound recordings of the *touloum*, and it is not easy to obtain such recordings even in the numerous record shops run by Pontic Greeks where a large selection of Pontic music recordings is available. Nevertheless, musical performances on the *touloum* are received with considerable interest, at least among the older and middle generations. Even in the rather sparse literature concerning Pontic music, the *touloum* is only mentioned in passing.²

The *lira* has a narrow, box-shaped body, with three strings tuned in 4ths. The neck is only about five to eight centimeters long, yet all of the instruments we recorded possessed fingerboards which, as a rule, extended beyond the body to allow for an additional position, thereby extending the range. In practice, however, this technique is hardly used; playing in the first position dominates, so that the richly ornamented and individually shaped fingerboards generally appear as purely decorative objects. Upon inquiry we were told repeatedly that the Pontic *lira* should always have a fingerboard; however, these are lacking on the "Turkish" (i.e., Laz) instruments. In fact in Turkey, particularly in the western part of the Black Sea coast, *liras* without fingerboards are often played.³ The particular characteristic of the music played on the *lira* is its polyphony, in which drone effects and, above all, parallel 4ths dominate. The limitation of playing primarily in the first position probably accounts for the particular emphasis that is placed on polyphony in Pontic music. Because of the *lira's* very short neck, polyphonic playing, especially in parallel 4ths, is extremely complicated technically in the second or third position and can hardly be realized in the usual playing position—holding the instrument either suspended freely, or supporting it on the knee.

The *touloum* is a bagpipe with two parallel pipes (bound together) without a drone pipe. The pipes are fixed together with wax and placed in a wooden disc that ends in a bell. They possess five adjacent holes each that are mostly round or oval, seldom square. The reeds (idioglot, percussion lamellae, cut upwards) and pipe are made of cane, the stock is of wood. In general, the bag is made entirely from sheep skin, although goat skin is also used on occasion. In contrast with the *lira*, which can often be purchased ready-made, the *touloum* is always made by the player himself, at least its most important parts, and is adapted to conform precisely to his musical intentions and physiognomy. Some musicians assured us that their chanters and stock were brought with them from the Pontus and are fitted each time into the single new instrument that they make. The sound and tonal system of these *touloums* have probably not changed during the more than fifty years since their dispersion. Most of the other players make a new bag, pipes and lamellae each time and use only the old stock and bell. Apparently a

purely practical reason is mainly decisive for this: on the Pontus a special wood (*şimşir*-‘boxwood’) that is very hard and thereby brittle like glass (it shatters, for example, when dropped on the floor) was used for the stock. A similar wood is hard to find in Greece, while cane for the pipes is easy to obtain. We discovered only one player who constructs his entire instrument and who uses a local wood for the stock.

The *touloum* is held either under the right or left arm, and the position of hands on the chanter also varies. While playing, the musicians usually sit and support the bag on the thigh, but often they perform while standing or even dancing.

Both Pontic instruments are almost identical in construction with those of the Laz and differ only in some details: in the attachment of the fingerboard on the *lira*, and by a different shaped bell on the *touloum*. On the Pontic bagpipe it is round, tapers vertically downward (as a direct extension of the stock), and widens at the base to a slight bell. The bells of Laz instruments, in contrast, are oblong and are bent towards the front at an angle of approximately thirty degrees.

In the study of the *touloum* and other double-pipe wind instruments, the question arises as to the purpose of doubling. Evidently von Bartha’s assertion is still valid that the reason lies solely in the increase of tonal fullness and the more or less intended achievement of beats.⁴ The following comments can be stated against this initially:

1. On the basis of physical and acoustical grounds doubling does not produce a sound amplification in the sense that the volume is increased by a factor of two. The increase of volume during the simultaneous production of two tones of equal pitch (expressed as sound pressure) amounts to only six decibels,⁵ which probably does not amount to an increase of not more than ten to twenty per cent of the absolute loudness of the *touloum*. Thus, for example, it is hardly possible to determine whether one or both pipes are sounding while listening to a tape recording solely on the basis of comparing loudness. The comparatively small increase in intensity requires a considerable increase in the construction and playing techniques in comparison to a simple wind instrument, which does not appear in an adequate relationship to the resulting sound.

2. All of the *touloum* players interviewed stated repeatedly that both pipes should sound as much alike as possible, that one tries extensively to avoid oscillations. The results of this attitude often emerge in a rather lengthy tuning process prior to and even during a performance. Not a single musician began to play without prior tuning, even when playing on his own instrument that was continually in use. In those cases, during which the musician played on a different *touloum*, the tuning process was pursued with particular care, and sometimes continued for more than a quarter of an hour. Often a player stopped in the middle of a piece if he thought that the tuning was no longer adequate. During the tuning process it was distinctly perceived that the intensity of the beats was reduced. That a certain “impureness” cannot be avoided in the sound of both pipes must be attributed to the rather simple manner of construct-

ing the instrument. Even the intensity of roughness is, ultimately, dependent on the manual dexterity of the individual musician, and therefore differs considerably among the various *touloums*. Besides, one must also take into consideration that due to the construction techniques of the *touloum*, the tuning can only be virtually accomplished through changes made on the lamellae (for example, by changing their position in the pipes, by shifting the thread binding with which the fastened end of the lamellae is secured, etc.), whereby the pipes quite often have to be removed from the bag. Conversely, bagpipes with (almost always multi-jointed) drone pipes offer the possibility of pitch discrepancies by the pushing together or pulling apart of single sections of a pipe, enabling a considerable facility in tuning. Both the physical and acoustical results, as well as the observations of practical music making, show that the amount of construction and performance techniques stand in a gross imbalance to the tonal achievement, in as far as this is restricted to *monophony*, as von Bartha assumes to ascertain. Becker⁶ also subscribes to this version for double-pipe wind instruments, although he arrives at the conclusion that for divergent double-pipes (i.e., the ancient *auloi*) an “. . . irregular, mechanical polyphony . . .” must be assumed for these.⁷ However, considering all aspects it appears to us that the primary aim of doubling is to enable polyphonic playing, which appears to be relatively limited when compared with other instruments. Investigations of *touloum* playing along the Black Sea coast of Turkey have demonstrated that there the instrument is mainly played polyphonically.⁸ To achieve this, the musicians make use of a simple technical manipulation: they close the uppermost, or the two uppermost holes with wax on one of the pipes and thus facilitate the realization of bitonality for themselves. At times, however, probably in addition to this manipulation, use is made of the technique of partial covering, which will be described below; but these are absolute exceptions. Even more ostentatious is the fact that *touloum* players from Pontus are unaware of the technique of plugging the fingerholes, although almost all of them play their instrument polyphonically.⁹ They have fully mastered the extremely difficult technique of partial covering: while the corresponding holes of both pipes are covered simultaneously with the first two phalanges when playing monophonically, certain fingerholes are kept open by means of partial covering. For this technique the musician has two possibilities at his disposal whose tonal results do not differ appreciably. In the first technique only the fingerhole closest to the respective hand is covered, while the opposite one remains open. With the fingering position:

	2	
left hand	3	
	4	
	2	right hand
	3	

The left hand covers only the holes of the left pipe, the right hand, those of the right. The fingers are curved considerably and the covering does not occur with the flat lying phalange common to monophonic playing, but with the finger tip.

The peculiarity of the second technique is that the second phalange of the finger is bent slightly upward to that the fingerholes beneath it remain open, during which time the fingertips cover the holes of the opposite pipe. Both techniques can be described schematically as follows (the left hand is always the upper):

1st technique	2nd technique
● 0	0 ●
● 0	0 ●
● 0	0 ●
0 ●	● 0
0 ●	● 0

The second method of fingering is considerably more difficult than the first, and is, therefore, seldom used. The musicians were unable to state when preference was given to the one method or the other, though it appears that this is dependent upon the finger dexterity of the individual player.

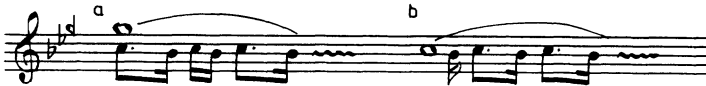
As a result of this particular technique of partial covering, a maximum of fifteen different double sounds as well as six unisons can be produced in contrast to only eight double and four unisons with two closed holes on the *touloum* of the Laz. On the other hand, should only one hole be closed, five unison and five double sounds are possible. The immense technical difficulty inevitably restricts the use of a few of the theoretical possibilities at a time. Besides this, it is obvious that during an entire piece it is not possible to play only polyphonically; moreover, the double sounds broaden and animate monophonic passages, whereby the character of the particular piece and, primarily, the technical dexterity of the performer are decisive for the playing of the polyphony. The advantage of a certain flexibility in the choice of harmonies as against the playing technique of the Laz is combined with the abandonment of a complicated polyphony moving in relatively independent voices. In the study of the transcriptions, two specific differences to Laz polyphony are particularly conspicuous:

1. The musicians from Pontus make possible the use of even smaller intervals (3rds and 2nds) throughout the entire, though limited range of the instrument. This is particularly clear in Example 5, where the lower voice lies only a 3rd below the drone at the very onset and later more repeatedly a 2nd below. In contrast, small intervals can only be played in the uppermost range on the Laz *touloum*; in addition, the distances are generally greater with 5ths and 4ths dominating, occasionally even 6ths appear. On the other hand, 3rds are quite rare, 2nds are the exception, as can be observed in the following comparison. In order to facilitate a comparison, the transcriptions found in Ahrens (1970) contain examples

for each of the three different types: dance-song, parlando-song, and *Spiel*form, which have been correlated with three corresponding Pontic pieces. For a definition of the types, see Ahrens 1970:42ff.

<i>Laz</i>	<i>Pontic</i>
three 6ths	one Tritone
four 5ths	six 4ths
three 4ths	two Major 3rds
two Major 3rds	three Minor 3rds
two Minor 3rds	six 2nds
three 2nds	

The typical initial and closing inflection in pieces of the parlando-song type is, for example, characterized by the interval of a 5th-6th among the *Laz* (Ex. 1a), while in the corresponding Pontic pieces a change between unison and 2nd takes place (Ex. 1b).



In general, it can be stated that larger intervals are used more often by the *Laz*, and a certain separation in various tonal ranges (within the framework of the very limited technical possibilities of the *toulou*) are more strongly pronounced.

2. The greater possibility of bitones allows the musician from Pontus to select certain intervals at particular places in the piece, or only in pieces of a definite type. Only rarely does one perform strict polyphony for long passages, since a strict separation of the upper and lower voice need not be necessarily maintained as occurs with the *Laz toulou*. Moreover, a “principal voice” lying in the middle can be circumscribed by pitches from both above and below (see Ex. 6). As can be recognized by the arrangement of the intervals in the *Laz* and Pontic pieces, the tendency towards amalgamation of the tonal levels is found not only among pieces of a particular type, but should be regarded as being characteristic for musical performance on the Pontic *toulou* altogether (Ex. 2).



To what degree the total range of the *toulou* is conceived as a uniform, inseparable tonal sphere by Pontic musicians is demonstrated

by the fact that numerous tones repeatedly appear as “lower” or “upper” during the course of a piece, thereby assuming the function of an axis around which the melodic movement is centered (Ex. 3).



It appears certain that among the diverse performance practices of the *touloum*, not only particular tonal traditions are revealed but, moreover, characteristics of various musical practices. Among the Laz the trend towards a spatial separation of the melodic levels along with a simultaneous independence of both voices can be perceived. The polyphony is quasi one-dimensional, since an assumed principal voice can only be accompanied by an additional voice moving either above or below it. This infers a more pronounced perception of distance, since the larger intervals, on this occasion, including the 6th, are preferred as extreme values. The reason that the limitation of the given range cannot be compensated by technical changes is undoubtedly because this can only be achieved through abandonment of doubling and with it the characteristic form of polyphony.

On the other hand, the concordances are situated in the midst of the *touloum*'s tonal range in the Pontic pieces, where bitones can fill out the tonal sphere that lies both above and also below the principal voice; the polyphony then appears two-dimensional.

An attempt can be made, but should not be undertaken here, to demonstrate the chronological development of polyphonic playing on the *touloum*. It is more important that we should concern ourselves with two musical concepts, which due to the particular idiosyncracies of the instrument, appear to coincide with certain acoustical results of the musical practice. Common to both, and, acting as a connecting link, is the use of polyphony. Polyphony, as the expression of a more acoustical orientation, has proven itself to dominate both cultures as opposed to the emphasis upon range and melodic direction, which is expressly a monophonic manifestation. The *touloum* music of both the Laz and the Pontic Greeks should, according to von Ficker's definition,¹⁰ be designated as being primarily acoustically structured, even though influences of a melodically oriented musical style can be distinctly recognized among the Laz.

Example 4

$\text{♩} = 448$

A

B

Example 5

Tempo rubato
Verse 1

18"

Example 6



FOOTNOTES

1. Heuser-Sevket, *Türkisch-Deutsches Wörterbuch* (Wiesbaden, 1953), p. 650.
2. Stavros Karakasis, *Griechische Musikinstrumente* (Athens, 1970), p. 121; D. Kutzoyannopoulos, *Die pontische Lyra*. Drama, 1927; "Die pontischen Tänze." *Archion Pontou* 28 (1966-67), 83; Kurt Reinhard, "Musik am schwarzen Meer." *Jahrbuch für musikalische Volks- und Völkerkunde* 2 (Berlin, 1966), 9-58; Christian Ahrens, *Instrumentale Musikstile an der ost-türkischen Schwarzmeerküste*. Eine vergleichende Untersuchung der Spielpraxis von davul-zerna, kemençe und tulum. (Munich, 1970), 3-31.
3. Ahrens, *Op. cit.*, pp. 143-144.
4. Denis von Bartha, *Die avarische Doppelschalmey von Janoshida* (Budapest, 1934), p. 94.
5. Hans-Peter Reinecke, *Stereo-Akustik. Einführung in die Grundlagen stereophonen Musikhörens*. (Köln, 1966), p. 62.
6. Heinz Becker, *Zur Entwicklungsgeschichte der antiken und mittelalterlichen Rohrblattinstrumente*. (Hamburg, 1966), p. 116.
7. *Ibid.*, pp. 119-120.
8. Muzaffer Sarisözen, "Kaval, Tulum, Çifte." *Güzel Sanatlar Dergisi* (Ankara, 1942), 106-110.
9. Two of the twelve musicians played monophonically; one of them did not come from the actual region of Pontus, but the other from the western part, where Pontic culture has been subjected to strong outside influence and has partially become extinct. Therefore, it is obvious to assume that polyphony is not a common characteristic of the music of the Greeks in Asia Minor in general, at least in recent times, but simply characteristic of the music among the residents of the Black Sea coast. Moreover, as a matter of principle, the possibility must be taken into consideration that already in antiquity fingerholes, which were originally bored in wind instruments, were later plugged with certain materials. Consequently it changed substantially their playing technique, especially upon the double-pipe instruments.
10. Rudolf von Flicker, "Primäre Klangformen," *Peters Jahrbuch* (1929), 21-34.

Remarks concerning the transcriptions:

Ex. 4: A+B (= one strophe) are repeated for each performance at least once, often more frequently. (Sign. Ah. 238).

Ex. 5: The note values are merely approximations, and do not represent fixed values. (Sign. Ah. 201).

Ex. 6: The dominating figure of the piece is quoted here with its most important variants. (Sign. Ah. 237).

Examples 4 and 6 were played by the same musicians.

The present study is based upon the results of two field trips to areas of Northern Greece presently inhabited by Pontic Greeks. The trips, undertaken in September-October 1972 and August-September 1973, were supported by grants from the Deutsche Forschungsgemeinschaft and the Free University, Berlin.