Özgün Makale

Western Staff Notation in the Context of Nineteenth-Century Ottoman Music[1]

19. Yüzyıl Osmanlı Müziği Bağlamında Batı Nota Yazısı

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Abstract

In the 19th century, the performative repertoire of Ottoman art music was recorded in numerous sources using different notation techniques. While the semantics of Hampartsum notation has been well studied, there are no corresponding studies on the use of Western staff notation in the Ottoman music context in the period from about 1830 to 1880.

This paper develops an approach to the interpretation of 19th-century Ottoman music manuscripts using Western staff notation on the basis of notational comparisons. The results of the studies already allow for a semantically correct transcription, but above all, they are intended to stimulate further research.

Keywords: Ottoman Music, Western Notation System, Music Manuscripts, Semantic.

Öz

19. yüzyılda Osmanlı sanat müziğinin icra repertuarı, farklı nota yazım teknikleri kullanılarak çok sayıda kaynakta kaydedilmiştir. Hamparsum notasyonunun semantiği iyi çalışılmış olsa da yaklaşık 1830'dan 1880'e kadar olan dönemde Osmanlı müziği bağlamında Batı notasyonunun kullanımı üzerine karşılık gelen bir çalışma yoktur.

Bu makale, nota karşılaştırmaları temelinde Batı nota yazısını kullanan 19. yüzyıl Osmanlı müzik el yazmalarının yorumlanmasına yönelik bir yaklaşım geliştirmektedir. Çalışmaların sonuçları halihazırda anlamsal olarak doğru bir transkripsiyona izin vermektedir, ancak her şeyden önce daha fazla araştırmayı teşvik etmeyi amaçlamaktadır.

Anahtar Kelimeler: Osmanlı Müziği, Batı Nota Sistemi, Müzik El Yazmaları, Semantik.

Preliminary Considerations

Beginning in the early 1820s, initially in Istanbul, the courtly and urban Ottoman music repertoire was recorded in a growing number of manuscripts. Mainly, the notation developed by a group of Armenians, including Hampartsum Limonciyan (1768-1839) shortly before 1812, was used for this purpose a very suitable system for the transcription of the art music repertoire.

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As was the case in later years in Iran and Egypt, Western Staff Notation was introduced in the Ottoman Empire in the context of the reform of armed forces along Western European lines. In all three cases, the conversion of military music from the traditional *mehterhâne* and comparable ensembles to the European military band was a central component of the reform agenda. In the process of instructing the new type of military music, Western staff notation was of not insignificant importance.[2]

In the years after 1830, starting with the reform of military music, Western staff notation gradually advanced alongside Hampartsum notation to become an increasingly used recording medium for traditional Ottoman art music. The study of the surviving music manuscripts in this notation is still in its infancy, and the problem of musicological-critical interpretation and transcription of the notations has, to my knowledge, not yet been addressed. The present study would like to make a contribution to this and, at the same time, set a starting point for future discussion. Central questions are the interpretation of the (ambivalent) semanticity of the signs, the representation of the central parameters in the sign system, and the methodological approaches to transcription into the variant of staff notation used in Turkey today. Connected with this is the question of the notational intention in the use of Western staff notation before ca. 1880, i.e., the time when Hacı Emin (1845 - 1907) took a step toward the development of an analytical variant of notation with the introduction of accidentals for the notational representation of microtonal intervals. Was staff notation before that too imprecise and less suitable for recording Ottoman art music than Hampartsum notation?

The discussion of these questions will be based on Guiseppe Donizetti's (1788 – 1856) table for the transcription of Hampartsum notation into Western staff notation, one of tShe early relevant documents for a comparison of notations.

1. Observations: Giuseppe Donizetti's Transcription Table - On the Musical-Cultural Translation Between Armenian Hampartsum Notation, Western Staff Notation, and Ottoman Pitch System

At the Ottoman court in Istanbul, the Italian military musician Giuseppe Donizetti started in 1828 to establish a Western-style military band as a substitute for the traditional *mehterhâne* ensembles, which had been abolished two years before. In order to have a better basis for the training of the Turkish musicians, he started his work by learning the already spread notation system of Hampartsum Limonciyan.[3] According to Emre Aracı, the transcription table created by Donizetti on this occasion is now in the Topkapı Sarayı Müzesi Arşivi (Figure 1).

Donizetti's approach to the unknown notation system is particularly interesting because it is not just about the translation of the signs of the Hampartsum notation, but ultimately about the development of a system for representing the complex semantics of the signs through the Western notation system.

At first glance, the table is unspectacular. The complexity is only visible when one looks more closely.

2 The basic data can already be found in (Gazimihal, 1955; Tuğlacı, 1986).

3 See, among others, (Alimdar, 2016, p. 34). It states there: "İtalyan besteci Giuseppe Donizetti'nin 1828'de Muzika-i Hümâyun'da göreve getirilmesiyle Avrupa notası resmî olarak saraya girmiş, Donizetti bu notayı öğretmek amacı ile önce Hamparsum yazısını öğrenmiş ve bu yöntemle Avrupa notasını öğretmiştir." In Istanbul, Western staff notation had already been used to compile music collections in the 17th century by Alî Ufukî (d. c. 1675) (cf. Haug, 2019; Behar, 1990). These manuscripts were not accessible to Donizetti, so there are no relations. I would like to express my sincere thanks to Salih Demirtaş (OII) for his helpful support in finalizing this paper.

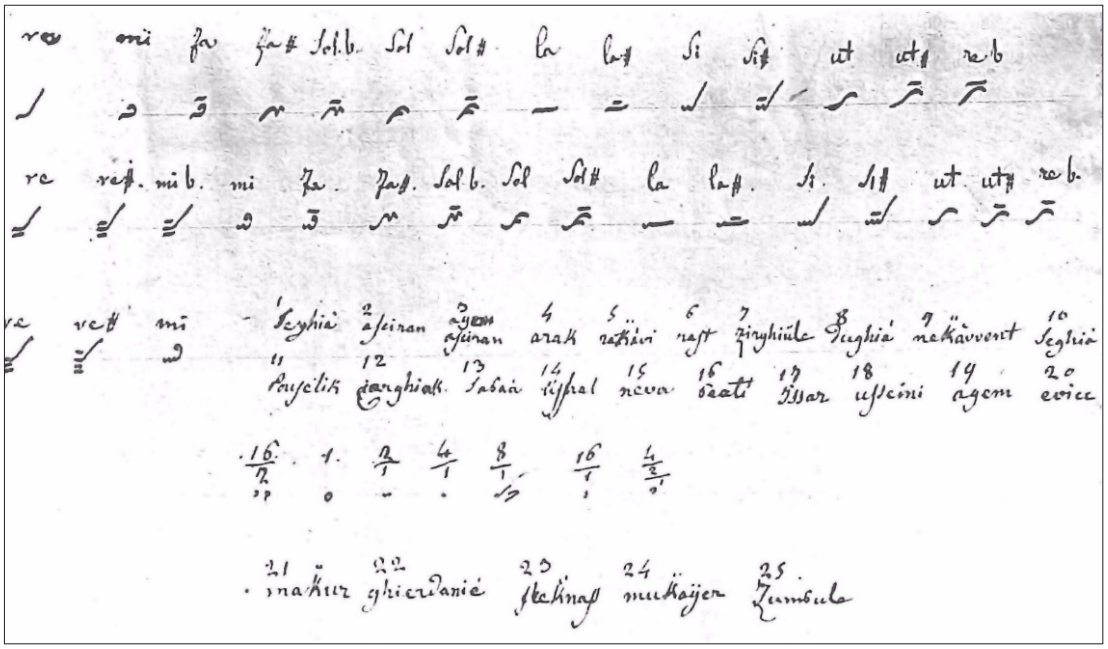


Figure 1: Guiseppe Donizetti's table for the transcription of *hampartsum-notası* into Western staff notation (Aracı, 2006, p. 61) .

The upper section contains an assignment of the Hampartsum notation signs to the Italian solmization syllables. Donizetti must have already realized during the creation of this table that a simple transfer of the signs to the Western system is impossible. At least two details have to be mentioned.

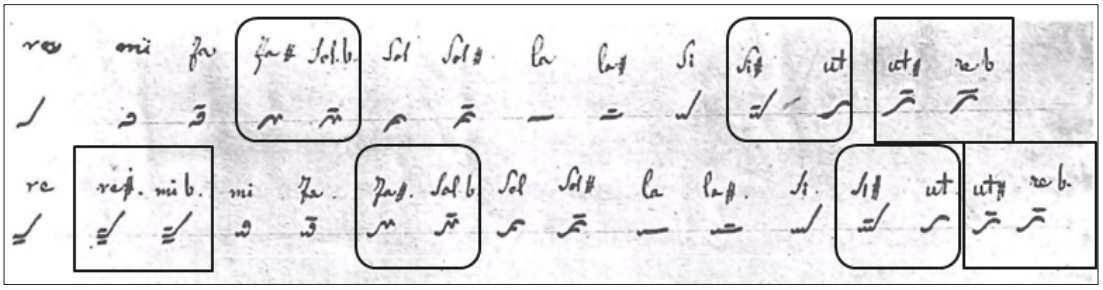


Figure 2: Guiseppe Donizetti's table for the transcription of Hampartsum notation into Western staff notation. Details on the phenomenon of sign ambiguities.

First, it is noticeable that several pitches, which have the same level in the tempered tone system, are represented by two different signs (marked with rounded frames). For example, *fa-sharp and sol-flat* are enharmonic equivalents in the Western system, but not in the non-tempered tonal system of Ottoman art music. The resulting problem is that the pitches associated with the signs cannot simply be translated into the Western system.

Secondly, the ambivalence of some signs of Hampartsum notation is just as problematic: they represent two pitches of the tonal system of Ottoman art music and must be interpreted (marked with square frames). Whether the signs are to be interpreted as *ut-sharp or re-flat*, for example, depends on the musical context. For the "correct" interpretation already in the context of

4 Reproduction from Emre Aracı; original manuscript according to Aracı: Topkapı Sarayı Müzesi Arşivi.

Ottoman art music, the elaborated knowledge of the *makâm* system is an unconditional prerequisite. There are several problematic assignments of this type, which are marked in the graphic (Figure 2).

In addition to the ambiguities shown regarding the assignment of signs, further difficulties arise with regard to the assignment of pitches. Although a semantic relation can be established between the Hampartsum notation signs and the *solmization* syllables, the signs of Western notation cannot represent the pitch system of Ottoman art music. The signs represent signs but not the musical contexts of meaning associated with them. In order to solve this substantial problem, Donizetti, presumably in a second step, has added the names of the Ottoman pitches as a reference system, which is represented in a simplified way by the Armenian notation system (Figure 3).

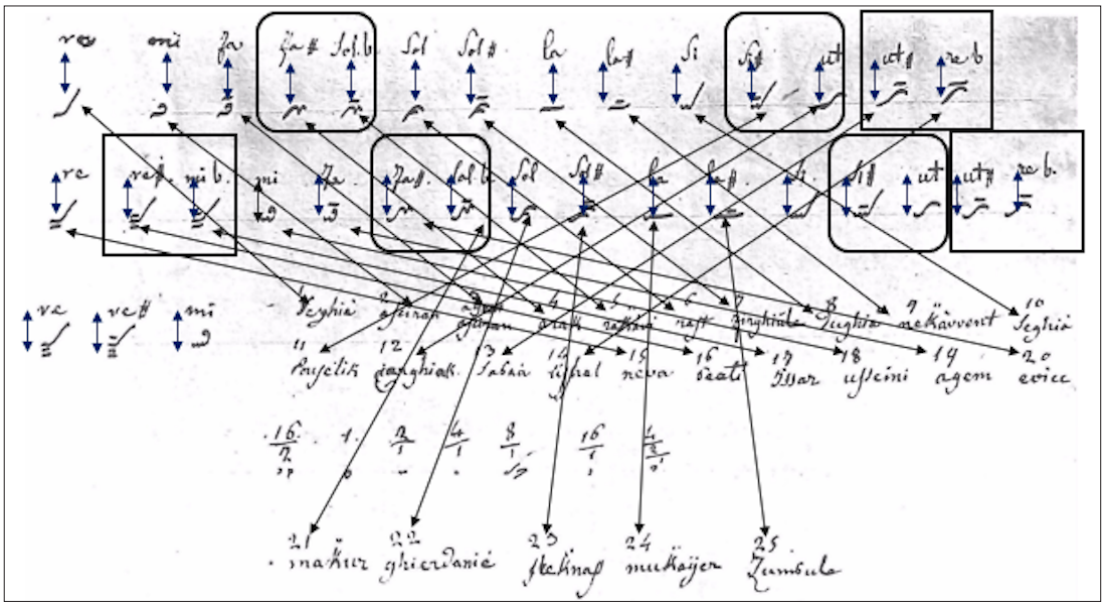


Figure 3: Guiseppe Donizetti's table for the transcription of Hampartsum notation into Western staff notation. Details on the assignment of the pitch names used in Ottoman art music.

The 25 Ottoman pitch names, numbered by Donizetti, represent precisely the 25 signs used in Hampartsum notation in order to represent these pitches (Figure 3). The inclusion of the Ottoman pitches in their original terminology as a reference system creates a semantic trichotomy: both the translation into Hampartsum notation and Western staff notation are depicted. The *makâm* system is not represented.[5]

2. Conclusions: Approaches to Deciphering the Semantics of the Western Staff Notation in the Ottoman Context

For the still largely pending deciphering of the semantics of Western staff notation in the Ottoman context, at least for the period before ca.1880, the table offers a promising starting point, provided that Donizetti's approach can be considered representative of the use of staff notation in the context of Ottoman art music. It is also evident in the table that Hampartsum notation and

5 It is remarkable that Giuseppe Donizetti does not make the obvious attempt to solve the problem of representation by introducing additional accidentals for semitone intervals, for example. A proposal for this, which would also have been accessible to Donizetti in principle, was presented by Giambattista Toderini in 1787 (Toderini, 1787; Jäger, 2011, pp. 473-488).

staff notation - represented by the Italian solmization syllables - stand for two different notational paradigms:

1. The pitch notation of Hampartsum refers descriptively to pitch names within the theoretical system of Ottoman art music; the semantics of the individual signs may vary depending on the musical context. The signs do not indicate absolute pitches and, due to their partial ambiguity, require constant interpretation in the respective music-performative context.

2. Staff notation, on the other hand, was explicitly based from the early 18th century onwards on the "premise that a note or a tone letter designates a certain or only slightly variable pitch - measurable as frequency" ["Prämisse, daß eine Note oder ein Tonbuchstabe eine bestimmte oder nur in geringem Maße variable – als Frequenz meßbare – Tonhöhe bezeichne"] (Dahlhaus, 1989, p. 60). The Western pitch system is "absolute"; the notation refers analytically to this fact.

In the transcription chart, staff notation is processually transformed from the "analytically"-absolute paradigm, which it originally represents, into the descriptive-relational of Hampartsum notation. At the end of the process, it is used in a descriptive way and advances - at least in the transcription chart - to the equivalent of Hampartsum's musical notation and must also be read this way - and not analytically: The solmization syllable "sol" describes the pitch "râst" but does not denote a tone with the pitch "sol" (Figure 4).

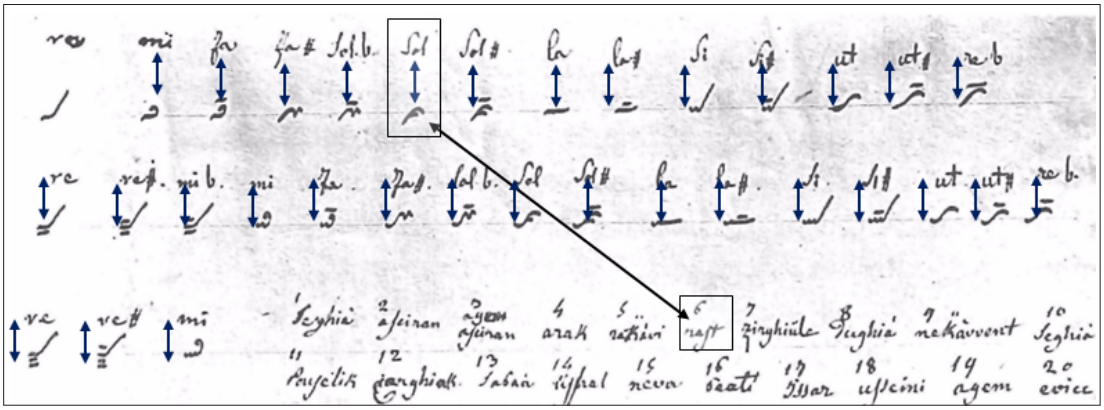


Figure 4: Guiseppe Donizetti's table for the transcription of Hampartsum notation into Western staff notation. Detail on the processual transformation from the "analytic"-absolute paradigm to the descriptive-relational paradigm.

From the late 19th century, Ottoman music theorists began to use staff notation analytically in the Ottoman context as well, which brought about a successive loss of the former ambiguity. Hacı Emin's (1845 - 1907) 1884 publication *Nota Muallimi* ("The Music Teacher") begins to implement this change by introducing an additional sign to allow the representation of microtonal pitches (Figure 5).[6]

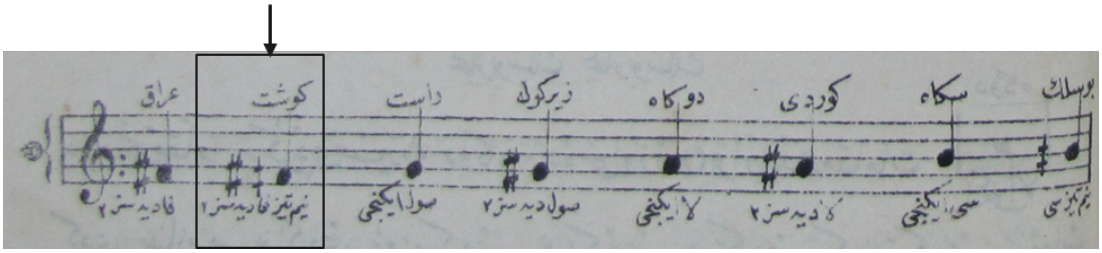


Figure 5: Analytical use of staff notation using the example of a note sign with an additional accidental to represent the pitch "geveşt"(Hacı Emin, 1884, p. 54).

6 Cf. The summarizing but meaningful article by (Ayangil, 2008, pp. 401-447; here: pp. 416-418).

Even though Hacı Emin continues to use the traditional pitch names and assigns them - like Donizetti - to the pitch signs of Western notation, he initiates a process with far-reaching consequences: the two musical systems are now conceptually integrated and represented by the same notation method, which must now be able to systemically differentiate the analytical qualities of the pitches of both the Western and Turkish systems.[7] The term "râst" is no longer described by the solmization syllable "sol" in Hacı Emin's concept, but now represents the absolute tone, which is designated by "sol" in the Western solmization system.[8]

In a statement of principle, Ruhi Ayangil had stated the following with regard to the transposing nature of the Turkish pitch system:

> As a result of this transference by Emin Efendi (and of Donizetti), *ümmülmakaamat* (the major *makam*/ gamme naturelle), that is the *Rast makam* scale, was transposed one pentachord up, in a way fitting the *bolahenk nısfîye* accord system of *ney* (the flute) and was written from 'sol' /g note (the fifth sound in the 'do' scale of the western notation) on the second line of the staff.[9]

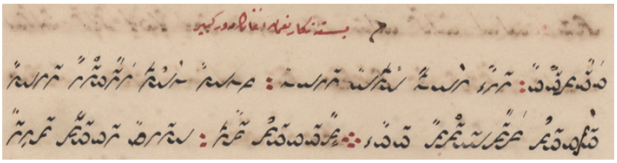
On the basis of the present research results, one could additionally argue that the "transposition" of the Turkish pitch system codified by Hacı Emin, which has never been followed through by Arab music theory, could, above all be a result of the paradigmatic transition from the formerly descriptive-relational procedure to an analytical-absolute one.

3. Observations: Emic Transcriptions of *Bestenigâr Peşrev, Usûl: Devr-i kebîr,* Nu'mân Ağa (d. after 1830) in Two Forms of Notation

For the purpose of this paper, however, the thesis that staff notation has adopted the descriptive-relational paradigm of Hampartsum notation in the Ottoman context and must be interpreted with the same methodological approach is of primary importance. One of the consequences of this would be that for every historical notation that does not yet use the system of Hacı Emin or his successors, the semantics of each notation sign must be determined individually since it is ambivalent and can have different meanings depending on the musical context. Here is an example (Figure 6):

Variant 1:
hampartsum notation

Beste-nigār [Peşrevi]
Nuʿmān Ağa'nıñ [Usûl]
devr-i kebīr
TR-lüne 214-12, p. 52



Variant 2:
staff notation

Bestenigār Peşrevi
Nuʿmān Āğānıñ [Usûl
Devr-i kebîr]

D-Müu Ms.or.2, p. 74

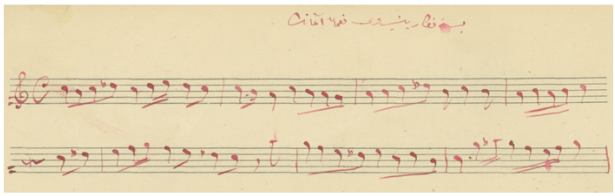


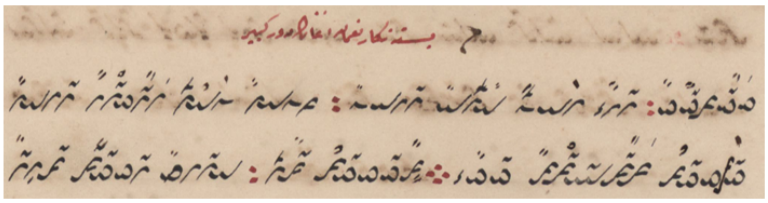
Figure 6: Details from facsimiles of two Emic Transcriptions of *Bestenigâr Peşrev, Usûl: Devr-i kebîr,* Nu'mân Ağa (d. after 1830).

7 It can be assumed that Hacı Emin took up the general tendencies of his time when reforming the notation. Other musicians and music scholars of the time were also concerned with working out the representation of precise microtonal pitches, including Alî Rif' at Çağatay (1867-1935), who, however, did not use the additional accidentals in the staffs he produced. The writings of Rauf Yekta Bey (1871-1935) were to become authoritative in this context, e.g., (Yekta, 1922, pp. 2945-3074). A more in-depth study has been prepared by (Sarı and Güner, 2019, pp. 32-55; here: pp. 41-52).
8 See (Merih, 2003, pp. 103-140; here: p. 107).
9 (Ayangil,2008, p. 417).

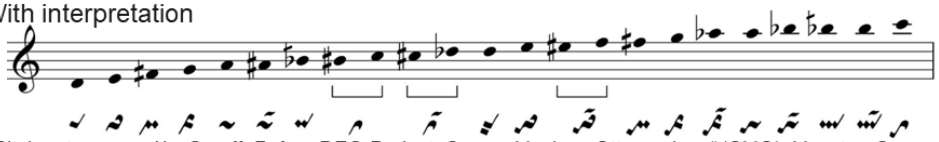
The manuscripts examined in the DFG project "Corpus Musicae Ottomanicae" (CMO) contain various variants of emic transcriptions of the *Bestenigâr Peşrev, Usûl: Devr-i kebîr* of Nu'mân Ağa (d. after 1830). Among them are the two example notations.[10] In order to determine how the pitch signs of Hampartsum notation are to be interpreted, the pitch set used in the notation must first be identified (Figure 7).

Variant 1:
hampartsum notation

Beste-nigār [Peşrevi]
Nuʿmān Aġa'nıñ [Usûl]
devr-i kebīr
TR-Iüne 214-12, p. 52



Pitch Set: Bestenigâr Peşrev, Usûl: Devr-i kebîr, Nu'mân Ağa, Variant 1,
With interpretation



Pitch set prepared by **Semih Pelen**, DFG-Project „Corpus Musicae Ottomanicae" (CMO), Münster, Germany
Online-Edition: https://corpus-musicae-ottomanicae.de/receive/cmo_mods_00000740

Figure 7: Pitch set of TR-Iüne 214-12, p. 52.

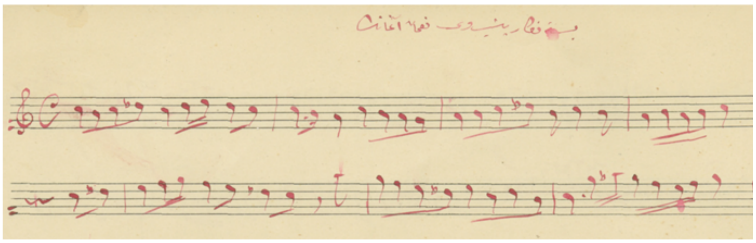
In the bottom line, Semih Pelen, who prepared the pitch set (Pelen, 2021), displays the original characters of Hampartsum notation. In the upper line, the interpretation of the signs is represented, whereby the pitch-specific specifications of the *makam bestenigâr* were considered. The fact that two signs have different meanings due to their context is clearly visible.

Also, for the example in staff notation, I prepared a pitch set that accurately reproduces the signs used in the manuscript and does not yet interpret them (Figure 8).

Variant 2:
staff notation

Bestenigār Peşrevi
Nuʿmān Āġānıñ [Usûl
Devr-i kebîr]

D-Müu Ms.or.2, p. 74



Pitch Set: Bestenigâr Peşrev, Usûl: Devr-i kebîr, Nu'mân Ağa, Variant 2,
Without interpretation

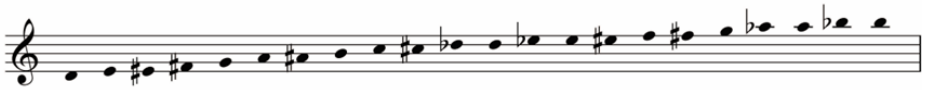


Figure 8: Pitch set of D-Müu Ms.or.2, p. 74.

10 Cf. Corpus Musicae Ottomanicae (CMO) Editions (Retrieved March 15, 2023, from https://www.uni-muenster.de/CMO-Edition/); Corpus Musicae Ottomanicae (CMO) (Retrieved 15 March, 2023, from https://corpus-musicae-ottomanicae.de/content/index.xml).

Two aspects have to be emphasized:

1. Even in this manuscript, written relatively late in the 19th century, no key signature is given in the notation. In a sense, the accidentals belong to each individual note sign. I interpret this as indicating that the note signs refer descriptively to the corresponding pitch designations.

2. Only one raising and one lowering accidental is used. Microtonal correlations cannot be represented.

The comparison of the two pitch sets reveals that they represent the same notational paradigm (Figure 9).

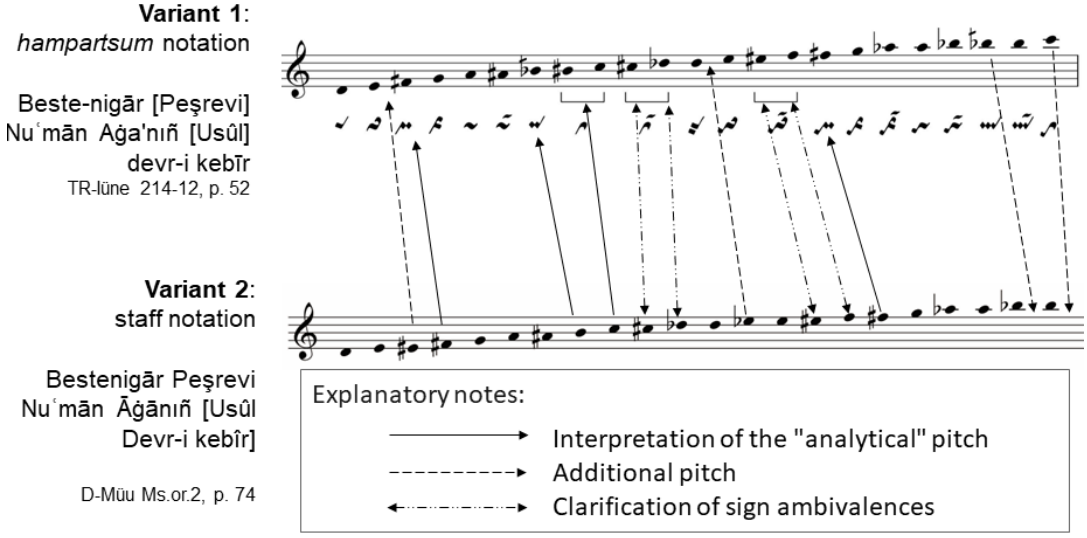


Figure 9: Comparison of the Pitch Sets.

The two pitch sets are analytically interpretable, but both are of descriptive-relational nature. It should be noted that both examples, the one with Hampartsum notation and the one with staff notation, are individually a bit more detailed in some places: They may each contain some additional pitches (dotted arrows), but staff notation in this example has a smaller number of ambiguously used signs (interrupted arrows). However, both forms of notation have in common that the signs have to be interpreted before they can be translated into a modern analytical form of notation (straight arrows) and thus lose their ambiguity to a good extent.

It is quite meaningful for the notation-technical demands made by musicians of Ottoman art music culture on a notation system that staff notation, as it is used here, has basically the same advantages and disadvantages as the music notation of Hampartsum. It only becomes deficient or even inadequate when one makes the mistake of assigning it to the "analytically" absolute paradigm. Only then the additional signs, which are needed to represent microtonal correlations, are missing. Staff notation in Turkey has been further developed in this direction and has achieved a high degree of accuracy. As a result, the direct relation to the emic performative practice has been lost to a certain extent.

4. Conclusions: Western Staff Notation in the Ottoman Context – A Question of Ambiguity?

My considerations so far have been primarily directed at the interpretation of the pitch signs. For research, the systematic "translation" of the pitch parameters following a universally applicable model is a priority desideratum, and I hope to have made a contribution to this.

Nevertheless, the pitch problem is only one of the notational parameters that require cultural translation. Of at least equal importance is the notational adaptation of the rhythmic beat cycles of *usûl*, most of which have complex and extensive structures that cannot be easily represented if one wishes to preserve the parameters inherent in the culture. Here, likewise, translations are to be expected in the historical context. Some basic observations can be summarized (Figure 10).

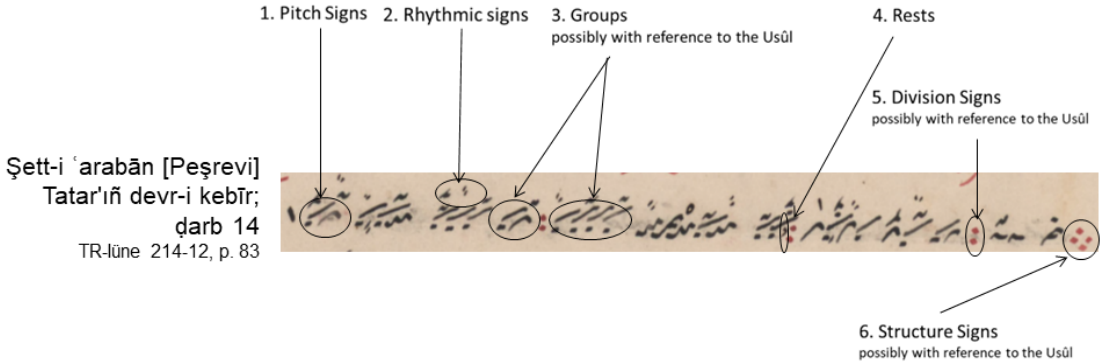


Figure 10: Notational parameters of Hampartsum notation.

In addition to pitch signs, rhythmic signs, and rest signs, Hampartsum notation also features ordering sign groups, division signs, and structure signs. While in a short *usûl,* the division sign also marks the end of a *usûl* sequence, this function is taken over by a structure sign in longer rhythmic structures - as here in the 14-beat *Devr-i kebîr.* In this case, the division sign marks the position after the fourth group. *Devr-i kebîr* comprises a total of 14 groups of signs, so the last division before the end of the *usûl* consists of only two groups.

In principle, this concept must also be assumed for the transcription of manuscripts into staff notation from the 19th century (Figure 11).

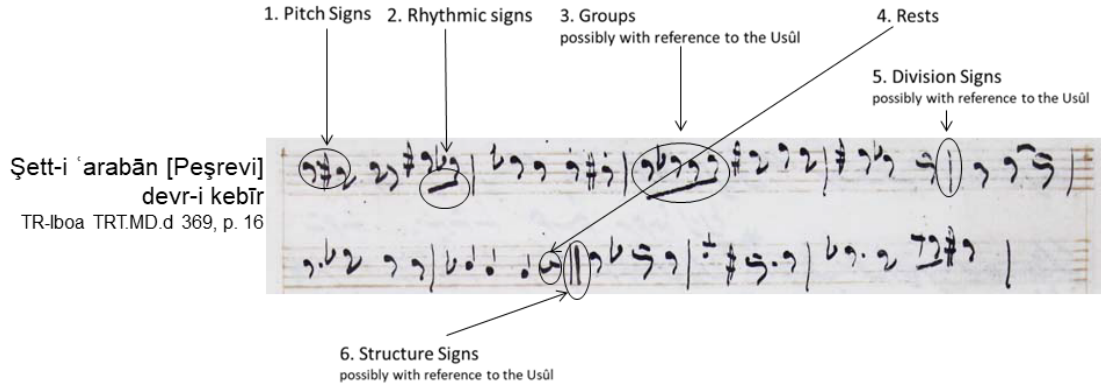


Figure 11: Notational parameters of staff notation in the Ottoman context.

The functions of the pitch signs, rhythmic signs, and rests are unproblematic and do not require further explanation. The bar lines, on the other hand, must be reinterpreted, because there is the possibility that in the Ottoman context, they take on the function of division signs in longer *usûl*s such as *devr-i kebîr*. They each comprise two groups of notation in Hampartsum notation. Whether the beaming of eighth notes leads to notation-relevant groups still needs to be investigated. It is clear, however, that the double bar in the notation example assumes the function of a structure sign and marks the end of the *usûl* sequence.

In this example, as in the notation in Hampartsum notation, the bar signature is missing. Other notations, however, also in this manuscript, indicate time signatures (Figure 12).

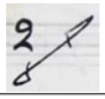
Usûl	Time signature	Title / Makâm	Composer	Manuscript, page
Aksak semâî	5/8 	Ferahnâk Saz semâîsi	[Zekî Mehmed Ağa]	TR-Iboa TRT.MD.d 005, p. 5
Sengîn semâî	3/4 	Ferahnâk Saz semâîsi	[Zekî Mehmed Ağa]	TR-Iboa TRT.MD.d 005, p. 5
Düyek	2/4 	Bülbül Peşrevi / [Rast]		TR-Iboa TRT.MD.d 005, p. 20
Düyek	2/4 	Arazbâr bûselik Peşrev / „Kız peşrevi“		TR-Iboa TRT.MD.d 369, p. 13

Figure 12: Examples of the use of staff notation time signatures in the 19th-century Ottoman context, 1. Usage in shorter *usûls*.

In *usûl*s such as *aksak semâî* (five-eighths time) and *sengîn semâî* (three-fourths time), the time signature is always given, and in *düyek* (two-fourths time), it is sometimes given in fractions (Figure 13).

Usûl	Time signature	Title / Makâm	Composer	Manuscript, page
[Zencîr]	??? 	Ferahnâk Peşrev	[Zekî Mehmed Ağa]	TR-Iboa TRT.MD.d 005, p. 4
Muhammes	??? 	Bûselik Peşrev / Feṭḥ-i Baġdād		TR-Iboa TRT.MD.d 369, p. 127
[Hafîf]	??? 	Zâvil Peşrevi	Zekî Mehmed Ağa	TR-Iboa TRT.MD.d 005, p. 26
[Darb-ı fetih]	??? 	Bayâtî [Peşrev]	[Tanbûrî İsak]	TR-Iboa TRT.MD.d 369, p. 117 [99]
Darb-ı fetih	88/2 	Bayâtî Peşrev	Tanbûrî İsak	TMKlii, no. 041/1

Figure 13: Examples of the use of staff notation time signatures in the 19th-century Ottoman context, 2. a Usage in longer *usûl*s.

With longer usûls, on the other hand, always the same time signature is indicated, independent of the number of beats. The meaning of this sign is not obvious at first. Comparisons show that a time signature in use today, such as eighty-eight-halfs for the *usûl darb-ı fetih* as first encountered in the historical printed edition of the *Dārü'l-elḥān küllīyātı*, can certainly not be meant (Figure 13).

Usûl	Time signature	Title / Makâm	Composer	Manuscript, page
Sakîl	??? 	Şevkefzâ Peşrev	Tanbûrî Nu'mân Ağa	TR-Iboa TRT.MD.d 005, p. 12
Devr-i kebîr	C =4/4 	Sabâ Peşrev	[Büyük Osmân Bey]	D-MÜu, Slg. Jäger, Kap. 1, Ms.or.1, p. 44
[Muhammes]	4/4 	Uşşâk Peşrev	Büyük Osmân Bey	D-MÜu, Slg. Jäger, Kap. 1, Ms.or.2, p. 18

Figure 14: Examples of the use of staff notation time signatures in the 19th-century Ottoman context, 2.b Usage in longer *usûl*s.

Further research shows that the initially unclear time signature must be a stylized "C" which, as a remnant of mensural notation, expresses the proportion sign "tempus imperfectum cum prolatione minore" and designates a four-four-time signature. The sign used in numerous manuscripts and by various scribes, which usually consists of two horizontal strokes, one above the other, is the largely standardized Ottoman variant of this time signature (Figure 14).

It should be mentioned only briefly that in the later 19th century, the sign is often replaced by the fraction "four-fourths."

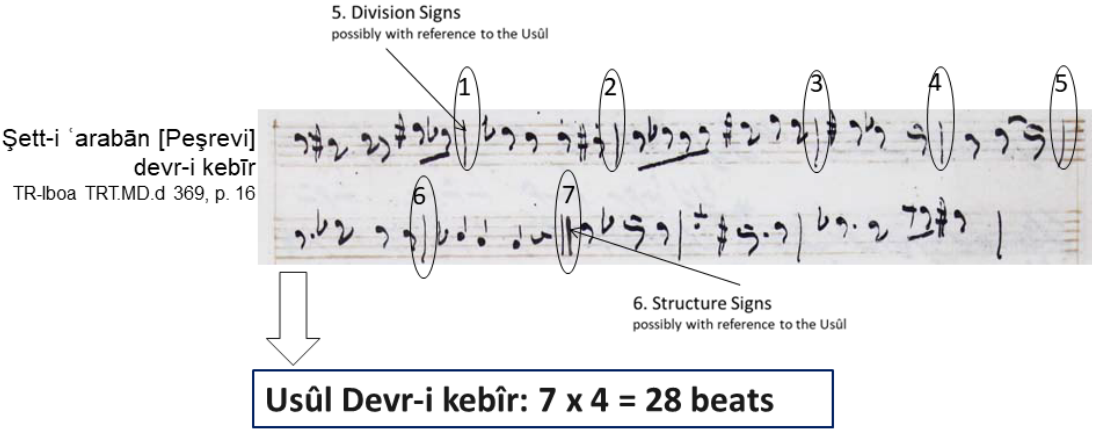


Figure 15: The function of barlines and double barlines in early Ottoman notations in staff notation illustrated by the example of *Şedd-i arabân Peşrev, Usûl: Devr-i kebîr,* [Tatar (often identified with Gâzî Giray Hân, d. 1607)].

The result of this short excursus on the time signatures is again paradigmatic for the adaptation of staff notation to the Ottoman notational traditions: Like the pitch notations, the time signatures are context-bound. An *usûl* adds up to the number of four-four structures needed to reach the total number of beats - here: seven times four equals twenty-eight. It is particularly noteworthy that there is no hierarchization - as in the Western understanding of a four-four time signature. The bar lines, as expected, take over the function of the division signs from the Hampartsum notation in longer *usûl*s, and the double bars are the function of the structure signs (Figure 15).

Western Staff notation in the Ottoman Context is unambiguously a question of ambiguity. This applies equally to the recording of melodic and rhythmic structures. The critical edition of the manuscripts must take these facts into account in order to avoid "false friends".

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