Principles of Transmission and Collective Composition in Turkmen Dutar Performance

David Fossum

> *You know what the most amazing thing about Turkmen music is? Turkmen music has first of all been passed down from generation to generation without any writing—only by ear. . . . And the amazing thing is, it was passed down without any distortion. It wasn't passed incorrectly—it was passed down for real. You know how the* nusga *was passed down? You see this carpet? There are white knots and there are red knots. You can't put a red knot in a white knot's place, or a white knot in a red knot's place. The* nusga *for our music remained in the same way. Like a carpet pattern. It was maintained. You understand? That's the most amazing thing. And that continues even now. And if we don't enrich it, it doesn't develop. And the essential thing is that the* nusga *is maintained. That's my opinion. . . .*
>
> *The "Balsaýat" I just played for you is not the same as the one I played for you before. Our masters, whether singing or playing an instrumental piece, they all did it that way. They played according to the type of heart they had and their mood. In doing this, they developed the music.*
>
> *—Akmyrat Çaryýew, personal interview, 7 August 2009*

AKMYRAT Çaryýew, one of the foremost dutar virtuosos of Turkmenistan, uttered the words above to me virtually unprompted. Trying to begin my interview with him in an open-ended way, I simply asked him what the most important thing to know about Turkmen music was, and I let my recorder roll. Thus his words are a telling indicator that the nature of the relationship between the individual and the collective, the imperative to preserve traditional musical compositions while also developing them over time in performance and transmission, stands at the forefront of Turkmen musicians' minds.

The Turkmen dutar is a two-stringed, long-necked lute optimized for elaborate, virtuosic performance. Its two strings are normally tuned a fourth apart, and the primary melody is played on the higher-pitched of the two strings. The dutar player then wraps the thumb of the playing hand around the instrument's narrow neck to stop the lower-pitched string as well, creating a shifting parallel melody. Alternatively, they may let this lower string ring open and use it as a drone for some pieces or passages. The dutar is most commonly used to accompany traditional bards called *bagşy*. In Turkmenistan's south-central Ahal region, dutar players have also developed a repertoire of pieces that are usually played as solo instrumentals. These have historically been orally transmitted, though some have been transcribed in modified Western notation in recent decades, for use as a written aid in instruction. This traditional repertoire is formally complex and, as we shall see, through-composed with some space for variation and change.

As Çaryýew's words suggest, the virtuosos who play it negotiate contrasting demands: to preserve some perceived essential core of each piece while adding original contributions in an ongoing, collective composition process. Çaryýew uses a local term, *nusga*, to refer to a concept that seems akin to what many scholars call a musical model: that which must be preserved even in the context of variability. But Turkmen performers not only preserve the *nusga*, they also develop it to fit their individual personalities—"according to the type of heart they have," as Çaryýew puts it—and also through extemporaneous decisions, according to their mood. In the process they create individual variants of traditional pieces, valorized in ways I have described elsewhere (Fossum 2015). As I show in this article, they do so in ways that resemble creative processes analyzed by scholars of composition, improvisation, and memory in other traditions. The case of the Turkmen dutar promises to yield fresh insights to such research, particularly since the instrumental dutar tradition constrains performers with relatively detailed models that must be preserved while also demanding that they advance the process of collective composition.

Turkmen Concepts of the Musical Model

Nusga is not the only word Turkmen musicians use to indicate something analogous to the concept of musical model. I have occasionally heard the Russian cognates *forma* or *skema* employed in a similar way. The term I most commonly encountered was *hasap*. *Hasap* means "account" or "reckoning" in its broadest sense; you ask for a *hasap* when you wish to pay your bill at a restaurant or want to know the score in a game.[1] In musical contexts it also has multiple meanings. Musicians I spoke with sometimes referred to one master's *hasap* for a piece, while at other times they referred to a general *hasap* for a piece. When I asked if I could change a certain passage my teacher had taught me, he frequently told me "it has to fit into the *hasap*."[2]

In some cases words like *hasap*, *nusga*, *forma*, or *skema* seemed to refer to a skeletal melody that different performers ornament in their own way. It is possible to draw up comparative transcriptions of long passages as performed by several different dutar players, or by the same dutar player on different occasions, and find only differences in melodic ornamentation, rhythmic treatment, or the lower string melody. Figure 1 is one such example, taken from a comparative transcription I made of three performances of a piece called "Balsaýat."[3] In the first bar, for example, there appears to be a basic skeletal melody that moves from *e'* to *d'* to *c♯'*, but each dutar player ornaments this melody differently and applies a unique set of strums and strokes, and Çaryýew (see the line marked "A") even varies the accompanying line on the lower string where the others allow it to drone.

1. See "хасап" in Frank and Touch-Werner (1999).
2. "Hasabyna gelmeli," literally, "it has to come into the *hasap*."
3. Turkmen musicians do not use an absolute pitch for tuning during their performances. Rather, they will start a performance with slack strings, tuning them up every few pieces as their hands warm up (this also has the effect of increasing the intensity of the performance as the string tension and pitch rise). By local convention, the higher-pitched of the two strings is transcribed as *a* (when open), and the lower-pitched string as *e*.

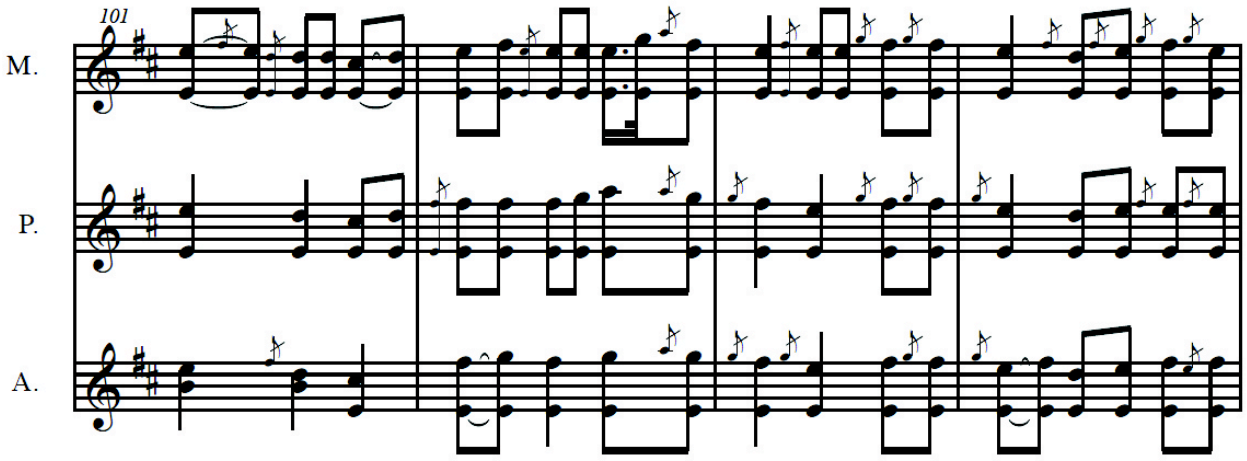


Figure 1. Comparative transcription of three versions of an excerpt from the traditional Turkmen piece "Balsaýat." The first staff is from a recording of Mylly Taçmyradow, the second is from Pürli Saryýew, and the third is from Akmyrat Çaryýew.

One way to think of *hasap* is as a through-composed melody that musicians elaborate differently. This is of course how performance works in many traditions both oral and literate. While I grasped the relative fixity of the transmitted compositions, my experiences learning Turkmen music and talking about it with my teachers led me to suspect that the concept of *hasap* involved more than simply elaborating on a memorized melody by varying ornamentation or dynamic interpretation.

Most musicians could not articulate the details of a concept of *hasap* to me explicitly when I asked them; they implicitly understood the parameters of each piece. Asked to explain *hasap,* they either shrugged their shoulders or resorted to metaphor, like Çaryýew's carpet pattern. But one musician, pressed to explain the principles of *hasap* to me, played several recordings of the traditional piece "Burny aşak," a lengthy, virtuosic, and revered collective masterpiece of the Ahal region's masters. As we listened, he raised fingers to indicate formal divisions in the piece's structure—part I, part II, etc. Another musician offered me a second explanation, emphasizing sequence and formal integrity: "As long as you don't move a section ahead of another, or behind another, or leave one out altogether, it's ok. You aren't changing the form [*forma*]" (A.O., interview, 28 June 2009). In general, Turkmen musicians tended to focus on formal structure as an important element of their music. One of the musicians I worked with even liked to borrow Russian cognates for sonata form terminology and use them to describe the formal progression of traditional pieces. But during my most recent period of research in Turkmenistan in 2009, the theorization of such formal structures seemed to be in its early stages.

However vague the *hasap* concept might appear to be, it involves an imagined entity that constrains the individual performer, primarily in terms of the sequential integrity of the

melodic ideas understood to make up the piece. An additional factor that distinguishes acceptable variations from corruptions is institutional and external to formal features: master performers' variations are validated by virtue of their training within master-disciple lineages. Once a musician has proven themselves to their master, they will receive a *pata*, a blessing from their master, and they will then proceed to develop the memorized repertoire under the auspices of this blessing.

Turkmen Music, Memory, and Improvisation

The following analysis, which seeks to illustrate exactly how Turkmen dutar players negotiate the contrasting demands to preserve and develop traditional pieces, relates to a complexly interconnected set of research areas: studies that focus on the importance of formulas and patterns to the process of reconstructing memorized material (Lord [1960] 2000; Treitler 1974) and studies that show how musicians draw on formulas, internalized schemas, and compositional principles to generate new musical material in the course of improvisation or composition (Gjerdingen 2007; Nooshin 1998, 2015; Widdess 2011; Nooshin and Widdess 2006; Zadeh 2012). Much of this research has been produced under the heading of improvisation studies (Nettl 1974; Nettl and Russell 1998; Solis and Nettl 2009), but this approach has led to a number of problems. As the introduction to one recent volume put it, "the drawback of a disciplinary ghettoization of the study of improvisation to those musical situations where it is marked as the central activity is that it has limited our understanding of musical improvisation in general" (Solis and Nettl 2009, 7). That is, focusing on cases where spontaneous generativity in performance is foregrounded can blind us to the commonalities such practices may have with the generative principles operating in practices less marked as "spontaneous."

To address this issue, some scholars have problematized the common composition/improvisation dichotomy, often preferring terms such as "composition in performance" to avoid too strictly distinguishing the creative work of a musician generating musical material more or less spontaneously during a concert from the potentially more deliberate work of composing in a written medium (Nettl 1974; Nooshin 2003). Nettl (1974) proposed thinking in terms of a series of spectrums: from more spontaneous (Schubert's quick spinning of lieder) to more deliberate composition (Beethoven); from musical models with a high density of points of reference that must be observed (jazz) to those with a relatively low density (Arabic *taqsim*); and from more audible kinds of musical models (a show tune in jazz) to less audible ones (a silent movie to which a live pianist provides a more or less extemporaneous score in the theater).

Nettl's spectrum proposal points toward a key problem: that musical performance always involves operating within some kind of pre-established guidelines on the one hand and some degree of interpretive choice on the other. "Spectrum" is a suggestive metaphor for imagining variation between traditions, but it is not a precise tool for comparative analysis.

Scholars—even after problematizing terms like "improvisation" and "composition" in the introductions of their articles—have often continued using such fuzzy concepts in the bodies of their analyses for lack of a better comparative rubric.

In some cases, ethnomusicologists encounter local terminologies and performance practices and deliberate over the appropriateness of glossing them as improvisation (e.g., Sutton 1998). Nooshin (2003, 2015) has offered a political critique on this point, showing how an orientalizing discourse has historically tended to categorize Western art music as "compositional" and jazz and non-Western genres as "improvisational" (cf. Blum 2009). In a more recent comment, Nettl (2009, xi) has expressed second thoughts about the term "improvisation" and wonders whether it has come to encompass too vast a range of phenomena. Marc Perlman (2016) has argued that the term's current conceptual murkiness arises in part from its historical spread into ever more diverse domains from its initial usage as a concrete noun within Western art music, to refer to "a performance (usually on a keyboard instrument) that resembles a piece of composed music, set in familiar compositional forms and idioms, such as could stand on its own as an item in a recital program." From this more restricted usage, it was extended to become an abstract noun that could refer to a broad range of practices involving spontaneity in performance. Complicating the matter, musicians themselves may object to the term because it implies a lack of planning and consideration (Bailey 1993, xii). Some scholars have aimed to debunk the (potentially orientalist) myth that "improvisation" in these traditions is "unplanned" or "unprepared," in contrast to "composition" in Eurogenetic art music.[4] Conversely, participants in a number of traditions around the world have sometimes taken up local cognates for Eurogenetic terms like "improvisation" and "composition" and applied them to aspects of their own music. This raises the issue of the frames within which actors evaluate musicians' creative practices and differentiate genres. Given the imprecision of the term "improvisation," when culture bearers or musicologists use the term—or deny its applicability—the most helpful question may not be whether the term is appropriate or not, but rather what motivates the desire to use it (or deny it) at all.

Turkmen music presents a case study that promises to complicate this discussion in useful ways. Research in this area has disproportionately focused on less dense examples of models (to use Nettl's [1974] terms), where musicians generate melodic sequences relatively spontaneously, in specially designated sections that both scholars and culture bearers have labeled "improvisation" (e.g., Persian *avaz*, Hindustani *alap*, Arabic *taqsim*, bebop solos). By contrast, the musical models at work among Turkmen dutar performers are relatively dense: not as restrictive as performing a Beethoven sonata from a score, but denser than, say, *taqsim*.

4. Eurogenetic is a term coined by Robert Reigle in 2004. It "[refers] to music with one or all components originating in Europe, as a more precise and more neutral alternative to terms such as 'Western,' 'Eurocentric,' 'non-Eastern,' or 'pan-European'" (Reigle 2014, 234).

To view this another way, scholars researching in this area have often distinguished between two sorts of tools that composers and performers draw on in the process of generating music: memorized chunks on the one hand and more abstract musical processes or strategies on the other. The terms that scholars use vary. The chunks are referred to as "formulas" (Lord 2000), "building blocks" (Nettl 1974, cf. Berliner 1994, 101), "musical objects" (as opposed to "musical processes"; Berkowitz 2010, 40), or, using linguistic terminology, "vocabulary," "lexicon," and so on. The relatively more abstract generative strategies are referred to as "compositional principles" (Nooshin 2003), "compositional strategies" (Nooshin and Widdess 2006), and "dynamic, generative 'programs'" (Slawek 1998, 363). By linguistic analogy these may be labeled (generative) "grammars" (a la Chomsky), and so on. Chloe Zadeh, in an analysis of *thumri*, has usefully proposed considering the two sides of this contrast as ends of a spectrum of types of recurring musical patterns, ranging from "stock expressions" on one end to "abstract strategies" on the other. This approach highlights how some types of generative schemas combine elements of each, such as a variable melodic contour or a modifiable or transposable "gesture" (Zadeh 2012, 21; cf. Gjerdingen 2007). Analytical studies of generative performance, while revealing this range of types of tools and schemas that musicians draw on, have most often focused on examples in which performers are free to generate new sequences of melodic ideas by drawing on and combining conventional, memorized building blocks (as in *alap*, *avaz*, or bebop solos, e.g., Nettl and Riddle 1973).

Turkmen music, by emphasizing adherence to a pre-established sequence of (somewhat variable) memorized chunks, presents a different kind of example. The Iranian musicians Nooshin (1998) describes absorb compositional principles in the process of learning a pre-composed repertoire, and then apply these principles to generate new ideas during performances that draw only in part on the learned repertoire (see also Tala'i 2000, 1–3). Turkmen musicians appear to internalize and utilize similar strategies. In the absence of designated genres for generating new melodic sequences extemporaneously, they reapply these strategies in performances of the learned repertoire itself. Thus one of the contributions of this paper is to illustrate how generative strategies work not only in the formation of new musical material marked as such, but also in the case of a tradition that emphasizes reconstruction-in-performance of relatively fixed, (historically) orally transmitted traditional compositions.

My contribution to this comparative strain of research goes beyond locating Turkmen music as a point on a spectrum, as I seek to isolate the exact parameters by which the musical models in this music constrain performance and where and how they afford specific kinds of variation, expansion, or insertion of new ideas. In particular, Turkmen music is rhythmically pulsed and metrically structured to an extent, but features no percussion instruments, and musical models allow for some departures from regular metrical patterns or set phrase lengths. On the other hand, as we shall see, there is a strong emphasis on maintaining the order of melodic events and the formal structure that constitute a given piece.

Do dutar players improvise? Here, I take a different tack than previous scholars, and in doing so model a different approach to this question. I seek to illustrate as precisely as possible the space for individual interpretation within the constraints provided by the orally received model. I leave the question of labeling and assessing how performers exploit such affordances to a separate but related ethnographic discussion of evaluative discourses surrounding the tradition. I argue that we can view the labeling of a particular localized practice as "improvisation" as opposed to "composition" as part of a discourse by which actors (positively or negatively) valorize creativity in performance.

As the term "improvisation" travels to new contexts around the globe, for example, it becomes stretched as scholars or tradition bearers apply it to musical practices where it had not been applied before. In doing so, they make an ideological assertion that a particular creative practice bears a similarity to others that have been labeled "improvisation." Because no two generative practices are exactly alike, this assertion may involve erasing both differences between divergent practices that have been labeled "improvisatory" and similarities between practices labeled "improvisatory" and those that are not. I argue that labeling a practice as "improvisation," "composition," "development," or any other term that identifies it as a particular kind of creative activity is a choice. By drawing attention to this fact, I aim to raise the question: what motivates actors' choices to use such a term in a given instance?

The type of analysis I provide here lays an initial groundwork for further ethnographic research to document such ideological processes at play in Turkmenistan. I primarily focus on identifying how (re)composition in performance generates variations and new material. My analysis clarifies where the space for variability lies within Turkmen musical models. I also show examples of how individual musicians have exploited this space. But their variations are only potential signifiers for evaluators of their performances to interpret, and it is a separate question how such evaluators might characterize these variations or what might motivate their assessments. Nonetheless, I draw on a few points of ethnographic data along the way to make some initial observations in this latter arena.

A Case Study: "Gyrmyzy"

This study of *hasap* and variability in Turkmen music is corpus-based, and I will refer to examples from a number of pieces that I have analyzed, learned to play, and/or discussed with Turkmen musicians during the 28 months I spent in the country. However, I have not found generalized or regularly appearing formal structures, even if there appear to be some recurring *formal strategies* that Ahal musicians have used in varying combinations in order to construct traditional pieces. In order to provide a concrete example of one traditional model, I have analyzed five recordings of the traditional Turkmen piece "Gyrmyzy"—one by Mylly Taçmyradow (1885–1960; henceforth Mylly aga), one by Pürli Saryýew (1905–1970; henceforth

Pürli aga), and three by Çary Täçmämmedow (1920–1976, henceforth Çary aga).[5] These are perhaps the three most celebrated dutar players of the twentieth century. Çary aga was a student of both Mylly aga and Pürli aga, though his playing style particularly reflects the influence of Pürli aga. The recordings all date from roughly the same period: the 1950s to early 1970s.[6]

I learned to play "Gyrmyzy" in a series of lessons I took with a young musician named Ýazmyrat Rejepow, who was hard at work transcribing as many classic recordings as he could and developing ways to analyze them. Rejepow was more interested in reconstructing what the classic masters had played than in developing his own variations on traditional pieces. He had transcribed the Mylly aga and the Pürli aga recordings of "Gyrmyzy" (though the latter was still in a rough draft stage at the time of our lessons), and we looked at both of them in detail as I learned from them. I focused on learning Mylly aga's version exactly—down to the smallest ornament that Rejepow could transcribe—but I also compared Mylly aga's version to Pürli aga's and later the three recordings by Çary aga that I was able to find. Appendix 1 provides a listening guide indicating when each section I describe in my analysis begins and ends on each recording. It also provides information for finding the recordings. The following analysis thus draws on my experience of learning to play the piece, Rejepow's transcriptions, and my own transcriptions of the Çary aga versions.

Figure 2 provides a rough analysis of the overall formal outline of the piece.[7] The piece features a recurring series of melodic ideas that I label the A section. The overall tonic of the piece is the system-wide tonic in this tradition: the higher pitched of the two strings strummed open, transcribed as *a*. But the A section ends with a temporary resolution on the fifth scale degree (*e'*), and the melody then resolves to the tonic (*a*) in various ways. I have labeled these resolutions to the tonic cadences 1, 2, and 3. There is also a short B section and a long final denouement: I have labeled this the C section for convenience since I will not be discussing it here, although it is possible to break this section analytically into smaller parts as well. Figure 2 could describe any of the performances, although there are some exceptions in Çary

5. *Aga* is a traditional honorific meaning "older brother," but often used for respected musicians.

6. Unfortunately, I have limited metadata about the recordings, which circulate informally as unpublished casettes or mp3 files among musicians. The third example from Çary aga appears to come from a homemade recording on which we can hear him telling a friend what pieces he is going to play, occasionally commenting on them. Given the limited metadata, it is difficult to draw conclusions about how recording context may have informed variational choices, although this homemade recording is the longest, most extensively elaborated of the bunch, suggesting that a performer may elaborate more extensively in a casual setting than in a formal setting such as an official broadcast.

7. It is impossible to know how closely the performers' conceptions of the form of "Gyrmyzy" might resemble my outline. The one element of this formal analysis that reflects a formal division that any local musician articulated to me is where I have marked "part I" and "part II." Rejepow identified this formal division when I was learning to play the piece, and this division made sense to me. No other musician offered me any kind of formal analysis of "Gyrmyzy"; thus aside from the demarcation of parts I and II, this figure reflects my own analysis.

aga's performance.[8]

We cannot be sure that the performers in these recordings conceived of the recurring ideas I call the A section as the same entity reappearing five times. The sequence of ideas does not recur in exactly the same form each time it appears. In my analysis, I have broken the A section down into a number of constituent phrases or subsections that are not all performed in every permutation of the A section. While there are identifiable patterns to the sequence of the A section's constituent melodic ideas across performances, there is also some variability. Did the performers conceive of these as five iterations of a melodic sequence that they then modified according to a governing schema, altering each iteration according to the situation? Or did they think of these as five separate entities that bear some similarities? Alternatively, what I am calling A1 and A2 might operate as a unit, since they are not separated by a cadential resolution to the tonic. A4 and A5 are linked in the same way. Did the performers then think of three basic entities that recur: A1/A2, A3, and A4/A5?

We can only speculate as to how these musicians conceived of the piece (and they might have differed from each other). In the course of learning the piece myself, I found that I was experiencing the A section as a recurring entity, as a habitual motor pattern. This created problems for me when I played for Rejepow, because he wanted me to play *exactly* what Mylly aga had played. Thus if Mylly aga had played an ornament in a particular place in A2 but not in the same place in A3, and I played it in A2 and then also in A3 (out of habit), Rejepow would correct me, saying "not this time." This is why I describe five appearances of the A section.

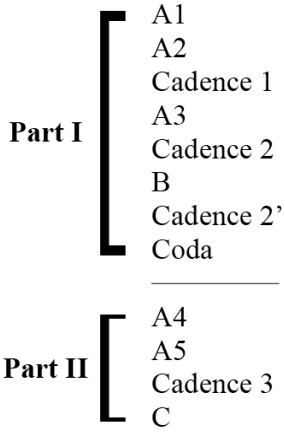


Figure 2. "Gyrmyzy" formal outline.

8. In the first Çary aga recording, he skips cadence 1 and section A3. In his second recording, he plays a short introductory and concluding passage that I have never heard elsewhere. Çary aga uses introductions and conclusions to incorporate new ideas, though in the case of one piece we discussed, Çaryýew attributed the introduction to Çary aga's father, Täçmammet Suhangulyýew, a master whose recordings do not seem to have survived. The added intro and outro in "Gyrmyzy" seem derived from a combination of subsection 4a and other ideas, from what I have labeled as cadences between the A sections.

Figure 3 shows my reduction of each of the melodic ideas, what I refer to as subsections, that make up the recurring A section sequence. The performers string the subsections together with some flexibility while maintaining a general sequence. They are not mixed and matched at random. Figure 4 maps the appearance of each subsection in the five recordings. Keep in mind that sequence is important; the subsections actually occur in the order that they appear on the chart in Figure 4, as read from left to right. Audio Example 1 is Mylly aga's rendition of the third A section, a fairly straightforward example of the entire sequence of ideas. Partial transcriptions (sections A1, A2, and A3) of Mylly aga's recording, Pürli aga's recording, and Çary aga's first recording are included as appendixes. These transcriptions are annotated to show where I identify the various subsections. The transcription of Audio Example 1 can be found on the second page of Appendix 3.

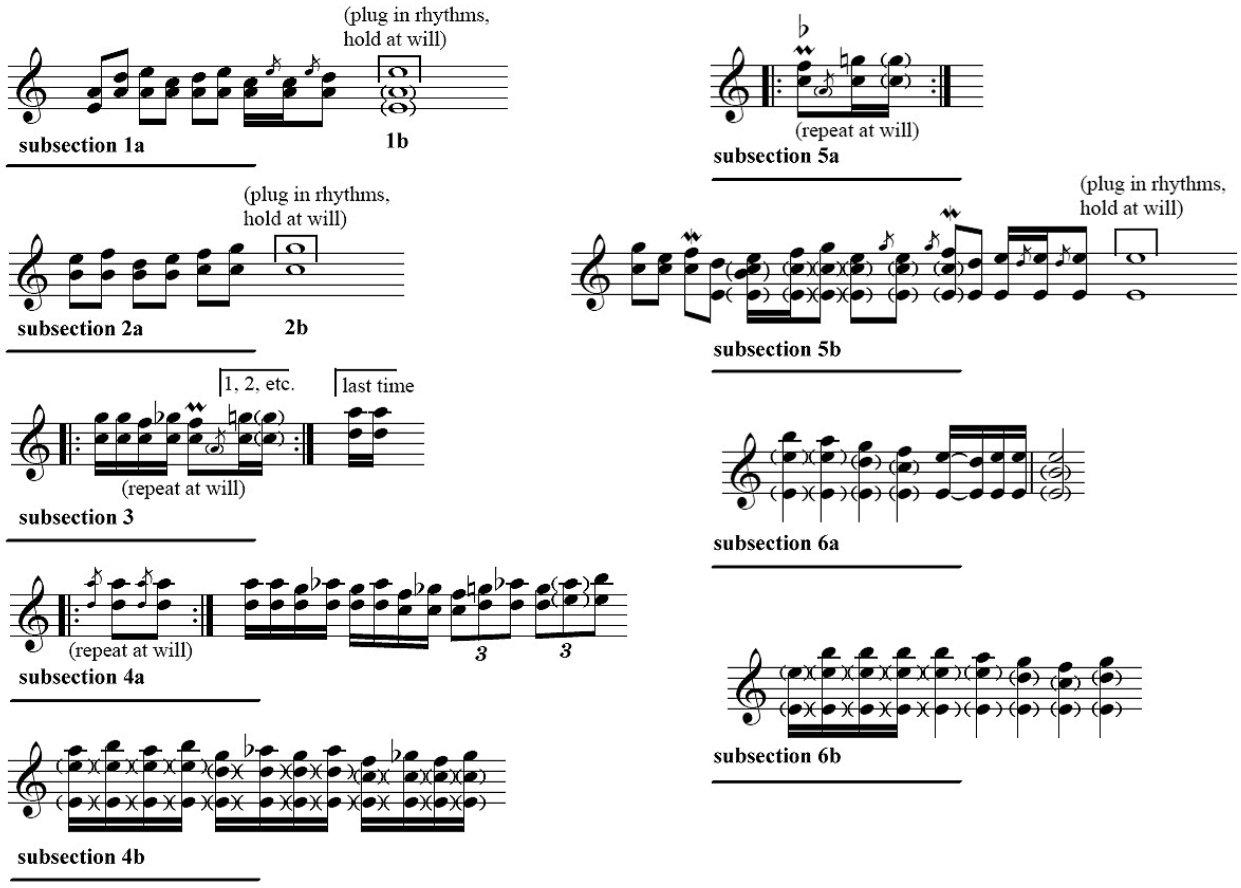


Figure 3. Reductions of the "Gyrmyzy" A section subsections. Parentheses indicate where the musicians sometimes stop the lower string with their thumbs to create parallel motion, but have the option to leave the lower string open (*e*).[9]

9. In general, they tend to stop the lower string, creating parallel motion, during A1 to A3, and more often leave it open—particularly in subsections 4 and 6—in A4 and A5. In A4 and A5 they also introduce the syncopated

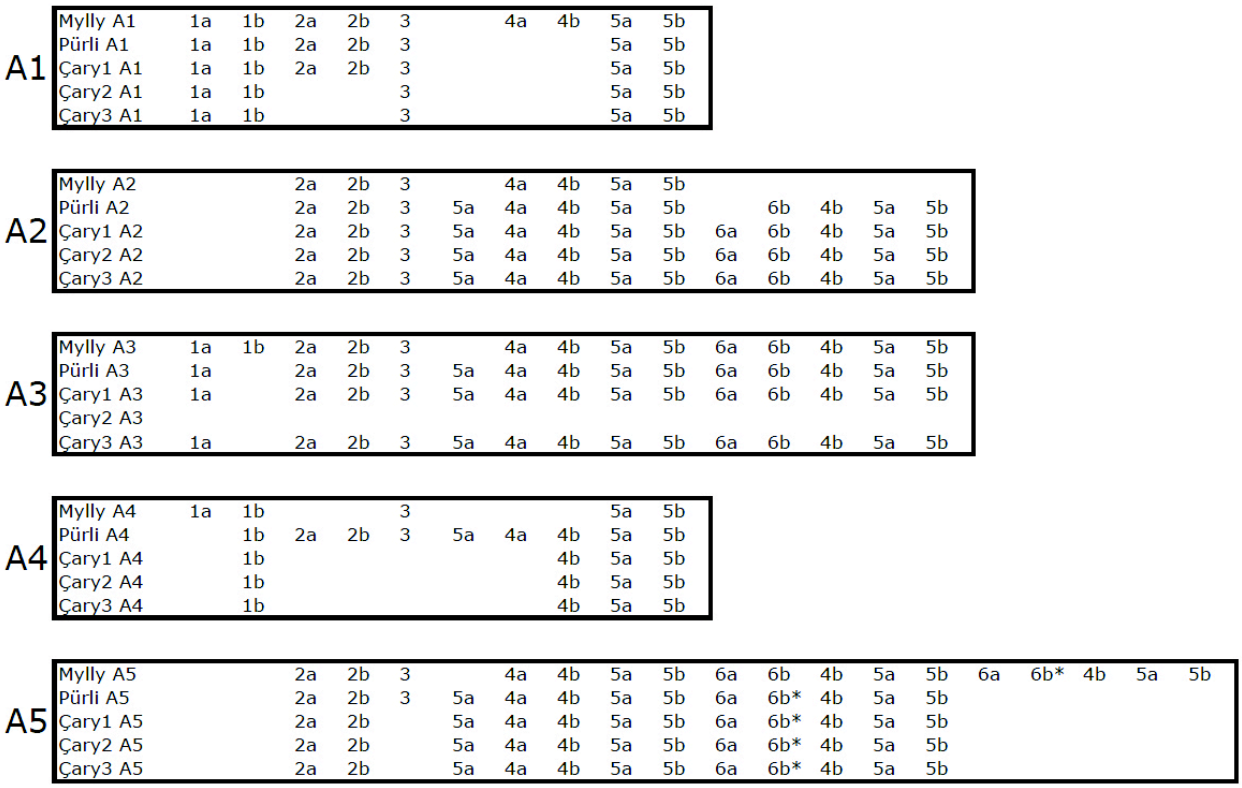


Figure 4. Chart mapping the appearances of each subsection in each of the five iterations of the A section in each of the five recordings. The subsections appear in order as shown on the chart, from left to right. Subsection 6b in A5 (marked with asterisks) is a special, extended variation on 6b that prolongs the climax of the piece.

Below, I will draw on the chart in Figure 4 to make some observations about the *hasap* concept and variability in this tradition. Before embarking on this analysis, I wish to point out a few features of the subsections shown in Figure 3. Note that subsection 1a ascends from the tonic of the piece (*a*) to the temporary tonal center of the A section (*e'*). Subsection 5 resolves the sequence to this temporary center of *e'* (as we shall see, this subsection thus always appears at the end of the sequence). Subsections 4 and 6 are peak moments that reach the highest ranges of the dutar. Finally, notice how subsection 5a and the second half of subsection 3 are quite similar (the importance of which will become clear shortly).

The Subjectiveness of *Hasap*

In his study of oral transmission in plainchant, Leo Treitler (1974) draws on psychological research to clarify the process of memorization and recall during performance.

rhythmic figure *agsak* ( , where the symbol ⊓ indicates a downward strum, and ∨ indicates an upward strum), though the performers differ in the extent to which they use it.

Summarizing the theories of Frederic C. Bartlett, he states that "we strive to assimilate newly presented material into the setting of patterns and schemata left from the encounter with past experience" and that our records of the past are constantly reorganized according to new material we encounter. Recalls are "based, not on some fixed model outside ourselves, but on our own assimilated version of the matter recalled" (1974, 344–45). Subsequent music scholarship has continued to draw on the psychological concept of schemas in discussions of how performers and composers undertake variation or improvisation in reference to archetypes (Snyder 2000, 101). However, recent research on improvisation usually fails to address one key point that Treitler was making: that such schemas are subjective, and subject to revision with every recall.[10] Turkmen musicians' performances of memorized compositions illustrate this point well, in that each musician's *hasap* appears to be slightly different, and potentially constantly changing.

For example, there is a telling degree of variance among the performers' choices of subsections to play within each A section. I highlight one instance in Figure 5. As the gray highlights show, in A1 through A3 and A5, Mylly aga plays subsection 4 directly after 3. The

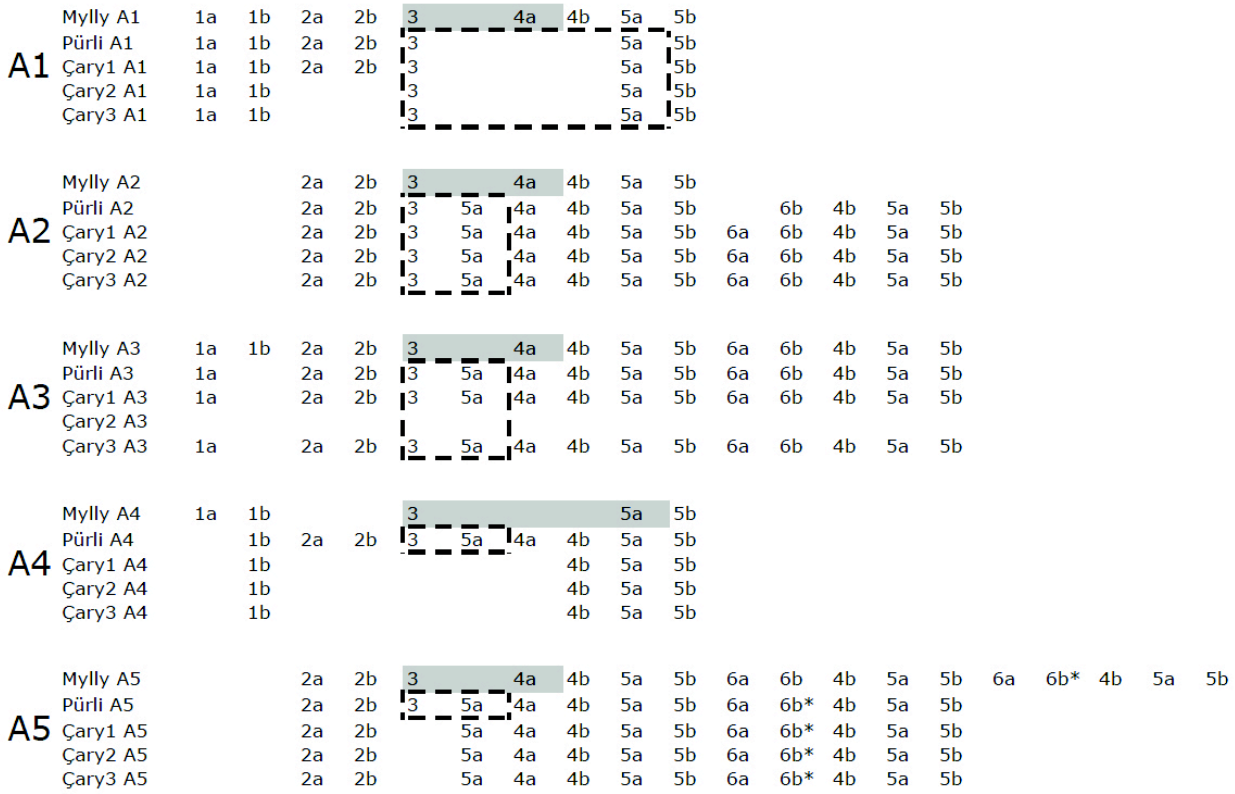


Figure 5. Outline showing an apparent difference in Mylly aga's conception of the A section *hasap* vis-à-vis Pürli aga and Çary aga.

10. One exception is Napier (2006, 5).

exception is in A4, when Mylly aga skips subsection 4, moving straight from subsection 3 to subsection 5a. By contrast, Pürli aga and Çary aga (dashed boxes) play 5a after 3 habitually, not only when they skip subsection 4 (which they both do in A1). Figures 6 and 7 provide one example each of Mylly aga's and Pürli aga's performances of this part of the A section.

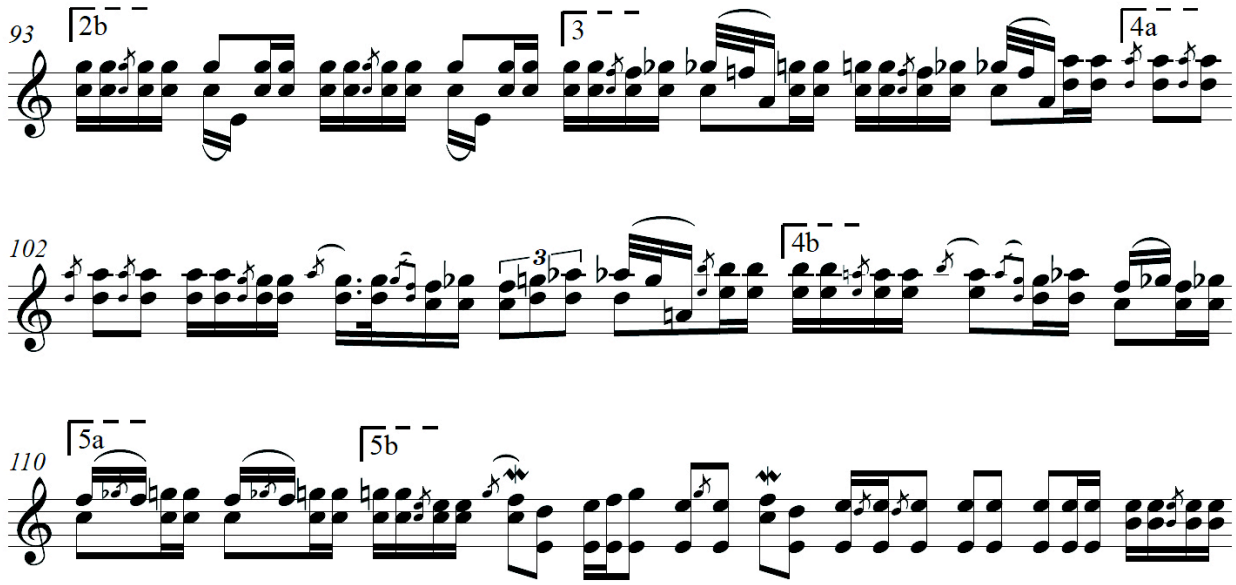


Figure 6. Excerpt from Appendix 3. Mylly aga plays subsections 3, 4, and 5.

Audio Example 2.

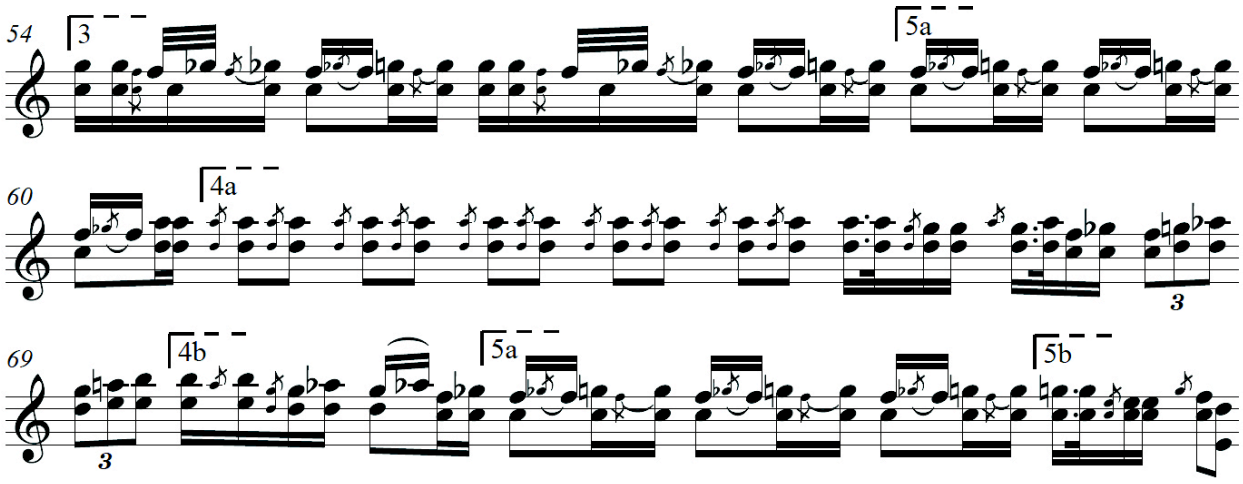


Figure 7. Excerpt from Appendix 4. Pürli aga plays Subsections 3, 5a, 4, and 5.

Audio Example 3.

What accounts for this discrepancy? We can only speculate. Recall that subsection 5a and the second half of subsection 3 are quite similar. It could be that Mylly aga's 3-4-5 progression represents an older version of the sequence (in fact, my numbering scheme suggests as much, a problematic analytical assumption I couldn't find a way to avoid).[11] Perhaps there was some point in time when Pürli aga began skipping subsection 4 in A1. With 5a now directly following 3 in this initial iteration of the sequence, 5a began to sound more like an acceleration of subsection 3, one that always fit there, and he began to play it habitually in that position, even when moving on to subsection 4. Çary aga, whose versions of pieces tend to emulate Pürli aga's, would have picked this habit up from him. Of course, there are other possibilities. The reverse could have happened. Perhaps Pürli aga's version represents an older way, and Mylly aga dropped the 5a-like acceleration that had long been a feature of the end of subsection 3. Either way, there appears at some point to have been a shift in the sequence such that the performers approach this differently.

This discrepancy suggests that, even if the performers thought of sections A1 through A5 as a recurring entity modifiable according to the situation, this schema itself appears to be negotiable or dynamic even apart from such situational modifications, since culture bearers deem all of these versions legitimate renderings of the "Gyrmyzy" model. Regardless of how we account for the shift, the consistency of the sequence among performances by the same musician demonstrates the subjective nature of *hasap*. Mylly aga apparently conceives of the full A section sequence as follows:

1 2 3 4 5 6 4b 5

Pürli aga and Çary aga seem to conceive of it this way:

1 2 3 5a 4 5 6 4b 5

At levels of even more minute microvariational detail, we find countless examples of the memorized *hasap*'s subjective nature among dutar performers, not only in terms of melodic contour, but also in terms of duration, intensity, timbre, and so on. Different performers have varying conceptions of the musical model.

Constraint Shifts: Defining the Space for Variation and Development

Despite the subjective nature of *hasap*, there are also constraints on acceptable variation, as should be expected given the imperative to preserve musical models as remembered from one's sources in the chain of transmission. But the parameters within which performers exercise interpretive choice shifts over the course of a piece. Particular moments within a

11. That Mylly aga is twenty years older than Pürli aga might support this speculation. But they were also contemporaries, and Mylly aga's own version of "Gyrmyzy" could have evolved over time as well, so we can't assume.

given piece will include particular structural features that constrain or afford particular kinds of variation.

In some musics formal distinctions might cue "composition in performance," such as the end of a "head" signaling a space for improvisation in bebop. More precisely, a saxophone player playing the melody of a standard tune has some space for a kind of elaboration I have been calling microvariation here. The end of the head signals the lifting of additional constraints on the soloist (fixed melody) while maintaining others (chord changes, meter, use of idiomatically appropriate "vocabulary," etc.); extemporaneous generation of melody within this particular set of constraints is usually labeled "improvisation" in jazz while the microvariational elaboration of the head usually is not.

As I have mentioned, Turkmen music does not contain such marked, separate spaces for generating new melodic material at length; rather, variation or development occur within the memorized composition itself. Furthermore, the parameters of constraint on this variation are constantly shifting in the course of the composition. One structural feature in Turkmen music—something I refer to as the static/dynamic dichotomy (Fossum 2010)—produces a number of such constraint shifts within a piece. Some moments in Turkmen compositions feature dynamic melodic movement, while others hover on a single melody note.[12] Comparative analyses of multiple performances of the dynamic passages reveals how these moments tend to last for fixed durations. That is, a melodic contour that plays out over, say, four measures of transcribed music in one performance will tend also to last four measures in all performances. In Figure 1, we saw one such example. This melodically dynamic passage within "Balsayat" seems constrained in terms of duration, such that all three dutar players' renderings can be lined up, beat for beat, and variation is restricted to the level of ornamentation, dynamics, and the like.

But static moments that feature a held note or chord are not constrained in this way. That is, if the *hasap* entails holding a note for a few beats, one performer may hold this note for two measures and another may hold it for four or five. The "Gyrmyzy" A section sequence features a back and forth between dynamic and static moments as the melody ascends or descends to a particular pitch (subsection 1a ascends to *e'*, for example) and then hangs on this pitch momentarily (subsection 1b).

Figures 8 and 9 show renderings of subsection 4a. Subsection 4a begins with a brief static moment as the player uses a strumming technique called *gyruw* on the note *a'* before beginning a short downward descent. Mylly aga plays the *gyruw* four times (beginning at subsection 4a), but Pürli aga sometimes repeats it ten times.

12. These moments may, however, feature movement on the accompanying lower-pitched string even as the main melody note holds steady.

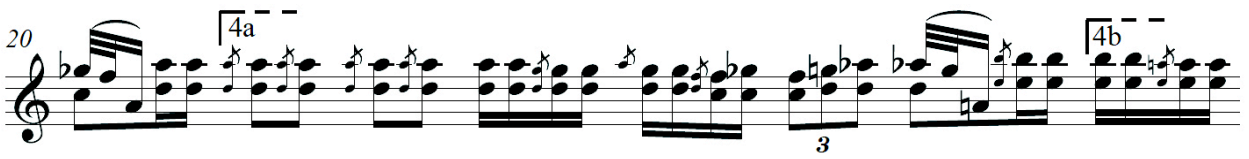


Figure 8. Excerpt from Appendix 3. Mylly aga's rendition of subsection 4a.

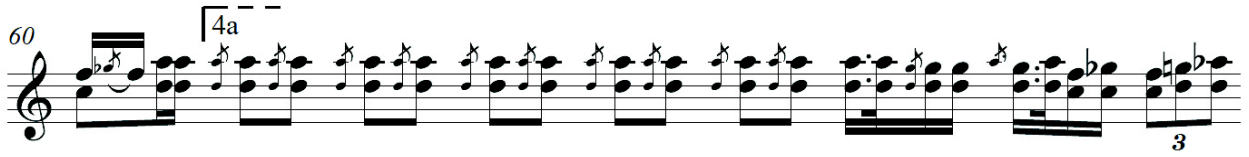


Figure 9. Excerpt from Appendix 4. Pürli aga's rendition of subsection 4a.

This example shows how static moments afford a particular kind of variability: durational expansion. The interplay of static and dynamic moments in Turkmen music represents one example of how constraints shift intermittently throughout a given piece.

Formulaic Strumming in Static Passages

The lifting of the durational constraint within static passages affords the one type of formulaic playing that I have encountered in Turkmen music: a stringing together of conventional building blocks that Zadeh (2012), in her analysis of *thumri*, might locate on the "stock expressions" end of her spectrum types of recurring musical patterns as opposed to the "abstract strategies" end. In my example from subsection 4a of "Gyrmyzy," Pürli aga exploits durational freedom on the held *a'/d'* chord to vary the number of times he strikes it; Mylly aga always strikes this chord four times. The strumming device *gyruw*, in which the dutar player strikes downward and immediately back upward with the thumb and index finger pinched together, seems to be essential to 4a, since all performers always use it here. But other static moments, while melodically constrained to one melody note, may be more flexible in terms of rhythm, allowing the player to combine various stock rhythms.

In the "Gyrmyzy" A section, for example, subsection 1b consists of vamping on *e'*, usually with *a* held below it on the lower-pitched string. Looking at the examples of how these musicians render 1b in Figure 10 reveals how they mix and match stock rhythms. The musicians use four rhythmic formulas here; in Figure 10 the first instance of each formula is circled. It appears that these formulas can be recombined more or less at will, though perhaps there may have been a tendency on the part of Mylly aga and Pürli aga to start out with the same two formulas in the same order. Çary aga departs from this pattern, using a different formula at the beginning of his brief performance of the subsection.

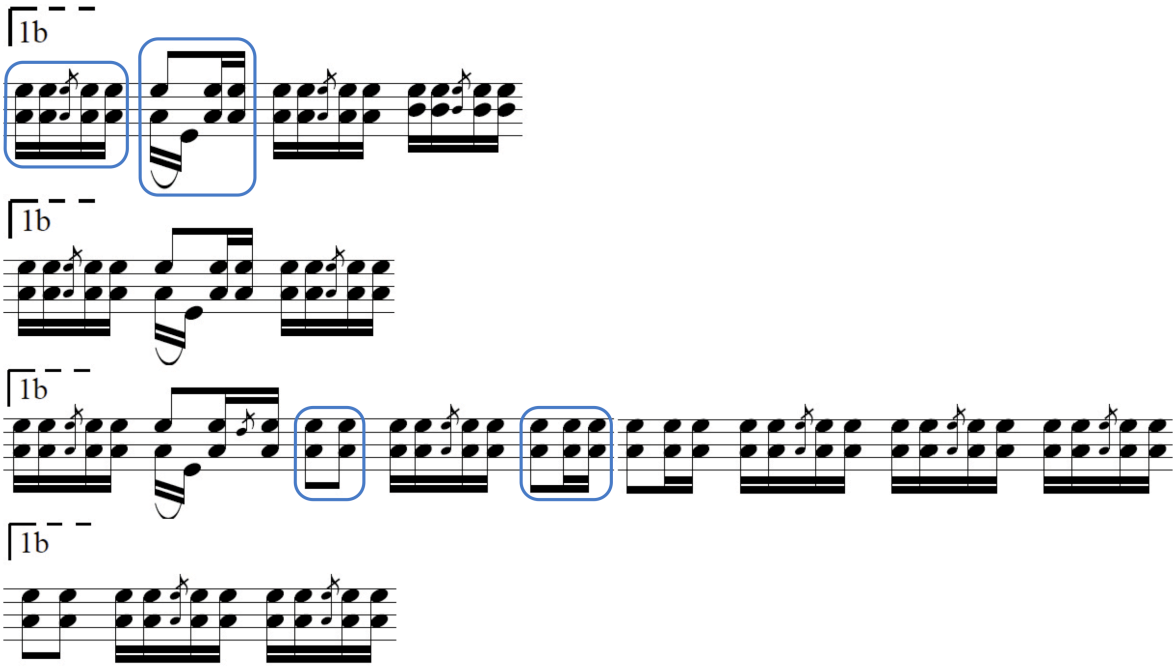


Figure 10. Examples of subsection 1b. The first two are from Mylly aga (see Appendix 3). The third is from Pürli aga (see Appendix 4). The fourth is from Çary aga (see Appendix 5).

Turkmen musicians use the term *boş kakuw* ("empty strumming") or *ara kakuw* ("in-between strumming") to describe another, special case of formulaic recombination of stock rhythms. This refers to a kind of open strumming before a piece begins and between sections of a piece. Strictly speaking, the strings are not always open during such strumming, as there may be some activity on the lower string (among the pitches *e*, *f*, and *g*) or a cadential strumming of the chord *d'/a* just before the beginning of the ensuing section of the piece. This sort of strumming can be heard in the "Gyrmyzy" recordings anywhere there are gaps among the time markers I list in Appendix 1.

For example, Mylly aga's recording of the piece "Ene" ("Grandmother") opens as shown in Figure 11. The opening of Pürli aga's recording of the same piece appears in Figure 12. I chose this example in part because Pürli aga's retuning of the instrument at the start of the recording leads to a quite expansive open strumming. Note a key constraint on the formulas used in this introductory strumming: they all produce a duple feel.[13] "Ene" features the same rhythmic feeling as does "Gyrmyzy," one usually transcribed in $\frac{2}{4}$ with some intermittent changes of time signature, according to local convention.[14] Mylly aga uses two different

13. Other pieces in the tradition feature different metrical patterns that can be notated with time signatures including $\frac{6}{8}$, $\frac{5}{8}$, $\frac{7}{8}$, etc., and the rhythmic formulas used in the open strumming will fit these.
14. I often choose not to use time signatures in my own transcriptions; see Appendix 2 for an explanation.

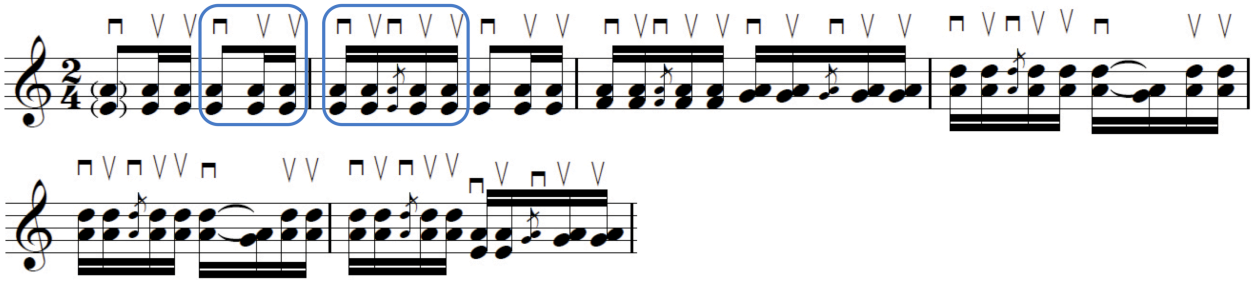


Figure 11. Mylly aga's introductory strumming to the piece "Ene." The notes in parentheses are cut from the recording.

Audio Example 4.

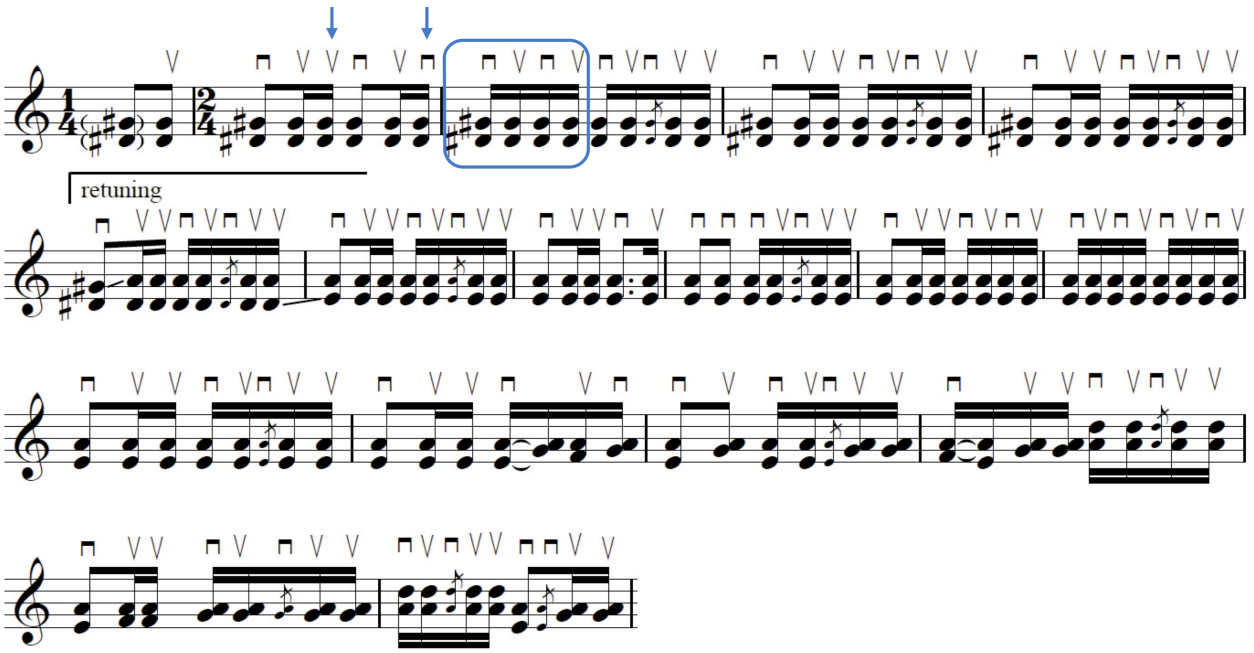


Figure 12. Pürli aga's introductory strumming to the piece "Ene." The notes in parentheses are cut from the recording. Tuning up of the strings at the beginning of a piece as is seen here is quite common.

Audio Example 5.

rhythmic formulas, examples of which are circled in Figure 11. Pürli aga uses four or five more, ranging from a string of sixteenth notes (circled in measure 3 of Figure 12) to one with a subtle substitution of a downward strum in place of a more common upward strum to produce a slightly different feeling, as marked by the two arrows in the figure. This is typical; Pürli aga tends in general to exploit the durational freedom of static passages to play more extensively and variably than Mylly aga.

Compositional Principles in Expanded Dynamic Passages

As I have mentioned, in contrast to static passages, dynamic passages tend to be durationally constrained. This suggests that within dynamic passages metrical length is more likely to be considered essential to a memorized melodic phrase, and departures from the familiar metrical pacing of the melody are more likely to be thought of as (potentially corruptive) alterations to the model that must be preserved. However, some dynamic passages—especially those that repeat an idea, perhaps transposing it sequentially—may afford space even for types of variation that result in durational expansion.

Here I have found that Turkmen musicians seem to employ principles similar to what Nooshin (2003, 272; 1998, 92) has described as "extended repetition," in which the performer states a phrase, repeats it, then extends it to a pitch climax during the third repetition before descending. In fact, on two occasions during my fieldwork in Turkmenistan, musicians I interviewed explicitly pointed out ways that they had used a device akin to (but not exactly the same as) Nooshin's "extended repetition" to modify a melody. In the first of these cases, Ata Gutlymyradow extended a passage in "Balsaýat." Gutlymyradow was an avid follower and relative of Pürli aga. Pürli aga played this passage as shown in Figure 13. The passage consists of a series in which the high point of the phrase shifts from *d'* up to *f♯'*. But Gutlymyradow, performing his own interpretation of the piece for me, played the passage as transcribed in Figure 14.

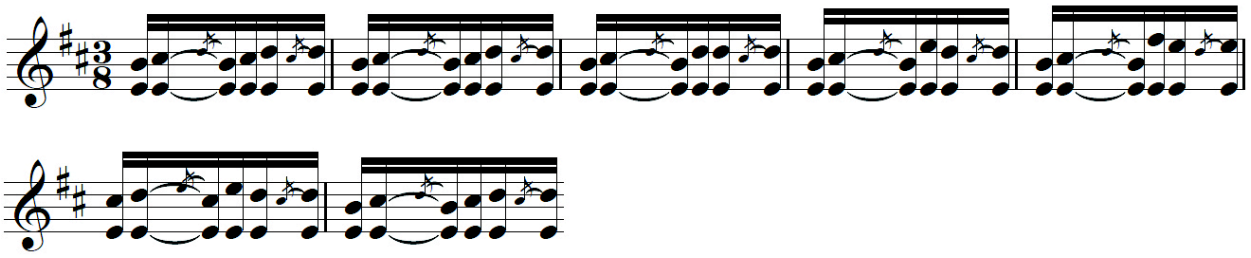


Figure 13. Excerpt from Pürli aga's rendition of "Balsaýat." Transcribed by Ýazmyrat Rejepow.

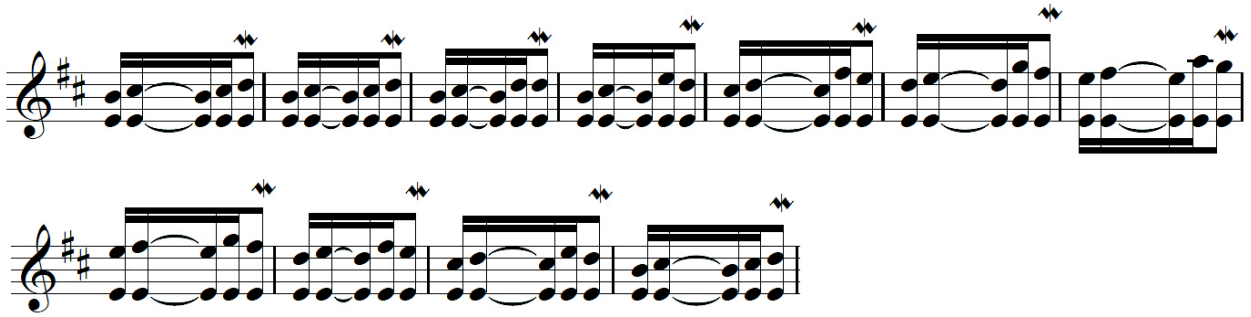


Figure 14. Excerpt from Ata Gutlymyradow's take on Pürli aga's variant of "Balsaýat."

In addition to the differences in ornamentation and strumming, Gutlymyradow extends the series to reach *a'*. After playing the entire piece for me, he pointed out this passage in particular as his own innovation. Interestingly, he commented that for a more formal performance such as a radio broadcast, he would omit this expansion of the piece (personal interview, 13 July 2009). This highlights how cognizant Turkmen musicians are of the contributions they are making to the ongoing tradition, and of their idiosyncratic insertions into the received model(s) for the piece.

I encountered a second, very similar example during an interview with Baýjan Rejepow, a music teacher in the town of Gyzylarbat (and Ýazmyrat's father). Rejepow played the piece "Döwletýar gyrk," pausing midway to point out his own contribution of a phrase. Pürli aga had played the passage in question as in Figure 15. Pürli aga plays the first phrase twice, then on the third repetition shifts up a half step for the first half of the phrase. Rejepow (personal interview, 12 July 2009) inserted an extra phrase that reached up an additional step, as in Figure 16.

There is a key difference between these examples and Nooshin's "extended repetition" examples. In the Turkmen examples, the entire recurring phrase does not always shift sequentially as phrases do in Nooshin's examples. A part of the phrase may recur at the same pitch level even as a part of the phrase is transposed sequentially. But at a more abstract level, this practice resembles the Iranian techniques described by Nooshin. That is, the performers appear to have observed repeated features in the piece; in the "Döwletyar gyrk" example, this is a recurring phrase with an initial, progressively transposed motif followed each time by a fixed motif whose pitch does not shift. They infer the logic of the melodic phrase, internalizing it, and then reapply the logic in order to extend it.

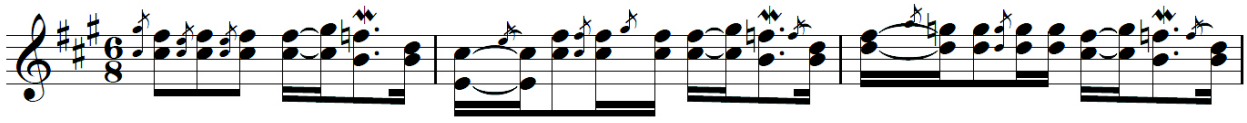


Figure 15. Excerpt from Pürli aga's version of "Döwletýar gyrk." After a transcription by Ýazmyrat Rejepow.

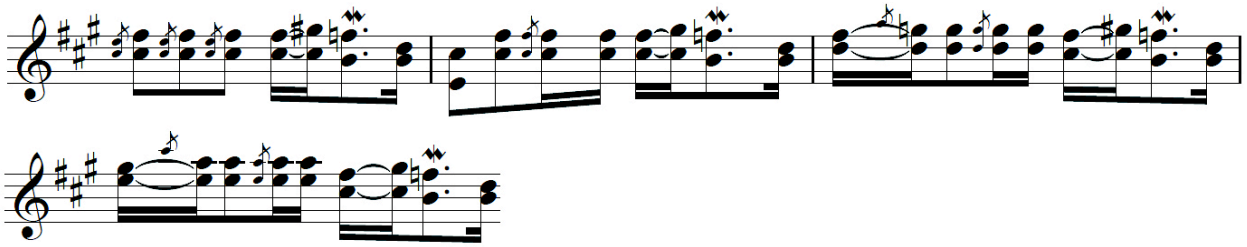


Figure 16. Excerpt from Baýjan Rejepow's rendition of "Döwletýar gyrk."

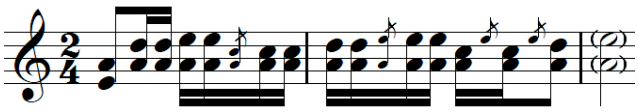


Figure 17. Mylly aga and Pürli aga's typical approach to subsection 1a.

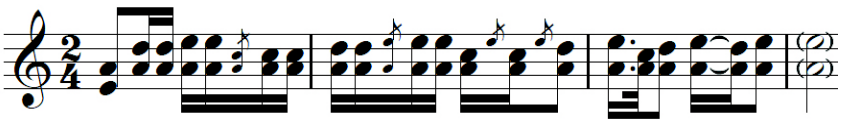


Figure 18. Çary aga's version of subsection 1a.

I have not found an example of exactly this sort of extended repetition within "Gyrmyzy," but there are examples of dutar players extending the logic of a melodic idea in other ways. The most obvious is perhaps at the very opening of the A section sequence (and indeed, of the piece), where Çary aga normally plays a slightly extended version of subsection 1a relative to Mylly aga and Pürli aga. Mylly aga and Pürli aga both play 1a as in Figure 17 (some durationally non-expansive microvariation notwithstanding). Çary aga extends the subsection as in Figure 18 (see the third bar).

This is perhaps a special case of extended repetition, where a sequence of notes (*d'-e'-c'*) is repeated, but with different rhythms applied to it each time. Çary aga apears to extend the logic of cycling these three notes through different rhythmic permutations by cycling through one additional permutation. Thus the extension of the repetition occurs not within the parameter of pitch level, but rather within the parameter of rhythmic variation.

Formal Logics and Higher-Order Variation

The examples of constraint shifts that I have provided so far have involved features at the microvariational level. That is, the signals for variational space appear as an aspect of the melodic material of a given subsection (as stasis or as a repeated idea within the subsection). In fact, in both of these cases, it seems to be repetition that triggers the lifting of a constraint; repeating a held chord affords durational expansion, while repeating a melodic idea affords further repetition that extends its logic.

Repetition appears to motivate variation at a higher structural level of a piece as well. Where repetition occurs within the overall form, performers may compose distinctions so as not to play exactly the same thing twice. Creating these distinctions may involve not only developments at the level of microvariation or durational expansion of a subsection, but also rearrangements in the order of the subsections.

Varied repetition is a key strategy evident in a number of traditional pieces in the

Turkmen repertoire. A number of pieces entail repeating a melodic section but varying the repetitions so as to reach successively higher pitches when the melody recurs. Mylly aga, Pürli aga, and Çary aga would have internalized this principle in the course of mastering a significant repertoire of pieces that follow such a pattern. I argue that their treatments of A1, A2, and A3 reflect this.

Recall for example that subsections 4 and 6 focus on the highest range of the dutar. Subsection 4 emphasizes *a'* by repeating the rhythmic device *gyruw*; meanwhile subsection 6 features descending lines that launch from *b'*, the very highest fret on the instrument's neck. These musicians do not play the full A section, all the way up to subsection 6, every single time. As the solid box in Figure 19 shows, for example, they do not play subsection 6 in A1. As the gray highlight shows, Pürli aga and Çary aga do not even play subsection 4 in A1.

In other words, the musicians introduce some of the A section sequence in A1, but they also hold something back. By A3, however, they have all played the entire sequence. That is, they all seem to operate on the principle of successively revealing higher ranges of the A section between A1 and A3. This reflects the common formal strategy in this tradition in which a melodic passage recurs but is extended to a relatively higher pitch upon repetition. What is interesting here is that there appears to be some flexibility in the rate at which these musicians successively reveal more and more of the A section sequence. Mylly aga plays subsection 4 in A1 while Pürli aga does not. The musicians also differ in A2. All of them start the sequence with subsection 2a in A2. This is because after A1 there is no cadential resolution down to the tonic *a*. They begin the sequence already at *e'*, and therefore do not need subsection 1a, which starts on *a* and ascends up to *e'*. From this point on there is some

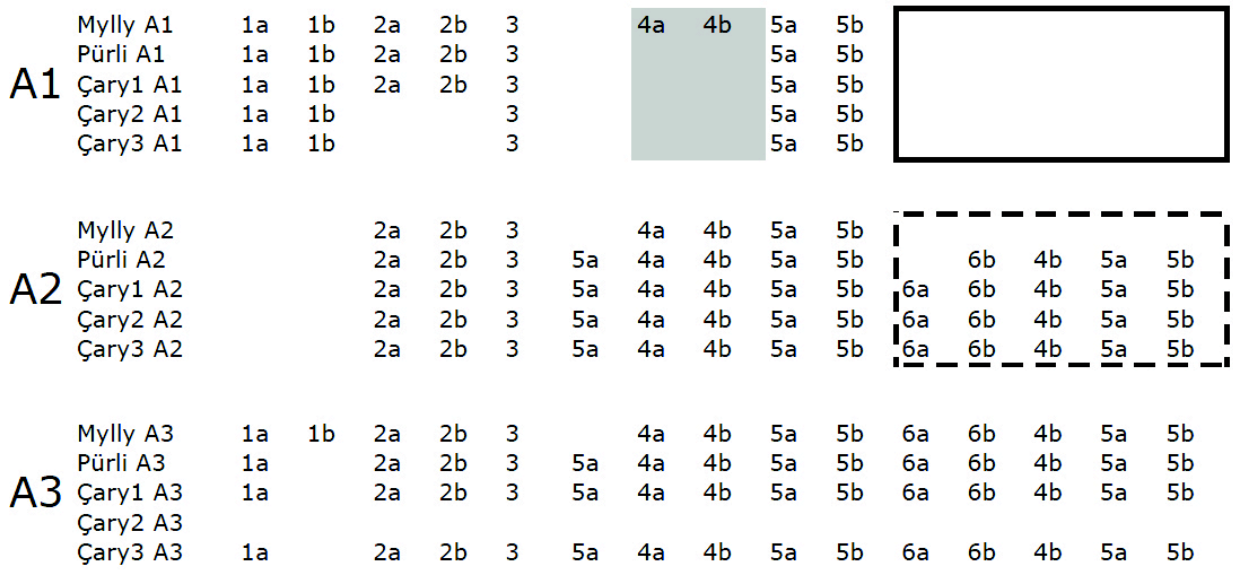


Figure 19. Outline of the appearance of subsections in A1 through A3, with highlights to point out some divergences among performers.

discrepancy in how much of the rest of the sequence is performed. Çary aga plays the entire sequence, all the way through subsection 6.[15] Mylly aga and Pürli aga continue to hold something back in A2. Mylly aga does not play subsection 6, leaving this for A3. Pürli aga plays a shortened version of subsection 6 (skipping 6a), leaving a full performance for A3.

The key point I wish to make here is that these divergences appear to arise as idiosyncratic realizations of an abstract formal principle: extending melodies to higher pitches upon repetition. That is, these musicians each appear to choose to hold something back prior to A3, but they do so differently. This reveals one opportunity for individual variation within the higher-order formal aspects of the schemas these musicians draw on as they reconstruct this memorized piece in performance. This is not necessarily to say that they "improvise" such divergent realizations of an abstract aspect of this schema. Note for example that in the one case for which we have multiple recordings from the same performer, Çary aga, he is mostly consistent in how much of the sequence he reveals each time. He never plays subsection 4 in A1. He always plays subsection 6 in its entirety in A2. But it seems that there are abstract formal principles these musicians would have internalized in the course of memorizing a vast repertoire. Given that the schemas they use in recalling the pieces are subject to constant reconstruction during performance, revising them in the light of formal logics recurring in the repertoire remains a possibility.

Valorizing Variation

So far, most of my analysis has attempted to identify and account for the space a performer has for variability within the constraints of what they understand to make up a given composition. But this is in fact a separate question from the issue of how Turkmen musicians evaluate such variability. A passing variation by a performer could go unnoticed, could be viewed as a corruption, or could be admired and possibly emulated by other, future performers. There are two main ways that Turkmen musicians tend to valorize such individual variability and recomposition. As Çaryýew suggests in the epigraph of this paper, they might view it as "development" of the traditional repertoire. And second, famous performers' classic versions are celebrated as variants (*waryýant*) treated with a reverence normally accorded a great work in Eurogenetic art music.

Further ethnographic research would be required to determine whether all variations and elaborations of the kind I have identified here are understood as "development" by tradition bearers and listeners. It seems possible, for example, that many actors might consider the higher order divergences in A1 through A3 to be significant developments, whereas a brief durational expansion in a static passage might even go unnoticed.

15. In fact, one possible explanation for his skipping A3 altogether in his second recording (Çary2 in Figure 19) is that, having already introduced the entire sequence by the end of A2, repeating it again in A3 appeared unnecessary.

Elsewhere (Fossum 2015), I have provided ethnographic and historical data that suggest some initial observations on this point. First, there is a tendency to dichotomize Mylly aga as a great tradition bearer, a preserver of old versions of pieces, and Pürli aga as an "improvisor" (*improwizator*). My example of Pürli aga's durational expansion in subsection 4a (Figure 7) was one example that Rejepow pointed out to me, during our lessons, as indicative of Pürli aga's creativity (Rejepow was a particular admirer of Pürli aga). Other musicians directed my attention to other ways that Pürli aga had exploited space for variability, or they credited him with inserting new sections into a piece as examples of what made him a great "improvisor." Thus in Turkmenistan, a cognate of the term "improvisation" has been taken up locally to valorize the contributions of a particular master.

As a historical matter, there are several interesting factors to consider, including: (1) the rise of recording technology in the mid-twentieth century (which afforded us the recordings I have used here); (2) the development in the 1970s of a localized system for transcribing the music using modified Western notation (after the death of the musicians whose performances I have analyzed here); and (3) the Soviet Union's cultural modernizations, which led to self-conscious attempts to reform Turkmen music in the image of Eurogenetic art music (holding up the three masters I have studied here as analogues to the great composers of the Western canon). It is common for contemporary Turkmen musicians to valorize the individual variants of these compositions that famous masters developed, and I have made a historical argument that this tendency is in fact an old one, predating the Soviet modernization efforts. However, it also appears that recording technology, notation, and Soviet cultural interventions have motivated heightened attention to these individual variants such that even the most fleeting variations may be seen as "development." This is suggested by the tendency of some current musicians, in their own performances, to restrict themselves to recreating exactly—to the finest levels of microvariational detail—the performance of one of these masters. This is ironic considering the flexibility demonstrated in the classic performances they emulate, such as the versions of "Gyrmyzy" that I have analyzed here. In fact, this is the main reason I wished to analyze historical recordings of the masters. I am unsure of the extent to which the hyperattentive emulation of recordings on the part of many contemporary players might alter their internalization of the kinds of schemas, formulas, and principles that older masters seem to have employed. This is a question for further research.

Conclusion

In this article I have sought to show how Turkmen musicians, in particular three masters of the early- to mid-twentieth century, draw on a range of formulaic processes, schemas, and compositional strategies as they reconstruct a memorized but constantly evolving repertoire of orally transmitted instrumental pieces. These schemas and strategies are similar to those used in the musical practices that have received the most attention among scholars working in this area (Hindustani music, Persian classical music, jazz, etc.). Presumably, Turkmen musicians absorb such principles subliminally, just as the Persian musicians Nooshin

describes learn "compositional principles" through years of studying the radif. But in Turkmen dutar performance, these principles are reapplied to inherited compositions themselves, rather than being used in specially designated spaces for generating new material.

Turkmen music presents constantly shifting constraints on the parameters of possible variation and expansion. We might consider the subtler ways that variational constraints and affordances shift during performances in better known traditions as well, traditions in which we have often focused disproportionately on genres that afford performers the most interpretive space, especially within the parameter of melodic sequence. My data are too limited to determine how widespread or spontaneous developmental variation is in dutar performance in general. Nevertheless, in the examples analyzed above we see some of the same strategies that scholars working under the heading of improvisation studies have uncovered.

I have tried to reframe the problems presented by the fuzziness of the concepts of "improvisation" and "composition." Instead of asking whether a particular local practice is improvisatory or not, we might attend carefully to the precise and shifting constraints within which a composer composes in a tradition or a performer performs, and how they exploit such affordances. When tradition bearers and scholars label operations within such constraints "improvisation," "composition," "rote performance," or "development," why do they do so? Are they operating from—or challenging—orientalist assumptions such as those described by Nooshin? Are there local agendas at play, such as a desire to venerate a particular master or lineage, as in the case of Turkmen musicians who dichotomize Pürli aga as a great "improvisor" and Mylly aga as a great tradition bearer? On the other hand, such valorizations may also be motivated by observable differences in the features of a genre (*alap*, *avaz* and *taqsim* are not constrained along some of the parameters that constrain many other musical practices) or of a performer's tendencies (the "improvisor" Pürli aga does play more variably and extensively in static passages than does Mylly aga).

My hope is that this study of Turkmen music will not only contribute a new example to this corpus, but that the example will complicate and enrich our understanding about how musicians generate music generally. Bringing to the unique features of Turkmen music the analytical approaches scholars have used to study improvisation, memory, and variability in other contexts might encourage us to view our analytical paradigms in a different light.

ACKNOWLEDGMENTS

I wish to thank first and foremost my teachers, friends, and hosts in Turkmenistan for their encouragement, support, and guidance. I am also grateful to Mark Slobin, Eric Charry, and Su Zheng for their comments on the MA Thesis with which some of this analysis originated; to Stephen Blum, Marc Perlman, and three anonymous reviewers for their comments on versions of this article; and to the attendees of the 2016 AAWM conference for their helpful questions and comments on the conference paper version of this article. Any

errors are my own. I also wish to thank the Schultz and Bove families for instituting and supporting the Rob Schultz Junior Scholar Award.

REFERENCES

Bailey, Derek. 1993. *Improvisation: Its Nature and Practice in Music*. Cambridge, MA: Da Capo Press.

Berkowitz, Aaron. 2010. *The Improvising Mind: Cognition and Creativity in the Musical Moment*. New York: Oxford University Press.

Berliner, Paul. 1994. *Thinking in Jazz: The Infinite Art of Improvisation*. Chicago: University of Chicago Press.

Blum, Stephen. 2009. "Representations of Music Making." In *Musical Improvisation: Art, Education, and Society*, edited by Gabriel Solis and Bruno Nettl, 239–62. Urbana: University of Illinois Press.

Fossum, David. 2010. "The Ahal School: Turkmen Dutar and the Individual." MA thesis, Wesleyan University.

———. 2015. "Westernizing Reform and Indigenous Precedent in Traditional Music: Insights from Turkmenistan." *Ethnomusicology* 59(2): 202–26.

Frank, Allen J., and Jeren Touch-Werner, eds. 1999. "Xasaп." *Turkmen-English Dictionary*. Kensington, MD: Dunwoody Press.

Gjerdingen, Robert. 2007. *Music in the Galant Style*. New York: Oxford University Press.

Lord, Albert Bates. (1960) 2000. *The Singer of Tales*. Cambridge, MA: Harvard University Press.

Napier, John. 2006. "Novelty That Must Be Subtle: Continuity, Innovation and 'Improvisation' in North Indian Music." *Critical Studies in Improvisation* 1(3).

Nettl, Bruno. 1974. "Thoughts on Improvisation: A Comparative Approach." *The Musical Quarterly* 60(1): 1–19.

———. 2009. "Preface." In *Musical Improvisation: Art, Education, and Society*, edited by Gabriel Solis and Bruno Nettl, ix–xv. Urbana: University of Illinois Press.

Nettl, Bruno, and Ronald Riddle. 1973. "Taqsim Nahawand: A Study of Sixteen Performances by Jihad Racy." *Yearbook of the International Folk Music Council* 5: 11–50.

Nettl, Bruno, and Melinda Russell, eds. 1998. *In the Course of Performance: Studies in the World of Musical Improvisation*. Chicago: University of Chicago Press.

Nooshin, Laudan. 1998. "The Song of the Nightingale: Processes of Improvisation in Dastgāh Segāh (Iranian Classical Music)." *British Journal of Ethnomusicology* 7: 69–116.

———. 2003. "Improvisation as 'Other': Creativity, Knowledge and Power: The Case of Iranian Classical Music." *Journal of the Royal Musical Association* 128(2): 242–96.

———. 2015. *Iranian Classical Music: The Discourses and Practice of Creativity*. Burlington, VT: Ashgate Publishing, Ltd.

Nooshin, Laudan, and Richard Widdess. 2006. "Improvisation in Iranian and Indian Music." *Journal of the Indian Musicological Society* 36–37: 104–19.

Perlman, Marc. 2016. "Musicologizing Improvisation: Or, How 'Improvisation' Became an Abstract Noun." Paper presented at Ideas on the Move: A Conference in Honor of Mark Slobin, Wesleyan University, Middletown, CT, April 16.

Reigle, Robert. 2014. "Reconsidering the Idea of Timbre: A Brief History and New Proposals." In *MusiCult '14: Music and Cultural Studies Conference*, 233–43. Istanbul: DAKAM [Eastern Mediterranean Academic Research Center].

Slawek, Stephen. 1998. "Keeping It Going: Terms, Practices, and Processes of Improvisation in Hindustani Instrumental Music." In *In the Course of Performance: Studies in the World of Musical Improvisation*, edited by Bruno Nettl with Melinda Russell, 335–68. Chicago: University of Chicago Press.

Snyder, Bob. 2000. *Music and Memory: An Introduction*. Cambridge, MA: MIT Press.

Solis, Gabriel, and Bruno Nettl, eds. 2009. *Musical Improvisation: Art, Education, and Society*. Urbana: University of Illinois Press.

Sutton, R. Anderson. 1998. "Do Javanese Gamelan Musicians Really Improvise?" In *In the Course of Performance: Studies in the World of Musical Improvisation*, edited by Bruno Nettl and Melinda Russell, 69–92. Chicago: University of Chicago Press.

Tala'i, Dariush. 2000. *Traditional Persian Art Music: The* Radif *of Mirza Abdollah*. Translated by Manoochehr Sadeghi. Costa Mesa, CA: Mazda.

Treitler, Leo. 1974. "Homer and Gregory: The Transmission of Epic Poetry and Plainchant." *The Musical Quarterly* 60(3): 333–72.

Widdess, Richard. 2011. "Dynamics of Melodic Discourse in Indian Music: Budhaditya Mukherjee's Alap in Rag Puriya Kalyan." In *Analytical and Cross-Cultural Studies in World Music*, by Michael Tenzer and John Roeder, 187–224. New York: Oxford University Press.

Zadeh, Chloe. 2012. "Formulas and Building Blocks of Thumri Style: A Study in 'Improvised' Music." *Analytical Approaches to World Music* 2(1).

APPENDIX 1: "GYRMYZY" LISTENING GUIDE

Section	Recording				
	Mylly aga	**Pürli aga**	**Çary aga 1**	**Çary aga 2**	**Çary aga 3**
intro					:28-:34
A1	:07-:30	:12-:33	:08-:29	:07-:27	:49-1:10
A2	:31-:48	:37-1:11	:29-1:07	:27-1:05	1:10-1:51
Cadence 1	:48-:54	1:12-1:15	1:07-1:13	1:05-1:20	1:51-1:59
A3	:56-1:30	1:19-2:00	1:16-1:56		2:08-2:51
Cadence 2	1:30-1:42	2:01-2:11	1:56-2:09		2:51-3:09
B	1:44-1:56	2:15-2:27	2:13-2:24	1:24-1:37	3:13-3:25
Cadence 2'	1:57-2:03	2:28-2:33	2:24-2:30	1:37-1:44	3:26-3:32
Coda	2:03-2:06	2:33-2:35	2:31-2:34	1:44-1:47	3:33-3:37
A4	2:09-2:20	2:40-3:08	2:40-2:53	1:51-2:06	3:42-3:57
A5	2:21-3:04	3:09-3:50	2:53-3:38	2:06-2:45	3:57-4:41
Cadence 3	3:05-3:25	3:50-4:13	3:38-4:05	2:45-3:11	4:41-5:15
C	3:27-3:56	4:16-4:51	4:07-4:43	3:13-3:53	5:17-6:04
outro					6:06-6:13

The recordings can be found online as follows:

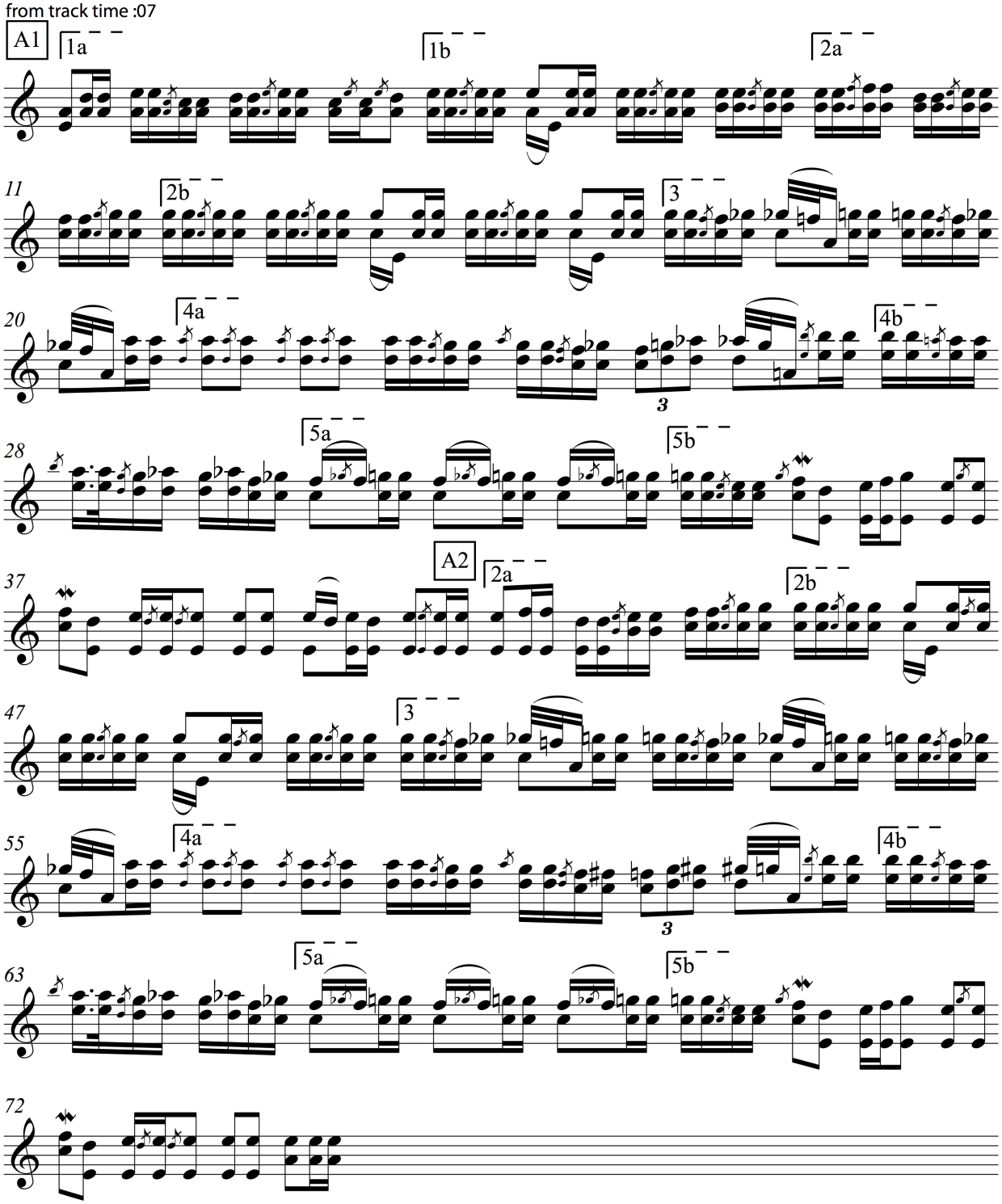
Mylly aga's recording: https://soundcloud.com/dokuzluk/gyrmyzy-mylly-tacmyradow
Pürli aga's recording: https://soundcloud.com/dokuzluk/gyrmyzy-purli-saryyew
Çary aga 1: https://soundcloud.com/dokuzluk/gyrmyzy-cary-tacmammedow-1
Çary aga 2: https://soundcloud.com/dokuzluk/gyrmyzy-cary-tacmammedow-2
Çary aga 3: https://soundcloud.com/dokuzluk/gyrmyzy-cary-tacmammedow-3

APPENDIX 2: A NOTE ON THE TRANSCRIPTIONS

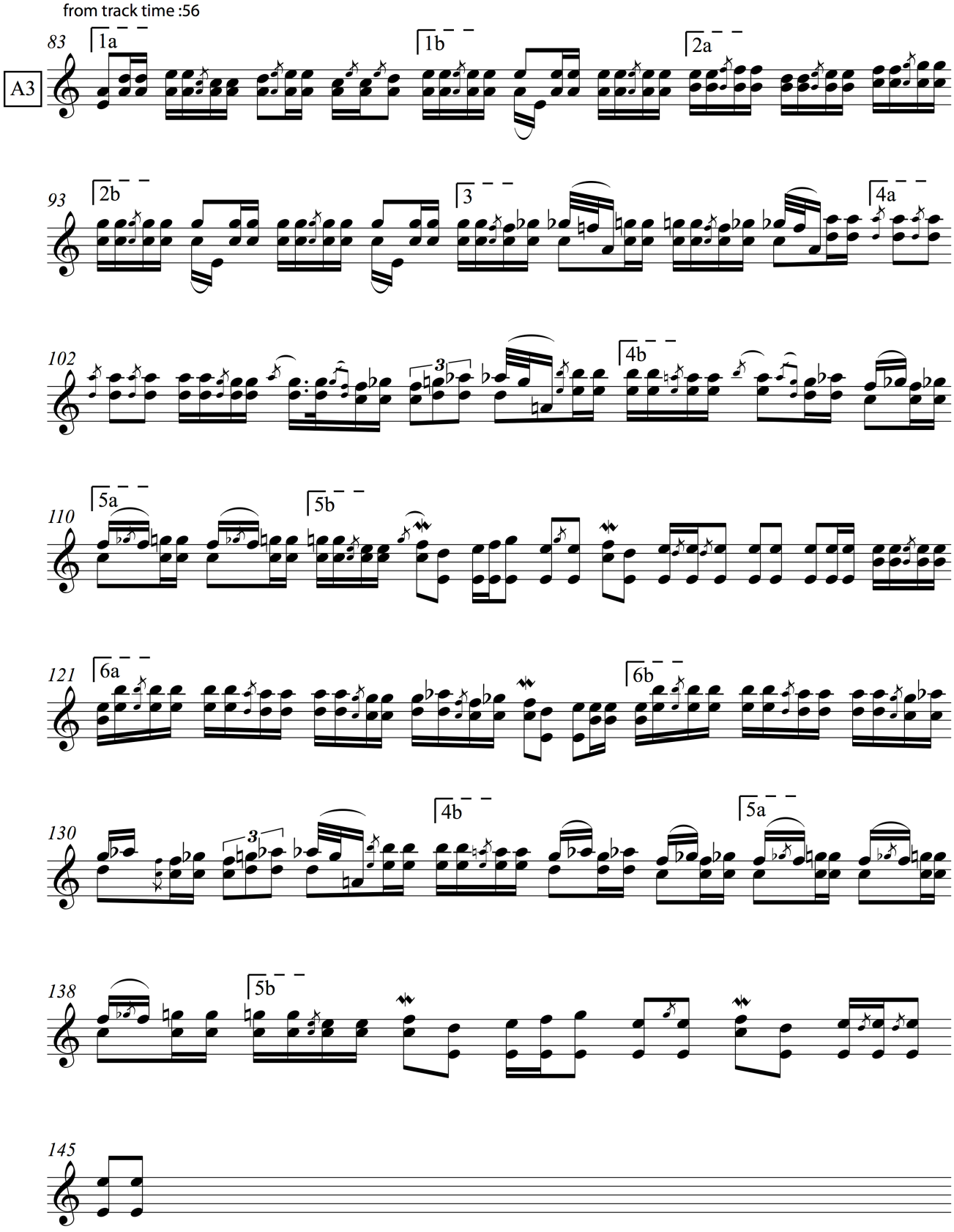
As mentioned in footnote 3 above, there is no absolute pitch to which dutar players tune. By local convention, the open strings are transcribed as *e* and *a*, with *a* serving as a system-wide tonic. The instrument has frets above this arranged chromatically, with intonation quite close to equal temperament. While the music is rhythmically pulsed and often features regular meter, melodies also often depart from regular meters. Local analysts have dealt with this by frequently changing the time signature from measure to measure in their transcriptions, although most pieces are primarily set in one time signature ("Gyrmyzy" is usually transcribed primarily in $\frac{2}{4}$). Given the frequent departures from regular meter, however, I often find that it can be difficult to decide where to place a barline, and that the barline may suggest a metrical division that I don't necessarily hear. Meanwhile the shifting time signatures seem not to reflect my experience of playing the music. Therefore, as in Appendixes 3 through 5, I often choose not to use barlines when I transcribe Turkmen music. The measure numbers appearing at the beginning of each system in these transcriptions reference beats (where one quarter note in the transcription equals one beat).

For Appendix 3 (and for much of my knowledge of this music), I am indebted to Ýazmyrat Rejepow. Appendix 3 mostly represents a re-transcription from his own transcription, though I have removed the barlines and a number of strumming indications and dynamic indicators that he included, and made a few small changes. If there are mistakes, they are my own. For Appendix 4, I took Rejepow's draft transcription as a starting point, but I made many more changes as well, as the version he had given me was still fairly rough. Again, mistakes are my own. Appendix 5 is my own transcription of Çary aga's recording.

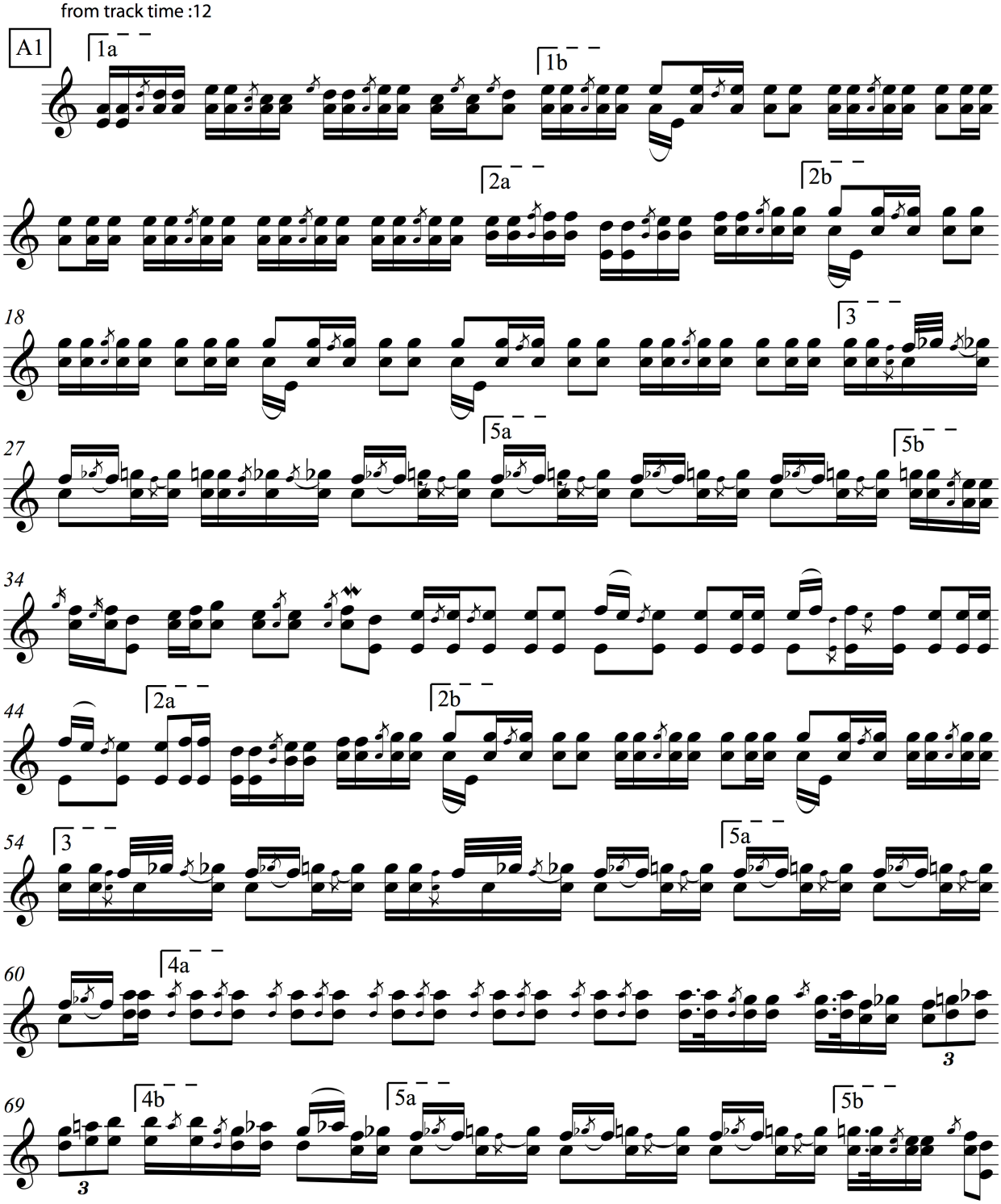
APPENDIX 3: MYLLY AGA, "GYRMYZY" SECTIONS A1, A2, AND A3, ANNOTATED TRANSCRIPTION



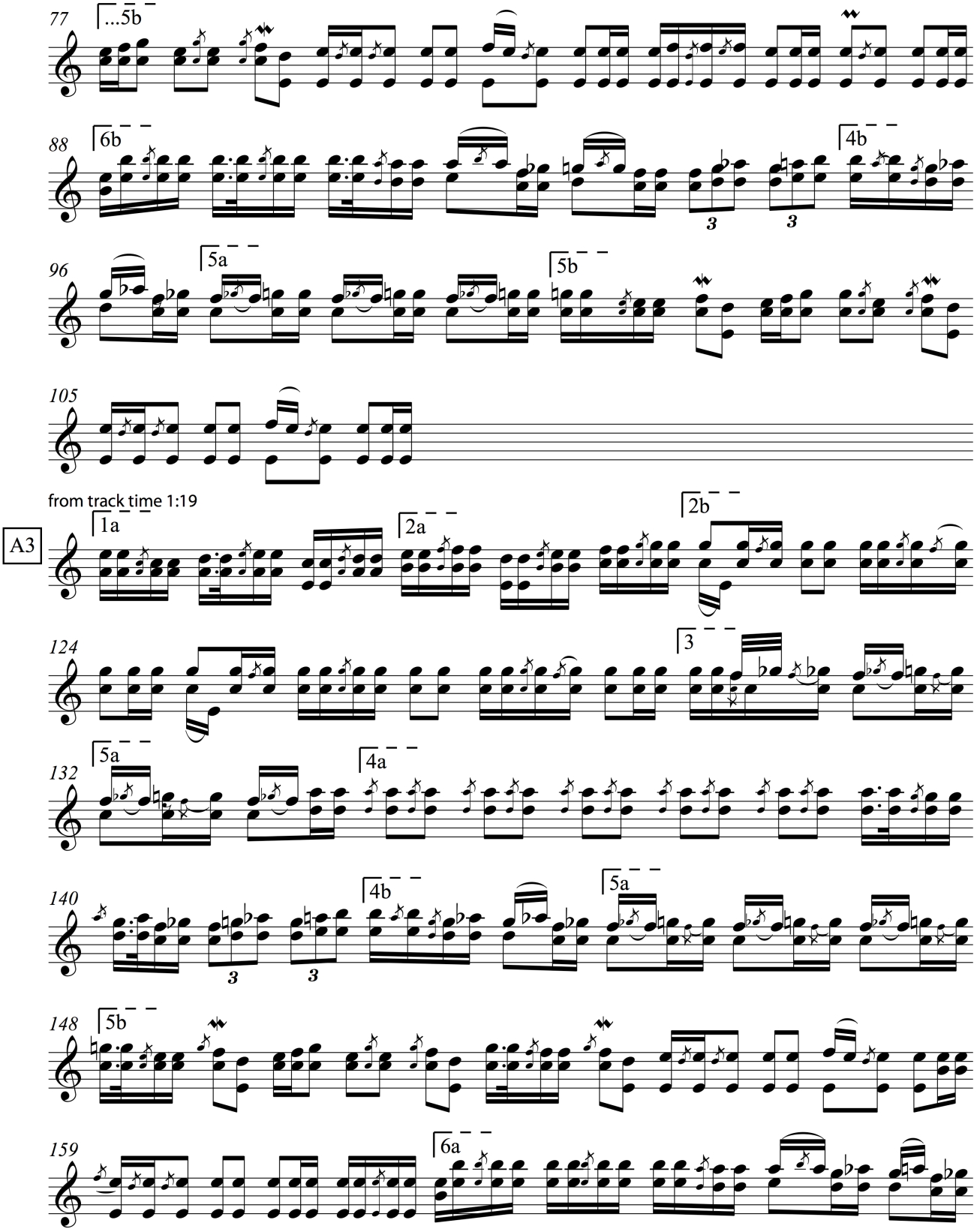
Appendix 3 — Mylly aga



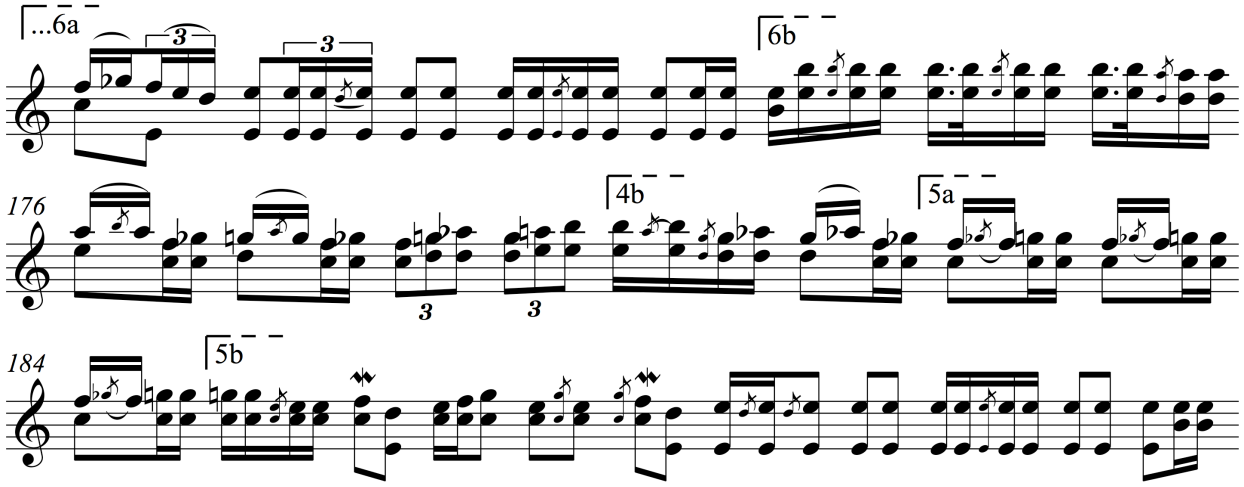
APPENDIX 4: PÜRLI AGA, "GYRMYZY" SECTIONS A1, A2, AND A3, ANNOTATED TRANSCRIPTION



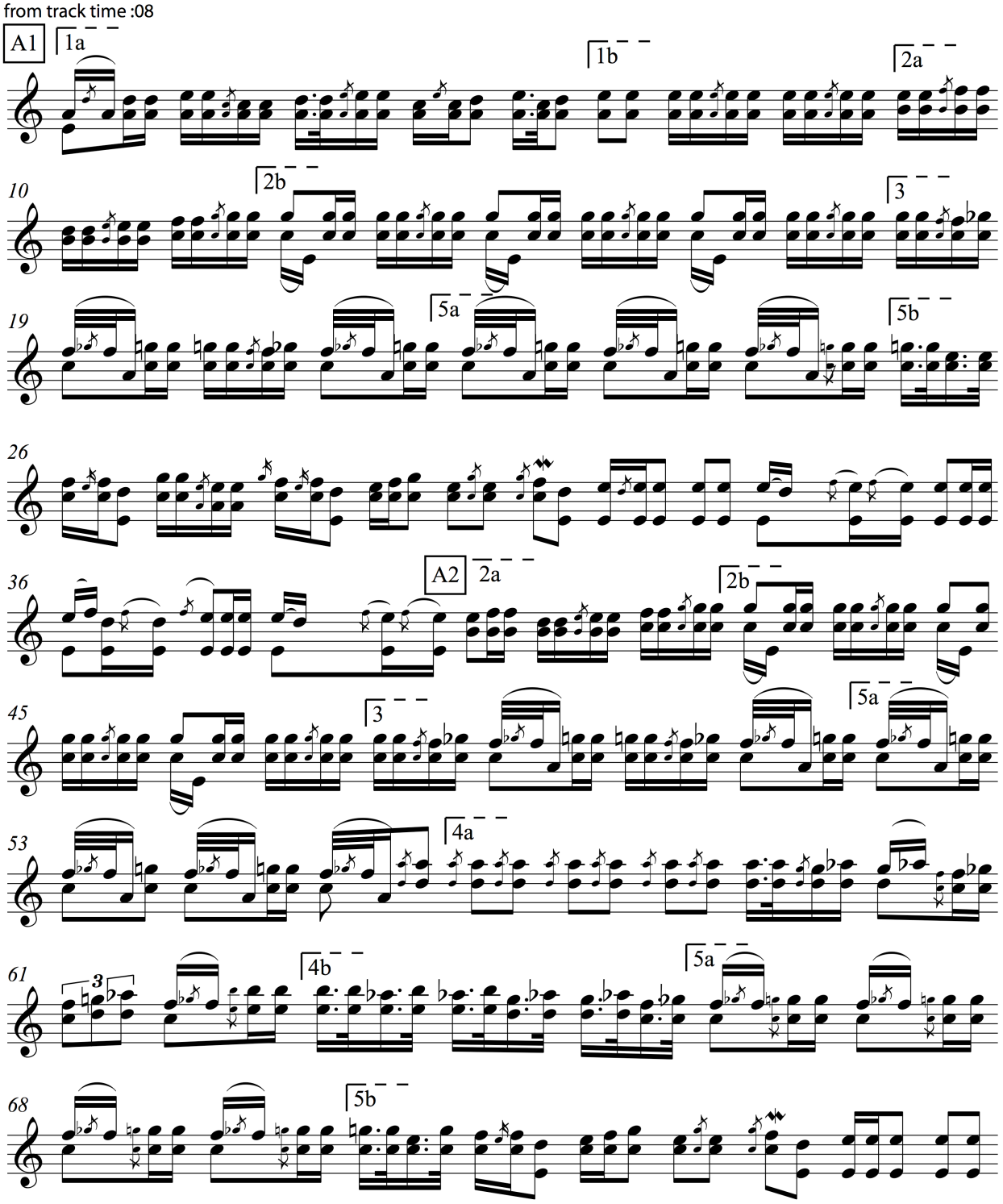
Appendix 4 — Pürli aga



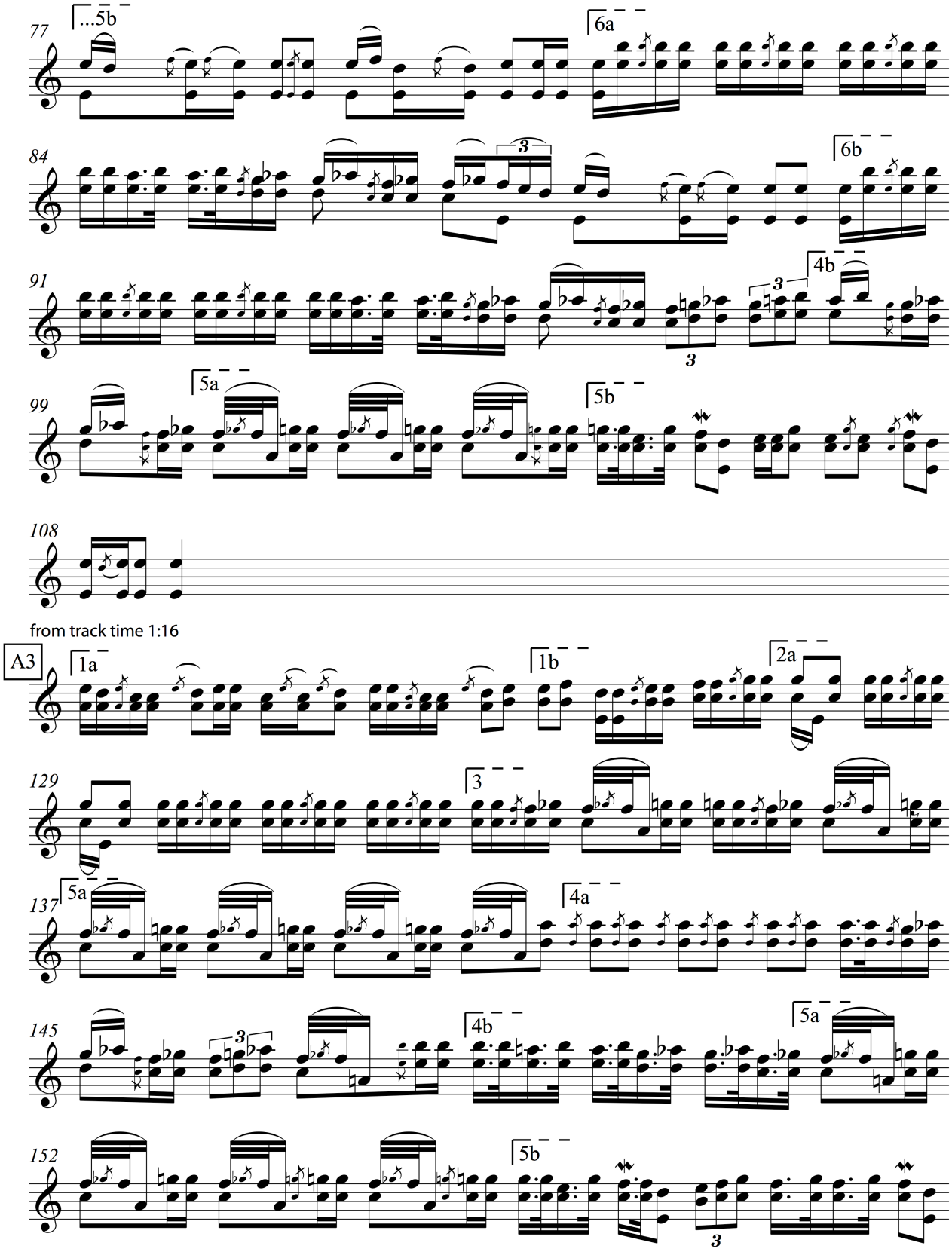
Appendix 4 — Pürli aga



APPENDIX 5: ÇARY AGA, "GYRMYZY" SECTIONS A1, A2, AND A3 (RECORDING 1), ANNOTATED TRANSCRIPTION



Appendix 5 — Çary aga



Appendix 5 — Çary aga