THE KAZAKH QOBYZ: EXPLORING PLAYING TECHNIQUES AND ITS ACOUSTIC FEATURES

A Master's Thesis

by
TOKZHAN KARATAI

Department of
Music
İhsan Doğramacı Bilkent University
Ankara
July 2025

THE KAZAKH QOBYZ: EXPLORING PLAYING TECHNIQUES AND ITS ACOUSTIC FEATURES

The Graduate School of Economics and Social Sciences
of
İhsan Doğramacı Bilkent University

by

TOKZHAN KARATAI

In Partial Fulfillment of the Requirements for the Degree of
MASTER OF ARTS IN MUSIC

THE DEPARTMENT OF
MUSIC
İHSAN DOĞRAMACI BİLKENT UNIVERSITY
ANKARA

July 2025

THE KAZAKH QOBYZ: EXPLORING PLAYING TECHNIQUES AND ITS ACOUSTIC FEATURES
by TOKZHAN KARATAI

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Music.

Onur Türkmen
Advisor

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Music.

Işın Metin
Examining Committee Member

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Music.

Erberk Eryılmaz
Examining Committee Member

Approval of the Graduate School of Economics and Social Sciences

---
Refet S. Gürkaynak
Director

ABSTRACT

THE KAZAKH QOBYZ: EXPLORING PLAYING TECHNIQUES AND ITS ACOUSTIC FEATURES

Karatai, Tokzhan

M.A., Department of Music

Advisor: Associate Prof. Dr. Onur Türkmen

July 2025

Music of Central Asia remains an understudied field within modern musicology and broader academic discourse. In particular, many questions arise regarding traditional Kazakh instruments. The Qobyz—a Kazakh string instrument recognized for its distinctive timbre—has undergone centuries of transformation influenced by various religious and political contexts. Yet, due to its repertoire and shamanic background, it continues to be primarily framed within a folk music tradition.

By studying the acoustic characteristics of the Qobyz through the lens of contemporary concert music, this research aims to expand the instrument's performance possibilities and repertoire by analyzing and evaluating all existing playing techniques within the context of European string instruments.

The main objective is to assess traditional and contemporary string playing techniques to determine their applicability to the Qobyz and explore its potential role in contemporary art.

The methodology is practice-based and includes the following seven steps: (1) literature review, (2) playing technique selection, (3) categorization of techniques, (4) analysis of the application process, (5) evaluation and comparison, (6) notation, and (7) interpretation and conclusion.

Additionally, this work is intended to function as a manual for composers and performers, offering them a comprehensive understanding of the instrument's theoretical and practical aspects.

Keywords: Contemporary Music, Central Asian Music, Qobyz, Extended Playing Techniques

ÖZET

KAZAK QOBYZI: ÇALMA TEKNİKLERİ VE AKUSTİK ÖZELLİKLERİNİN İNCELENMESİ

Karatai, Tokzhan

Yüksek Lisans, Müzik

Tez Danışmanı: Dr. Öğr. Üyesi Onur Türkmen

Temmuz 2025

Orta Asya müziği, modern müzikoloji ve genel akademik söylem içinde hâlâ yeterince incelenmemiş bir alan olarak kalmaktadır. Özellikle geleneksel Kazak çalgılarına ilişkin birçok soru halen açıklığa kavuşmamıştır. Kendine özgü tınısıyla tanınan Kazak telli çalgısı Qobyz, yüzyıllar boyunca çeşitli dini ve politik etkiler altında dönüşüm geçirmiştir. Ancak repertuvarı ve şamanistik geçmişi nedeniyle, hâlâ büyük ölçüde halk müziği bağlamında ele alınmaktadır.

Bu tez, Qobyz'ın akustik özelliklerini çağdaş akademik müzik perspektifinden inceleyerek, çalgının icra olanaklarını ve repertuvarını geliştirmeyi amaçlamaktadır. Tüm çalma tekniklerinin araştırılması ve değerlendirilmesi yoluyla Qobyz'ın potansiyelinin genişletilmesi hedeflenmektedir.

Tezin temel amacı, geleneksel ve çağdaş standart yaylı çalgı tekniklerini değerlendirerek, bunların Kazak Qobyz'ına uygulanabilirliğini ortaya koymak ve bu çalgının çağdaş akademik müzikteki potansiyel rolünü araştırmaktır.

Metodoloji, uygulama temellidir ve yedi aşama içermektedir: 1) literatür taraması, 2) çalma tekniklerinin seçimi, 3) tekniklerin kategorize edilmesi, 4) uygulama sürecinin analizi, 5) değerlendirme ve karşılaştırma, 6) notasyon, 7) yorumlama ve sonuç.

Ayrıca bu tez, besteciler ve icracılar için bir kılavuz işlevi görmeyi amaçlamakta olup, çalgının teorik ve pratik yönlerine dair kapsamlı bir anlayış sunmayı hedeflemektedir.

Anahtar Kelimeler: Çağdaş Müzik, Orta Asya Müziği, Qobyz, Genişletilmiş Çalma Teknikleri

ACKNOWLEDGEMENTS

I sincerely thank my family and friends for their constant support throughout my academic journey. Their belief in me and encouragement have been invaluable.

I am especially grateful to my adviser, Associate Prof. Dr. Onur Türkmen, for his continued support, insightful guidance, and generous sharing of knowledge and experience during the development of this thesis. His mentorship has been instrumental in both the completion and growth of this work.

TABLE OF CONTENTS

LIST OF FIGURES

Link To The Video Materials:

https://drive.google.com/drive/folders/1FWYhGisZmDmkLY7I3yqIZGoklok5_8ey?usp=share_link

INTRODUCTION

The two-stringed fiddle, referred to as the *Qobyz*, emerged in Kazakh music during the 7th century and has a rich historical background. The instrument measures roughly 70 cm in length; its body resembles a deeply curved ladle, and its surface is covered with camel skin. The Kazakh qobyz is categorized as a “fiddle”, “chordophone,” and “bowed instrument”. It plays a significant role in Kazakh traditional music and is seen as a manifestation of shamanism, which held considerable significance in the Central Asian region prior to the advent of Islamic influence. Even though the instrument has not significantly changed over the centuries, the function and repertoire of the qobyz have undergone several transformations. However, its sacred status and appearance have remained unchanged. According to researchers, the belief in power and the respect among nomads towards the instrument protected it from radical transformations: “But in the land where he was born, the qobyz remained unchanged, preserving its ancient and sacred features. The undying Tengrianism, with its living faith in Korkyt and in the divine origin of music and the instrument, as well as the qobyz’s

sacred role in the life of the people, protected it not only from the touch of ordinary people but also from any alterations" (Dzhumagalieva et al., 2022).

This study examines the instrument through folk and contemporary music perspectives to explore the extent to which the instrument can transcend the traditional repertoire and establish its presence in contemporary music, thereby integrating the qobyz into contemporary compositions and broadening its repertoire. To accomplish this goal, it is important to examine all applicable playing techniques for the qobyz and an acoustic assessment of the instrument. This work comprehensively examines the historical, theoretical, and practical aspects of qobyz. The analysis begins with organology, followed by an exploration of instrument classification and the evolution of the qobyz.

This work aims to serve as a manual for composers and performers, providing them with an extensive understanding of the instrument's theoretical and practical aspects. It also intends to investigate the potential role of the qobyz in contemporary music, focusing on its acoustic properties and playing techniques applied to the European standard string instruments.

An examination of the instrument is essential due to the significant potential for research and discovery in this area.

The methodology is practice-based and includes seven steps: 1. Literature review, 2. Playing technique selection, 3. Categorization of techniques, 4. Application process analysis, 5.Evaluation and comparison, 6. Notation, 7. Interpretation and conclusion.

The first step is based on reviewing prior existing studies on the qobyz and other organologically close instruments to the qobyz, focusing on its historical importance, cultural setting, acoustic features, and musical repertoire. Based on the literature review, the second stage evaluates both traditional and contemporary playing techniques, such as standard Western stringed instrument techniques and various inherited qobyz techniques. Stage three interprets the results of classifying techniques into categories. Step four examines the efficacy of each playing technique on the qobyz in light of factors including dynamics, articulation, and instrument capability. In the fifth stage, a comparison between the qobyz and Western string instruments will be conducted to identify similarities and contrasts in the sounding results of each playing technique. The notation of the selected and evaluated playing techniques is the primary focus of the sixth stage. Subsequently, the final stage involves the interpretation and conclusion of the entire research.

It is essential to discuss the study's significance in comprehending the qobyz's performance potential within contemporary composition, its cultural relevance for heritage preservation, and its prospects for musical exploration.

CHAPTER I

HISTORICAL AND TRADITIONAL OVERVIEW

1.1.Definition of the Qobyz

The Kazakh qobyz, defined as the bowed lute or fiddle and classified as a chordophone (Sachs, 2006), holds special respect and meaning within Kazakh culture and traditions. It plays a significant role in culture as it intersects with shamanic ritual, which is part of the aspects of nomadic beliefs.

According to historical accounts, the instrument was not part of musical performance or entertainment; it functioned as a tool for shamans in ritualistic practices, carrying a sacred meaning. The qobyz was typically used to accompany shamans during ritualistic ceremonies and epic recitations.

The qobyz has varieties of similar fiddles in other cultures with common traditions: "The qobyz belongs to a family of Central Asian fiddles with horsehairs

strings and bow that includes the Karakalpak qobyz, Kyrgyz kiyak, and Mongolian khuur, from which bowing is thought to originate" (Daukeyeva, 2016)

As indicated by historical records, the instrument could have been invented in the seventh century. As claimed, the instrument was created by Qorqyt, the first shaman and qobyz player in Kazakh culture, and was also known as Qorqyt-Ata. As Rancier mentioned: "Qorqyt ("frightening one") received his unique name because when he was born, the onlookers became frightened by his unusual appearance." (Rancier, 2009).

The instrument was initially associated with the mysticism and ritualism of nomadic traditions. The shamanic concept is profoundly connected to qobyz, and the instrument is still considered to be a mediator between the physical and sacred realms. The sound of the qobyz is often described as the one capable of communicating with animals and nature; thus, the instrument has an imitative sound feature. As the instrument holds the meaning of the mystical and sacred tool, it helped Qorqyt to escape death while playing on the instrument: "According to a popular legend in the corpus of küis attributed to Qorqyt, the hero divided the instrument on the shores of Syr Darya River to escape death. In search of immortality, he visited all four parts of the world. But wherever he appeared, death would meet him in a different guise. Then he returned to his homeland, the shore of the Syr Darya River, and made the qobyz, covering it with the skin of his sacrificed she-camel, Jelmaya ("Fast-as-the-Wind"). Thinking that death

would not reach him on the waters of the Syr Darya, he spread out a carpet on the river's waves and came to play the qobyz day and night. His playing attracted all earthly creatures who gathered by the river drawn by the music, and as long as Qorqyt played, death could not approach him to take his soul. But one day, when Qoryt put down his qobyz to take a drink of water, he was bitten by a poisonous snake and died. Thus, Qorqyt became the patron (pir) of qobyz players." (Daukeyeva, 2016)

In Kazakh literature, Qorqyt-Ata is often described as "the father of all Turks" (Rancier, 2009). His name is also mentioned in other Turkic literatüre, such as Azeris and Turkmen. According to Rancier, the most famous example is "The Book of Dede Korkut," which takes place during the Oghuz Empire (probably in the 9th or 10th century A.D.) (Rancier, 2009).

According to musicologists Zhumabekova and Yeginbaeva, it is evidence of the qobyz being a long-time existing instrument in Central Asia. The instrument was mentioned in the "Great Book of Music" by a medieval thinker, Al-Farabi: “Significant influence on the scientific and cultural life of the peoples of Central Asia and Kazakhstan have been made by medieval thinkers, such as Al-Farabi (870-950), Ibn Sina (980-1037), Al-Khorezmi (10th century) and others. Thus, Al-Farabi’s musical-theoretical work “Great Treatise on Music” (“Kitab al-music al-Kabir”) was one of the

proofs of the long-time existence of bow instruments in Central Asia." (Zhumabekova & Yeginbaeva, 2019)

The authors also referred to researcher Sarybaeva's statement: "According to B. Sarybayev, researcher of the Kazakh folk instruments, Al-Farabi in his treatise highlights the description and ways of improvement of many musical instruments, and among them he mentions the two-stringed kyl kobyz, drawing attention to the bulbous type of the instrument. It is noteworthy that for Farabi "Natural instruments are throat, uvula, and all that in the throat, then the nose; artificial instruments are, for example, the flute, the lute, and others." (Zhumabekova & Yeginbaeva, 2019)

The Kazakh qobyz, until today, has not been radically changed. However, it has still been slightly transformed both in physical terms and in the playing method. Moreover, the function of the instrument has also changed, which has expanded the capabilities of the qobyz. This transformation's main aspects and causes are the influence of Western cultures and political and religious factors in Central Asia.

According to Gerard Clauson, in An Etymological Dictionary of Pre-Thirteenth-Century Turkish, the instrument's name, qobyz, emerged from the mixture of words meaning "hollowed-out object" or "container" in Turkic and Mongolian languages (Daukeyeva, 2016). Indeed, the hollow part of the instrument is one of the distinct parts of the qobyz and is the main resonator. The qobyz is traditionally made of whole-piece

wood, with the groove that resonates and the lowest part of the body, which is covered by camel skin. The strings of the qobyz are made of horsetail, just like the bow. The unique and very expressive sound of the instrument resulted from the contact of the hair-made bow to the horsehair-made strings. Importantly, the instrument is also commonly called “qyl-qobyz ” or “Kyl-Kobyz,” as “qyl” in this context means "hair". (Daukeyeva, 2016)

The epic story of Qorqyt-Ata leads to the belief in the power of qobyz as the instrument that connects two worlds and protects them from evil spirits. The instrument was used in the shamanic rituals by *baqsy* as a primary tool. Jyrau also used qobyz in the epic traditions: "In narrations of epic poems and tales by bars (called *jyraus* in Kazakh), who acted as spiritual leaders and advisers to the khans, qobyz playing served to protect and guide the community, and to foretell the outcome of important events, such as battles and military campaigns." (Daukeyeva, 2016)

Today, despite the same respectful attitude of people towards the qobyz, the instrument is no longer a shamanic attribute due to the fading of the shamanic tradition in Kazakhstan and the introduction of the instrument into the professional musical sphere.

1.1.1. Role of Qobyz in Kazakh Traditional Music

The interest in the power of the qobyz and its healing properties is often the main factors that bring researchers into studying the role of the qobyz in Kazakh musical culture. Because the nomads had a deep faith in a superior power, they turned to shamans not only in moments of illness but also when difficulties arose in the household. For example, Rancier quoted Mukhambetova's discussion on the life-giving properties of the instrument and its effect on the human and animal body: "The general Kazakh view of music and musical instruments as "bearer[s] of life-giving (zhiznetvoriashchaia) energy" able to open "channels (tamyry)" in the bodies of humans and animals. Numerous legends tell of miraculous feats enabled by performance on a musical instrument, ranging from the restoration of a camel's ability to provide milk to the reanimation of a deceased person back to life." (Mukhambetova 2002 as cited in Rancier, 2009).

Since Qobyz was an essential tool in numerous rituals and had the function of a talisman, people often hung it at the entrance to the yurt. This instrument has always been treated differently from other musical instruments of the steppe; such a respected attitude is related to the belief that the qobyz is an ensouled object. It has a soul and a voice through which qobyz communicates with the animal world, nature, and spirits. However, the central aspect of this instrument is that the qobyz has never been a musical

instrument; music was not performed on it professionally in terms of music till the 19th century, and it was not played for entertainment.

The sound of the instrument has a specific character that is described as a "raspy sound amplified by harmonics-the series of high-frequency, acoustically related to tones generated by a fundamental tone sounded on a string, or in a reverberant space such as a hollow tube " (Daukeyeva, 2016). Rich harmonics result from the friction of the horsehair bow on the string. According to Daukeyeva, "In shamanic rituals, harmonics and melodic ornaments combined with sound effects produced by ringing metal, pendants tinkling bells created a complex resonating soundscape." Also, the instrument produces a deep, drone-resonant sound with a variety of overtones. As Rancier explained, the sound characteristic is associated with a certain structure and the material from which the qobyz is made: "The dozens of vibrations from the 50-70 horsehairs that make up each string are enhanced by the resonance provided by the hollowed-out body and the piece of skin covering the bottom of it. Since the bridge rests on the skin, the vibrations from the strings go through it and then bounce off the skin, creating an unexpectedly loud but deep tone." Additionally, timbre often compared to the human voice and throat singing. In fact, singing was present in the performance of jyrau in which qobyz was used as an accompanying instrument. (Rancier, 2009)

The vertical structure of harmonics was also described by Amanzhol: "What matters to us is the instrument itself — an expresser of timbral sensations, embodying the image of a multi-layered space. This very structure becomes the key to the shaman's journey through the layers of the universe." (Amanzhol, 2016)

1.1.2. Traditional Repertoire: Kui

When discussing the integration of the qobyz into professional music and its repertoire, it is important to distinguish this context from its earlier use in shamanic practices. Although the shamanic tradition of *baqsy* continued into the early 20th century, the qobyz no longer played a central role in it. Instead, the instrument was associated with *Zhyrshy* – an epic singer who recited epic stories while accompanying themselves on the qobyz. This epic tradition began to decline toward the end of the 18th century. Following its decline, a new instrumental genre, *kui*, emerged in the mid-19th century. (Levin et al., 2016)

Kui is a traditional piece that uses narration and often includes storytelling. Kui as a genre is a concept of "program music" that combines an extra-musical idea and a narrative:" These pieces were an example of "program music" - that is, music that tells a story, represents images and events, or conveys emotions and states of mind" (Daukeyeva, 2016). The musician who performs this narrative instrumental music is addressed as “kuishi.”

The direct translation of the word "kui" could be translated as "state" or "mood." In fact, depending on the context and narrative of the composition, the music reveals the idea embedded in the music and adjusts the listener. Kui can be characterized as a solo work, also according to criteria such as "programmatic content and/or an accompanying legend, recognized authority, emphasis on improvisation, and a musical structure based on melodic motives" (Rancier, 2009).

As a genre related to traditional performing arts, Kui is performed on various traditional instruments within Central Asia. For example, in the Kyrgyz musical tradition, this genre is called kuu, in Tatar and Bashkir kyui and as an epic singing tradition - kai in Altai (Mukhambetova 2002 as cited in Rancier, 2009).

Traditionally, the solo performance of the kui is typical of all Kazakh instruments. Nevertheless, due to the innovations that occurred during the Soviet Union, this genre was also applied in orchestral works and called "symphonic - kui," which features characteristics of kui in structure but is performed by an orchestra: "This point is important with respect to the introduction of folk orchestras to the Kazakh musical landscape during the Soviet Union, and the many orchestral arrangements of kuis subsequently created for these ensembles" (Rancier, 2009).

The central figure who contributed significantly to this genre was *kuishi*[1] Ykhlas Dukenuly, who lived in the 19th century and is considered the pioneer of the Kui tradition. Ykhlas's contribution to the qobyz school includes expanding the traditional repertoire and developing virtuosic performance techniques. His compositions are considered to be more challenging and expressive.

1.1.3. Schools of Traditional Performance

The history of the qobyz starts from the 7th century and is associated with the name of the first shaman, Qorqyt, as he was the instrument's inventor. However, it was already discussed that traditionally, the instrument had a ritualistic function, and due to its sacred meaning, it was not considered a musical instrument. Thus, in this section dedicated to the schools of performance, the introduction will start with Ykhlas Dukenuly (1843-1916), a kuishi who brought the traditional repertoire of the qobyz to the virtuosic level. Notably, he is claimed to be the first whose music transformed from a ritualistic function to a performing art: "...This outstanding musician is considered the founder of the performing qobyz school since it was he who brought this instrument out of the narrow sphere of its ritual use. Preserving the principles of qobyz music and

[1]Kui performer

ancient works developed over the centuries, Ykylas enriched the instrument's technique and formed a professional qobyz repertoire" (Karsakbayeva et al., 2020).

Ykhlas is one of the most significant figures in the fundamentals of the qobyz performance school as well as in the contribution to the traditional repertoire and the development of the art in general. According to the records, his father, Duken, was a well-known qobyz virtuoso who passed his knowledge down to Ykhlas. As was mentioned, Ykhlas made a tremendous contribution to the field by composing distinct and virtuosic pieces that brought qobyz repertoire to a new level while moving far away from the *baqsy* tradition: "Zhubanov notes that Ykhlas's compositional style signals a move away from the "mysterious, other-worldly character" of the baqsi style of qyl-qobyz performance, and towards a life-affirming, 'secular' character" (Zhubanov, 2001 as cited in Rancier, 2009.)

The next generation that took turns to continue Ykhlass's traditions further consisted of his four students: Ashai Bekmagambetuly, Abikey Toktamysuly, Sugir Aliuly and Ykhlas's son Tusipbek. Notably, Sugir was a dombyra[2] player who

[2] A Kazakh traditional musical instrument

distinguished himself by performing Ykhlas's compositions on the dombra[3]. The tradition continued to pass down to the next generation and develop a professional qobyz school under the Soviet Union. During the Soviet era, Westernization strongly influenced Kazakhs' culture and everyday life. Due to the westernization of Kazakh instruments as well as their transformation, it was required to train qobyz players in a realm of professional institution, which was the first Conservatory in Kazakhstan. Additionally, new professional music schools were established within the whole Central Asia. It is impossible to deny the positive impact of this decision on instrument development, as it is possible that the intention was to elevate it to a more professional stage. However, this had a lasting impact, and the Western influence can still be observed today.

Two distinguished qobyzshi - Zhappas Kalambaev (1909–1970) and Daulet Myqtybaev (1904–1976) significantly formed the qobyz school within the newly established Soviet education system. However, they encountered difficulties preserving traditional playing while the qobyz increasingly became a Western instrument. According to Karsakbayeva and Dzhumaniyazova, the shamanic instrument was placed in the orchestras and ensembles, "The sacred and solo instrument kobyz began to be

[3] A two-stringed Kazakh lute

used in ensemble and orchestral performance."(2020:220) They also stated that: "While Kalambayev and Myktybayev maintained the traditional method of performance, their colleagues started incorporating cello techniques, thereby further transforming the performance school."(2020:220) According to the authors, these transformations were based on the adaptation of the standardized Western notation, a new tuning system, as well as the hand position and the playing method borrowed from Western standard string instruments. Consequently, due to notation adaptation which did not previously exist, the traditional form of learning qobyz playing, such as "Ustaz-Shakirt"[4], disappeared. Today, the adapted system of Westernized music education is still in use, and qobyz players are professionally trained within this model.

1.1.4. Evolution of the Qobyz

The main changes started in the late eighteenth century when the epic tradition slowly disappeared. The main reason for these changes was the socio-cultural transformation of the nomadic culture, which was the consequence of the political influence of the czarist empire. However, the epic tradition did not fade away. Instead, it transformed into a smaller genre: "The epic tradition continued in the form of smaller

[4] Master and Student

epic genres performed by bards (jyrshy) who accompanied themselves on the dombyra, the two-stringed plucked lute that from the nineteenth century onward would gain widespread currency among Kazakhs" (Daukeyeva, 2016).

The reason for mentioning the epic singers in the context of the evolution of the qobyz is that the instrument is related to this epic tradition, as before the dombyra, epic singers accompanied themselves with qobyz. There is not much evidence or records regarding qobyz being central in the epic traditions; however, some researchers mentioned this fact in their works. For instance, one of the first researchers writing about this was Shokan Ualikhanov. He wrote: “All steppe *zhyrs* are usually sung in a recitative style accompanied by the *qobyz*.” (Ергалиева & Қиякбаев, 2021). Additionally, the instrument was mention in some of the epic stories: “Mentions of the *qobyz* appear in the texts of the heroic epics *Koblandy Batyr*, *Er Targyn*, and the romantic epic *Kyz Zhibek*. ” (Ергалиева & Қиякбаев, 2021)

Another reason for the traditional decline was Islamic influence and the ideology that shamans faced during that time. According to the Kazakh ethnographer Shoqan Valikhanov, "Our national character increasingly takes on a general Muslim type…, and our bards, instead of folk epics, sing Muslim apocryphal stories set to folk verses." (Valikhanov as cited in Daukeyeva, 2016).

According to Daukeyeva, the new policies combined shamanic and Islamic traditions, resulting in the Sufi ritual - zikr (remembrance or praising Allah), which helped to integrate qobyz into Muslim practice. The process of zikr is a ritual where the prayer is repeated multiple times while praising God. It is a practice with a spiritual meaning, with the aim of achieving a trance state.

Similarly, in shamanism, which was before Islam spread in Central Asia, an important aspect was entering into a trance to connect with higher powers. In other words, the two practices described above had the same purpose, and because Islamic traditions became everyday for nomads, they intuitively combined the two traditions. However, the function of the qobyz used for ritualistic purposes shifted into traditional performance art by the nineteenth century, during which qobyz players started performing kui- the narrative compositions[5].

In the early 20th century, when the idea of westernization went too far for developing the traditional Kazakh instruments, a "modified" version of Kazakh instruments occurred. Qobyz was not an exception.

---

[5] See Section: *Traditional Repertoire: Kui*.

1.1.5. The Modern Types of Qobyz

Due to the influence of Western culture on the development of the arts in the Soviet Union era and, subsequently, on Kazakh culture, qobyz players have become actively integrated into the professional music scene. The new soviet policies and ideologies related to not only wanting to westernize the Central Asian region but also aiming for uniformity became reasons for the transformation. “Soviet authorities have formulated the imperative of national culture: national in form, socialist in content. It provided for some differences and features, but unification was at the front. Like Russian culture at the turn of the 19th and 20th centuries, those nations that had not developed orchestral traditions were persistently encouraged to develop new forms of collective performance. This led to the urgent need of a standardized music industry including instruments and their manufacturing as well as increasing numbers of performers (and instruments) for philharmonic needs” (Nedlina, 2023). With new trends and art improvement, professional orchestras featuring folk Kazakh instruments began to emerge. "In 1934, the first orchestra of traditional instruments (later named after Qurmanghazy) was established in Almaty - a major enterprise that came to epitomize the music of Soviet Kazakhstan" (Daukeyeva, 2016). Due to the demand to reconstruct and implement traditional instruments into the orchestra in 1936, the first modified version of the qobyz was invented. The reason for this was that, under the influence of Western innovations, like Western orchestras and ensembles, traditional instruments changed in

attempts to adapt their sound to Western standards: “Improvements" of the kobyz went so far that they led to the creation of a new instrument on which the traditional repertoire could not be performed. It can however, be used” (Muhambetova, 1995). Thus, variations appeared for a variety of Kazakh traditional instruments. In other words, given the example of qobyz, to achieve the sound of a violin, they decided to replace the strings of qobyz with metal ones, like a violin (Muhambetova, 1995). Thereby, the first "improved" qobyz was called prima-qobyz, and it was created on the example of a violin. "The prima-qobyz was modeled on the violin and, like the violin, served as the lead melodic instrument in the orchestra." (Daukeyeva, 2016)

Furthermore, the strings for the modern prima-qobyz were replaced with violin strings, and the number of strings increased to four. Ultimately, the instrument's playing method remained unchanged: performers held the instrument between their knees, seated, and played with their nails (unlike violinists). This variation of the qobyz continued to evolve, with other modified versions emerging for specific purposes. Another variation of qobyz emerged as the alto-qobyz, bass-qobyz, and "double bass qobyz to replace the functions of viola, cello, and double bass in the orchestra. "Following the introduction of the modified prima-qobyz, the other instruments in the qobyz consort were also superseded by their four-stringed, short-necked counterparts. The consort was now a quintet analogous to the string section of a symphony orchestra." (Daukeyeva, 2016)

The information related to the modern types of the qobyz is provided only for informational purposes, and this study focuses only on the traditional, original type of the qobyz. All the above-mentioned variations of the qobyz that emerged under Western influence were introduced as the historical part of the original instrument.

1.1.6. Structure of the Qobyz

The traditional Western classification of the instruments has categorizations. In the organological context, qobyz belongs to the group of chordophones, which are stringed instruments. According to Sachs, chordophones can be divided into four main groups: zithers, lutes, lyres, and harps. (Sachs, 2006) The qobyz belongs to long, bowed lutes or fiddles as it features a long neck and is played by bowing. The stringed instrument parts mentioned by Sachs are as follows: The body, rib, soundboard, soundholes, neck, stick, handle, fingerboard, frets, pegs, pegbox, string holder, bridge, and strings.

Generally, the are three main parts that characterize the string instruments. It was stated by Benade in his work *Fundamentals of Musical Acoustics,* "It is customary to think about instruments of the violin family as being made up of three reasonably distinct parts." He goes on to say: "(1) the sound-generating portion of the instrument, consisting of the bow and the strings working cooperatively; (2) the body, whose resonances strongly influence the way the sound is radiated into the room; and (3) the bridge, which mediates between the oscillating strings and the body" (Benade, 1990).

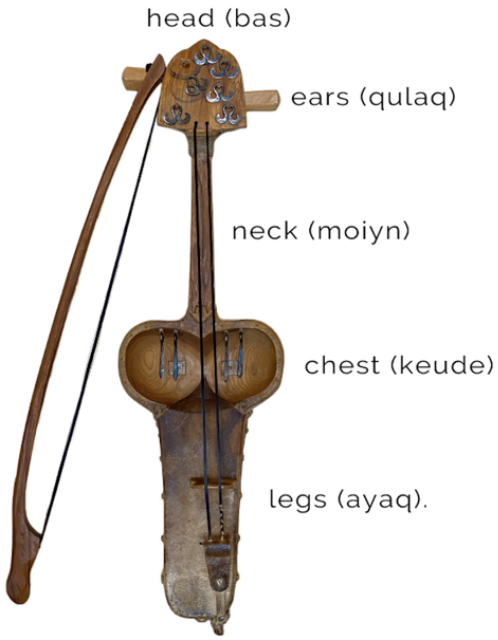

Figure 1. Qobyz and the indicated parts

The qobyz's body is the main resonator and, due to its shape, which is rounded, can be described as a shell if we consider the string instrument's organology explanation by Shach: "The *body* is usually a soundbox or resonator; in rare cases, it is only a stick or board. It is always structurally a part of the instrument. Therefore, the term cannot be applied to designate an attached gourd, as in the stick-zither. *Shell* is used by preference when the body is round and reminiscent of the shell, for instance, of a coconut." (Sachs, 2006)

The instrument does not have ribs as it is built from a whole piece of wood, unlike the violin. It features a soundboard made from wood and animal skin and a sound hole cut into the soundboard. The instrument's neck grows from the body and is considered long. The instrument lacks a fingerboard since it is played not by pressing fingers against the neck but by using nails, specifically cuticles, pushing the string to the side as there is a space between the strings and the neck. On top, two pegs (Sachs, 2006) are growing from both sides of the pegbox with the back left open. The strings are attached to the string holder, which is made of skin and attached to the body's lowest point. The bridge is located between the soundboard and the string holder of the qobyz, as it is common among stringed instruments. The bridge is a mediator that keeps the distance between the string and the soundboard while transferring the string's vibrations to the soundboard. The strings of the qobyz are made of horsetail and have not been changed.

There are specific rules for the construction of the instrument that have been followed for a long time. For example, the length of the instrument is typically 600-700 millimeters, while the width ranges from 100-200 millimeters. The depth of the instrument’s sound box is 60-80 millimeters. (Vertkov, 1963 as cited in Rancier, 2009)

String application is an essential and complex process that significantly affects the instrument's sound. The strings are made only from horsetail (preferably male),

carefully washed in soapy water, and thoroughly combed. However, the most crucial aspect is the quantity of hair for each specific string. For instance, the string, D (unlike the violin), should consist of approximately 60 to 70 hairs, while the string, either G or A, should have around 50 to 60 hairs. (Qosbasarov, 2001, as cited in Rancier, 2009). Another professional qobyz player, Raushan Orazbayeva, shares her opinion on achieving perfect sound from the strings: "The D string should consist of 80 hairs, while the string (G or A) is supposed to have 60." According to Orazbayeva, the lowest string should have more hair, as it helps achieve a deeper and denser sound. Depending on the tuning, the highest string, usually G or A, has 60 hairs, as this string should sound higher and thinner: "The less hair you apply, the thinner and higher the sound will be, as this amount of hair is easier to stretch." The traditional qobyz bow is typically an arch-shaped wooden part with a horsehair. The type of wood from which the bow is made is usually the same as that of the instrument.

The material from which the instrument is made is most often a solid piece of wood like maple or birch. However, there is a specific type of tree from which it is best to make the qobyz. According to the results of Rancier's research during her stay in Kazakhstan, she was informed that the best material is "Kara-agash," which literally means black wood. Notably, the process of the qobyz construction starts with shaping the basics of the instrument and giving time to dry for approximately a month, after which the material is ready for further manipulations.

Qobyz belongs to the sacred heritage of the Kazakh people; it is revered, respected, and treated as an animate object. In this regard, the instrument's parts are also referred to as parts of the human body. For example, the head (bas), ears (qulaq), neck (moiyn), chest (keude), and legs (ayaq).

It is also expected to decorate the instrument with various objects such as mirrors, metal ornaments, and feathers of sacred birds. Each such decoration has its own specific meaning. For example, mirrors are inserted into internal resonating recesses to protect against the evil eye or evil forces. They also symbolize the portal between this world and the other world. Metal hanging ornaments create percussive sounds while playing the instrument, which also belongs to shamanic traditions.

1.1.7. Tuning

Today, the qobyz is tuned to either a perfect fourth or a perfect fifth for performance. These two intervals (p.4 and p.5) are fundamental in the structure of Kazakh traditional music. They often occur within traditional pieces as well as in kuis (traditional qobyz pieces) performed by the qobyz. In a kui, the introduction starts by playing long notes on the open strings, which are usually a perfect fourth or fifth. The following figure demonstrates two of the most commonly used tunings.

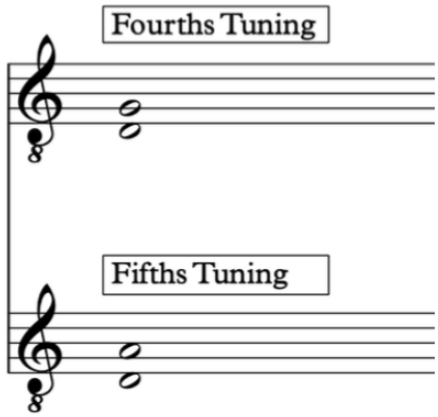

Figure 2. Examples of Two Standard Tunings

According to Rancier's study, each tuning had a particular function. In pre-Soviet times, Zhyrau, the Kazakh epic singer, used the perfect fourth tuning for recitation. The perfect fifth was used by Baqsy, the Kazakh shamans, as an accompaniment for their ritualistic practices (Kunanbaeva, 2002, as cited in Rancier, 2009). Each of the two strings has its own characteristics; according to those, they have specific functions. For instance, as the upper string (G or A) sounds higher and lighter, it is mainly used to play the main melodies, while the lower string, which is D, functions as a pedal tone.

CHAPTER II

PLAYING TECHNIQUES

This chapter includes the standard string playing techniques that are available for the qobyz. The presented playing methods were selected, evaluated, and applied to qobyz. They are divided into two categories: left-hand and right-hand. Within themselves, these two categories are separated into specific techniques unique to the qobyz traditions.

Additionally, it is important to note that using treble clef in the qobyz notation is common, similar to the violin. However, due to qobyz's actual sounding result being an octave lower, all notated examples in this thesis are presented using the octave treble clef.

2.1. Hand Position and Instrument's Range

One must understand the principles of hand-position before delving into pitch production and playing techniques on the qobyz. Usually seated, the instrument is held

with the end softly compressed between the knees. The instrument's leg should not drop lower since this will cause the bow to operate in an inappropriate range. The bow will interfere with the left hand while playing in this position. The head of the instrument should lean on the performer's left chest. The traditional method to stop the string is done by using the left-hand fingernails or, to be more precise, by cuticles. Due to the distance between the strings and the neck, which is approximately three centimeters, the performers produce notes by pressing the string with the cuticle from left to right.

Generally, only four fingers are used: the Index finger, the middle finger, the ring finger, and the pinky finger. The thumb[6] is not used as it is positioned under the neck, which helps to move from one position to another, and is a crucial support for left-hand fingers. The number assigned to each finger is similar to strings such as a cello or a violin: The first-index finger, the second-middle finger, the third-ring finger, and the fourth-pinky finger. The following example, Figure 3, demonstrates the proper hand position together with finger indication.

[6] Using the thumb is not typical for traditional repertoire as it serves as a supporting finger for the neck of the instrument.

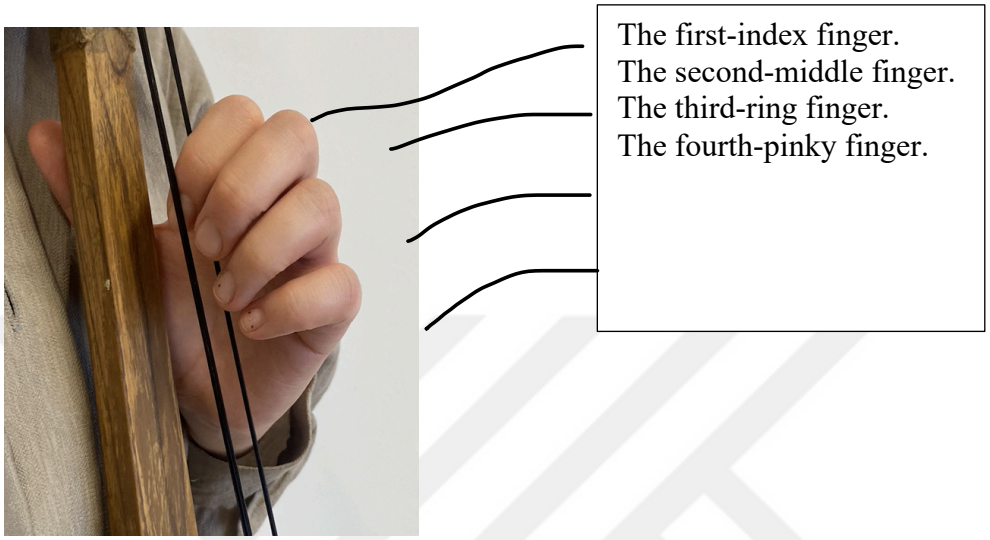

Figure 3. Left-hand Position and Finger Indication

To clearly understand the range of possibilities of the instrument, the following chart in Figure 4 is provided. Each of the strings has a range of two octaves. It is important to note that the range of the qobyz is not limited by the range provided example, Figure 4, as it illustrates the range mostly used in all types of repertoires for the qobyz. There are examples that show all the possibilities of the range of the instrument, which are discussed further in this chapter.

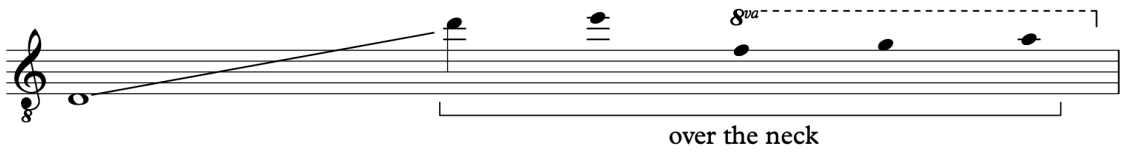

Figure 4. Overall range

In Figure 5, three strings are indicated as qobyz has two tunings: the first string may vary between G and A, but the second string is always D.

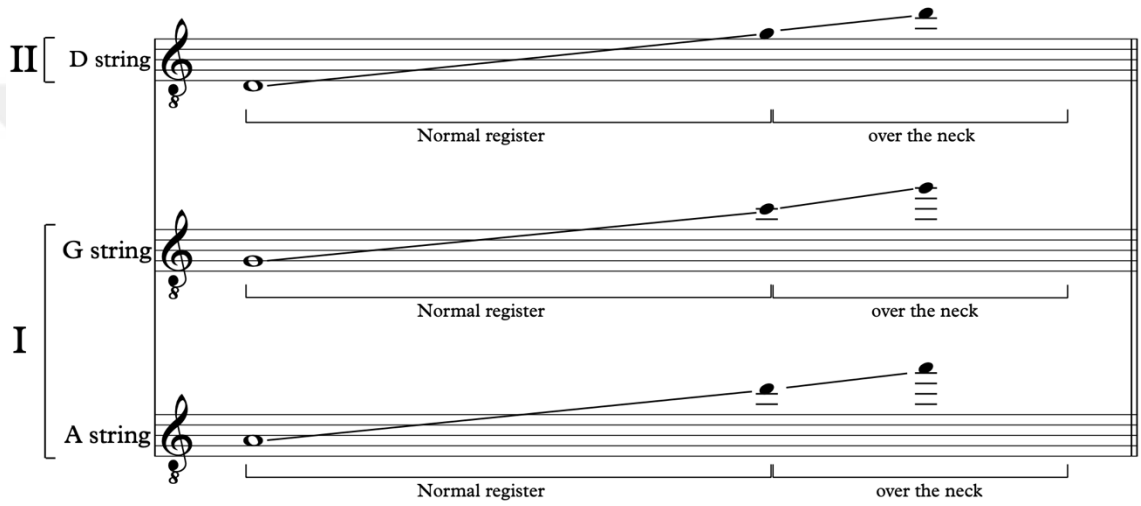

Figure 5. Range Explanation for Each String

As indicated, the chart illustrates normal and over-the-neck registers. The normal register is used in traditional repertoires. However, the notes over the neck are rarely used due to technical difficulties such as hand position, being very close to the bow position, and difficulties with intonation that may also affect the timbre quality. However, these challenges do not exclude this register or make it inapplicable. This register is applicable with the control over the bow and intonation.

2.1.1. Left-Hand Techniques

This section demonstrates techniques that are performed using the left hand. It illustrates all possible left-hand playing techniques commonly used in the string instrument, including extended techniques. Also, it includes an explanation of finger positions.

2.1.1.1. Finger Positions

Finger position is critical for pitch production and intonation. The following diagram illustrates the standard finger placement and how it correlates with specific pitches. There are eleven finger positions in the qobyz, as illustrated in the following chart. (Figure 6.) Finger positions are explained for both strings. For the first string, there are two possible tunings and finger positions are illustrated according to them. It should be considered that the position over the neck may not sound as clear as standard registers. Additionally, it is important to note that the provided table is based on Equal Temperament; however, any type of microtonality is applicable to the qobyz.

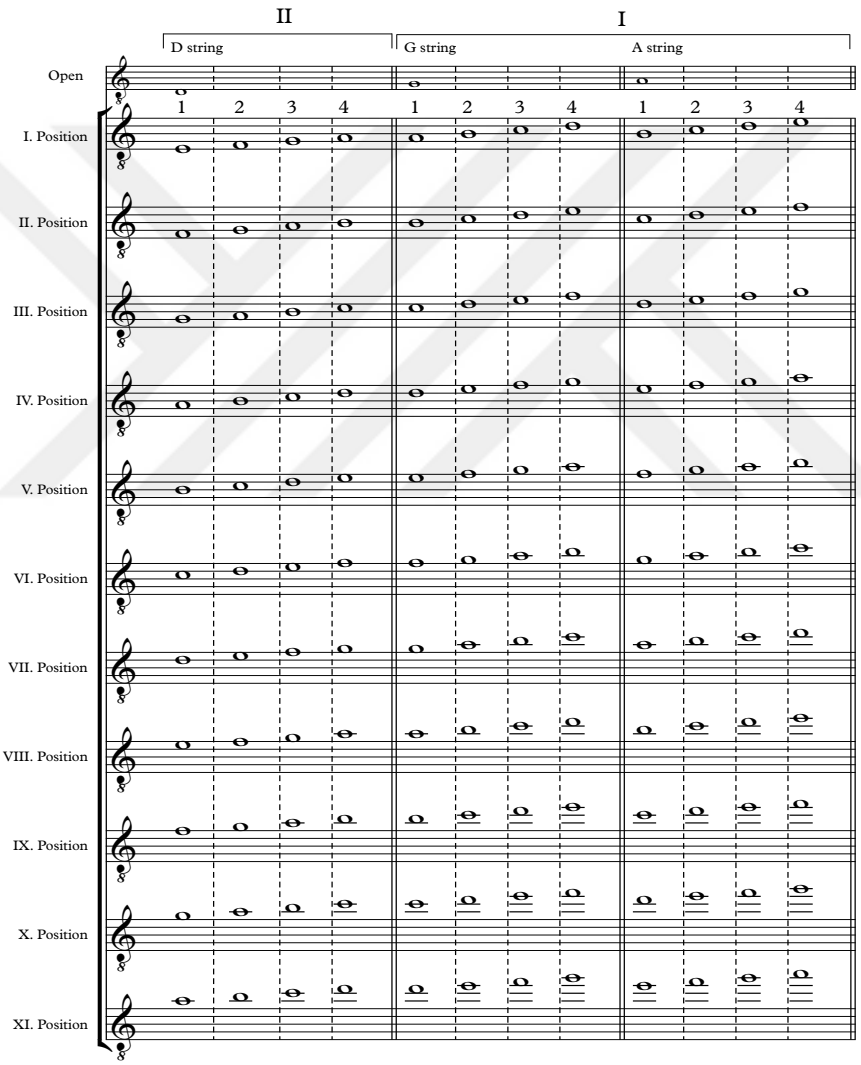

Figure 6. Finger Positions on the Qobyz.

2.1.1.2. Double Stop

The double stop is a common technique among all string instruments. It is a playing technique that requires the performer to simultaneously stop two notes on the adjacent strings. On the qobyz, it is significant to consider the distance between the stopping notes and the left hand's position to produce two-pitched intervals. There are two ways to play intervals on the qobyz: intervals where the performer stops two strings with both nails and the finger, and the ones that are stopped by only nails. Additionally, intervals with one string open are commonly used as they are the most approachable and are always available.

Available interval types are provided below; they are divided into two standard tunings applied to the qobyz. As it is shown, the first position includes intervals starting from the second and those that are smaller than the octave. It is important to note that the distance between the intervals is reduced in the upper positions, so it is possible to play octaves starting from the second position. Additionally, if stopping notes require stretching in the first position, the upper finger positions do not require stretching, and intervals are easily approached.

Tuning	Positions	Intervals Type
Fourths	1	Second and larger Smaller than an octave
	2 and above	Second and larger Octave and smaller
Fifths	1	Third and larger Octave and smaller
	2 and above	Second and larger Octave and smaller

Figure 7. Available Intervals For Double-Stopping

Generally, unisons are possible with only one string open. The octave is the limit for double-stopped intervals, but wider intervals are possible if playing one string open.

The example below shows a possible option for performing large intervals like an octave and higher. This method is possible when one interval pitch is an open string.

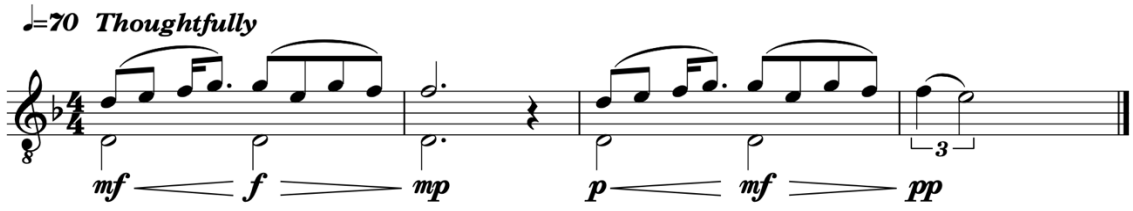

Figure 8. Double-stop with One String Open – Tokzhan Karatai, *Joqtau* for String quartet and Qobyz, mm. 139-141.

Intervals located behind the neck register are easier to perform as the distance reduces; however, if playing in very high positions closer to the bridge, the intervals are hardly controllable regarding intonation and dynamics.

It is crucial to consider different tunings for the first string on the qobyz. Since fourths and fifths tunings are used, intervals vary depending on the tunings applied, as the sopped intervals on fourths tuning differ from those performed on fifths tuning. The distance between adjacent strings is greater in fifths, resulting in different finger placement for the same intervals performed in fourths tuning.

2.1.1.2.1. Double Stop With Nail And Finger Pad Combination

Although stopping the string with nails is the standard way of pitch production, there are some exceptions when the performer stops two strings, both with the nail and the finger pad. This is quite common within the traditional qobyz repertoire. For instance, the example below illustrates that the notes played on the D string are produced by nails, while the notes on the A string are produced by slightly touching the string from below with finger pads. Importantly, this method produces harmonics as the upper voice notes are stopped with the light touch of the finger pad.

Figure 9 shows an excerpt where the qobyz plays parallel fourths, in which the second voice is played with nails, and the upper voice is played with a finger pad. This method is called "double stop with nail and finger pad combination."

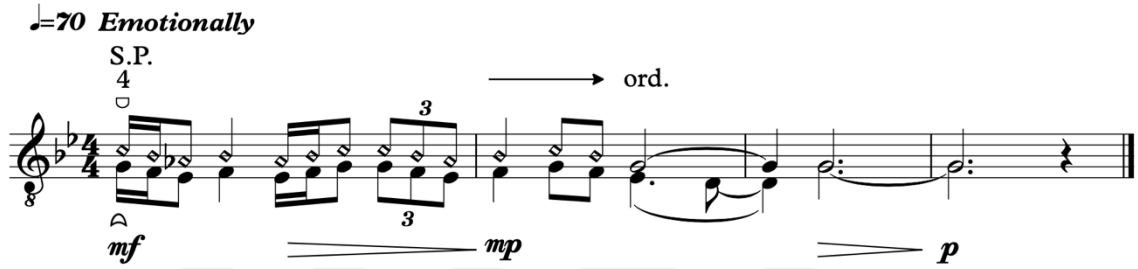

Figure 9. Double Stop with Nail and Finger Pad Combination – Tokzhan Karatai, *Joqtau* for String quartet and Qobyz, mm. 16-21.

2.1.1.3. Vibrato

Vibrato is fully applicable to qobyz and can be performed in several ways. For instance, it is possible to smoothly switch between standard vibrato, with a small oscillation, and *molto vibrato*, with a wider vibration. Additionally, it is easily combined with different types of bow position techniques, such as *Sul Ponticello, Sul tasto*, and *Col Legno.*

In the traditional repertoire, according to the recordings that have been preserved to this day, a very small vibration was applied by most of the performers. Additionally, it was applied mainly to long tones rather than short ones.

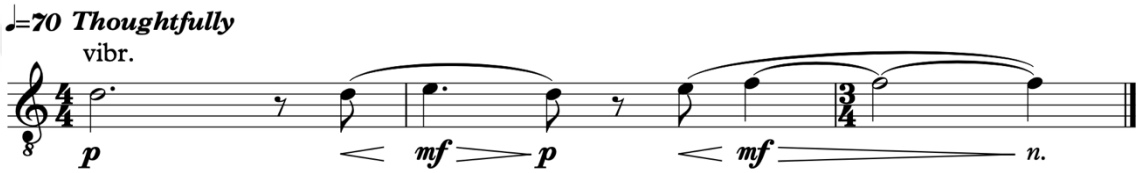

Figure 10. Vibrato

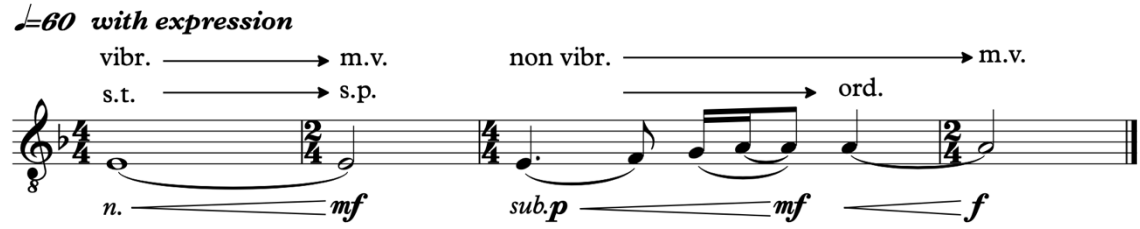

Figure 11. Vibrato Combined With Other Techniques

2.1.1.3.1. Vibrato On An Open String

Due to the significant distance between the strings and the instrument's neck, vibrato on an open string is possible, although vibrating with a finger on the open string is impossible. However, there are alternative ways to implement this technique. While bowing one open string, the adjacent string can vibrate. For example, if playing on an open D-string while vibrating is required, one can vibrate on the first string, A, without

bowing on it. Notably, the vibrating pitch can be slightly heard and affect the timbre of the sounding note.

However, the register matters as the vibrating pitches are mostly definable in the higher register starting from D5 and above. For instance, if a D open string is played, then vibration by stopping D5 on the adjacent string will create an octave interval within two D notes.

This vibration technique usually does not need to be indicated or notated on the score, as a performer understands that it is impossible to directly vibrate on the open string and perform it on the adjacent string. However, as mentioned before, the vibrating string can affect the sounding one, and it gives a possibility to enhance the vibrato technique in terms of timbral aspect; thus, the following notation example is suggested:

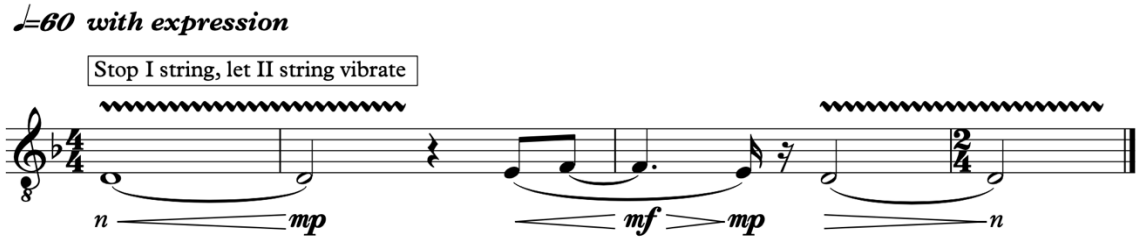

Figure 12. Vibrato On An Open String

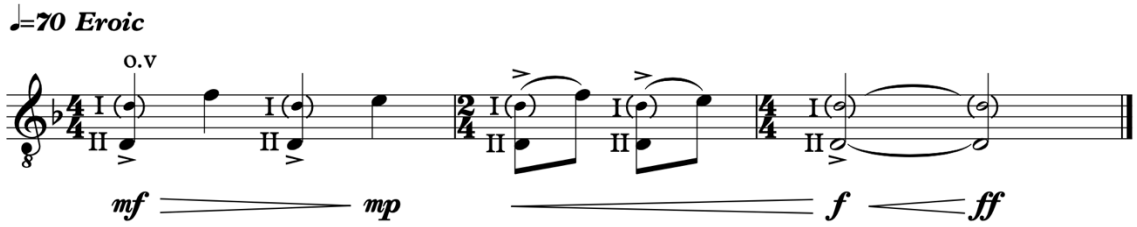

Figure 13. Vibrato On An Open String With An Octave Indication

2.1.1.3.2. Rhythmic Vibrato On The Skin

Another way of vibrating on the open string is to oscillate with the left hand on the skin part of the instrument, right in front of the bridge, under the strings. This way, it is possible to vibrate both open strings simultaneously and individually, which is usually used in the traditional repertoire of the qobyz. As shown in the following example, D and G are open strings[7]. Bar one indicates "let vibrate on the skin," which means the performer with the left hand oscillates on the skin part of the qobyz, written below the strings. In bar two, a rhythmic vibrato is created by the actions of the left hand.

[7] The example in figure 14, is in the fourth tuning.

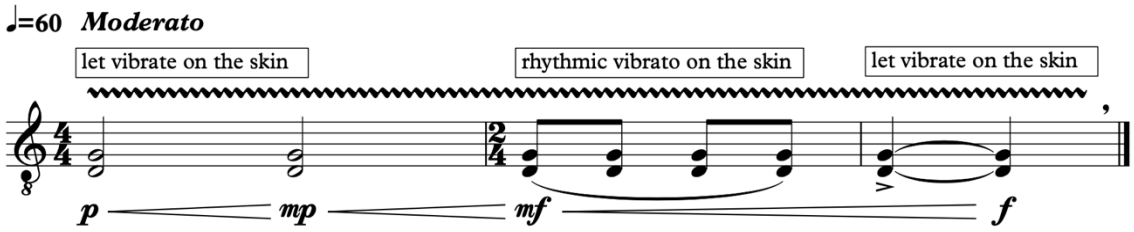

Figure 14. Rhythmic Vibrato On The Skin

2.1.1.4. Glissando

Glissando can vary depending on the pressure, speed, and angle of the performance, as well as combinations with other playing techniques. There are different glissando types, and most apply to the qobyz. However, the result may differ from what can be obtained from stringed instruments such as the violin, for example, due to the specific acoustic features of the qobyz as well as the material of the instrument's strings. For instance, the glissando on the strings made of horsetail sounds warmer and softer than the glissando on the metallic string.

As noted above, the glissando can be performed differently depending on the sliding speed. It can also be combined with other effects, such as *sul tasto, sul ponticello*, and *col legno*. It can also be applied with *molto vibrato*. Figure 15 demonstrates a standard glissando, while Figure 16 illustrates an example of the

glissando performed with the *molto vibrato* technique.

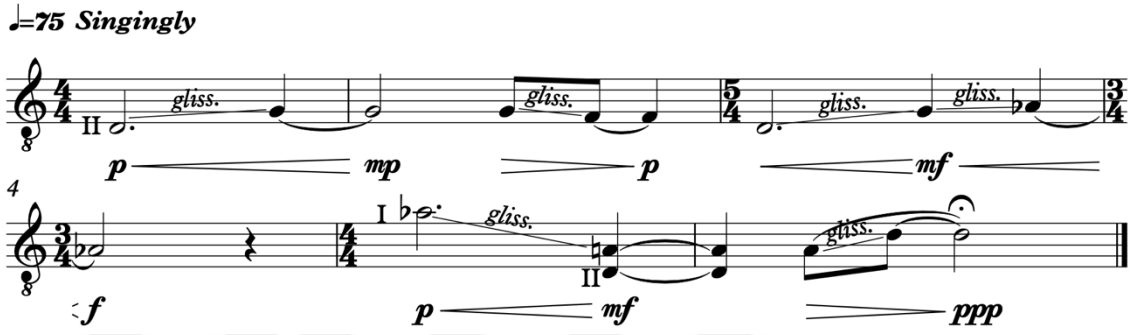

Figure 15. Glissando

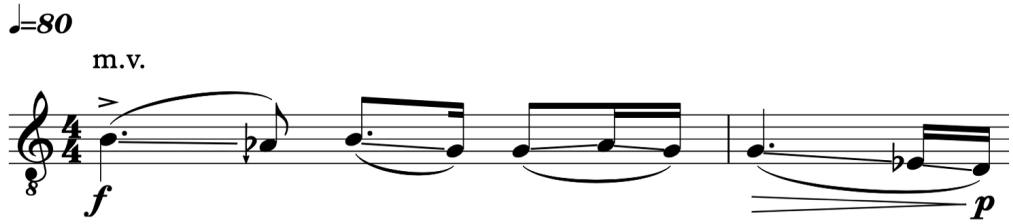

Figure 16. Glissando – Tokzhan Karatai, *Joqtau* for String quartet and Qobyz, mm. 29-30.

2.1.1.4.1. Double-Stop Glissando

The glissando technique can be performed with double stops. On qobyz, this method can be performed on both strings. This technique has several methods: 1) parallel motion, when the left-hand moves in parallel motion on two strings simultaneously while the right hand is bowing on two strings. 2) contrary motion. If we

talk in the context of Western strings, then this method can only be applied to the cello or double bass since, in these two instruments, the left hand can use the thumb. In traditional qobyz playing, the thumb is rarely used (only in the traditional repertoire requiring imitation of animals). Nevertheless, the instruments' playing method and the position of the left hand allow the use of the thumb for glissando in contrary motion. Applying a thumb's finger pad will be more effective to do this, since it is practically impossible with a nail. This method expands the range for the left hand and produces a glissando with contrary motion. Importantly, contrary motion glissando that is wider than a perfect fourth simultaneously is challenging, and it is suggested that the instrument's tuning and the performer's hand size should be considered. The following figure 17 illustrates three different types of double-stop glissando.

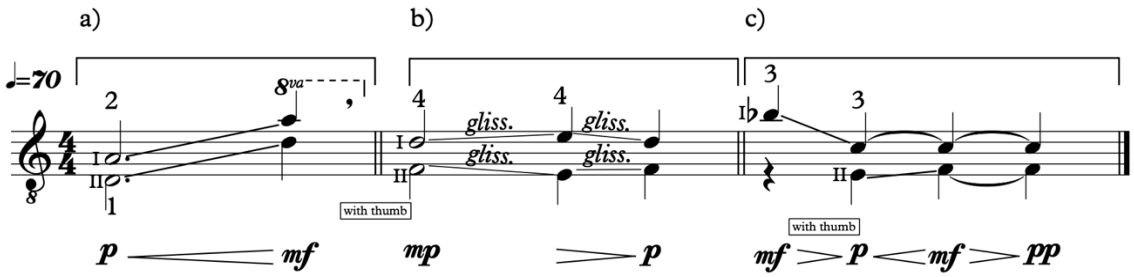

Figure 17. Double stop glissando: a) Parallel motion, b) Contrary motion, c) Sequential and oblique contrary motion

2.1.1.4.2. Seagull Effect

Another possible glissando is the Seagull effect technique. It is also called the whale effect. The method of performing this technique is similar to cello. To perform, you need to use two fingertips, create an artificial harmonic position, and slide from the upper register down. The interval of the artificial harmonic is not essential, as any interval will work to achieve the desired whale sound effect. It is essential to note the difference between the Seagal effect technique and the standard artificial harmonic glissando on the stringed instruments. In the Seagal effect, the left-hand fingers' position is fixed when sliding down or up, while in artificial harmonic glissando, the fingers' position changes as the distance between the intervals extends or gets smaller, depending on the position.

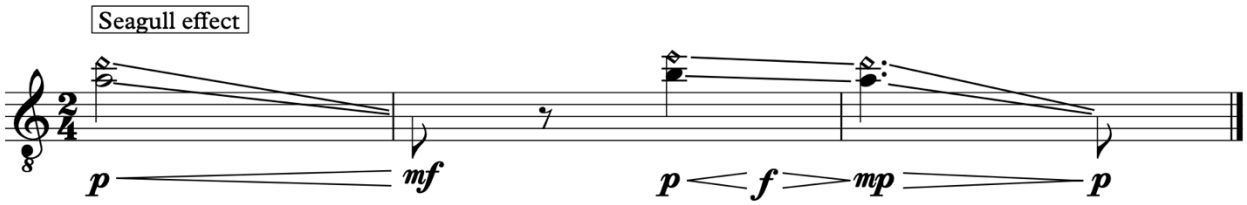

Figure 18. Seagull Effect

2.1.1.4.3. Undulating Glissando

Glissando can be performed not only in one direction with the left hand but also in a wave-like manner. The left hand can move up and down, giving a randomness or

undulation effect. This method can be combined with different intensities, rhythms, and vibrato.

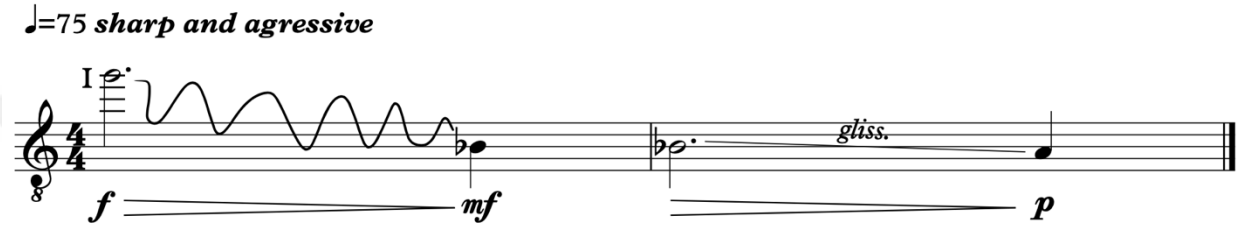

Figure 19. Undulating Glissando

2.1.1.4.4. Glissando With Tuning Pegs

Glissando can also be played by turning pegs upwards or downwards. One hand manipulates the pegs while the other is bowing or plucking strings. However, it is suggested to turn the pegs downwards as pulling the strings can damage or even break them. Moreover, this technique is not recommended for live performances, as tuning it back isn't easy.

Figure 20. Glissando With Tuning Peg

2.1.1.5. Trill

Trill is an ornamentation technique accomplished by alternating between two notes that are one semitone or a tone apart from each other. Commonly, it is indicated by the abbreviation *tr* on the top of the trilling note. Trills are commonly used on the qobyz, both in traditional and contemporary music. The trills can be played on both strings and all registers.

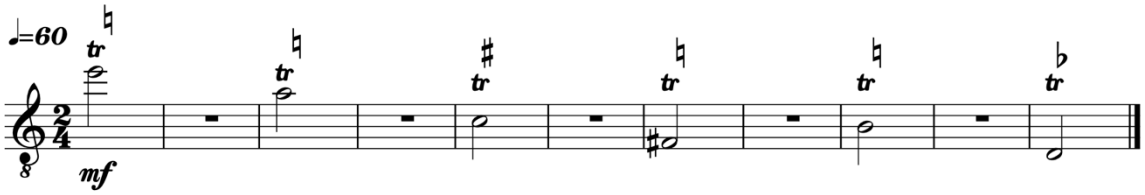

Figure 21. Trills

2.1.1.6. Finger Tremolo

The fingered tremolo is approachable on the qobyz. It is accomplished by oscillating between two notes on the same or adjacent strings. If the oscillating of two pitches happens on one string, thirds and fourths can be played, but the hand size and the registers should be considered. For instance, fourths are possible on higher registers rather than lower. As an example, on D string the fourths are possible on A4 and above. On G or A, the fourths can be played starting from F5 or E5, respectively. If performing

larger intervals, then two strings are supposed to be used as intervallic possibilities expand to[8]. Any large interval is possible if one of the notes is an open string.

The technique is usually notated by indicating the value for the tremolo, but without measuring notes within the tremolo. Figure 22 illustrates three possible finger tremolos[9]: a) finger tremolo on the one string, the Roman numeral indicates the string number. b) tremolo on two different strings, but this tremolo is done by bowing. It is also indicated that this example is performed with finger pads, as this method is more convenient for approaching parallel string stopping. c) The bow accomplishes the tremolo with an open string.[10]

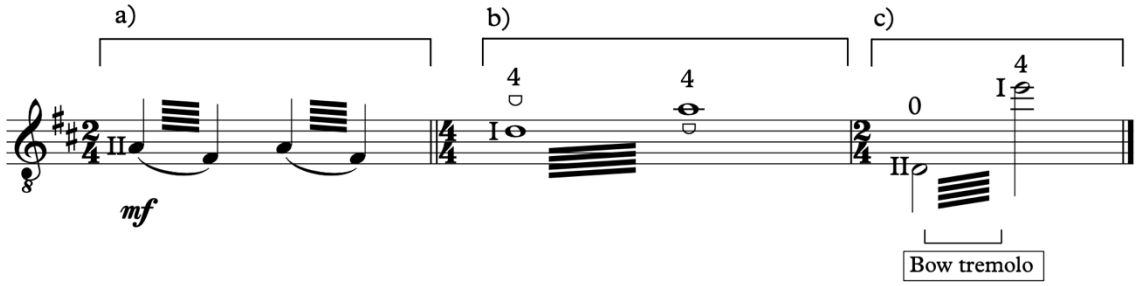

Figure 22. Finger Tremolo

[8] See possible intervals in the Double Stop section.

[9] Bow tremolo is explained in the bow techniques section

[10] Bow-based tremolos are examined in this section to explain the possible intervals.

2.1.1.7. Playing Techniques Based On The Pressure

This section is dedicated to string techniques mainly accomplished by finger pressure. Here, details of existing pressure types and their resulting effects are provided and illustrated.

2.1.1.7.1 Ordinario Pressure

In the context of ordinary finger pressure on the string, we are referring to an adequate pressure, enough to produce a clear and even sound without intonation fluctuation. On qobyz, ordinario pressure means standard playing with nails and medium pressure on the string.

2.1.1.7.2. Half Pressure

Playing with half pressure on the qobyz is often used in the folk and modern repertoire. As with other stringed instruments, this method is applied, considering the determination of the sound effect. It all depends on how weak the pressure is and on the contact points of the finger and the string. Half pressure creates overtones. However, if the pressure is significantly light, it will result in uneven and unclear sound.

2.1.1.7.3 String Bending

String bending is applicable to qobyz and is performed by pushing the string. Bending is commonly used in the traditional repertoire as an effect to raise the note microtonally. It is typical to stop on one specific note and bend it to create a micro-inflection effect, and bending the string to raise it to a tone is possible. However, the risk of losing the tuning should be considered.

On the qobyz, since there is a distance between the instrument's neck and the strings, the strings can be pushed to the left, right, and down. For example, in traditional qobyz music, this playing method is performed by slowly pushing the stopped string down till reaching microtonal variations. The examples below illustrate string bending in different directions.

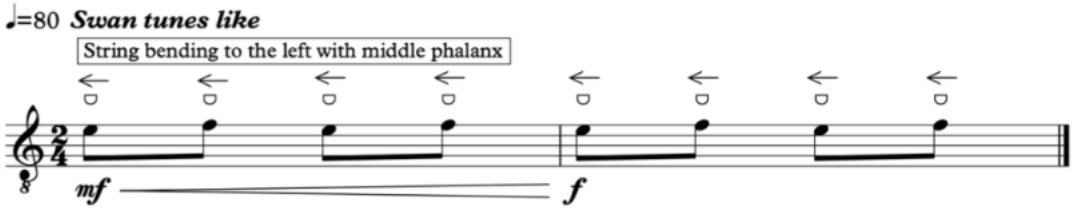

Figure 23. String Bending With Finger Pads To The Left

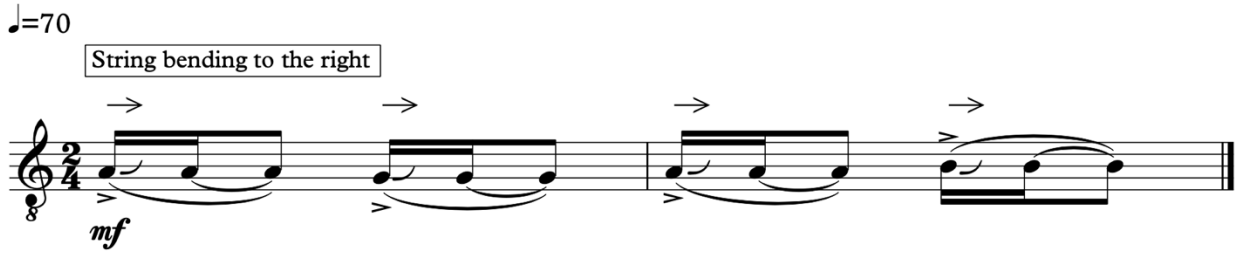

Figure 24. String Bending To The Right

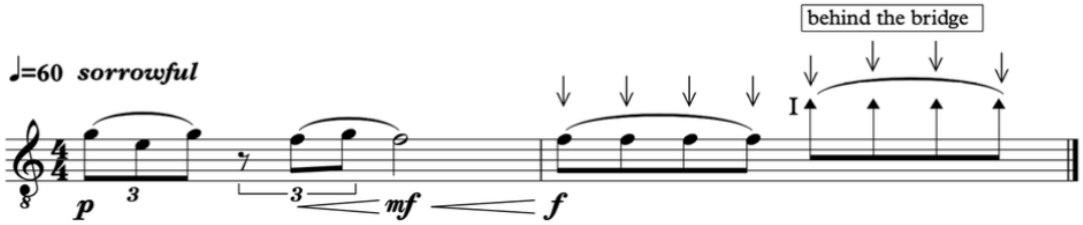

Figure 25. Downwards String Bending – Tokzhan Karatai, *Joqtau* for String quartet and Qobyz, mm. 109-110.

2.1.1.8. Harmonics

Generally, harmonics on the string instruments are produced by slightly touching the string while it is vibrating. On the qobyz, it is possible to play harmonics by slightly pressing the string both with nails and the finger pad. However, in traditional qobyz school, harmonics are usually called *flageolet* and are played by shifting the bow close to the bridge.

Similar to other string instruments, two types of harmonic series are available on qobyz: natural and artificial harmonics.

2.1.1.8.1 Natural Harmonics

The first type of harmonics is called natural harmonics, as they are produced on the open vibrating string by slightly touching the nodes. The slight touch on the string creates the partials that are parts of the fundamental pitch and belong to its harmonics series: "Every pitch produced on any sounding body-whether a string or a vibrating air column-is a combination of the open string, called the fundamental or first harmonic (or first partial), and some overtones (second partial and higher.)" (Adler, 2016).

The sound characteristics of the natural harmonics on the qobyz can slightly differ from those produced on the string instruments with metallic strings. On the qobyz, harmonics sound more shimmering and spectral due to the hair-made string on the qobyz.

Similar to the other string instruments, the qobyz can produce up to six partials. They are easily approachable, but the sixth partial may sound unclear as the left hand, which stops the string, has to produce the partial at a very close distance to the bow.

The example below, modeled on the example given in S. Adler's "The Study of Orchestration" book, illustrates the six partials on both open strings of the qobyz. Both illustrations start from the fundamental tone.

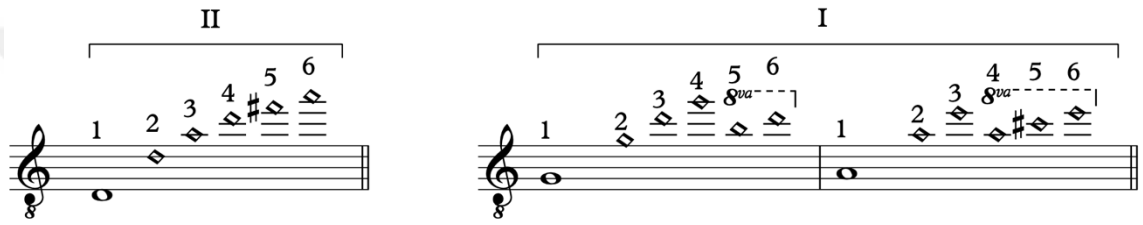

Figure 26. Harmonics Of The D, G, And A Strings. Six Partials.

The example below, figure 27, demonstrates natural harmonics on the qobyz in a reverse direction: from the higher register to the lower.

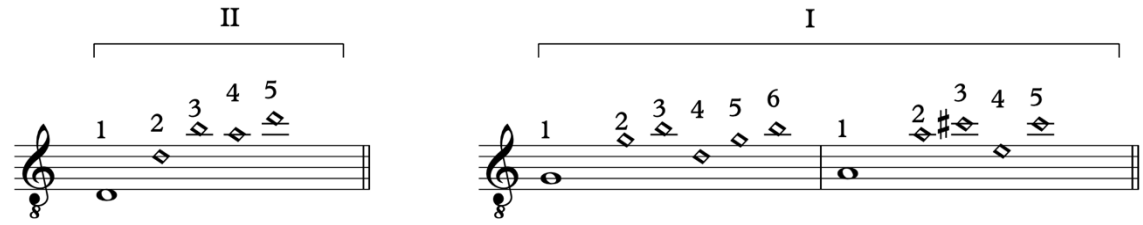

Figure 27. Harmonics Of The D, G, And A Strings. Backwards Direction.

2.1.1.8.2. Artificial Harmonics

Artificial harmonics are usually not used in the qobyz repertoire and are less practical than on Western string instruments because of the horsehair-made strings. On the qobyz, some harmonics do not provide a stable result. Nevertheless, it is possible to produce artificial harmonics on the instrument. They are produced similarly to the Western string instruments by stopping one pitch with the first finger and slightly touching the curtain interval above. The possible intervals for artificial harmonics are major and minor thirds and perfect fourths. Alternatively, the thumb can be used to stop the fundamental pitch instead of the first finger. This way, the thumb is used as an extension for finger position.

Figure 28 demonstrates a chart for possible artificial harmonics on qobyz.

Figure 28. Possible Artificial Harmonics.

2.1.1.8.3 Harmonic Glissando

Glissando can be combined with other techniques, such as harmonics. On qobyz, due to the acoustic features (the hair strings of the instrument), this method sounds especially impressive. Basically, this method is performed with the fingertips of the left hand since it is this method that allows you to achieve a brighter harmonic spectrum. It is important to note that when performing a harmonic glissando, the range expands, and the left hand can perform the glissando right up to the instrument's bridge.

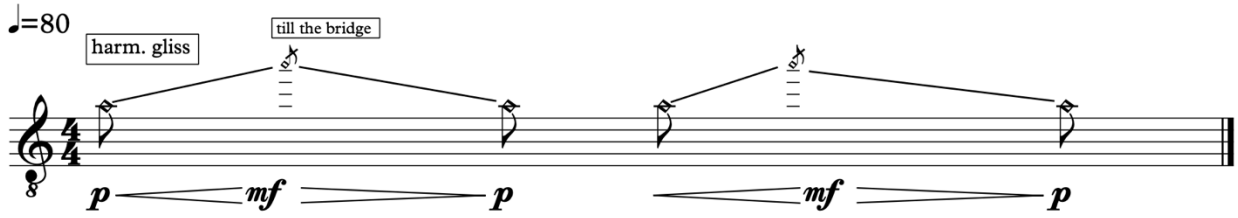

Figure 29. Glissando Based On Natural Harmonics

2.1.1.9. Multiphonics

Multiphonics is a frequently used effect in the contemporary repertoire of wind instruments. However, this method has also been found to be applicable to stringed instruments. According to Fallowfield, the author of the manual "Cello Map," there is still no reliable explanation of the effect of this technique in the context of string instruments: "There has been little research exploring multiphonics in stringed

instruments; an acoustical explanation of the effect is still lacking." (Fallowfield, n.d.) The author provides certain conditions under which the technique can be approachable. The main aspects of performing multiphonics on stringed instruments are high bow pressure, very slow speed while bowing, and finger pressure on the left hand. Also, the author emphasizes the importance of the contact point, where the bow contacts the string. Typically, it is a point that is close to the bridge.

In the context of the qobyz, this technique has not been studied and has never been practically applied to the instrument. However, because the instrument has the unique property of producing many overtones, this technique is applicable under specific conditions. If we proceed from the perspective that multiphonics is a combination of many simultaneously sounding overtones, then on the qobyz, this effect, coming from only one string, can be achieved under the following conditions: the string should be stopped with a fingernail and under full pressure - not half as in the case of overtones. The following important suggestion is to choose the pitch from which the overtones will be produced, but then slightly shift it down; that is, the pitch should be microtonal. Lastly, the bow should be close to the bridge and under sufficient pressure. The more pressure, the more overtones can sound.

When using this playing technique, it is important to understand that this effect is more difficult to perform on strings than on wind instruments, and therefore, it is always a matter of chance.

Usually, multiphonics is indicated either by M or by a "multiphonics" indication on the score. The note heads are similar to those used for overtone notation. Additionally, one should consider the dynamic possibilities of this technique on the instrument when writing multiphonics for the qobyz. Generally, dynamics here are not flexible, and applying loud dynamics is impossible.

The example below, Figure 30, illustrates the suggested notation for multiphonics. All multiphonics are presented in different ranges.

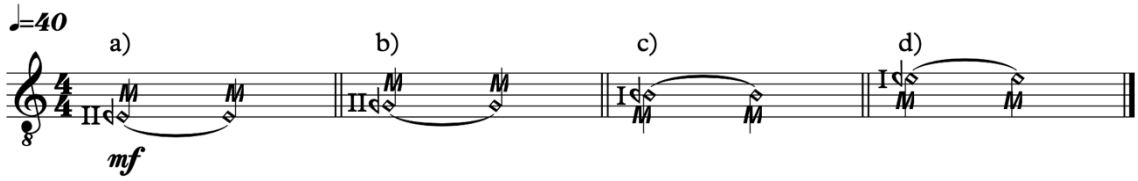

Figure 30. Multiphonics

2.1.2 Right-Hand Techniques

This section explains the playing techniques related to bowing manipulations by the right hand. Additionally, it explains the basics of bow holding. The techniques for articulation, pressure, and timbral changes are discussed and illustrated further

Before delving into the details related to right-hand performing techniques and the articulation aspects, it is significant to understand the fundamentals of bowing on the qobyz. It is not that the bowing on the qobyz is significantly different from the bowing on the other stringed instruments, but it requires some introductory explanations.

2.1.2.1. Basics Of Bow Holding And Bowing Positions

The shape of the traditional bow differs from that of the Western bow used in European string instruments. It has an arched form and is made of wood and horsehair. The lower part of the bow, where it is normally held, is placed between the thumb and index finger. The remaining fingers, such as middle, ring, and pinky, rest on the hair side, applying slight pressure to produce a more effective sound. The following figure demonstrates the traditional bow holding.

Figure 31. The Correct Hand Position For Holding The Bow.

The traditional bowing method is bowing in the middle area, which is located in the middle section of the area between the bridge and the sound hole, where it is indicated as number 2 in Figure 32. Usually, rosin is applied to that area. The timbre manipulations can be accomplished by moving the bow position up (*Sul Tasto*), where it is indicated as number 1 in Figure 32, or down (*Sul Ponticello*), where it is indicated as number 3. The latter is commonly used in the traditional repertoire and is often referred to as a flageolet technique, in which unintentional overtones occur.

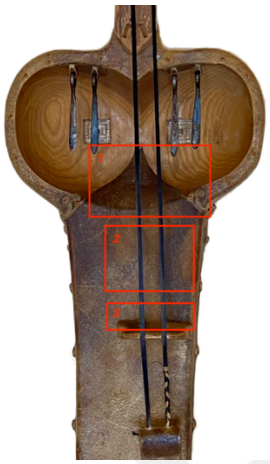

Figure 32. A Bowing Area On The Qobyz.

2.1.2.2. Bowing

The bowing process on the qobyz is flexible and can be used in performing many playing techniques. Articulation is also adjustable for smooth, detached, accented, and legato techniques as they are part of normal practices, and the area where the bow is placed has a direct impact not only on the timbre of the sound but also on the dynamics that are available on the instrument. For instance, the dynamic flexibility depends on where the bow is located. The middle section of the bowing area produces the loudest sound. The upper section, used for *sul tasto*, gives quiet dynamics. If the bow is placed close to the bridge, the dynamic range is less flexible than in the middle section, and the sound results in unintentional harmonic sounding.

Slur indication on the qobyz follows standard notation similar to other string instruments.

2.1.2.2.1. Bowing Directions

Shifting upwards and downwards is similar to other stringed instruments, and the sign indication for it is standardized according to Western notation. The down bow indicated as Π is used for more accented notes requiring full sound, and the up bow indicated as V is often used for weak notes with light and soft dynamics. However, both directions are flexible in providing all types of dynamics.

2.1.2.2.1. Legato And Slurs

Slurs, indicators of legato playing, are used similarly on the qobyz as on standard Western string instruments. They allow the notes to be played continuously, are the primary aspects of phrasing, articulation, and musical expression, and dictate the bowing direction. Slurring can also be combined with articulations such as *portato*, *staccato,* and other techniques. Here, various slur types and their impact on the musical interpretation of the qobyz are discussed.

2.1.2.2.1.1. Types Of Slurs

Generally, there are two defined slur types: short and long ones. Both of them are used for different articulations and require curtain bow control for particular dynamic expressions.

2.1.2.2.1.1.1. Short Slurs

Short slurs are applied on short melodic phrases with one or two notes. They are commonly used in the qobyz repertoire and do not require a specific bow control; thus, they can be performed in all kinds of dynamics.

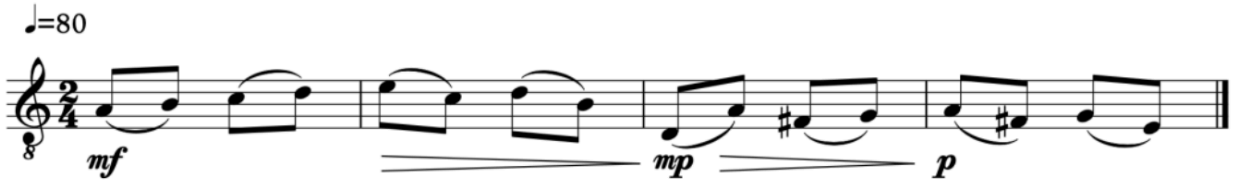

Figure 33. *Legato,* Under Very Short Slurs

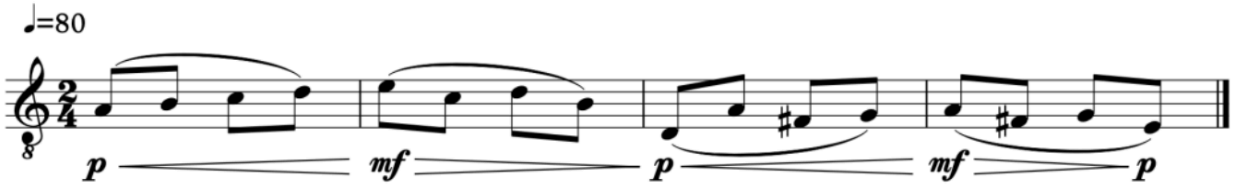

Figure 34. *Legato* Under Short Slurs

2.1.2.2.1.1.2. Long Slurs

Long slurs applied for long passages or long tones require significant bow control similar to standard string instruments. The bow control is essential for long slurs since they require a speed increase for forte and a speed decrease for piano; thus, in considerably long passages, soft dynamics are applicable. The tempo indication under which the passages are performed should be taken into account. The example below illustrates that a passage under long slurs and with the fast tempo indication is flexible in its dynamics, which is possible with careful bow controlling. The same passage under a very slow tempo will be challenging to perform with loud dynamics.

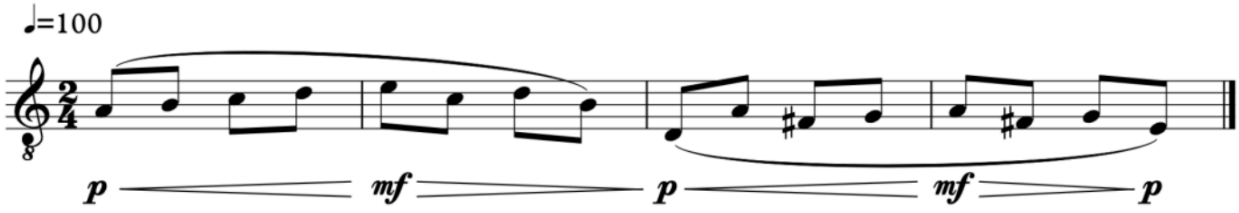

Figure 35. Passage Under Long Slurs

In the following example, it is clear that the passage within the very long slur can be performed with only soft and light dynamics.

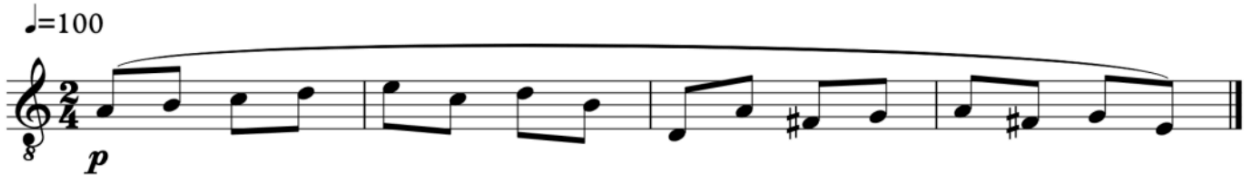

Figure 36. Passage Under A Very Long Slur

2.1.3. Articulations

This section is dedicated to the different types of articulation techniques available on the qobyz.

2.1.3.1 Tenuto

Tenuto is performed on the qobyz in the same manner as on the other standard string instruments. Same with the notation. The first example illustrates *tenuto*, an articulation where notes are played *non-legato* with full duration and slight emphasis.

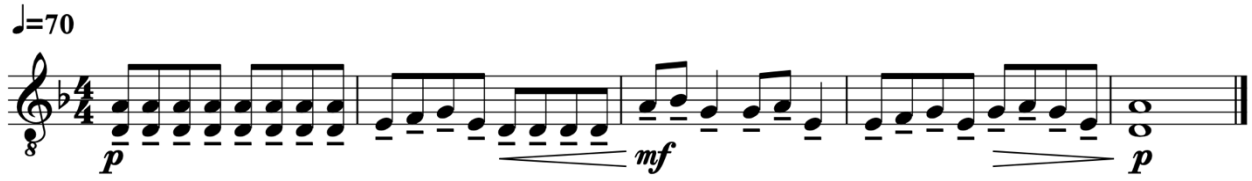

Figure 37. Tenuto

2.1.3.2 Staccato

Staccato does not appear frequently in traditional music, unlike modern repertoire. Also, when performing staccato, performers do not experience problems with it. In the context of staccatissimo, then, for the most part, this technique is found less frequently in the repertoire, and when using this technique, additional instructions may be required for the performer to more accurately describe the character of the performance.

The following figures exemplify staccato and staccato under the slurs. Both techniques do not have any limitations in terms of dynamics and articulation.

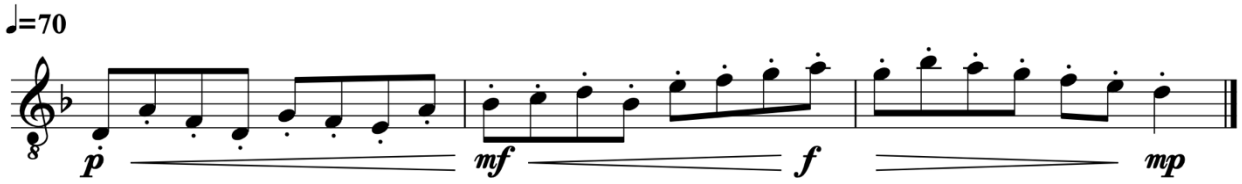

Figure 38. Staccato

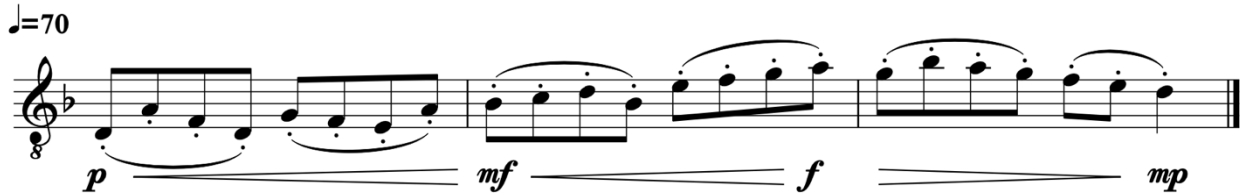

Figure 39. Staccato Under The Slur

2.1.3.3 Marcato

Marcato does not commonly appear in traditional music, but in the modern repertoire, it is used. The technique is similarly performed on the qobyz as in a standard string instrument by forcefully playing each indicated note. It is flexible in terms of dynamics and is easily approached on the qobyz.

In Figure 40, it is illustrated that marcato can be performed under a *forte* dynamic and is flexible in terms of different ranges of the instrument.

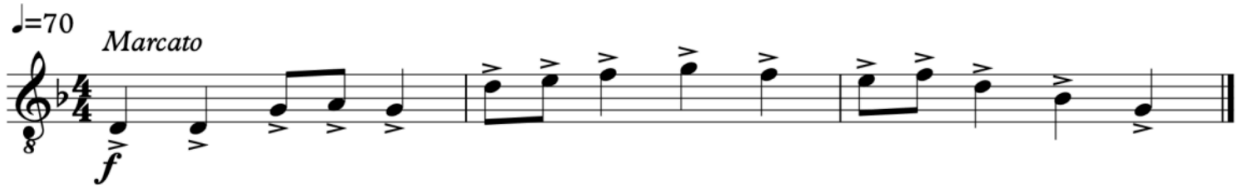

Figure 40. Marcato

2.1.3.4 Ricochet

The uncontrolled bow strikes on the strings are practically implementable on the qobyz. The traditional arc-like shape of the bow is convenient for creating a series of bounces on the strings and allows a natural bouncing of the bow. However, it is essential to consider that while applying the technique, the ricochet is more bouncing and dynamically available on the open string. When strings are stopped, the sound becomes

muffled and dull in its characteristics; thus, dynamically, it is not flexible. With stopped strings, ricochet can be applied from piano to mezzo forte. This technique has no limitations regarding the instrument's register, as sound quality does not change according to it. Additionally, ricochet is applicable behind the bridge and even on the tailpiece of the qobyz.

These techniques can also be integrated with other bowing techniques, such as *Col Legno.*

The example below illustrates one of the possible notations. However, a Ricochet indication in the score is commonly used as well.

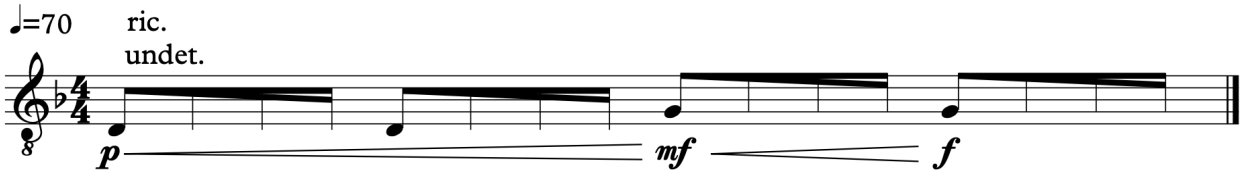

Figure 41. ***Ricochet***

2.1.3.5 Spiccato

A light and quick articulation produced by the bow's bounce off the string is also available on the qobyz. There is no limitation regarding the register and sound clarity. The following Figure 41 demonstrates *spiccato* and its possible notation.

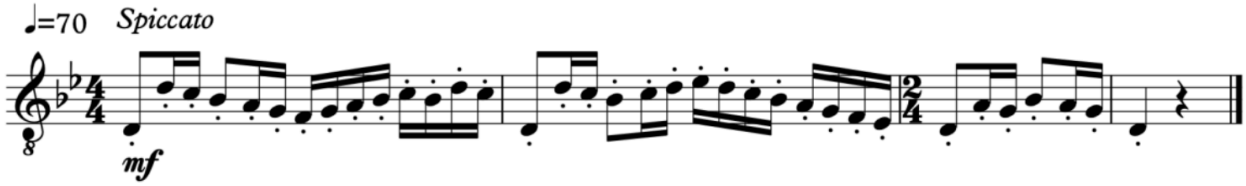

Figure 42. ***Spiccato***

2.1.3.6. Bow Tremolos

The technique is available on the qobyz. In bow tremolos, the primary workload is on the bow. The qobyz bow's position and shape provide adaptability to perform unmeasured and measured tremolos freely. On the qobyz, tremolos are available in all ranges of dynamics.

2.1.3.6.1 Tremolos on one string

The example below demonstrates single noted tremolos with gradual changes in dynamic range.

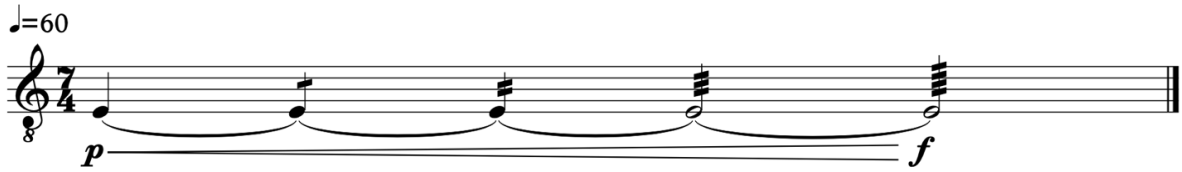

Figure 43. Single note tremolo

The usage of a certain part of the bow for achieving a specific dynamic is a common method in qobyz playing. This way, the sounding result becomes more efficient. To achieve *a forte,* the most effective way is required to play *al Stallone,* while for quiet dynamics such as *piano,* the tip of the bow, *punta d'arco,* will be appropriate.

2.1.3.6.2 Tremolos on adjacent strings

When considering two-stringed tremolos, it is significant to consider the speed at which the technique is performed, as switching between two strings quickly can be challenging for performers. Tremolos on adjacent strings are available on the qobyz. However, performing this technique at a fast speed is not advisable. Certainly, finger positions should be considered as well.[11]

The following example illustrates the standard notation for two-stringed tremolos with dynamic changes as, similarly to tremolos on one string, all dynamics are available.

[11] See the Finger Tremolo section

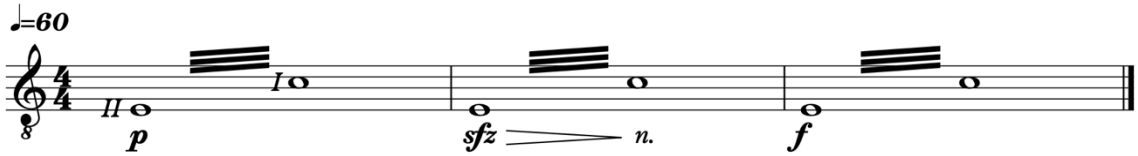

Figure 44. Tremolos on Adjacent Strings.

2.1.4. Placement of the Bow

This section explains and illustrates techniques that are based on the different placements of the bow. Typically, these playing techniques provide a significant color change of the timbre.

2.1.4.1. Ordinario

Ordinary is a normal standard playing in the normal position of the bow, which is located between the sound hole and the bridge. For more explanation, see the "Basics of Bow Holding and Bowing Position section."

2.1.4.2. Sul ponticello

Playing close to the bridge is common in qobyz playing and is used regularly. Similarly to the Western string instruments, Sul Ponticello is accomplished by moving the bow position down towards the bridge. The technique allows the instrument to produce a vast spectrum of unintentional harmonics. Also, there is another more intense

version: Alto or Molto Sul Ponticello. The performer must bow extremely close to the bridge to apply this technique to produce an intensified and metallic sound. This technique is indicated in the score by Sul Pont. or S.P. indications.

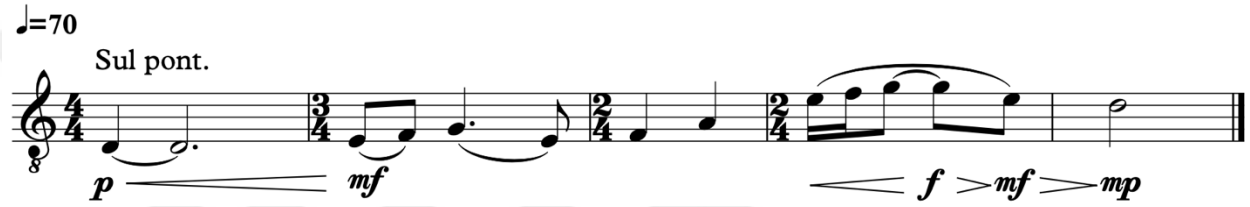

Figure 45. Sul ponticello.

2.1.4.3. Sul tasto

In order to play Sul Tasto, the bow position must be shifted from the middle position to the sound hole or even above. The resulting sound is soft and muffled even in the *forte*. In the score, similar to Sul Ponticello, it is indicated as Sul Tasto or S.T.

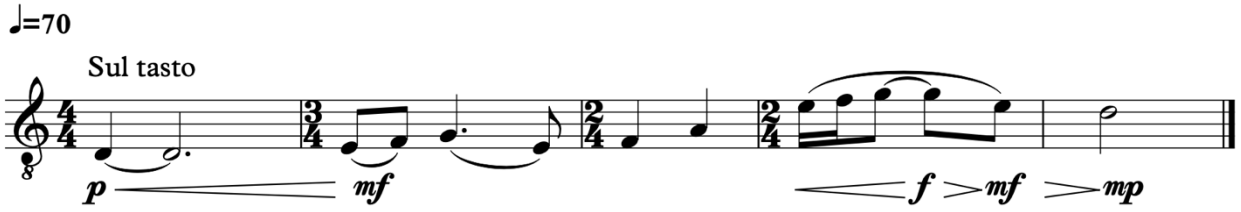

Figure 46. Sul tasto

The next playing techniques discussed in this category are considered to be extended

Contemporary techniques as they are not traditionally used in the qobyz repertoire. However, these techniques are applicable and used in contemporary music.

2.1.4.4. Behind the Bridge

The bowing behind the bridge is available on the qobyz. The tone is exceptionally high and squeaky, and the pitch definition is undetermined. Additionally, it is essential to consider that this technique is not applicable while stopping the strings, as it will not change the sounding tone.

The following figure illustrates an example of how to notate an excerpt with *the behind-the-bridge* technique.

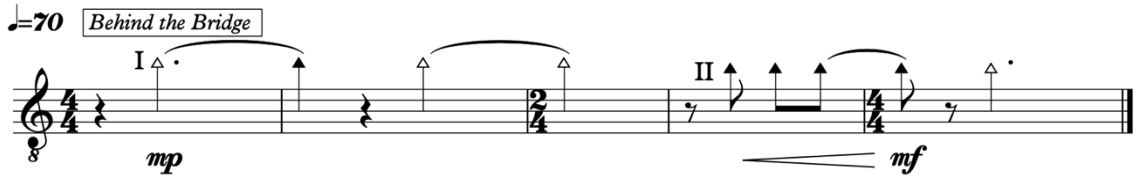

Figure 47. Behind the Bridge

2.1.4.5. Bowing on the bridge

This technique involves bowing on the instrument's bridge without touching the strings.

Inserting a bow on a wooden surface produces a dull hum or noise. When using this technique, one cannot expect dynamic diversity since high or middle dynamics are impossible.

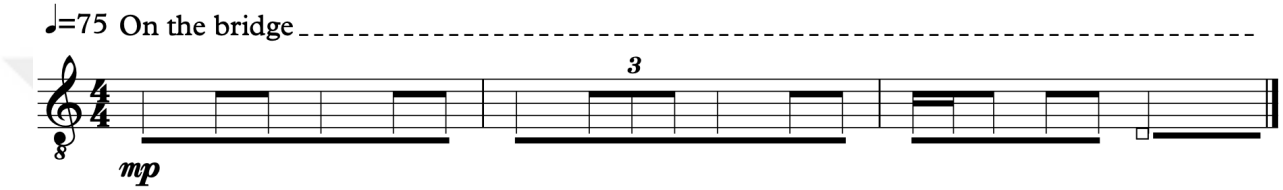

Figure 48. Bowing on the bridge

2.1.4.6. Bowing on the tailpiece

This technique is carried out by bowing on the tailpiece. It is important to note that this part of each instrument might be different, as they are usually made of different materials. For example, on one instrument, the tailpiece might be made of leather; on another, it might be made of wood. Accordingly, the sound result of two different tailpieces will differ from each other. The sound from the bowing on a leather surface is more flexible regarding dynamics, as it can be performed under quiet and high dynamics. Also, it produces a clear, randomized pitch that cannot be controlled. The nature of the sound when playing on a tailpiece has a slightly scratchy character and also a dull hum. When bowing on the tailpiece made of wooden material, the sound is quieter

and duller. Additionally, dynamics are not flexible, and high dynamics should not be used.

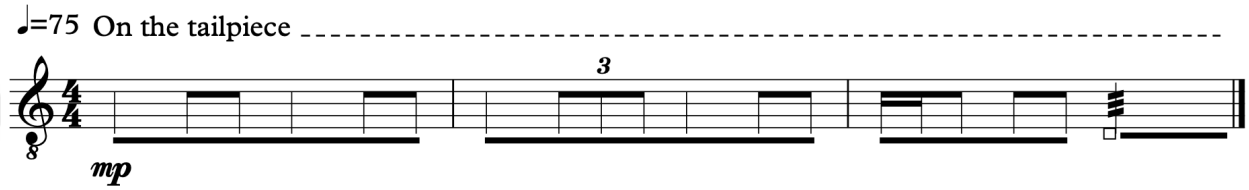

Figure 49. Bowing on the tailpiece

2.1.4.7. Bowing on the Pegs

Similar to the techniques explained above, this playing technique requires bowing on the wooden surface of the instrument's pegs. Due to the shape of the pegs, which makes them longer than the other stringed instruments, the bowing process is convenient. It is possible to bow on both pegs at different times. However, the right one would be more convenient to bow as it is closer to the right hand. Additionally, it is important to consider that the bowing on the peg can produce quiet dynamics only, and in order to make the sound hearable, it is preferred to mute the metallic accessories with the left hand in order to prevent unnecessary percussive sound.

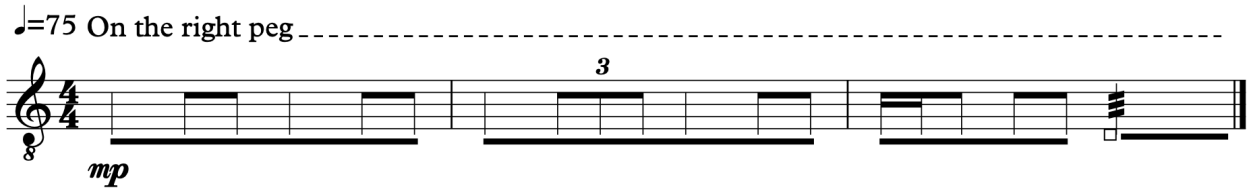

Figure 50. Bowing on the right peg

2.1.4.8. On the body of the instrument

This technique is considered to be a contemporary technique and is not commonly used in the traditional repertoire. There are two options for accomplishing this technique: 1) to bow on the sides of the sound hole, which is made of wood. 2) on the part that is covered by the skin. The sound result is a very quiet, noisy sound. Neither method is dynamically varied, and only the piano dynamic is available.

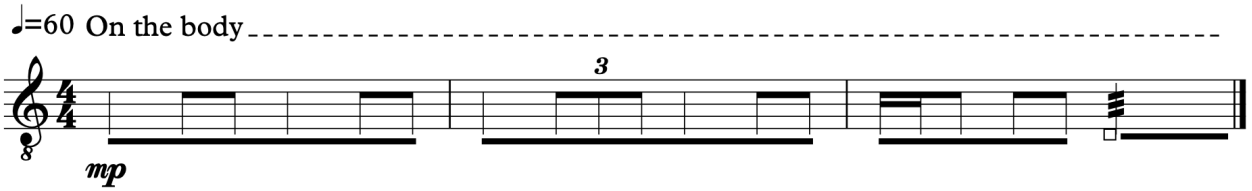

Figure 51. On the body of the instrument

2.1.4.9. On the skin of the instrument

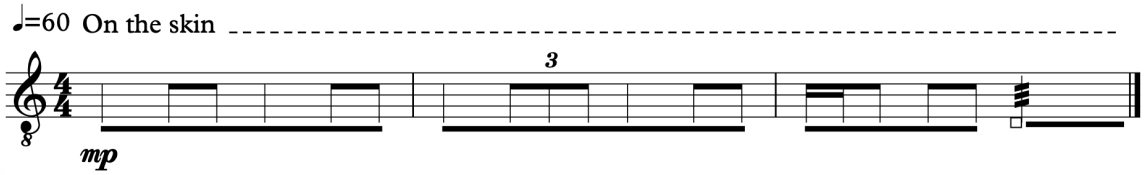

Figure 52. On the skin of the instrument

2.1.5. Alternative Usage of the Bow

This section discusses and illustrates the playing techniques that are played in an alternative way, different from the normal bowing on the qobyz, such as *Col legno Tratto* and *Col legno Battuto, which* are performed with the wooden part of the bow.

2.1.5.1 Col legno Tratto

This technique is available on the qobyz and is performed by fully turning the bow over using its entire wooden side. Importantly, unlike the other stringed instruments that feature metallic string material, on the qobyz, the strings do not damage the bow's wooden part. The sound result is quite sloppy, and the intonation is not clear. To get clear intonation, firm bowing is required. All dynamic and register ranges are available in this technique. In standard notation, this technique is indicated as *Col Legno Tratto.*

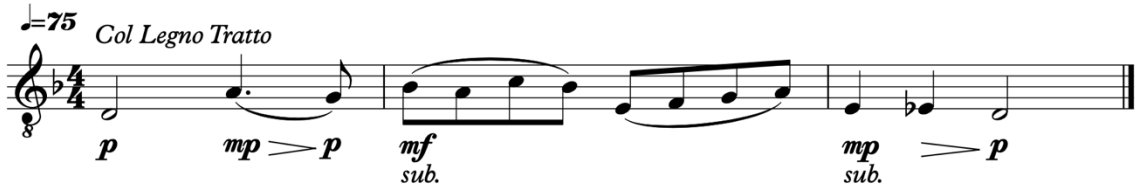

Figure 53. Col Legno Tratto.

2.1.5.2 Col legno Battuto

Striking the string on the qobyz is fully available. However, the wooden tone dominates over the pitch definition. Especially in the higher register, Col Legno Battuto has a more percussive effect. This also applies to dynamics; the more intense strikes on the string result in a loud percussive sound. However, high-intensity dynamics are applicable as the hair-made strings do not damage the wooden part of the bow. In standard notation, this technique is indicated as *Col Legno Battuto.*

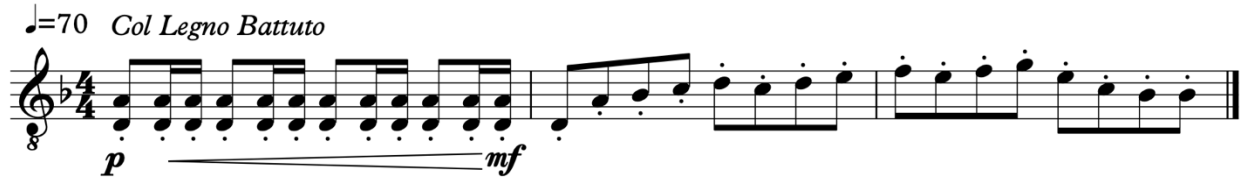

Figure 54. Col Legno Battuto.

2.1.6. Bow Pressure

Here, the playing techniques that are accomplished by different types of bow pressure on the strings are demonstrated and explained. Overall, there are two playing techniques that show two types of bow pressure.

2.1.6.1. Flautando

The technique is not commonly used on the qobyz but is fully approachable. Similarly to Sul taso, flautando requires fast bowing on the area above the sound hole. The technique in the score is indicated as *flautando*.

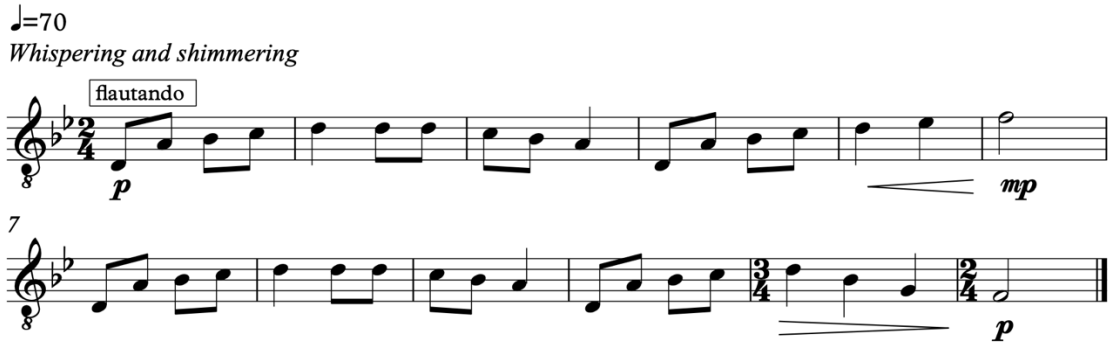

Figure 55. Flautando.

2.1.6.2. Overpressure or scratch tone

Over-pressing the bow on the string is applicable on the qobyz. This technique is called overpressure or scratch tone. It is accomplished in a standard way by putting

extreme pressure on the instrument's strings horizontally (bowing from left to right) and vertically (bowing from up to down). Two types of this technique slightly differ from each other: The horizontal bowing overpressure creates a harsh scratching sound, and the vertical one results in a grittier sound effect. Figure 43 demonstrates an excerpt with scratch-tone notation.

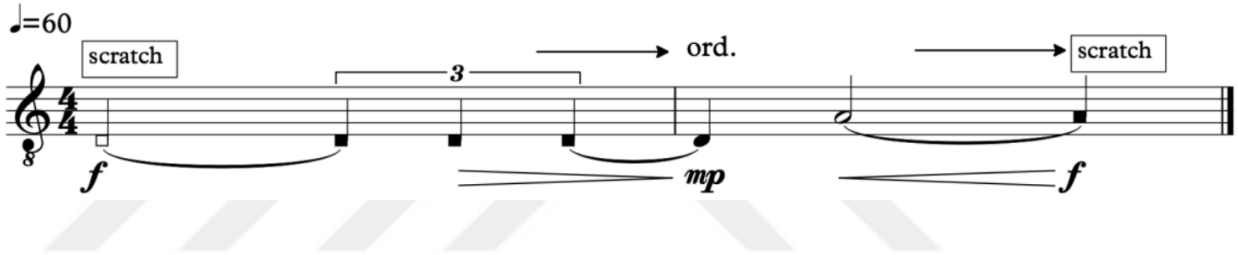

Figure 56. Overpressure or scratch tone

2.1.7. Plucked Techniques

This section explains playing techniques that are accomplished by plucking strings on the qobyz. Three types of pizzicato techniques are explained and illustrated here. It is important to note that this playing method's performances and the sounding results are different from those accomplished on the standard western strings due to the strings on the qobyz being made of horsetail.

2.1.7.1. Pizzicato

The standard pizzicato is not commonly used in the traditional repertoire. However, in the works of contemporary composers, it frequently occurs. Similarly to other stringed instruments, pizzicato is performed by plucking the string with the right hand while stopping strings with the left one if needed.

There are several factors that have to be taken into account when using pizzicato on the qobyz due to its acoustic features. As the strings are made of hair material, the resulting sound will be deaf and muted sound. The exceptions are open strings. When strings are not stopped, the sound is more resonant, but one may lose the pitch when forced. When playing pizzicato on stopped strings, the technique is not flexible in dynamic ranges, and forte, for instance, is not as forte on open strings. Additionally, the pitch difference is not clearly defined. In the score, the standard *pizzicato* or *pizz.* Indications are preferable.

Two examples below illustrate pizzicato on the open and stopped string under different dynamics.

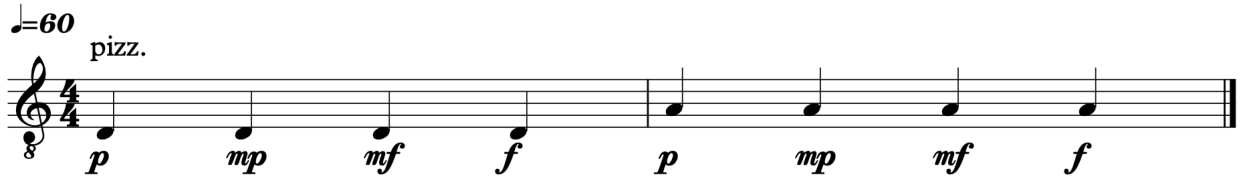

Figure 57. Pizzicato on open strings.

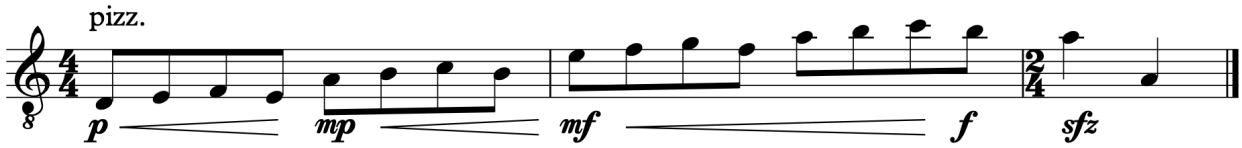

Figure 58. Pizzicato on the stopped string.

Additionally, pizzicato can be combined with other techniques to enhance the sound's timbre. It can be performed with Sul pont. or by plucking the string with a nail instead of the standard way with a finger pad, as shown in the following examples:

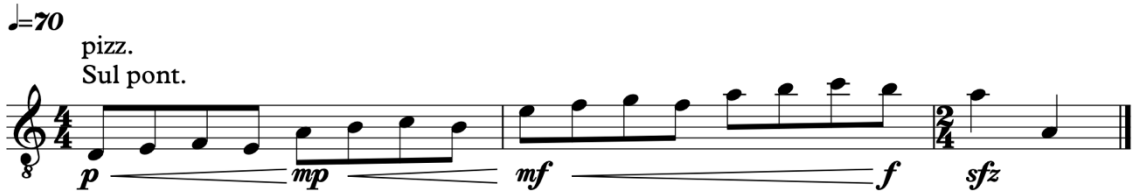

Figure 59. Pizzicato with Sul Pont.

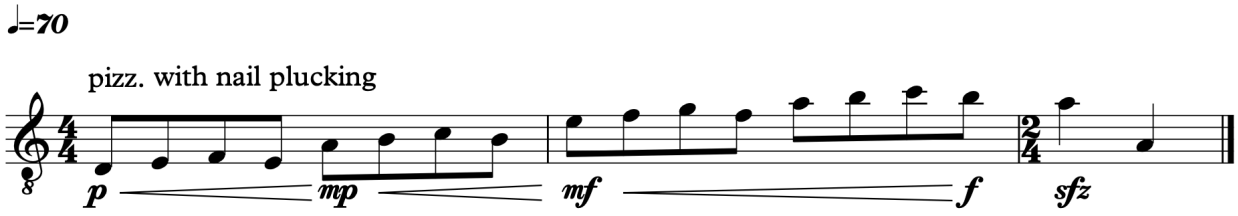

Figure 60. Pizzicato with a nail plucking.

2.1.7.2. Bartok Pizzicato

Bartok pizzicato, in its original way, cannot be used on the qobyz as the instrument does not have a fingerboard; thus, creating harsh plucking on the string to make it fall back on the fingerboard is impossible on the qobyz.

2.1.7.3. Left-hand Pizzicato

This type of pizzicato is similar to the standard one in the performing method, but the only difference is that strings are plucked with the left hand. When stopping a string, it is possible to stop it with one finger and pluck it with another. Importantly, this playing method is not flexible and should not be used in difficult passages. Additionally, plucking is more productive with nails.

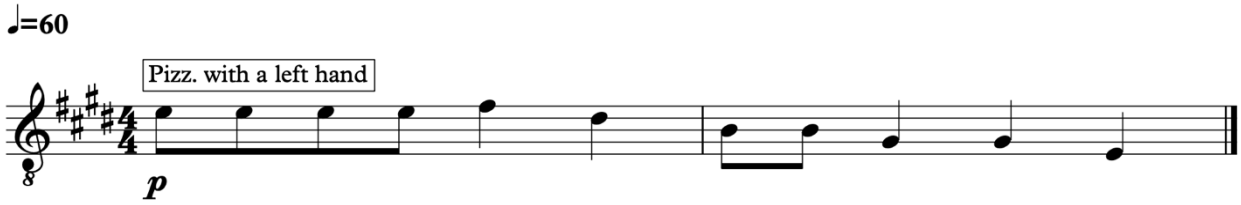

Figure 61. Pizzicato with the left hand

2.1.8. Preparing the Qobyz

In this section, some examples of instrument preparation are discussed. Preparing the qobyz is not commonly used, but it is possible and applicable to this instrument. One of the ways to prepare the qobyz is through muting strings. Similarly to other standard string instruments, strings can be muted by hand or other materials.

2.1.8.1 Muting with a Hand

The instrument's strings can be muted by the left hand, particularly by a flat palm. This can be used only when strings are not stopped, as the left hand is used for muting strings and the right hand for bowing. Muting strings prevents the bridge from vibrating, and as a result, strings do not resonate and amplify. Depending on the pressure applied to the mute, the timbre of the sound can vary. With the slight pressure, the sound might be dull, rough, and quieter. However, the pitch remains clear. With the harder pressure, the sound becomes airier and noisier without the pitch being clear.

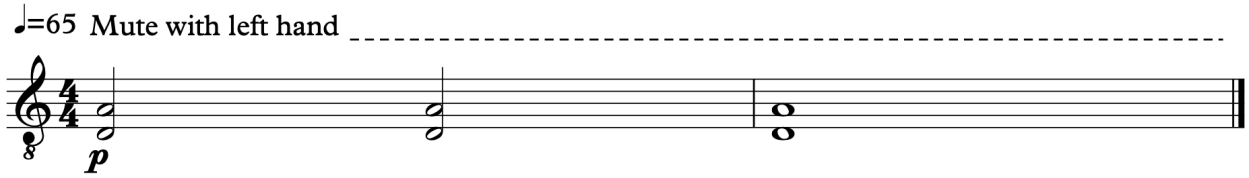

Figure 62. Muting with left-hand

2.1.8.2 Muting with Other Objects

Strings can also be muted by other objects, such as special muting devices that are used for standard Western strings, which are attached to the bridge of the instrument to prevent it from vibrating. There is no similar device used on the qobyz; thus, other alternatives should be used. In this case, the strings can be muted directly by objects that can slightly pinch the strings. For example, hairpins, a key ring, or tie wraps. This method can be used for timbral changes and for lowering the dynamics.

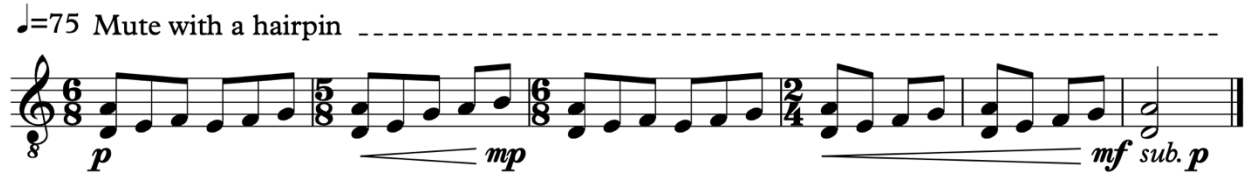

Figure 63. Muting with an object (hairpin)

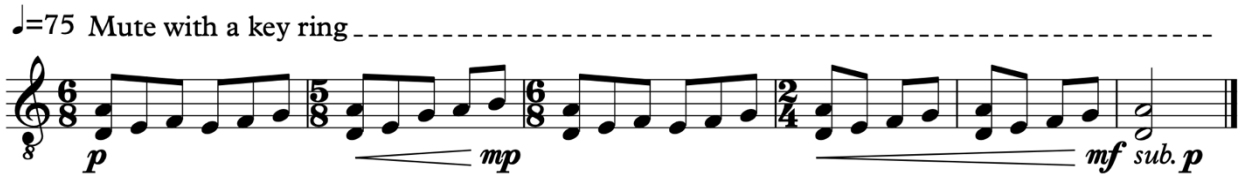

Figure 64. Muting with an object (key ring)

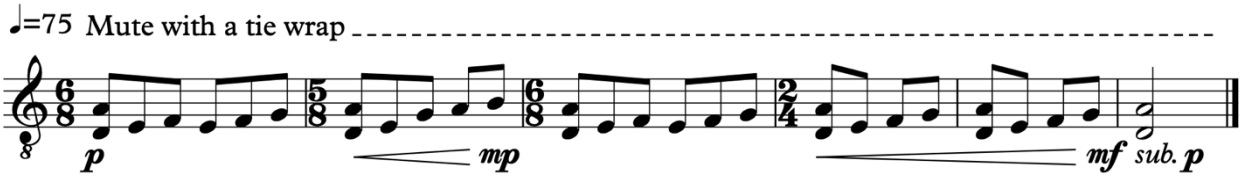

Figure 65. Muting with an object (tie wrap)

2.1.9. Percussive Techniques

This section is dedicated to the discussion of percussive and drumming playing techniques on the qobyz that involve drumming on the body of the instrument and the usage of the metallic attributes hanging on the qobyz.

2.1.9.1 Drumming on The Body (skin)

This method is for imitating drum instruments by drumming on the body, on the area that is covered with skin. Since the body of the instrument has a cut-out hole that is covered with animal skin, this part of the instrument resonates well when the body is struck and sounds like a full-fledged drum instrument. However, due to strings being

located in the same area and the most resonant part being located precisely under the strings, drumming on the skin is not comfortable for full performance as on drums. However, this playing technique is fully applicable and has a wide range of dynamic capabilities.

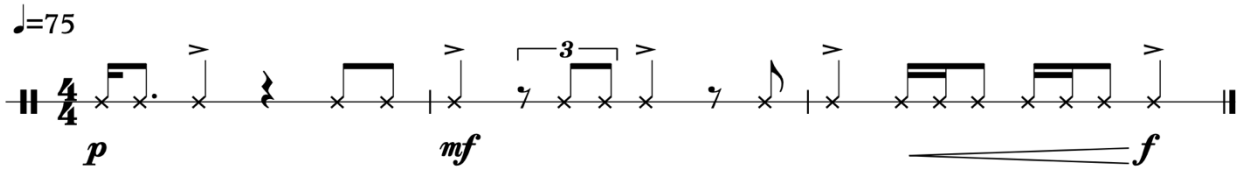

Figure 66. Drumming on the body of the instrument

2.1.9.2 Shaking the decorations on the instrument

This playing technique can be used as an imitation of percussive instruments such as a tambourine. It is accomplished by shaking the instrument to make the metallic hangings on the instrument move and create noise. It is more convenient to use this playing technique for long and continuous durations, or if using rhythmic figures, it is better in a slow rhythm, since shaking the instrument quickly while following the rhythm will be difficult. It is flexible in terms of dynamics, but challenging to control.

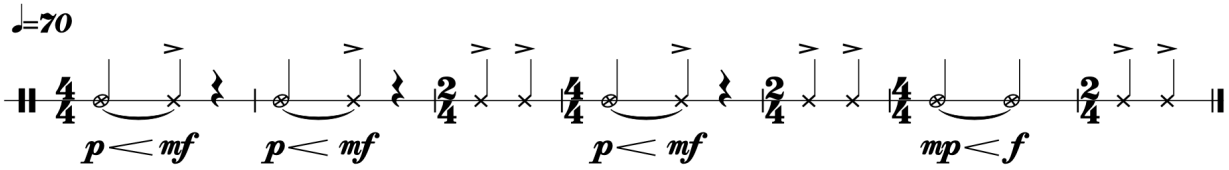

Figure 67. Shaking the decorations on the instrument

2.1.10. Scordatura

Scordatura is applicable to the qobyz. It can be applied to use intervals that are impossible or hard to play in normal tuning. Furthermore, scordatura can be used to change the standard tuning to achieve different timbral qualities by tuning the qobyz in different registers.

CHAPTER III.

Animal Imitation Techniques

This chapter will examine the playing techniques of the qobyz used in traditional qobyz music to imitate certain animals. The origin and existence of these techniques are closely connected with the cultural heritage of nomads. Since the time of Tengrianism, the first religion of nomads, people believed in the sacredness of certain animals; thus, many traditional works were dedicated to these sacred totem animals. These animals include the swan, wolf, and antelope. Regarding this belief, today's researchers often correlate the shape of the qobyz with the sacred bird swan: "The form of the kobyz resembles a swan taking off. Interestingly, many scientists, referring to the construction of the old instruments of different nations, noted several imprints of cosmogonic concepts and phenomena - solyarism, anthropomorphism, animal worship." (Smakova et al., 2016). However, not only does the shape of the instruments resemble the bird, but also the timbre of the instrument: "... the Kazakhs believe that the purest sound in nature is the cry of a swan, and in order that kobyzcan sound melodic, it is made resembling a

swan. This form of kobyz as a magical instrument is partly connected with a cult of the swan (akku), which, in general, was one of the ancient totems of the Kazakhs"(Smakova et al., 2016). Indeed, a large amount of narrative instrumental music – kui, dedicated to the swan, confirms the special attitude towards this bird. The flight and the swan's calls of the bird are often imitated.

Because the performance of animal imitation techniques involves specific manipulations and may differ from other standard playing techniques, these techniques are presented in a separate chapter, where each technique will be considered separately.

3.1. Aqqu (imitation of a swan)

This playing technique, called *aqqu*, meaning "swan" in Kazakh, is used to imitate this bird. The swan holds a sacred status among the Kazakhs, and as a result, a distinct genre or style of kuis—aqqu—dedicated to the swan has emerged. A defining characteristic of these compositions is their depiction of the swan's flight and calls through music. The example below were taken for demonstration from the traditional kui titled "Aqqu" that vividly demonstrated and depicts the swan. Acccording to Rancier,"Aqqu" demonstrates a number of the distinctive features of the qyl-qobyz and its traditional küi repertoire." The author also refers to the special imitation technique which sound in the beginig of such "Aqqu" dedicated pieces: "From its opening notes, this composition highlights the ability of the instrument to create a rich sound world of overtones/harmonics. The

composition also demonstrates the ability of the qyl-qobyz to tell a story without words, and this story has some obvious connections to Kazakh nomadic culture." (*Connecting to Kazakh Nomadic Culture through Sound: The Qyl-Qobyz - Abai Center*, n.d.)

There are two primary methods for performing this technique. In the first, illustrated below, the flight of a swan is imitated. Hand positioning is crucial, as it shapes and mimics the motion of wings. Hand movements and rhythm convey the impression of the bird's flight. Traditionally, this technique is performed on open strings, particularly in fifth tuning.

The first type of this technique in the following example is approached by a swift and alternating motion of the index finger and pinky using the finger pads instead of the nails, with a light touch on the strings. Generally, this technique is used within the traditional qobyz music to imitate the swans flying.

All dynamics are possible for this playing technique.

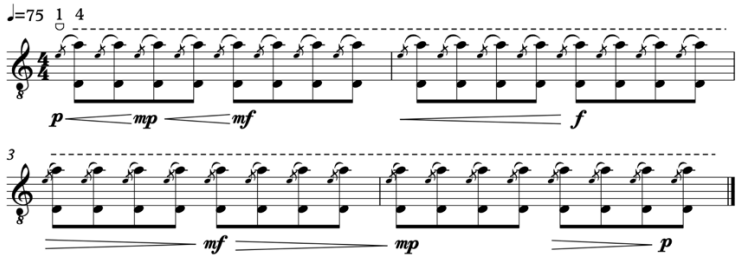

Figure 68. Aqqu

The second type of this technique is to imitate swan calls. Here, this technique is approached by slowly bending the string downward to create microtonal alteration. As in the first method, this technique is also performed using the index and pinky fingers, but with significant finger pressure. It should be performed in the highest registers on the instrument; additionally, it is often used close to the bridge area.[12]

Regarding dynamics, the *aqqu* playing technique is flexible, allowing for a full range of dynamics on the instrument. In both variations of this technique, unintentional overtones are produced, and they are uncontrollable.

Similarly to the previous example, all dynamics are possible for this playing technique.

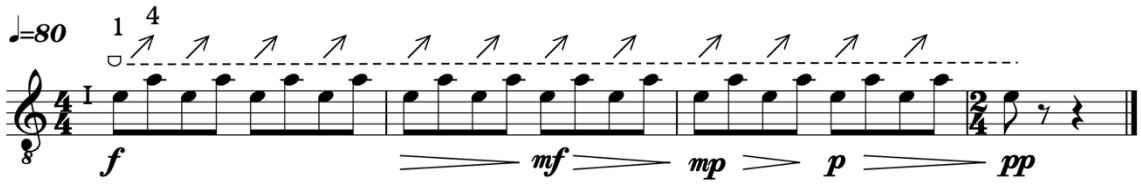

Figure 69. A second *aqqu* technique involves the imitation of a swan call.

Over the neck register of the instrument[12]

3.2. Qasqyr (imitation of a wolf)

The following playing technique is used to imitate a wolf's howl, and the word *qasqyr* means “wolf’" in Kazakh. This technique is performed with a slow glissando from the lower register to the high register, after which it is important to sustain the final note in the high register for a while before performing a backwards glissando. Another essential aspect is bowing - it must be slow enough to ensure that the imitation of the wolf's howl is sufficiently drawn out. It is also suggested that this technique be performed by switching between two strings and starting each glissando on different pitches, adding an element of randomness to imitate a pack of wolves. Additionally, it is possible to play the glissando on both strings simultaneously.
All dynamic ranges are available while performing this playing technique.

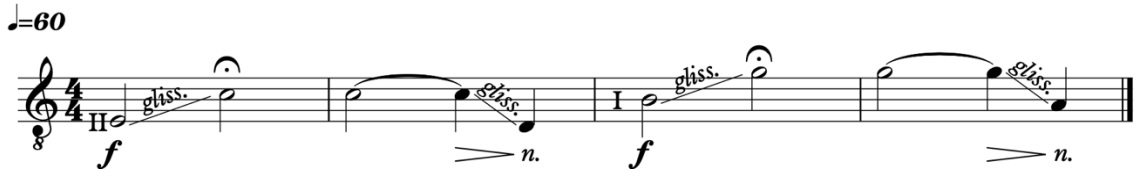

Figure 70. Qasqyr

3.3. Zhez kiyk (imitation of an antelope)

This technique is used to imitate an antelope. In Kazakh language, “Zhez kiyk” means an antelope. Unlike the previous two methods, which focused on sound or timbre

imitation, this technique primarily relies on rhythmic patterns. In Kazakh folk music, certain rhythms are cognitively associated with the movements of ungulates, such as horses or antelopes.

A key aspect of performing this technique is that the rhythmic pattern is primarily executed or, as shown in the example below, struck using the pad of the pinky finger.

Similarly to the two previous techniques, Zhez kiyk is available in various dynamics.

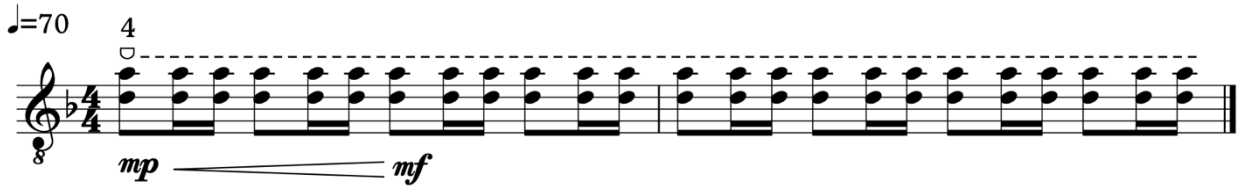

Figure 71. Zhez kiyk

Conclusion

The primary purpose of this thesis was to study the traditional two-stringed Kazakh qobyz not only in the context of traditional music but also in contemporary concert music. The goal is also to expand the repertoire and performance capabilities of the qobyz through the evaluation and analysis of traditional and extended playing techniques for standard string instruments that were selected and applied to the qobyz in order to study the degree of applicability of the chosen playing techniques and the acoustic features of the instrument.

The research was not limited to musical context but introduced the instruments' historical, theoretical, and practical aspects.

This study's methodology of analysis of the playing techniques was practice-based and included seven steps: 1. Literature review, 2. Playing technique selection, 3. Categorization of techniques, 4. Application process analysis, 5.Evaluation and comparison, 6. Notation, 7. Interpretation and conclusion.

The research introduced playing techniques that apply to the strings in two main categories: left-hand techniques and right-hand techniques.

The study revealed that standard Western playing techniques for strings are applicable to the qobyz. However, their performance on the qobyz does differ from that of European string instruments due to the different material of the strings (horsehair) and the structure of the instrument (lack of fingerboard). For a similar reason, Bartók pizz. Technique is non-applicable to the qobyz.

Some playing techniques deserve more attention due to the acoustic features of the instrument. For instance, when bending the string, the qobyz has no fingerboard and has enough space between the strings and the neck of the instrument. Due to this, the bending technique has great flexibility in performance. Another point that needs attention is double stops, since it is important to consider the distance between notes, as some intervals are difficult to implement.

The next category, which is based on the pressure of the fingers on the string, showed that the playing methods of this category are flexible in the context of performance, and also have an exceptional sound result because the strings are made of horsehair. For instance, in this category, different alternatives for pressure on the string were demonstrated, carried out by playing with a nail or a finger pad. This approach to performance gives a fairly rich acoustic spectrum, since the instrument produces many

overtones. Also, it is important to mention the multiphonics in this category, even though multiphonics can be used on the qobyz and they are entirely playable, the technique still slightly differs in its performance approach and sound, again, due to the acoustic properties of the instrument itself. Further, the result showed that bowing methods are fully applicable in the category of performance techniques based on the right hand. The same applies to articulation and alternative bowing methods: all standard and extended playing methods are fully applicable to the qobyz. Particular attention should be paid to the *col legno*, since the result showed that the sound when using this technique differs from its use on other standard European stringed instruments: due to the strings made of horsetail, the result showed that when playing with wooden sight of the bow, the sound does not differ from the ordinario bowing method. Moreover, the playing methods in this category, which are performed on the body of the instrument itself, are quite flexible in performance and have a distinctive sound, since most of the instrument's body is covered with leather material. Other categories, such as pressure, plucked techniques, instrument preparation, and percussion techniques, have also shown positive results in application to the qobyz. However, it is important to note that using pizzicato may be less effective because the pitch may be less clear on a hair string. Also, Bartok's pizzicato cannot be used on the qobyz since the instrument does not have a fingerboard. Another important point concerns the drumming technique on the instrument's body. This method has

shown that it is possible to imitate percussion instruments entirely on the leather part of the qobyz. Scordatura is also applicable to the qobyz.

The last category, imitation of animals, was introduced in a separate chapter since these playing techniques were presented from the prism of the traditional qobyz performance school, which is found in the traditional repertoire. As a result, all the presented techniques showed how broad the acoustic spectrum of the instrument is and the strong potential of the qobyz's performing capabilities in a contemporary composition.

These findings suggest that the qobyz, as a musical instrument, has great potential in contemporary music and can be developed not only within the framework of traditional musical art. Moreover, the evaluated playing techniques prove that qobyz has rich and flexible acoustic features. Thus, this thesis contributes to the development of qobyz in the context of performance and composition, since this thesis can be used as a guide on applying extended playing techniques to the qobyz.

Additionally, due to the instrument being unfretted, it can be flexible in terms of microtonality.

The main observation regarding the performance of the playing techniques is that qobyz players always use the Western standard notation, which means there will not be

an issue with the notation and its interpretation. However, the study showed that according to the repertoire qobyz players perform today, the contemporary music notation is not commonly used in the qobyz music; thus, performers are not familiar with it. Additionally, due to the Western system of education, which was adapted during Soviet times, qobyz players, similar to other traditional instrumental players, are skilled and trained to perform with ensembles and orchestras.

The problematic point could be that when applying playing techniques, the acoustic property of the qobyz should be considered, as horsetail-made strings may react differently for each technique.

To conclude, by shedding light on the playing techniques of the qobyz, the research provides a foundation for the development of the qobyz in the field of contemporary music and its recognition in the Western world, as the thesis encourages composers to write for the qobyz and the qobyz players to broaden their repertoire.

REFERENCES

Primary Source

Levin, T., Daukeyeva, S., & Köchümkulova, E. (2016). *The Music of Central Asia.* Indiana University Press.

Secondary Sources

Adler, S. (2016). *The study of orchestration* (Fourth edition). W. W. Norton and Company.

Amanzhol, B. (2016). Muzykal'nye traditsii Tengrianstva. *Central Asian Journal of Art Studies*, 1(1), Article 1. Retrieved from https://cajas.kz/journal/article/view/35

Benade, A. H. (1990). *Fundamentals of musical acoustics* (2nd, rev. ed ed.). Dover Publ.

Connecting to Kazakh nomadic culture through sound: The qyl-qobyz—Abai Center. (n.d.). Retrieved February 7, 2024, Retrieved from https://www.abaicenter.org/connecting-to-kazakh-nomadic-culture-through-sound-the-qyl-qobyz/

Dzhumagalieva, A., Nurbayeva, D., & Tokzhanov, T. (2022). *Musigi Dunyasi.* Retrieved from http://www.musigi-dunya.az/article/90/90_9.html

Ergalieva, A. T., & Qiyakbaev, S. G. (2021). Kobyzovaya muzyka kazakhov epicheskoy traditsii. *Archivarius*, 5–8. https://doi.org/10.52013/2524-0935-2-56-1

Ertuğrul. (2013). *The Cambridge guide to orchestration.* Cambridge University Press.

Fallowfield, E. (n.d.). *CELLO MAP: A HANDBOOK OF CELLO TECHNIQUE FOR PERFORMERS AND COMPOSERS.*

Karsakbayeva, A. A., Jumaniyazova, R. K., & Kurmangazy Kazakh National Conservatory. (2020). The Contemporary Kobyz School of Kazakhstan (Concerning the Issue of Historical Connections and Perspectives). *Music Scholarship / Problemy Muzykal'noj Nauki*, 4, 217–224.

Muhambetova, A. I. (1995). The Traditional Musical Culture of Kazakhs in the Social Context of the 20th Century. *The World of Music*, 37(3), 66–83.

Nedlina, V. (2023). Neotraditionalism and Innovations in Kazakh Instruments and Music-Making. *International Peer-Reviewed Journal*, 11, 34–53. https://doi.org/10.59850/SARYN.4.11.2023.33

Rancier, M. (2009). The Kazakh qyl-qobyz: Biography of an instrument, story of a nation - ProQuest. https://www.proquest.com/docview/304852995?pq-origsite=gscholar&fromopenview=true&sourcetype=Dissertations%20&%20Theses

Rancier, M. (2014). The Musical Instrument as National Archive: A Case Study of the Kazakh Qyl-qobyz. *Ethnomusicology*, 58(3), 379-404. https://doi.org/10.5406/ethnomusicology.58.3.0379

Smakova, Z., Karsakbayeva, A., Rakymzhan, A., Kalymova, G., Kudaibergenova, S., Gaissin, A., & Takisheva, A.(2016). Ethnomusical Traditions of the Kazakh People: Past and Present. *Man in India.*

Turkmen, O. (2009). *Contemporary instrumental techniques applied to Turkish instruments.*

Zhumabekova, D., & Yeginbaeva, T. (2019). The History of the Art of Kobyz in Kazakhstan. https://doi.org/10.2991/icassee-19.2019.141