

Balancing Mathematics and Virtuosity: A Performer's Guide to Sofia Gubaidulina's

Dancer on a Tightrope

by

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ABSTRACT

Sofia Gubaidulina's *Dancer on a Tightrope* (*Der Seiltänzer*, 1993) for violin and piano is an excellent example of the sonic capabilities of both instruments. To convey the balance and uncertainty of a circus act, Gubaidulina makes ample use of rhythmic variation, flexible melodic gestures, compound meters, dissonance, and indeterminacy in notation of musical time. Due to the intricate nature of both parts, this can be a difficult work to perform accurately. This paper is an accompanying document to the score to explain notations, suggest performance techniques for both instruments, and provide a thorough analysis of the complete work.

Students of Gubaidulina's music can find numerous studies detailing her biography as a Soviet and post-Soviet composer. There are many dissertations on her string works, including the string quartets and string trio. However, there is no performer's guide or existing study that would provide insight to *Dancer*. Most of the existing literature on Gubaidulina is not based on sketches but relies on analysis of published sources.

In researching this document, I drew upon the manuscript collection for *Dancer on a Tightrope* housed at the Paul Sacher archives in Basel, Switzerland. I compare sketches with the published score and analyze the work's structure, melodic aspects, harmony, timbre, and practical applications of the extended notation. I will also compare *Dancer on*

a Tightrope to Gubaidulina's works from the same period, violin writing, and other chamber music. Many of the rhythmic and pitch ambiguities in the published score will be clarified by a sketch study of the piece. For assistance with piano notation and performance, I suggest techniques for the most careful way to play inside the instrument to avoid damage.

I contextualize Gubaidulina within a Soviet and international context. It is essential to view her work within a broader twentieth-century framework, her life as a composer in the USSR, and in light of broader socio-political trends. Gubaidulina is one of the foremost Soviet composers who has earned international recognition. This performer's guide will advance and encourage performances of *Dancer on a Tightrope* and help disseminate knowledge about this work.

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CHAPTER 1

INTRODUCTION

Sofia Gubaidulina is one of the most preeminent women composers of the twentieth century. Her career and output shows numerous influences including religious iconography, mathematics, German philosophy and culture, the music and culture of Central Asia, and, naturally, the political systems under which she has lived¹.

Gubaidulina's music has steadily gained popularity in the West; most notably her violin concerto *Offertorium* composed for Gidon Kremer. Gubaidulina created two concertos for violin and orchestra, but *Der Seiltänzer*, or *Dancer on a Tightrope* is her only work for violin and piano. I analyze Gubaidulina's *Dancer on a Tightrope* composed in 1993 after Gubaidulina's immigration to Germany. Commissioned by the Library of Congress², it is an excellent twentieth-century composition, virtuosic, and an easily programmable work for violin. However, the notation used in the piece is not always standard, and the complex structure of the work according to Fibonacci and Lucas proportions may be lost to the performer as no performance guide or explanation of this work exists.

¹ Gubaidulina is a unique presence in 20th century music. Like Denisov, she has lived, and had strong connections to the West after the fall of communism. However, given her affinity for German culture, and complicated relationship with the Soviet government, I do not believe it is correct to refer to her as a "Soviet" composer, nor as a "German" composer. I later address the inherently problematic trope of the "Soviet Avant-Garde" as it relates to Khrennikov's Seven.

² *Dancer on a Tightrope* was commissioned by the Library of Congress and premiered there in 1993 there by pianist Ursula Oppens and violinist Robert Mann according to Sikorski's Catalogue of Gubaidulina's works: Sikorski, *Sofia Gubaidulina List of Works and Biography* (Hamburg, Germany: Sikorski, 2016).

I use my expertise as a performer to provide a comprehensive performance guide to *Dancer on a Tightrope*. First, I discuss Gubaidulina's career in the context of other twentieth-century composers, specifically focusing on other Soviet and Soviet-emigré composers. I briefly explore changing perspectives and scholarship on Soviet composition since the fall of communism and how preconceptions of the USSR have affected our knowledge and interpretation of Soviet works today. Second, I provide the compositional periods and influences of Gubaidulina, from her formative experiments with timbre through her "middle period" use of numbers and the Fibonacci sequence and finally her use of quarter tones³. I primarily focus on her first two periods which show timbral developments and use of mathematical structures, as these are the influences most prevalent in *Dancer on a Tightrope*. Because Gubaidulina is not strictly a tonal composer in line with the nineteenth-century tradition, understanding her compositional process is critical to an informed and accurate performance of her works. Finally, I analyze *Dancer on a Tightrope* and present practical performer suggestions. Due to the complex nature of Gubaidulina's constructions, I utilize both her original sketches, from my research at the Paul Sacher Stiftung in Basel, and the only published score from Sikorski as source material. I examine the mathematical structure of the piece as well as Gubaidulina's definitions of consonance and dissonance as they relate not only to pitch but also to rhythm, gesture, and timbre. I focus on the features of construction that are most applicable to the performer. I also include suggestions for accurately representing

³ Vera Lukomsky, "Sofia Gubaidulina: 'My Desire is Always to Rebel, to Swim against the Stream,'" *Perspectives of New Music* vol. 36, no. 1 (Winter 1998): 5 – 41, accessed December 31, 2016, <http://www.jstor.org/stable/833574>.

Gubaidulina's intentions with macro-sectional division, fingering and bowing suggestions for the most difficult and awkward gestures for the violin, and a section on the logistics of interior piano playing techniques for this piece.

All translations from German and Russian, of Gubaidulina's notes in sketches and of Tsenova's writing, are my own. I have used the Library of Congress system of romanization⁴ for Russian except in instances of a more recognized western spelling: Tchaikovsky versus Chaikovskii, for instance.

I hope this performer's guide will serve as reference for musicians wishing to play *Dancer on a Tightrope* in future performances. Additionally, this document will contribute to an understanding of the broader *zeitgeist* which nurtured Gubaidulina's creativity, and provide a modern post-Communist perspective on how we view her work and represent it in an historically informed fashion.

⁴ Library of Congress, "Romanization of the Russian Alphabet," Library of Congress, accessed February 17, 2016, <https://www.loc.gov/catdir/cpsd/romanization/russian.pdf>.

CHAPTER 2

GUBAIDULINA'S LIFE AND CAREER

Sofia Asgatovna Gubaidulina was born in 1931 in Chistopol, USSR to a Russian mother and a Tatar mullah⁵ and engineer father. Gubaidulina recalls a fear of the secret police and of her father being taken away from a young age⁶. In later interviews, she also spoke of the effects of growing up in relative poverty. Gubaidulina started official piano and composition lessons in 1946 at the Kazan Music Gymnasium with Nazib Zhiganov⁷, and in 1949 began studies at the Kazan conservatory with Leopold Lukomsky⁸. Later, she studied piano with Maria Yudina – who influenced Gubaidulina's pianism and religious beliefs – and composition with Grigory Kogan, also in Kazan⁹. In 1952, Gubaidulina was awarded the Stalin Scholarship to attend Moscow Conservatory. In reflection of this award she says “Perhaps I won on the basis of the overall evaluation, but I rather suspect that because of Stalin's policy of nationalities they wanted to feature a Tatar name¹⁰.” However, she does not identify strongly with Tatar or Russian nationalism: – “For me, the most important thing is not nationality, but humanity as a whole¹¹.” Important cultural

⁵ Mullah: A muslim trained and educated in Islamic law.

⁶ Michael Kurtz, *Sofia Gubaidulina: a Biography*, eds. Malcom Hamrick Brown and Christoph K. Lohmann (Bloomington, IN: Indiana University Press, 2002), 14.

⁷ Kurtz, *Gubaidulina*, 18.

⁸ *Ibid.*, 22.

⁹ *Ibid.*, 24.

¹⁰ *Ibid.*, 28.

¹¹ *Ibid.*

influences for Gubaidulina from her formative years include early teachers – often Jews, German culture and early study of the language. She was also influenced by her paternal Tatar heritage, ethnic musics of the USSR, her mother’s Russian ethnicity, and native language - Russian.

Gubaidulina continued her studies at Moscow Conservatory from 1954. The policies of Zhdanovshchina had lessened slightly by this time, but scores and musical study was still restricted and serialist composers, Stravinsky, among others were taboo¹². At Moscow Conservatory, she studied piano with Yakov Izrailevich Zak and composition with Nikolai Peiko and Vissarion Shebalin¹³. While at Moscow Conservatory, she also met her future husband Mark Liando with whom she shared a love of Pasternak, Thomas Mann, Mandelstam, Goethe, and Hermann Hesse¹⁴. In 1959 Gubaidulina finished her coursework at Moscow Conservatory and had her daughter Nadia. In 1964 she and Liando divorced¹⁵.

The 1960s and 1970s were a period of change for Gubaidulina. In 1965, she first experimented with dodecaphony¹⁶, after hearing a live performance of Webern piano sonata performed by Yudina at semi-official concerts in Moscow. She declined offers to compose for the Party (Kommunisicheskii soiuz molodëzhi or Communist Youth

¹²Peter Schmelz, *Such Freedom, if only music* (New York, NY: Oxford University Press, 2009), 30.

¹³ Ibid., 38.

¹⁴ Ibid., 41.

¹⁵ Ibid., 50.

¹⁶ Ibid., 63.

League)¹⁷, and instead composed mainly small chamber works for “unofficial” and house performances as well as commercial music and music for Soviet film¹⁸. In 1969, with much encouragement from Maria Yudina, Gubaidulina was baptized in the Russian Orthodox Church¹⁹. This was a major event for Gubaidulina, whose music is marked by spirituality in the form of religious symbols, numerological representations of Christ and the Passion, allusions to key Christian figures in titles and numerology, and the allegorical use of mathematical sequences. Gubaidulina often stated that art had a religious function, that life is “staccato” and art is “legato”. Gubaidulina draws a parallel between similar sounding words connecting “legato” to “religio” and asserts that art is the re-legato, “re-ligio” and reconnection to God in a broken life²⁰. Her viewpoint is that religion is the fluidity, legato, and connection in life. In the 1960s, Gubaidulina had a romance with and was married to Kolya Bokov and she had two significant professional relationships with Pyotr Meshchaninov and Gennady Aigi. Her personal relationship with Bokov brought her in close connection with the KGB, given his support of dissident materials including Pasternak’s *Dr. Zhivago*²¹ of which they hid illicit copies in their apartment²². Gubaidulina met Meshchaninov while conducting sound experiments at the

¹⁷ Ibid., 66.

¹⁸ Ibid., 60 – 75.

¹⁹ Kurtz, *Gubaidulina*, 87.

²⁰ Ibid., 96.

²¹ Pasternak’s *Dr. Zhivago* painted the Russian Revolution in an unflattering light, and the book was originally published in Italy. Pasternak’s 1958 Nobel Prize in Literature, and publishing possibly linked to the CIA was a further embarrassment to the Communist government. Pasternak along with Solzhenitsyn was a symbol of dissidence and resistance in the USSR.

²² Ibid., 89.

Skriabin Institute in Moscow. Meshchaninov was interested in mathematical intervals, and introduced Gubaidulina to the “geometrics of acoustics” and to numerical interpretations of musical intervals and, significantly, rhythm²³. Similarly, Gubaidulina’s friendship in the early 1970s with the poet Gennady Aigi, gave her a mathematical framework – based on the Fibonacci series – for understanding poetry, and later, music²⁴. Aigi based strophic variation in his poetry on calculations of Fibonacci numbers.

Throughout the 1970s, Gubaidulina received increasing notoriety outside of the USSR. After being denied travel to the Warsaw Autumn Festival in the 1960s²⁵, she was finally allowed to go to Warsaw in 1970 for premieres of her works. There she met Witold Lutosławski and Karlheinz Stockhausen²⁶. Gubaidulina’s cantata *A Night in Memphis*, was recorded in Prague, and two works – the chamber piece *Concordanza* and *Piano Sonata No. 1* were performed at the Eighth International Festival of Contemporary Art in Royan²⁷. *Concordanza* is a seminal piece for Gubaidulina. Notationally, she introduces many of the non-traditional markings used extensively in her later works including *Dancer on a Tightrope*²⁸. It is also her first major experiment in quarter-tone

²³ Ibid., 85.

²⁴ Kurtz, *Gubaidulina*, 100.

²⁵ Denisov was the first composer allowed to Warsaw in the 1960s. Ironically, Gubaidulina’s request for travel was denied in the early 1960s because her “works” were pursuing an incorrect artistic direction, and the work cited by the Moscow Composer’s Union, was her Violin Sonata, a piece she never composed.

²⁶ Kurtz, *Gubaidulina*, 91.

²⁷ Kurtz, *Gubaidulina*, 95.

²⁸ In *Concordanza*, Gubaidulina first uses her notation that modifies the beaming of notes to indicate tempi: accelerando, rubato etc. She also introduces non-metrical sections and sections of time rather than metrical length. This is the first example of this notation in her writing, and carries into her other works.

composition and allegorical religious writing²⁹. In the late 1970s, Gubaidulina also formed and performed with an experimental music group, *Astraea*, with Viacheslav Artyomov and Victor Suslin in the USSR. The trio experimented with folk instruments from Central Asia and the Soviet provinces, and inspired Gubaidulina's later Concerto for Violin, Piano, and Bayan³⁰. Gubaidulina's connection to *Astraea* and interest in music from Central Asia and Soviet provinces comes from her own Tatar upbringing and connections. During the 1970s, Gubaidulina also received a number of major commissions and began to attract international attention. In 1972, Boris Berman commissioned a piece for harpsichord and percussion (*Music for Harpsichord and Percussion Instruments from Mark Pekarsky's Collection*), and in 1973 Natalia Shakhovskaya asked Gubaidulina for a cello piece (*Detto II*³¹).

Gubaidulina's most significant international commission was the violin concerto *Offertorium*. Gidon Kremer, the winner of the 1970 Tchaikovsky competition, met Gubaidulina by chance in 1977, and requested a violin concerto from her. She composed a violin concerto based on religious themes from the Passion³². Kremer premiered *Offertorium* in Vienna in 1981, and in Moscow in 1982, and her collaboration with Kremer propelled Gubaidulina into the international spotlight. The violin concerto was a highlight for the composer in two otherwise trying years, in which Khrennikov

²⁹ Kurtz, *Gubaidulina*, 97.

³⁰ Bayan is a bowed, Central Asian instrument.

³¹ Kurtz, *Gubaidulina*, 106.

³² *Ibid.*, 163 – 75.

denounced Gubaidulina and six others³³(1979), and in which she became increasingly isolated from the Moscow Composer's Union³⁴.

In the 1980s, Gubaidulina accepted an increasing number of international engagements, from Kremer's festival in Lockenhaus, Austria to performances with the Berlin Philharmonic (1982), Sound Celebrations in Louisville, Kentucky (1987), and Paris and New York. In the latter two cities, *Offertorium*³⁵ was performed. In 1988, Gubaidulina met John Cage in Leningrad, and in 1989 and 1990, her works received performances in Tokyo, New York, London, Amsterdam, Louisville, Vienna, Australia, and she was honored with the "First Gubaidulina Festival" in the USSR in 1990³⁶. Gubaidulina composed *Dancer on a Tightrope* shortly after her immigration to Hamburg in 1992. It was commissioned by the Library of Congress (USA). In the same year, Gubaidulina also transferred all of her sketches to the Paul Sacher Stiftung in Basel and served as Composer in Residence at Mozarteum, in Salzburg³⁷. Since her immigration to Germany, Gubaidulina has actively composed for the most prestigious festivals, orchestras, and soloists in the world while maintaining a strong relationship with other Soviet émigré artists and intellectuals like Kremer, Yuri Bashmet, and Edison Denisov.

³³ Khrennikov's Seven: a denunciation of Gubaidulina, Denisov, Firsova, Suslin, Knaifel, Smirnov, and Artyomov in 1979. I discuss this politically at length later. Khrennikov's decree, unlike Zhdanov's 1948 Pravda decree, had a similar tone, but primarily a financial and personal impact on the aforementioned composers, not a Stalinistic, secret-police undertone like in the 1940s. It was primarily rooted in jealousy of younger composers rather than cultural control from the *Politburo*.

³⁴ Kurtz, *Gubaidulina*, 270.

³⁵ *Ibid.*, 270.

³⁶ *Ibid.*

³⁷ *Ibid.*, 272.

CHAPTER 3

CONTEXTUALIZING GUBAIDULINA – MUSIC AND POLITICS IN THE USSR

To better understand Gubaidulina’s life, it is important to contextualize her music within the broader chronology of Soviet life and politics. In studying any composer from the USSR, it is important not only to look at their output, but also to consider the larger socio-political forces that contributed to the reception, performance, publication, and proliferation of their works. Additionally, when studying the USSR from a Western perspective, it is particularly important to avoid Western bias and anti-Soviet perceptions of Russian music in the twentieth and twenty-first centuries. Political bias from conflict, such as the end of the Second World War and Cold War, is often reflected in scholarly biographies in the arts. Vera Lukomsky, a prominent Gubaidulina biographer, asserts that “when a musicologist writes about a composer, the main issue should be what is essential in his or her music.³⁸” However, this approach can be problematic as it ignores the larger societal impact on a composer and assumes the composer’s interpretation of the era as literal truth. While a composer’s chronology provides insight into their own individual work, it is merely a *microcosmos* of the larger artistic and political climate. I present a brief historical analysis of Russian music to situate Gubaidulina in the arena of her Soviet contemporaries.

To understand what ideology affected Soviet music, it is helpful to see Soviet music as a continuation of Imperialist Russian music and an “Orientalist” view of Russian music from the 1800s and earlier. Richard Taruskin highlights several problems

³⁸ Lukomsky, “Gubaidulina: My desire is Always to Rebel to Swim against the Stream”, 9.

with the idea of Russo-Nationalism in music, notably that nationalism is an issue that divides and “ghettoizes” Russian musicians³⁹. Russian music was widely performed in Europe as well as Russia, and the cases of Sergei Diaghilev and Anton Rubinstein show the pervasive nature of Russian artists and their comparable standing to Western counterparts⁴⁰. However, one must also examine the sort of Russian music that was historically championed. Vladimir Stasov⁴¹ classified a “national” element in Russian music as containing: an absence of preconception, folklore as a source of material, an oriental element, and an extreme inclination to programmatic music⁴². The type of Russian music championed by Diaghilev in the West parallels the type of Russian music Stasov championed within Russia. From a Western perspective, “Diaghilevshchina⁴³” still exists, and Russian music is still valued outside of Russia for its exoticism. Russian music frequently contains themes of either nationality or exoticism, and is thus featured in the standard canon. It often serves a programmatic function, or is entirely relegated to a separate concert⁴⁴. Soviet nationalism is especially isolating to Russian music in the

³⁹ Richard Taruskin, “Non-Nationalists and other Nationalists,” in *Russian Music at home and abroad: New Essays* (Berkeley, CA: University of California Press, 2016) 34.

⁴⁰ Taruskin, “Non-Nationalists and other Nationalists,” 35.

⁴¹ Vladimir Stasov, the Russian music critic and the architect of the “Mighty Handful” (Могучая кучка).

⁴² Taruskin, “Non-Nationalists and other Nationalists,” 41.

⁴³ The ending “shchina” or щина in Russian roughly translates as “ism” eg. Diaghilev-ism. However, in Russian, words that are associated with this ending almost always trigger a deep *gestalt* in the listener. Zhdanovshchina or especially Yezhovshchina trigger deep fears about Stalin, the secret police, artistic censorship, and a bygone communist system. Diaghilevshchina is meant to be provocative, and link the orientalism promoted by Diaghilev to future suppression of Russian music.

⁴⁴ Exceptions to the relegation of Russian music of course include the Tchaikovsky 4th-6th symphonies, violin and piano concertos, and Rachmaninov’s piano concertos. The “ghettoization” of Russian music applies mostly to symphonic music, and certainly opera and vocal music.

West, as the intent of the composer often distorted by projections of political intent on music. Political isolation of Russia in the twentieth century perpetuates *Diaghilevshchina*. Problematically, the political climate that led to an isolation of Russian music in the twentieth-century became more complicated than ever before. Wartime sentiments about Slavic people and culture lingered post-war with a dominance of Western classical music in Western performances. Post-war Soviet resentment of the West and internal policies of the USSR led to a promotion of Soviet composers almost exclusively internally in the USSR. The Soviet perspective of the Great Patriotic War⁴⁵ was reflected in musical and artistic commemoration and emphasized the Soviet experience instead of the global or Western experience. As the USSR became politically isolated, the arts in the USSR became isolated as well. Simply by continuing to exist, Soviet art and music undermined the Nazi effort to destroy Soviet culture⁴⁶. Although Russian music is rooted in Western European musical tradition, Soviet music aimed to develop native Soviet ideals of realism devoid from Western European influence associated with cosmopolitanism⁴⁷. In essence, *Diaghilevshchina* continued in *Zhdanovshchina*, with the creation of political music for a Stalinist state⁴⁸.

Musical policies in the early USSR 1917-1953

Musical developments under the Soviet system begin most fundamentally with Lenin and have distinct periods under Lenin, Stalin, Khrushchev, and Brezhnev. I discuss

⁴⁵ The Great Patriotic War – Soviet title for World War two.

⁴⁶ Tomoff, *Creative Union*, 78.

⁴⁷ *Ibid.*, 156.

⁴⁸ Taruskin, “Non-Nationalists and other Nationalists,” 48.

Lenin and Stalin's official policies first, as this era is the one most shrouded in mystery to Western readers. After 1917, Russian music ceased to be "Russian" music. A common misnomer among Western scholars is that a Soviet composer is by default a Russian composer. This is inaccurate and ignores larger sociopolitical forces and factions of Soviet society. By definition, the USSR is a very large and multi-ethnic state and its music reflects multi-ethnic cultural policy from the 1920s. The formation of the USSR was complicated by the multinational empire that the previous Czars had created. Under Lenin, avoidance of the tsarist "Great Russian chauvinism"⁴⁹ was the driving force behind cultural, administrative, and ethnographic policy⁵⁰. *Korenizatsiya*, or indigenization, was a policy promoting local representatives to administrative rolls in the Soviet bureaucracy, and, to a lesser extent, this was promoted in music. Stalin encouraged cultural nationhood, as political nationhood could threaten control, and Russian artists were sent to the Soviet republics for collaboration with local musicians in the 1920s⁵¹. During the 1930s, the deliberate and systematic development of national cultures was at the center of Stalin's cultural policy. Gubaidulina's comment about receiving the Stalin scholarship for study because of her Tatar name is likely to be accurate and was a reflection of such policy. Stalin also promoted Socialist Realism - art that glorified the proletariat, portrayed everyday Soviet scenes, championed patriotism,

⁴⁹ Great Russian Chauvinism, was identified by both Lenin and Stalin in the 1920s as a threat to policy of the USSR. This was meant, to the Soviet Republics, to show an end to Russian dominance and portray revolutionary Russia in contrast to its Czarist predecessor.

⁵⁰ Marina Frolova-Walker, *Russian Music and Nationalism: from Glinka to Stalin* (New Haven, CN: Yale University Press, 2007) 301.

⁵¹ Frolova-Walker, *Russian music and Nationalism*, 302.

and contained representational themes⁵². Socialist Realism also shunned abstraction and expressionism in all forms of art from architecture to visual art to music. Cultural production that failed to emphasize Russian (not multi-ethnic) nationalism and emphasize folk materials was labeled as “cosmopolitan” and was suspect⁵³.

Stalin’s promotion of national cultures in the republics was driven by an ulterior motive of political control. These policies left a legacy in the Soviet republics beyond Stalin and even the USSR⁵⁴. Stalin’s nationalities policies were inherently developmentalist in nature – the arrangement of cultures and peoples in hierarchical order from most developed to least. Developmentalism is the Soviet version of “equality”. In theory, all peoples can succeed but realistically are ranked by race and religion. Developmentalism allowed for racial identification and segregation and was fused to the revolution, as well as the inevitability of Soviet society’s progression to communism⁵⁵.

Cultural and musical policy in the USSR dramatically changed in the thirty-eight years between Stalin’s death and the fall of the Soviet Union in 1991. I focus on common perceptions regarding Gubaidulina and her contemporaries from this era; notably, living in the “shadow of Shostakovich” and the concept of the Soviet “avant-garde”. I also address types of performance and dissidence in the USSR, Tikhon Khrennikov and his

⁵² Representational to Stalin was often synonymous with “folk” elements in music. An easy way to represent provincial music in Soviet nationalist music was the inclusion of regional folk themes and idioms that would appeal broadly to society. From: Frolova-Walker, *Russian Music and Nationalism*, 311 – 12.

⁵³ Kiril Tomoff, *Creative Union: The Professional Organization of Soviet Composers 1939-1953* (Ithaca, NY: Cornell University Press, 2006), 156.

⁵⁴ Frolova-Walker, *Russian Music and Nationalism*, 355.

⁵⁵ Kiril Tomoff, *Virtuosi Abroad: Soviet Music and Imperial Competition during the early Cold War 1945-1958* (Ithaca, NY: Cornell University Press, 2015), 4 – 5.

role at the Composer's Union, and Gubaidulina's career before her emigration to the west.

In the study of Soviet artists, the West seems to mythologically cast “unofficial” composers as “dissident” composers⁵⁶. This romantic assumption is likely fueled by Cold-War ideology when, in actuality, many if not all composers were in some way “dissident”⁵⁷. Dissidence in the Soviet psychology is more in the vein of Pasternak, Solzhenitsyn, Akhmatova, and Mandelstam⁵⁸. Such writers were heavily persecuted for their anti-government writings including deportation, imprisonment, and murder of family members. Gubaidulina, and Alfred Schnittke, for instance, lived in state supported apartments. Were they really dissident composers? Shostakovich also holds a controversial place in this debate, as his public works often bend to Soviet censorship, while many private works were consigned to the drawer for decades. Resistance, the type that ultimately destroyed the USSR, lay in the small, everyday deeds of Soviets that gradually weakened the state⁵⁹.

⁵⁶ Schmelz, *Such Freedom*, 13 – 14.

⁵⁷ Ibid.

⁵⁸ Boris Pasternak, the author of *Dr. Zhivago* was threatened during the Great Purges and ultimately published *Dr. Zhivago* covertly, although Soviet authorities forced him to decline the Nobel Prize for Literature. Aleksandr Solzhenitsyn is most famous for dissident writings including *The Gulag Archipelago*, *Cancer Ward*, and *August 1914*. He was imprisoned multiple times including in the Lubyanka prison and the Gulag system and was awarded the 1970 Nobel Prize primarily for raising awareness of the Gulag system. Poet Anna Akhmatova was a highly acclaimed author whose ex-husband Nikolai Gumilyov was executed by Cheka and whose son and husband Nikolay Penin spent years in the Gulag (where Penin died). Osip Mandelstam was a prominent Jewish-Polish poet and essayist who died in a Siberian transit camp – his memoirs were published posthumously by his wife Nadezhda.

⁵⁹ Schmelz, *Such Freedom*, 16.

Similar to “dissident”, the term “avant-garde” is problematic for composers of the 1960s, such as Gubaidulina. Gubaidulina is part of the first generation of composers that came of age in the Thaw⁶⁰. These composers were idealistic figures, on the outside of the “official” Soviet system, who carried a feeling of displacement from party ideals. The musical avant-garde from the 1920s thought that political and social revolution should be mirrored in music⁶¹. To imply that their music is “avant-garde” often problematically imbues the music with political sentiment that is not there⁶². A rejection of Socialist Realism alone is not enough to assign “avant-garde” as a label to composers. Gubaidulina herself rejects the term “avant-garde”, calling it a type of art that “seeks to amaze the public” and that composers should instead “think about depth, not innovations [...and] worry about the content of the art, incarnation, and representation of ideas⁶³.” Schwarz asserts, for example, that staying “up to date” was a major issue for Soviet composers, and that often the younger generation operated in a vacuum with limited stimulus and scores from the West⁶⁴. This claim is patently false as it applies to the Thaw generation. Although travel was often restricted, many Soviet composers after Stalin had access (covertly or not) to music of Webern, Stravinsky, Cage, Cowell, and others. In the case of Gubaidulina, her two primary compositional influences from her student years have been

⁶⁰ The Thaw is a period during the Soviet Union under Khrushchev of relaxed censorship in the arts and de-Stalinization policies including rehabilitation of Gulag prisoners.

⁶¹ Tomoff, *Creative Union*, 17.

⁶² Schmelz, *Such Freedom*, 334.

⁶³ Lukomsky, “Gubaidulina: My desire is Always to Rebel to Swim against the Stream”, 9.

⁶⁴ Boris Schwarz, *Music and Musical Life in Soviet Russia* (Bloomington, IN: Indiana University Press, 1983), 444.

Bach and Webern⁶⁵. In the case of any Soviet composer, interviews must thusly be treated with caution, to avoid composers either being identified as martyrs, or the contrary, forgetting true Soviet restrictions⁶⁶. Such is the case with Gubaidulina as well, as she often does not view herself in a Soviet light⁶⁷.

Shostakovich is a paradoxical figure. To the West, he is trapped somewhere between a martyr and a Soviet hero. As Taruskin stresses, there is a nostalgic notion of “anti-Stalinism” when it comes to Shostakovich. Without a Stalin, there can be no Shostakovich⁶⁸. This idea romanticizes and sentimentalizes *Zhdanovshchina*, and plays into a historical narrative supported only by texts like Volkov’s *Testimony*. Regardless, Shostakovich and Prokofiev were the main influences for young composers during the Thaw. Shostakovich was held in high regard “above all others” by Gubaidulina, likely because of his official standing and political power he could use to influence young

⁶⁵ Vera Lukomsky, “Sofia Gubaidulina (1931-),” in *Music of the 20th Century Avant-Garde: A Biocritical Sourcebook*, ed. Larry Sitsky (Westport, CN: Greenwood Press, 2002), 184.

⁶⁶ This has certainly been the case with Shostakovich scholarship based on Solomon Volkov’s book *Testimony*, which has been largely discredited, with numerous documents highlighting the impossibilities and false statements supposedly contained in “Shostakovich’s” writings. Volkov presents one Soviet paradigm: the Shostakovich/Stalin juxtaposition, where part of Shostakovich’s genius comes from his martyrdom under Stalin.

⁶⁷ Schmelz reveals a statement Gubaidulina made to Vera Lukomsky saying that it was possible to study many types of scores and recordings, and that the dorms were never searched in the 1950s. This however, contradicts the fact that in 1952 the dorms were searched for Stravinsky scores, and in an earlier interview Gubaidulina said that this occasionally occurred in the post-Stalin era as well (p. 30). This reveals another Soviet paradigm – forgetting true Soviet restrictions to avoid self-martyrization.

⁶⁸ Richard Taruskin, “The Birth of Contemporary Russia out of the Spirit of Music (not),” in *Russian Music at Home and Abroad: New Essays* (Berkeley, CA: University of California Press, 2016) 357.

composers⁶⁹. As Gubaidulina stated, “In my opinion, we do not have the right to judge the generation of our fathers, and the generation of Shostakovich⁷⁰.”

It is also important when contextualizing Soviet composers to remember Soviet and Russian ideas surrounding nationality, gender, marital status, religion, and sexual orientation. Composers like Gubaidulina, Elena Firsova, and Galina Ustvolskaya undoubtedly had their careers shaped by their marriages, and the Soviet expectation of the role of women. I believe the greatest service to women composers is to simply analyze and present their work as equal to men without highlighting their gender. However, it is worth mention that the Soviet system, supposedly “egalitarian” in principle, still perpetuated sexist ideals of women. Today, as under Stalin, the Russian government recognizes women who give birth to many children with medals, for example. Gubaidulina would have always faced disadvantages, and at best an “affirmative-action” mentality,⁷¹ due to both her gender and Tatar ethnicity.

Gubaidulina’s career was also significantly shaped by her 1979 “denunciation”, inclusion in the “Khrennikov’s Seven”, and her relationship to the Union of Composers. Within the Union of Composers, informal networks were the primary method of organization. Traditionally, party loyalists were jealous of younger, talented colleagues, and censorship often came from rivalry⁷². As head of the Union of Composers,

⁶⁹ Schmelz, *Such Freedom*, 38.

⁷⁰ Lukomsky, “Gubaidulina: My desire is Always to Rebel to Swim against the Stream”, 16.

⁷¹ Terry Martin speaks of an “Affirmative action” mentality broadly in Soviet politics towards the republics in: Terry Martin, *The Affirmative Action Empire: Nations and Nationalism in the Soviet Union, 1923–1939* (Ithaca, NY: Cornell University Press, 2001).

⁷² Schmelz, *Such Freedom*, 190.

Khrennikov stressed the importance of composers reaching the people, that art for “art’s sake” was not in favor of the people, and cited the important relationship between politics and culture⁷³. Khrennikov rescinded the prohibitions of *Zhdanovshchina* in 1958, but at great cost politically⁷⁴. The 1979 report of Khrennikov was meant as a summary, to vilify the Cologne New Music festival for not including Prokofiev, Myaskovsky, or Khachaturian but for including Gubaidulina, Firsova, Knaifel, Smirnov, Suslin, Artyomov, and Denisov⁷⁵. Khrennikov’s “denunciation” of these composers can be viewed as unofficial recognition, that his establishment couldn’t control these composers or their work. It ultimately resembles generational bullying rather than political denunciation, as was the case in 1948⁷⁶. Gubaidulina’s 1979 “denunciation” and inclusion in Khrennikov’s report was little more than a reprimand for inclusion in an international festival and paradoxically also served as unofficial recognition from Khrennikov. This sort of “unofficial” or “dark” recognition also parallels 1948, when the majority of students registered at Moscow Conservatory wished to work with the disciplined composers Vissarion Shebalin and Aram Khachaturian⁷⁷. However, any

⁷³ Schwarz, *Music and Musical life in Soviet Russia*, 621.

⁷⁴ Richard Taruskin, “Two Serendipities,” in *Russian Music at Home and Abroad: New Essays* (Berkeley, CA: University of California Press, 2016) 318.

⁷⁵ Taruskin, “Two Serendipities,” 318-19.

⁷⁶ Taruskin, “Two Serendipities,” 319.

⁷⁷ Tomoff, *Creative Union*, 210.

political denunciation or criticism in the USSR could be dangerous. Gubaidulina, like Schnittke before her, left for Germany in the early 1990s⁷⁸.

⁷⁸ Kurtz, *Gubaidulina*, 321.

CHAPTER 4

GUBAIDULINA'S COMPOSITIONAL STYLE

Gubaidulina's compositional style is perhaps the most important component in understanding her music. Two possible frameworks may be used to comprehend Gubaidulina's compositional output. Gubaidulina herself states that she has three periods of composition: an early focus on instrumental timbres (1950-1970), a "middle period" in which she explored rhythm and numbers (1970- 1995), and the present marked by an interest in microtonality⁷⁹ (1995-2017). Valentina Khlopova, a Gubaidulina biographer, indicates five expression parameters that may also be used for analysis of Gubaidulina's music: articulation and methods of sound production, melody, rhythm, texture, and compositional writing. Khlopova also assigns a consonant or dissonant function to each parameter resulting in ten possibilities total⁸⁰. I first present features found in many of Gubaidulina's compositions. Aspects evident in the first two periods of composition are: timbre and rhythm with numbers. Her explorations in the first two periods are most reflected in *Dancer on a Tightrope* (1993) as Gubaidulina's experiments with microtonality are largely from the late 1990s (after *Dancer*) to present. In my analysis of *Dancer on a Tightrope*, I also utilize Khlopova's parameters, specifically for examining articulation and methods of sound production as these become highly relevant to the performer. I present the compositional genesis of *Dancer on a Tightrope* to inform performers about form, structure, and micro-gestures.

⁷⁹ Dmitri Smirnov, "Sofia Gubaidulina: From Where I Sit," *Gramophone*. Vol. 79, (2001) 23.

⁸⁰ Philip A. Ewell, "The Parameter Complex in the Music of Sofia Gubaidulina," *Music Theory Online*, vol. 20, no. 3 (September 2013): 4.

Timbre, *Astreia*, and Sonorism in Gubaidulina's early works

Gubaidulina has always had a fascination with timbre. Even in her earliest music studies during her childhood, she experimented with making unusual sounds inside the piano⁸¹. She views sonority and timbral development as the natural evolution of music in the twentieth century: atonality to serialism to sonorism⁸². Generally, timbral experiments that branched into visual art or Fluxus-type performances were not supported in the USSR. Khrennikov referred to such performance art as “circus stunts rather than pieces of music⁸³”. However, many Lenin prize winners employed serialist, atonal, pointillistic, dissonant, and indeterminate techniques in their compositions⁸⁴. Gubaidulina's approach to timbral expression can be best defined as a juxtaposition of differing traditions and techniques⁸⁵. Works from Gubaidulina's timbral period are influenced by her fascination with contemporary classical techniques when studied at conservatory (1954-1959), investigating composers of the past, particularly Bach and Webern, when she worked on Soviet film music, and synthesized Eastern and Western techniques⁸⁶. Later, Gubaidulina expanded her use of Eastern timbre in her work with the folk ensemble *Astreia* with

⁸¹ Kurtz, *Gubaidulina*, 13.

⁸²Vera Lukomsky, “The Eucharist in my Fantasy: interview with Sofia Gubaidulina,” *Tempo* no. 206 (September 1998): 27, accessed December 31, 2016, <http://www.jstor.org/stable/945505>.

⁸³ Schwarz, *Music and Musical life in Soviet Russia*, 486.

⁸⁴ *Ibid.*, 489.

⁸⁵ Vera Lukomsky, “Sofia Gubaidulina (1931-),” 185.

⁸⁶ *Ibid.*

fellow composers Artyomov and Suslin. This contributed to her use of the Bayan instrument in later works and experiments with microtonality⁸⁷.

Expression Parameters

A hallmark of Gubaidulina's style is a good understanding of individual instrumental techniques with the ability to manipulate instruments and color⁸⁸. She refers to percussion as "a very great mystery," and that "these instruments are at the boundary between palpable reality and subconscious, because they have these unique acoustics [...]. This subconscious contains information beyond logic, perhaps in the soul⁸⁹". Articulative devices, such as ricochet bowing, may be associated with a particular rhythmic feature, and the use of non-percussion instruments in a percussive manner by Gubaidulina is a specific expressive technique⁹⁰.

Khlopova assigns her expression parameter analysis to these timbral changes in her analysis of the *10 Preludes for Solo Cello*. Khlopova classifies the contrasting pairs of timbral expression: *con sord* versus *senza sord*, *pizzicato* versus *arco*, *sul ponticello* versus ordinary, and heavy pressure versus normal weight⁹¹. Julia Biber further discusses the timbral gestures used in the *10 Preludes*, and also suggests that these gestures may be felt by the performer as "consonant" or "dissonant"; perhaps more practically understood

⁸⁷ Vera Lukomsky, "Sofia Gubaidulina (1931-)," 187.

⁸⁸ Mark Morris, *A guide to 20th Century Composers* (London, UK: Meuthen, 1996), 315.

⁸⁹ Ivan Moody, "The Space of the Soul: An interview with Sofia Gubaidulina," *Tempo 66* (February 2011) 32.

⁹⁰ Ewell, "The Parameter Complex in the Music of Sofia Gubaidulina," 5 - 8.

⁹¹ *Ibid.*, 8.

as “playable” or “awkward”⁹². Articulation may also be used as an expression parameter to suggest darkness versus light, or to simply use instrumentation that occupy different poles or sound worlds⁹³. Ultimately, timbre and analysis of Gubaidulina’s music through expression parameters or timbre alone ignores large-scale structural elements of her music.

Gubaidulina’s second “Rhythm of the Form” period, and her increased use of symbolic numerical sequences, provides clues as to how she builds larger structure in her compositions. An analysis of timbre as a structural feature may be used by the performer as a quick method of structural comprehension without the need for more detailed analysis. Secondly, Gubaidulina is also clear that, where expression may provide a guideline, she is most concerned with a performer bringing an individual voice to her works without feeling constrained by the timbral parameters⁹⁴.

Gubaidulina’s early music often has a narrative quality that was deepened with her conversion to Russian Orthodoxy. The narrative quality comes first from her writing for the Soviet film industry and later transformed into a fascination with musical representation of religious images through numerical symbols. This shift into representational symbols is first seen in *Concordanza*⁹⁵, and is also evident in *Offertorium*. This style of composition is similar to George Crumb’s *Black Angels* using

⁹² Julia Biber, “Ten etudes for solo solo by Sofia Gubaidulina” (DMA document, City University of New York, 2016), 94.

⁹³ Biber, “Ten etudes for solo cello by Sofia Gubaidulina,” 15.

⁹⁴ *Ibid.*, 99.

⁹⁵ Ewell, “The Parameter Complex in the Music of Sofia Gubaidulina,” 9.

numerology allegorically in creating structure. Gubaidulina's work in rhythm and rhythmic proportions may be considered her most significant compositional achievement and is self-referentially her "main experiment" and a source of great pride⁹⁶.

Gubaidulina's "Rhythm of the Form"

Gubaidulina's use of rhythm as a structural device, is self-referentially called "The Rhythm of the Form"⁹⁷. In the 1980s, Gubaidulina became fascinated with Gennadi Aigi's poetry and his use of the Fibonacci sequence to divide his poems⁹⁸. Her specific rhythmic use of the Fibonacci series was also influenced by Piotr Meschaninov's⁹⁹ use of it, although there is no evidence that Gubaidulina applied the series to pitch¹⁰⁰. She also cites Bach's use of the Golden Ratio¹⁰¹ as seen in the proportionality of sections, particularly the *Chaconne* from Bach's Second Violin Partita¹⁰². Gubaidulina speaks of this transition to rhythmic structure and her use of mathematical concepts as moving from

⁹⁶ Vera Lukomsky, "Hearing the subconscious: Interview with Sofia Gubaidulina," *Tempo*, No. 209 (July 1999), 27.

⁹⁷ Lukomsky, "The Eucharist in my Fantasy," 34.

⁹⁸ *Ibid.*

⁹⁹ Peter Meshchaninov was a Soviet composer who experimented with the division of the octave into greater than twelve pitches with the help of electronics in the 1970s. He also experimented with assigning the Fibonacci series to pitch within his new octave and arrangement of pitch in works with Fibonacci.

¹⁰⁰ Janice Ellen Hamer, "Sofia Gubaidulina's Compositional strategies in the "String Trio" (1988) and other Works" (PhD Dissertation, City University of New York, 1994), 23.

¹⁰¹ The Golden Ratio (mean or proportion) is a "perfect" mathematical proportion that is derived from the Fibonacci sequence found in nature, mathematically constructed objects, spirals, and music and art. The Golden Ratio is 1.666.

¹⁰² Lukomsky, "My desire is always to rebel, to swim against the stream: Interview with Sofia Gubaidulina," 19.

pure intuition to structural intuition to illuminate her compositions¹⁰³. She says that she “chooses rhythm in the broad sense in order to clarify [her] subconscious and not damage its essence¹⁰⁴. This shift coincides with her conversion to Russian Orthodoxy in 1970, encouraged by Maria Yudina¹⁰⁵. As Gubaidulina once said about religion and music, “Actually, all my works are religious. As I understand it, I’ve never written non-religious pieces¹⁰⁶,” and that the “re-ligio” is the “re-legato” and that religion is the “legato in the staccato of life¹⁰⁷.”

How Gubaidulina applies mathematical constructions using sequences in composition is critical to analysis and performance of her works. Because she uses proportions to construct sections of works, sizeable amounts of pre-compositional calculations and math are evident in her sketches for works from this period¹⁰⁸. In the case of *Dancer on a Tightrope*, there are twenty-four tablet-size pages of sketches, and a twenty-three-page edited fair copy for a twenty-page score¹⁰⁹. The precision of her outline and structure is also evident, as the overall length of the macro-form does not change sizably from the sketches.

¹⁰³ Lukomsky, “The Eucharist in my Fantasy: Interview with Sofia Gubaidulina,” 35.

¹⁰⁴ Lukomsky, “Hearing the Subconscious: Interview with Sofia Gubaidulina,” 30.

¹⁰⁵ Kurtz, *Gubaidulina*, 86.

¹⁰⁶ Lukomsky, “Hearing the Subconscious: Interview with Sofia Gubaidulina,” 31.

¹⁰⁷ Moody, “The Space of the Soul: an interview with Sofia Gubaidulina,” 32.

¹⁰⁸ Jennifer Denise Milne, “The Rhythm of Form: Compositional Processes in the music of Sofia Gubaidulina” (PhD Dissertation, University of Washington, 2007) 27.

¹⁰⁹ Sofia Gubaidulina, *Dancer on a Tightrope*, complete sketches (Basel, Switzerland: Paul Sacher Stiftung, 1993), microfilm.

Ratios and Colors

One of Gubaidulina's signatures is the mathematical relationship between music and color. In the 1990s, she experimented with mathematical proportionalities indicative of specific colors¹¹⁰. Gubaidulina does not advocate for color projections during her music, as she believes that it would overwhelm her music¹¹¹. Colors are intended as enhancement of the work, and long-lasting static ratios often change at pivotal points in the work to indicate sectional change¹¹². Lukomsky includes a detailed analysis of what colors correspond to each ratio; I have included a table of Lukomsky's analysis of each color and its ratio (Figure 1)¹¹³. Ratios are typically included under rhythmic groupings of notes or accompanied by dynamic swells to allow the color to "breathe"¹¹⁴. Gubaidulina derives mathematical ratios for colors from the amount of light absorption ratios, or how color is formed scientifically¹¹⁵.

Intended Color	Corresponding Ratio
Yellow	7:1
Orange	6:2
Red	5:3
Green	4:4

¹¹⁰ Milne, "The Rhythm of Form: Compositional Processes in the Music of Sofia Gubaidulina," p. 30.

¹¹¹ Lukomsky, "My desire is always to rebel, to swim against the stream," 28 – 9.

¹¹² Ibid.

¹¹³ Ibid., 30.

¹¹⁴ Ibid., 31.

¹¹⁵ Ibid.

Light blue	3:5
Blue	2:6
Violet	1:7

Figure 1. Gubaidulina’s Color proportionalities.

Gubaidulina’s use of the Fibonacci Series

Gubaidulina uses the Fibonacci sequence specifically to order major sections, the length of phrases by numbers of beats, the length of phrases by numbers of silent beats, and occasionally the number of attacks or notes within a phrase¹¹⁶. In order to understand Gubaidulina’s use of the Fibonacci series, it is key to understand the mathematical construction of the series. The numbers that comprise the Fibonacci sequence or series, are linear, additive, and recurring. To derive the series the following equations are used:

$F_n = F_{n-1} + F_{n-2} \text{ where } F_1 = F_2 = 1$ <p>Linear recurrence equation:</p> $X_n = A_{x_{n-1}} + B_{x_{n-2}} \text{ where } n \geq 3 \text{ or simply } x_n = x_{n-1} + x_{n-2}$
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Figure 2. Fibonacci and Linear Recurrence¹¹⁷.

Simply put, the Fibonacci series adds each number to the previously occurring number to derive the full series.

<p>Fibonacci Series:</p> <p>0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987...∞</p> <p>0+1=1, 1+1=2, 2+1=3, and so on</p>
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¹¹⁶ Milne, “The Rhythm of Form: Compositional Processes in the music of Sofia Gubaidulina,” 52.

¹¹⁷ Pravin Chandra and Eric W. Weisstein, “Fibonacci Number,” from *Mathworld* a Wolfram web resource, accessed August 8, 2016. <http://mathworld.wolfram.com/FibonacciNumber.html>.

Figure 3. The Fibonacci Series

The Fibonacci series is also linked to the mathematical principle of the “Golden Ratio” or “Golden Mean”. This mathematical principle is linked to beauty and symmetry in nature and engineering, proportionality in the music of Bach, and the drawings of Escher¹¹⁸. The ratio between successive numbers in the Fibonacci series is roughly 1.6180, the same as the “Golden Mean”. Additionally, it is possible to draw squares with sides of Fibonacci lengths that will contain spirals proportional to the “Golden Mean”. It also works in retrograde using the Golden Ratio, and the position of the Fibonacci number in the series, to find the specific Fibonacci number¹¹⁹.

Golden Ratio or $\phi = 1.6180\dots$
F_8 / F_7 or $13/8 = 1.625$
In retrograde:
Given $\phi = 1.6180$ $x_n = \phi^n - (1 - \phi)^n / \sqrt{5} \rightarrow x_6 = \phi^6 - (1 - \phi)^6 / \sqrt{5} = 8.00003$ ($X_6 = 8$)

Figure 4. Deriving the Golden Ratio from the Fibonacci series.

In later experiments into the “Rhythm of the Form” Gubaidulina also uses the Lukas and Evangelist series¹²⁰. However, most of her works reflecting these series are part of her writing in the early 1990s before she transitioned into further experiments with microtonality and proportionalities drawing on physical colors¹²¹. Gubaidulina makes other

¹¹⁸ Pravin and Weisstein, “Fibonacci Number,” *Wolfram Mathworld*.

¹¹⁹ Ibid.

¹²⁰ The Lukas and Evangelist series are other additive sequences similar to the Fibonacci sequence. Both are linear and proportionally increasing. However, neither sequence derives to the Golden Ratio, and were used less frequently by Gubaidulina.

¹²¹ Milne, “The Rhythm of Form: Compositional Processes in the Music of Sofia Gubaidulina,” 29 – 31.

allusions to the significance of the various mathematical series. Where she mentioned the Fibonacci, Lukas, and Evangelist series by name in numerous interviews, she also stated that “the farther away from the Fibonacci series, the less perfect is the proportion¹²²”. In such a categorization of sequences, Fibonacci may be viewed as a “consonant” construction with other sequences viewed as “dissonant”¹²³. In *Dancer on a Tightrope*, the most significant mathematical constructions are based on the Fibonacci sequence.

¹²² Lukomsky, “Hearing the subconscious: Interview with Sofia Gubaidulina,” 28.

¹²³ Ibid.

CHAPTER 5

ANALYSIS AND COMPOSITIONAL STRUCTURE OF *DANCER ON A TIGHTROPE*

The printed score for *Dancer on a Tightrope* is readily available from Sikorski for performers. For performers, there are many notational features in *Dancer* that need further explanation and may be derived from Gubaidulina's other compositions. Additionally, to completely understand the structure of *Dancer on a Tightrope* a thorough analysis derived from the composer's sketches is required. Gubaidulina's *Dancer on a Tightrope* is constructed using the Fibonacci sequence and the Lukas series to create both the macro and micro structure. My analysis focuses on Gubaidulina's use of the Fibonacci series. A more conventionally based melodic or harmonic analysis would arguably provide less, if any, insight into the macro-construction of this work, and would not be as useful to a performer as a thorough understanding of its Fibonacci-based structures. My analysis focuses on expectation and realization, sectional division, and attention to Gubaidulina's "expression parameters". A more complete discussion of notation, as well as a diagram of all non-standard notations is included in my recommendations for performers. Between the fair copy and published score, there are over ninety-eight changes or discrepancies, including an extensive section at the end of the piece which has been entirely rewritten. Thus, I highlight which copy of the score I am referencing throughout my analysis as well as how changes prior to the printed edition affect analysis and interpretation. I also address features in the sketches that are not in the published score that contribute to mathematical interpretation. It is worth noting, I have only included observations about the analysis I can make without doubt. I

have additional theories I mention about the proportionality between sections and color relationships, but they are purely hypothetical.

History of *Dancer on a Tightrope* and Gubaidulina's comments on the work

Gubaidulina's *Dancer on a Tightrope* was composed at an intense personal juncture for the composer. Composed in 1993, the work was commissioned by the Library of Congress during a period of Gubaidulina's life when she was beginning to receive substantial international acclaim. *Dancer on a Tightrope* was composed shortly after her immigration to Germany in 1991¹²⁴. Allusions to balance in *Dancer on a Tightrope* can be interpreted as her balancing an identity as a Western and Soviet composer, life in general, and literal compositional balance in the work. Gubaidulina says that the piece is a metaphor for "Life as risk and art, as flying through another state of being¹²⁵". She suggests that the piece is a fantastical dance through life. The hesitation of the violinist mirrors a dancer taking hesitant steps on the wire, and the interior playing of the pianist is a literal representation of the metal tightrope¹²⁶. Gubaidulina also says that the piece is structured around her "holy" numbers referring to the use of the Fibonacci sequence¹²⁷. In Gubaidulina's output, this piece falls at the end of her time working with numbers and before she began focusing on microtonality. An analytical understanding, as well as precise execution is essential to this work.

¹²⁴ Kurtz, *Gubaidulina*, 327.

¹²⁵ Valeria Tsenova, *Cislovyje tajny muzyki Sofii Gubaidulinoi*, Moscow, Russia: Moskovskaya gos. Konservatoria im PI Chaikovskogo, 2000) 151.

¹²⁶ Tsenova, *Cislovyje tainy muzyki Sofii Gubaidulinoi*, 152.

¹²⁷ Ibid.

Macro-Structure of *Dancer on a Tightrope* and Sectional divisions

As previously mentioned, the best approach to *Dancer on a Tightrope* is a detailed structural analysis. The piece does not rely on traditional tonal harmonic relationships. Rather, its tonal center is an “A” with a tendency towards A minor in arrivals with the note A hidden in a cluster. The tonal expectation begins and ends on the pitch A. This reiteration of pitch can only be seen as an emphasis, not conventional tonality, as features indicative of a key like a dominant relationship, non-cluster chordal development, or expectation and tonal realization are not present. Furthermore, a serial analysis is not recommended, as there is no evidence of a serial matrix in Gubaidulina’s sketches. Rather, in the sketches, all preliminary constructions center on Fibonacci or Lukas proportionality. Pitch has no compositional determination in the sketches¹²⁸.

Tables of Sectional Division

The entire work may be divided either into three macro-sections or eight micro-sections with the last section remaining unclear when comparing the sketch and the published edition. Most likely, the entire last section is as one, leaving the number of micro sections at eight, a Fibonacci number. The three macro sections were determined by major shifts in timbral color at each juncture as well as by the presence of silent measures. Silence is a powerful tool in Gubaidulina’s writing, and silence is typically an indicator of sectional change¹²⁹.

¹²⁸ Sofia Gubaidulina, *Dancer on a Tightrope*, complete sketches (Basel, Switzerland: Paul Sacher Stiftung, 1993), microfilm.

¹²⁹ Hamer, “Sofia Gubaidulina’s Compositional strategies in the “String Trio” (1988) and other works,” 15 and 22.

Measures	Description and Indicators
Beginning to Rehearsal 25	<ul style="list-style-type: none"> - First measure of Rehearsal 25 is silent. - Timbral shift in the Piano. - Timbral shift in Violin, first <i>espressivo</i>.
Rehearsal 25 to one measure before Rehearsal 38.	<ul style="list-style-type: none"> - Middle section for Violin. - Piano cadenza section with thimbles. - Return of opening motive in <i>pizzicato</i>. - Silence the measure before 38.
Rehearsal 38 to the end of the piece	<ul style="list-style-type: none"> -Pianist plays at keyboard. -Where numbering begins in sketches. - Piano writing same to the end -Silent last measure

Figure 5. Table of three macro sections in Gubaidulina’s *Dancer on a Tightrope*.

Three is a Fibonacci number, and each section is marked by major timbral shifts. Three also reflects the overall architecture of the piece and the concept of balance with two outer sections “balanced” around a middle section. The two outer sections are nearly the same length – 119 and 144 bars respectively – with a much shorter middle section. This heightens the overall sense of balance to the piece. The Fibonacci constructions that dictate the smaller eight sections are based on everything from note lengths to number of bars. Although the overall count of the bars is not always based on Fibonacci, the final section, thoroughly planned in Gubaidulina’s sketches, is exactly 144 measures, a Fibonacci number.

The eight smaller sections of *Dancer on a Tightrope* may also be determined from Gubaidulina's sketches. The demarcation of sections A-H were all indicated approximately in the sketches in blue¹³⁰. I have used the published score for my analysis, copying the blue notations from the sketch into the published score for ease of viewing two versions simultaneously. Both the macro form and micro forms contain a Fibonacci number of sections – three and eight respectively – it is clear that the sectional division of the piece as well as individual gestures are constructed using the Fibonacci series.

Reference Letter	Location	Number of Measures or Numerical Relationships	Is this section present in the sketches?	Additional Description
A	Measure 1 through rehearsal 7.	34 measures, beats may be divided as $89+37$, where $37=34+3$	A is clear in sketch, B placement clear from piano part in sketch.	Violin Cadenza, transition to 2/4 is indicative of sectional division
B	3 measures before rehearsal 7 to rehearsal 10	Rhythmic elision: 3 transition measures with violin, Piano solo alone is 21 measures.	B is clearly indicated from Piano solo, not piano entrance.	Entrance of Piano with glass.
C	Rehearsal 10 to 16	89 beats. 8 seconds must count as 8 beats	C is clearly indicated in sketch with new <i>col legno</i> timbre.	<i>Col Legno</i> for violin and ricochet for piano. Instruments answering.
D	Rehearsal 16 to 25	89+13 measures.	D is clear, although piano chords are not clear in pitch in sketch.	Violin changes from <i>pizzicato</i> to <i>arco</i> , more specific piano timbre.

¹³⁰ Sofia Gubaidulina, *Dancer on a Tightrope*, complete sketches (Basel, Switzerland: Paul Sacher Stiftung, 1993), microfilm.

E	Rehearsal 25 to 35	55 “units”. Not all beats are in metered time. Rehearsal 25 to 26 has 6 units over 24 seconds with 6 note changes for example.	Gubaidulina indicates 55 beat or articulation units between E and F in blue.	Opposing dynamics in violin and piano. Change in usage of the tumbler by the pianist. Violin is all lyrical bowed gestures.
F	Rehearsal 35-36	8 segments, 8 attacks or statements between fermata rests.	Yes, exactly the same from sketch to printed edition.	Piano Cadenza with thimbles.
G	Rehearsal 36-38	89 notes. Not all attacks, but 89 individual notes.	Yes, however meter changes from sketch and fair copy to printed score.	Piano <i>glissando</i> across strings without tumbler or thimbles.
H	Rehearsal 38 to the end	144 measures.	Piano part extremely clear in sketch. Rehearsal 56 to the end is highly divergent in printed edition, however given a clear “H” at 38, and a total number of 325 measures, there is no doubt this is the final section.	Static piano writing until the end. Pianist plays at the keys. Violin brings back material from earlier in the piece.

Figure 9. Table of eight micro sections in Gubaidulina’s *Dancer on a Tightrope*

For clarity, I indicated the relationship of each section to Fibonacci in red and the major timbral feature of each section in green. Every section has a Fibonacci proportionality and, as with other works of Gubaidulina, the use of the sequence is the

largest structurally determining factor rather than the order of the sequence mathematically in the work.

Features found in the Sketches for Reference in Analysis

To begin analysis of *Dancer on a Tightrope*, some reference notes are needed to understand Gubaidulina’s compositional process. For performers and theoreticians alike, a quick reference to the first fifteen Fibonacci numbers is useful. For ease, I have omitted the zero placement in the series which is zero. Using the sequence is essential for every step in the analysis, as the sections are often a compound, addition, or subtraction of several Fibonacci numbers. It is also easy to see if the number of bars does not equal a Fibonacci number, but represents the number of beats, silence, or attacks in a section instead.

Place in Sequence	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Fibonacci Number	1	1	2	3	5	8	13	21	34	55	89	144	233	377	987

Figure 7. Fibonacci series from first placement to fifteenth¹³¹.

Another idiosyncrasy of Gubaidulina’s compositional language in the sketches is the use of divergent arrows along the score. Throughout the sketches, there are triads of arrows in various colors, indicating numbers at the top of each one¹³².

¹³¹ This is my own construction of the sequence using the Wolfram formulas indicated before.

¹³² Sofia Gubaidulina, *Dancer on a Tightrope*, complete sketches (Basel, Switzerland: Paul Sacher Stiftung, 1993), microfilm, 976 – 98.

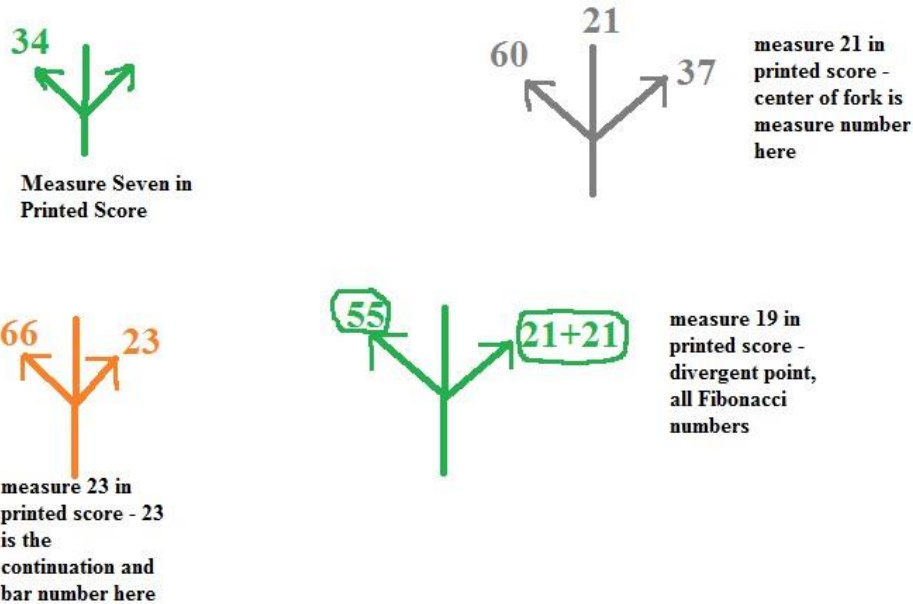


Figure 6. Gubaidulina’s divergent arrows from the sketches.

Each of these arrows indicate a sectional division within the sketches, and also allow Gubaidulina to track how many measures, beats, or types of notes have been used since the beginning of the piece, from this point in the section, and relationships to other sequences. Gubaidulina precisely maps each section as she writes, and these arrows are an indicator of the mathematical precision that she checks as she goes. The center of the fork always corresponds to the measure number or the rehearsal number of the piece. The left arrow always indicates beats or measures prior to that measure, and the right arrow always shows beats or measures continuing from that point. This is also an easy way to verify placement of macro-sections. For example, at rehearsal five, such an arrow indicates the number “twenty-one” with a continuous arrow.

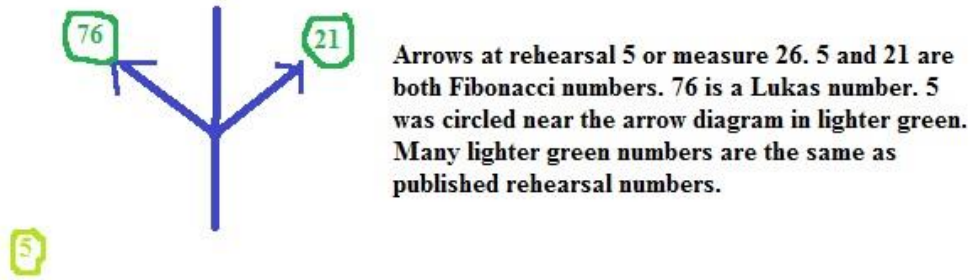


Figure 7. Gubaidulina’s “arrow tree” from the sketches at rehearsal five¹³³.

From the point at rehearsal five, there are twenty-one major beats before the next section begins at rehearsal seven (B). Gubaidulina checks the exactness of each measure and rehearsal number by confirming some sort of Fibonacci relationship as she writes. Because the sketches often do not correspond exactly to the printed score, these arrows may be used to check beats or measure numbers from published points.

Color is also significant to Gubaidulina. Fibonacci numbers on her divergent arrows are almost always indicated in green, unless the entire arrow is marked in a different color. She indicates ratios that she will later apply to groups of notes in the color associated with the light absorption of that ratio – 5:3 for red, for example¹³⁴. Thusly, it is paramount to work with Gubaidulina’s original sketches, or sketches that accurately represent color if analyzing her use of sequences or color ratios.

From the sketches to the printed score, there are numerous sections that are completely unchanged. Rehearsal thirty-eight to rehearsal fifty-six is a good example as

¹³³ Sofia Gubaidulina, *Dancer on a Tightrope*, complete sketches (Basel, Switzerland: Paul Sacher Stiftung, 1993), microfilm. 975.

¹³⁴ See Figure 1: table of colors and corresponding ratios.

the printed copy remains nearly identical to the first sketches. From rehearsal thirty-eight, every green number indicates the exact number of beats that the pianist will hold a pitch, and the blue numbers exactly correlate to measure numbers. The total number of measures from rehearsal thirty-eight to rehearsal fifty-four is eighty-nine, a Fibonacci number. Rehearsal fifty-four would be measure ninety of Gubaidulina's count, and rehearsal fifty-four to the end is precisely fifty-five measures, another Fibonacci number. The piano part from thirty-eight to fifty-six is completely unchanged from the sketches to the printed edition, and the violin part was added by the fair copy. The final section was only changed in the number of piano chords. In the printed edition, there are five new piano articulations from fifty-six to the end, another Fibonacci number, which suggests that Gubaidulina fixed a consistency error in the final score. This final section in particular shows the detailed amount of compositional planning that Gubaidulina undertook and the precision of her macro-sectional planning from sketch to published score. Below is the beginning of the section to compare how the green and blue numbers from the sketches correspond to the published score¹³⁵.

¹³⁵ Sofia Gubaidulina, *Dancer on a Tightrope*, complete sketches (Basel, Switzerland: Paul Sacher Stiftung, 1993), microfilm, 990.

38 ♩ = 84

♩ = 84
* ord.

pp

p

1. 2. 3. 4. 5.

7 3 4 7

* red. * red. * red. (→ con red.)

Example 1. Gubaidulina *Dancer on a Tightrope*: rehearsal no. 38 with sketch markings added to published score.

One of the most important events in the piece is when the pianist transitions from interior playing to performing on the keys. The above section, rehearsal thirty-eight to the end, is one of the most carefully planned by Gubaidulina. The final transition to the pianist at the keys is one of the most significant indications of sectional division.

These tools, color, use of the Fibonacci series, and an understanding of Gubaidulina's markings are critical for analysis. From this basic understanding, analysis is conducted by counting beats and measures in order to discern what was transferred from the sketches to the published score. Just as in harmonically driven music, the performer should be guided by expectation, realization, and sectional division according to the number sequences. Therefore, this sort of macro-analysis is the most useful to performers and those wishing to broadly understand the construction of *Dancer on a Tightrope*.

Analytical conclusions

For performers, the macro structure of three sections, as well as the micro structure of eight sections gives a framework for phrasing and sectional division. With these sections clarified, timbral shifts become more evident. These changes in timbre at sectional divisions can be emphasized by the performer to highlight the overall form to the listener. Details like Gubaidulina's "number trees" and use of the Fibonacci series in determining silence, for example, serve as analytical checks to facilitate larger structural understanding. To further delve into any of the above sections, or to understand a specific gesture, the Fibonacci series should always be the first point of reference for this piece.

CHAPTER 6

PRACTICAL CONSIDERATIONS AND SUGGESTIONS FOR PERFORMERS

In a performance of *Dancer on a Tightrope*, the piece must be approached with a deep understanding of the piece's structure, performative potential, as well as what is practically possible for both instruments. In my suggestions for violin and piano, I use Khlopova's "Expression Parameters"¹³⁶ and primarily focus on accentuating the work's extremes of timbre and gesture. I also include a complete table of all non-standard notations for performance reference. For the violin, the idea of consonant and dissonant gesture is significant when bowing the piece. I include suggestions for the violinist of bowings and other expression markings based on the original markings in the sketches and fair copy and how this differs from the published score. Finally, for the piano I include recommendations for interior playing, optimizing rehearsal time on the pianos which allow interior performance, and minimizing damage to the strings, dampers, pedals, and sounding board.

When studying *Dancer on a Tightrope*, an understanding of Gubaidulina's notation and how to execute it is a performer's initial challenge. Many of the notations in *Dancer on a Tightrope* are standard for Gubaidulina and are also used in her String Quartet No. 2, *Concordanza*, *Offertorium*, and String Trio.¹³⁷

¹³⁶ Refer to chapter four for a complete explanation of how Khlopova derived her "Expression Parameters". I focus here on a practical explanation and application of the parameters regarding performance and timbral differences.

¹³⁷ Sofia Gubaidulina, *String Trio* (Paris, France : Chant du Monde, 1989).

*Concordanza*¹³⁸, and String Quartet No. 2¹³⁹, for example, a legend of the notation is included in the beginning of the score for reference. However, in *Dancer on a Tightrope*, no such gamut is provided. This assumes familiarity of the performer with Gubaidulina's notation and access to other works. I interpreted Gubaidulina's notations in *Dancer on a Tightrope* based on the legends from the String Quartet No. 2, String Trio, and *Concordanza*. I also included notations the score to *Dancer on a Tightrope* that do not have parallels in the other works relating to interior piano playing, and compiled everything into a single legend for performance ease. This legend should serve as a useful reference while playing the piece and for score study prior to playing to clarify expressive and tempo markings. Additionally, this should increase accuracy in tempo changes – a key feature of Gubaidulina's music to precisely represent the mathematical structure and creation of ratios. In my opinion, this or a similar legend is an essential performance tool that should be published with *Dancer on a Tightrope*.

¹³⁸ Sofia Gubaidulina, *Concordanza*, (Hamburg, Germany: Sikorski, 1976).

¹³⁹ Sofia Gubaidulina, *String Quartet No. 2* (Hamburg, Germany: Sikorski, 1987).

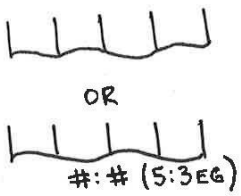




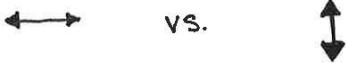

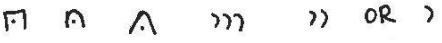


GUBAIDULINA "DER SEILTÄNZER"		TABLE OF NOTATIONS
NOTATION		MEANING
 <p>OR #: # (5:3 EG)</p>		RUBATO OR RUBATO WITH A SPECIFIC RATIO: 5 NOTES IN THE SPACE OF 3 BEATS, FOR EXAMPLE
		NOTES BECOME FASTER
		NOTES BECOME SLOWER
		NOTES BECOME FASTER THEN SLOWER
		INDETERMINATE NOTATION PIANO FOLLOWS PITCH CONTOUR WITH GLASS ON STRINGS
		INDICATES DIRECTION OF GLASS MOTION IN PIANO: HORIZONTAL OR PARALLEL TO STRINGS
		NON-METRICAL PASSAGE SOME INCLUDE A RATIO OR TIMING
		RESTS WITHOUT METER
		AS FAST AS POSSIBLE
		PLAYED WITH THIMBLES

Figure 10. Table of notations for Gubaidulina's *Dancer on a Tightrope*¹⁴⁰.

¹⁴⁰ Sofia Gubaidulina, *Der Seiltänzer* (Hamburg, Germany : Sikorski, 1993).

In addition to the notation itself, there are some other unique features worth mentioning for the performer prior to playing the piece. As in the passage from the third measure of rehearsal nineteen through rehearsal twenty-four, one of the instruments – here violin – is frequently metrical, where the piano is non-metrical¹⁴¹.

The image shows a musical score for 'Dancer on a Tightrope' from rehearsal 18 to 19. It consists of two systems of staves. Each system has a violin staff on top and a piano staff on the bottom. The score is annotated with handwritten numbers in circles (7, 8, 9, 10, 12, 13, 15, 17, 18) and red arrows pointing to specific notes. The piano part includes dynamic markings like sfz, sfz, sfz, p, mf, and sfz, and a 'cresc. poco a poco' instruction. The violin part has a 'arco' marking.

Example 2. *Dancer on a Tightrope*: rehearsal eighteen through nineteen.

In this example, I left Gubaidulina’s notes regarding changes from six to nine in the printed copy of the score. The violin here dictates the overall rhythmic scheme. In the circled areas in Example two, it is clear how important meter and coordination between both instruments is. This can be difficult when pitch is indeterminate in the piano, such as at rehearsal nineteen. Rehearsal eighteen remains with both instruments in the same

¹⁴¹ Gubaidulina, *Der Seiltänzer*, 8.

meter, with the third measure of rehearsal nineteen having an indeterminate meter for the piano from the fourth measure of rehearsal eighteen.

This requires attention for the performers to carefully align attacks that occur at the same time and to avoid attacks that are staggered. Such is the case at rehearsal twenty-one where the second piano grace note occurs before the violin, and at rehearsal twenty-two, where the piano “G” occurs after the violin downbeat¹⁴².

The image displays two systems of musical notation for a piece titled "Dancer on a Tightrope". Each system consists of two staves. The first system begins with a tempo marking of "a tempo" and a dynamic marking of "mf". It includes a section marked "poco riten." with a 7:9 time signature. A box labeled "22" is placed above the second staff, and a red circle highlights a measure in the second staff. The second system also features "poco riten." and "a tempo" markings, with a dynamic marking of "f espr." and a "vibr." instruction. A red circle highlights a measure in the first staff. The score includes various musical notations such as slurs, accents, and dynamic markings like "sfz" and "sfpp".

Example 3. Rehearsal twenty-two of *Dancer on a Tightrope*.

Before rehearsal seven, the pianist enters on what appears to be the “harmonic” pitch “A”¹⁴³ in the lower staff.

¹⁴² Ibid.

¹⁴³ Gubaidulina, *Der Seiltänzer*, 3.

ric. quasi gliss.
sul D
gliss
9:8

mf

pp
Ped.
l.v. sempre

Detailed description: The image shows two staves of musical notation. The top staff is a single treble clef staff with a glissando line starting from a note and moving upwards, labeled 'ric. quasi gliss.' and 'sul D'. Below the staff, the ratio '9:8' is written. The bottom staff consists of two treble clef staves. The upper staff has a triplet of notes with a slur over them, marked 'mf'. The lower staff has a triplet of notes with a slur over them, marked 'pp'. Below the lower staff, there is a 'Ped.' (pedal) line with a dotted line and the instruction 'l.v. sempre'.

Example 4. *Dancer on a Tightrope*, measure 32.

This notation indicates the “A” where the glass should be placed, resulting in the first overtone. It carries the same meaning three measures before rehearsal ten as well, simply with a filled note-head and therefore different rhythm¹⁴⁴.

10 c.l. batt. (ric. sempre)

p

p

sfz

sfz

sfz

sfz

sfz

Detailed description: The image shows two staves of musical notation. The top staff is a single treble clef staff with a sequence of notes and slurs. There are three 'sfz' (sforzando) markings with arrows pointing to specific notes. The bottom staff consists of two treble clef staves. The upper staff has a triplet of notes with a slur over them, marked 'p'. The lower staff has a triplet of notes with a slur over them, marked 'p'. There are two 'sfz' markings with arrows pointing to notes in the lower staff. A red circle highlights a triplet of notes in the lower staff.

¹⁴⁴ Gubaidulina, *Der Seiltänzer*, 4.

Example 5. *Dancer on a Tightrope*: Rehearsal ten with different rhythms for the overtone “A” in the piano.

Another unfamiliar notation for the pianist is the seeming indication of *ricochet* as in the measure before rehearsal eleven, or the fifth measure of rehearsal twelve¹⁴⁵. To approach *ricochet* with a glass on piano strings, the glass should be dropped while still held in the hand, preferably at a slight angle to the string for precision, and from enough height to create the bounce against the desired string.



Example 6. One measure before rehearsal eleven in *Dancer on a Tightrope* – piano *ricochet*.

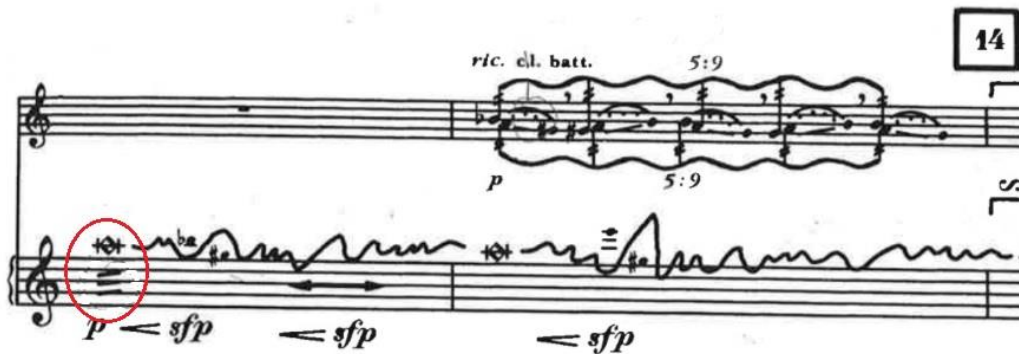
The angle of the glass will result in hitting only one string versus many. As in the fourth and fifth measure of rehearsal twelve (Example 7), attention should be paid to creating a distinct grace note and distinct points of attack for each major beat in order to create rhythmic stability.

¹⁴⁵ Gubaidulina, *Der Seiltänzer*, 4 – 5.



Example 7. Fourth and fifth bars of rehearsal twelve in *Dancer on a Tightrope*.

In the case of “tremolo” for the pianist on the strings, as in two measures before rehearsal fourteen¹⁴⁶, I do not recommend dropping the glass.



Example 8. *Dancer on a Tightrope*: Two measures before rehearsal fourteen. Piano tremolo.

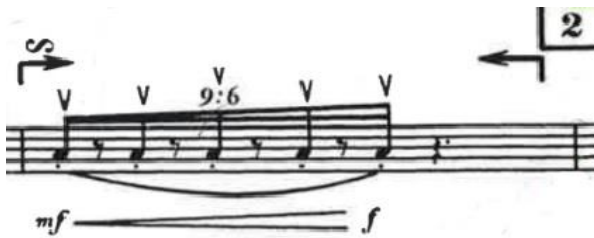
Rather, I recommend a slight zig-zag motion with the hand holding the glass in the direction as Gubaidulina indicated. In the case of two before rehearsal fourteen, this would basically be a horizontal motion with the glass on the strings following the melodic contour. To execute the “sforzando piano” dynamics, differing amounts of the glass

¹⁴⁶ Gubaidulina, *Der Seiltänzer*, 5.

surface may touch the string: more glass in louder dynamics comparable to using flatter bow hair for string players for increased sound production.

Ratios and Colors for the Performer

Because for Gubaidulina number series are so significant, it is critical that the performer execute these ratios precisely. She advocates for one singular tempo with rhythmic liberty in individual sections as indicated. According to Gubaidulina, an exact execution allows for a large amount of freedom in melody and harmony, and the precision of rhythm and ratio should ultimately sound gestural¹⁴⁷. The performer should be concerned with precision in three key areas: expanding ratios across the bar proportionally, counting of timed sections exactly as indicated, and alignment of differing meters between parts. Many measures, such as the measure before rehearsal two (Example 9). or the two measures before rehearsal seven, are clear as to the distribution of notes: nine beats in the space of six with an accelerando, nine notes in the space of eight with an accelerando, or five notes in the space of three with rubato respectively¹⁴⁸.



Example 9. *Dancer on a Tightrope*: one measure before rehearsal two.

¹⁴⁷ Lukomsky, "Hearing the Subconscious : Interview with Sofia Gubaidulina," 30.

¹⁴⁸ Gubaidulina, *Der Seiltänzer*, 2 – 3.

ric. 5:4 ric. 5:4 ric. 5:4 ric. quasi gliss. sul D
 sf sf sf 9:8
 mf
 pp
 Red.
 l.v. sempre
 ff 5:3 7
 sfpp

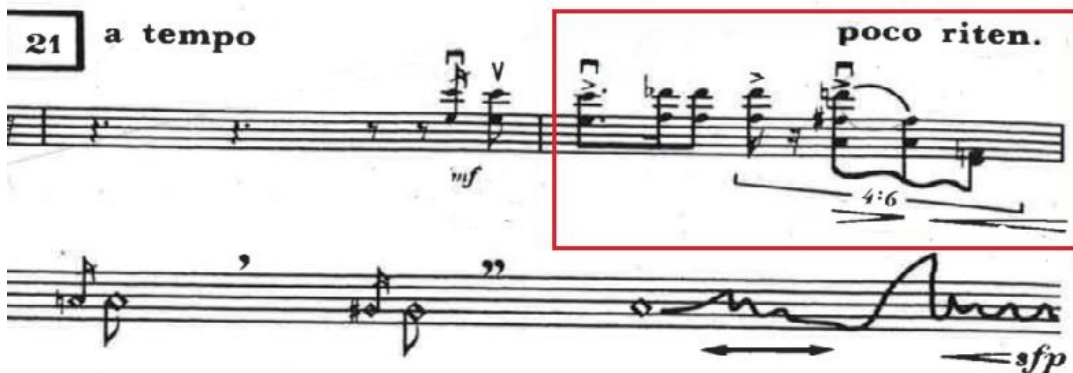
Example 10. *Dancer on a Tightrope*: Two measures before rehearsal seven.

Other ratios, such as those with tremolo or ricochet or those mixing note lengths, can be more difficult to execute, such as the measure before rehearsal fourteen, and the second measure of rehearsal twenty-one¹⁴⁹.

ric. al. batt. 5:9 14
 p 5:9
 sfpp

Example 11. *Dancer on a Tightrope*: one measure before rehearsal fourteen.

¹⁴⁹Gubaidulina, *Der Seiltänzer*, 5 – 7.



Example 12. *Dancer on a Tightrope*: second measure of rehearsal twenty-one.

Regardless of the complications in execution, the focus as a performer must be on an even and proportional representation of such bars. Any variations in tempo in these measures should be added after a proportional execution of the measure has been practiced to emphasize the ratio.

Another key area for timing are sections that indicate a precise duration of time. Rehearsal twenty-five and the third measure of twenty-six are excellent examples of this, and require precision in counting from both performers¹⁵⁰.

¹⁵⁰ Gubaidulina, *Der Seiltänzer*, 8.

The image displays two staves of musical notation. The top staff is for the violin and the bottom for the piano. Rehearsal 25 is marked with a box and a red circle around a 24-second timing mark. Rehearsal 26 is also marked with a box and a red circle around a 10-second timing mark. The score includes performance directions such as 'con sord.', 'pp', 'espr.', and 'p'. A tempo marking of quarter note = 84 is present. The instruction '(And..... l.v. sempre)' is written below the piano staff.

Example 13. *Dancer on a Tightrope*: timing at rehearsal twenty-five.

Such precise timings may be achieved using a stopwatch that runs from the beginning of the work. However, because the intent is proportionality between sections rather than digital precision in timing, I favor that both the violinist and pianist practice counting these sections. This will expose any rushed or late tendencies in counting between partners in the same way that we do not count standard string quartet literature aloud in performance, but frequently practice with a metronome. Such sections may also be practiced with a metronome at sixty to the quarter note for additional rhythmic precision of the silent beats.

Finally, I propose that performers pay special attention to proportionality and attacks in sections where the violin and piano have different meters. Such sections include rehearsal twenty-three, and rehearsal thirty-eight to the end of the piece.

Rehearsal twenty-three specifically features different timings for both instruments, and demands coordination of attacks and rhythmic form¹⁵¹.

The image shows a musical score for rehearsal 23, consisting of two staves. The top staff is for the violin and the bottom for the piano. The score includes various dynamics such as *ff*, *f*, *sf*, and *sfp*. There are also performance markings like *cresc. poco a poco* and *5:6* (likely a 5/6 time signature). A red circle highlights a specific section of the music in both staves, and another red circle highlights a different section. A box with the number '23' is in the upper left corner of the score.

Example 14. *Dancer on a Tightrope*: rehearsal twenty-three.

The entire closing section of the work, from rehearsal thirty-eight to the end, demands a different kind of precision between the parts. While the pianist is ultimately counting tremendously long sustained beats, they must be aware of their reactions to the violin part. Both players must carefully observe the dynamic contour from *pianissimo* to “quinta-forte” (fffff) followed by another drop and swell, and finally closing the work in piano. The overall architecture of the final section is dynamically driven by both instruments, and they should feel reactive to each other, even as the rhythmic balance feels unstable.

Recommendations for the Violinist

My recommendations in the violin part vary from questions regarding notation to suggestions for bowing and fingering to logistical suggestions to facilitate collaboration with the pianist and precision of execution.

¹⁵¹ Gubaidulina, *Der Seiltänzer*, 7.

All harmonics for the violinist are executed at the notated pitch, and are notated without the diamond harmonic note heads in the sketches¹⁵². The pitch integrity, as well as the rhythmic integrity in the bar, is the focus, not the virtuosity of the harmonic fingering. Therefore this should dictate fingering up a single string in many cases. The simple answer for harmonic creation is typically the correct one. An excellent example is at rehearsal two, where the entire gesture may be executed on the A string¹⁵³.



Example 15. *Dancer on a Tightrope*: harmonic gesture for violin at rehearsal two.

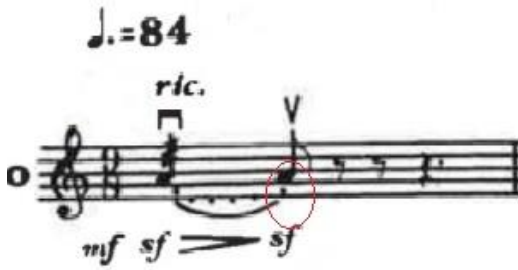
Another issue for the violinist is the execution of bowing and creation of gestures. The number of notes under a ricochet bow stroke in the sketches are a Fibonacci number – eight notes, five notes etc. Therefore, any ricochets that appear to be a non-Fibonacci number should be considered a printing error in the published score¹⁵⁴ and adjusted to the nearest Fibonacci number. Additionally, in some of the ricochet strokes the number of notes are not indicated. In these instances, there should be five notes articulated in the

¹⁵² Sofia Gubaidulina, *Dancer on a Tightrope*, complete sketches (Basel, Switzerland: Paul Sacher Stiftung, 1993), microfilm, 1000.

¹⁵³ Gubaidulina, *Der Seiltänzer*, 2.

¹⁵⁴ Sofia Gubaidulina, *Dancer on a Tightrope*, complete sketches (Basel, Switzerland: Paul Sacher Stiftung, 1993), microfilm, 1003 and 1004 as examples.

ricochet with the final resolution note the sixth note which is not part of the Fibonacci calculation. Such is the case in the first measure of the piece, where the up-bow A, is staccato, but not part of the ricochet calculation¹⁵⁵.



Example 16. *Dancer on a Tightrope*: measure one, ricochet bowing versus staccato.

Clearly, with any ricochet bowing, the correct number of notes may be difficult to execute. However, because Fibonacci dictates the micro and macro forms of the work, attention should be paid to such details as much as is possible without detracting from the overall gesture.

Generally, the bowing from the sketches is the one that is printed in the score, or one that is consistent with a similar gesture in the sketches or fair copy. This sort of bowing, two up-bows, is not comfortable on violin, and counterintuitive to the thrown gesture of the bow. This is what Khlopova refers to as Gubaidulina’s “Expression Parameters” and is a “dissonant bowing”,¹⁵⁶ meaning that it is difficult or non-idiomatic in its execution. Phrasing should be executed according to the “Rhythm of the Form”

¹⁵⁵ Ibid.

¹⁵⁶ Ibid.

principles and should emphasize structure; it is not romanticized or intuitive. Throughout *Dancer on a Tightrope*, there are sections where the bowing feels awkward or backwards, and these should be embraced as this sort of “dissonant” gesture rather than changing the bowing to an idiomatic one. Thusly, idiomatic bowings feel “consonant” or idiomatic to the instrument and provide a contrast for the performer.

Bowing suggestions for the violin were taken from the sketches and compared to the published edition. The opening bowing of the motivic gesture of the piece is not in the fair copy, and I have suggested a new bowing in red to be more idiomatic for violin¹⁵⁷.



Example 17. *Dancer on a Tightrope*: measures two through five with suggested bowing. When this same figure returns, I would recommend using the printed bowing, as it is the same bowing in the sketches¹⁵⁸. This is a good example of a non-idiomatic bowing that Gubaidulina has indicated precisely in the sketches and should not be changed. Where Gubaidulina has not indicated a bowing, the violinist should choose the most idiomatic bowing in performance as to feel the difference between a “consonant” and “dissonant” gesture.

¹⁵⁷ Sofia Gubaidulina, *Dancer on a Tightrope*, complete sketches (Basel, Switzerland: Paul Sacher Stiftung, 1993), microfilm, 1000.

¹⁵⁸ Ibid.



Example 18. *Dancer on a Tightrope*: measures thirteen through fifteen with suggested bowing.

My final suggestions for bowing address phrasing rather than expression parameters. In the section “E” – rehearsal twenty-five to rehearsal thirty-five – the violinist must heed the overall dynamic contour carefully. Although the first entrances are never marked louder than *forte*, they must be in sharp contrast to the piano entrances and there should be room for substantial diminuendo with each subsequent entrance. By the end of this section, the violin should be almost completely covered by the piano chords on the strings; this provides transition into the piano cadenza. One bowing issue that is easily resolved is to set the bow down at rehearsal thirty-five and pick the bow up again at rehearsal forty-two. This allows for the *pizzicato* chords to be better voiced, and to achieve a wider range of dynamic contrast.

The bowing at rehearsal twenty-seven should facilitate the line as no bowing is suggested in the printed copy or sketches. I recommend beginning rehearsal twenty-seven down-bow and rehearsal twenty-nine up-bow, for example, to emphasize the dynamic contours of the line. The focus in this section for the violinist is on lyricism and is a contrast to the more percussive sections of *col legno* and *pizzicato*.

Finally for the violinist, some logistical questions must be addressed. I advocate for playing from the score to allow for precision between parts. In order to do so, several page turns must be changed for the violinist. The page may be turned at rehearsal forty-

four, with the last system of the page copied and attached to page fourteen. In measure 249 (the third measure of forty-nine), the page also must be turned, with the last system of page fifteen copied and attached to page sixteen. The last two measures before rehearsal fifty-six should be copied to the bottom of page seventeen, which allows for a quick page-turn to rehearsal fifty-six. Last, the entire final page should be copied and opened out at the beginning. All page turns should be clearly indicated for quick turns, and colored flags help this process. These changes allow the violinist to play from the score from the beginning of the piece.

In rehearsal, playing from the score has distinct advantages for the violinist being able to follow the contour of the glass-piano sections. Also, sections like rehearsal twenty-three, twenty-six, thirty-seven, and thirty-eight to the end should feel reactive, with each performer answering each other. Rehearsal thirty-eight is particularly important for the violinist to set a clear entrance. This begins the entire final section of the piece and is the most continuous section for both instruments to react to each other. Clearly reacting to the piano part is important and does not leave gaps in the sound. Playing from the score allows for precise coordination in sections without metrical division.

In all, I suggest that the violinist play from the score, pay particular attention to bowings as they relate to expression parameters and development of phrases within Gubaidulina's sectional division, and carefully practice harmonics for gestural fluidity. It is also extremely helpful for the violinist to have extensive knowledge of the piano part and the interior playing techniques necessary in *Dancer on a Tightrope*, to truly work collaboratively on the entire piece and performance.

The majority of my recommendations for the pianist are based around logistics of interior piano playing including limited rehearsal and practice time, minimizing piano damage, and using performance techniques that would be accepted by a broad array of piano technicians to facilitate more frequent performance of *Dancer on a Tightrope*.

Interior piano playing is certainly not unique to Gubaidulina. For reference, similar notation and aesthetic can also be found in the music of Cowell and Crumb who used interior piano playing much earlier than Gubaidulina. In particular, Cowell's notation for string playing in *The Banshee* (1925) is similar to Gubaidulina's indeterminate motion across the strings¹⁵⁹, and Crumb's *Five Pieces for Piano* (1962) is similar to the section using thimbles in *Dancer on a Tightrope* with tremolo playing on the strings¹⁶⁰. Standard techniques of interior playing, that do not involve "preparation" of the piano in the style of John Cage, include plucking strings, striking strings, glissandi, and tremolo¹⁶¹.

Metric changes at rehearsal thirty-six

At rehearsal thirty-six, there are substantial metric changes from the sketches to the printed score. In the printed score, the meter is in seven four and stays the same from rehearsal 36 to rehearsal 37. The table below shows the intended meters from the sketches from rehearsal thirty-six to thirty-seven. The pianist may choose to play either meter; however, I recommend using the meters below as they were contained in

¹⁵⁹ Reiko Ishii, "The Development of Extended Piano Techniques in 20th Century American Music" (PhD Dissertation, Florida State College of Music, 2005), 29 – 31.

¹⁶⁰ Ishii, "The Development of Extended Piano Techniques in 20th Century American Music," 58 – 59.

¹⁶¹ Ishii, "The Development of Extended Piano Techniques," 15 – 16.

Gubaidulina’s sketches and fair copy, and only changed in the published copy. I believe the printed score is also valid, as without access to the sketches, the pianist would never know about the changes in the published edition.

Meter	11/4	11/4	13/4	13/4	18/4	18/4	18/4
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Figure 11. Meters from Gubaidulina’s sketches¹⁶² at rehearsal thirty-six.

Interior piano playing and recommendations

As Richard Bunker and other prepared piano aficionados point out, it is impossible to completely avoid damage to a piano when playing inside the instrument¹⁶³. Anytime a hammer hits one of the piano strings, it causes slight to major detuning of the instrument. Piano strings, just as violin strings, require careful maintenance and avoidance from excess damage. This is also evident in the frequency of piano tuning at conservatories and universities. My recommendations to pianists feature practices to avoid excess damage to the instrument and allow for *Dancer on a Tightrope* to be easily performed in a variety of concert settings. I also offer detailed suggestions to aid pianists who are less familiar with standard interior techniques. Finally, it is worth differentiating between interior playing, as in the piano music by Cowell or Gubaidulina, and works for “prepared piano” by Cage or Crumb, which requires additional manipulation and separation of the piano strings.

Materials

¹⁶² Sofia Gubaidulina, *Dancer on a Tightrope*, complete sketches (Basel, Switzerland: Paul Sacher Stiftung, 1993), microfilm, 1011.

¹⁶³ Richard Bunker, *The Well-Prepared Piano* (Colorado Springs, CO: Colorado College Music Press, 1973), 1 – 4.

When discussing the least harmful methods of executing interior piano passages, perhaps the most significant decision is what materials to use. In order to minimize damage in touching the strings while placing interior flags, etc., I recommend wearing thin cotton gloves when first working in the piano. As *Dancer on a Tightrope* calls for specific notes to be played in the interior of the piano, these notes should be “flagged” with low-acid and low-residue page markers for easy visibility when performing. I recommend Post-It brand markers, which leave less residue once removed and are in contrasting colors.



Figure 12. Adhesive markers to be used in interior playing.

Adhesive markers can be used to label both strings and hammers without marking on the piano itself in any way. Additionally, if the pianist is unable to practice and perform on

the same instrument, the markers may be reused through countless rehearsals, and it is easy to adjust to the color scheme on various instruments.

I suggest minimal use of flags for the pianist to have easy visual reference points and a memorizable color scheme for quick reference on different instruments. The notes I recommend flagging in performance are A5, where the interior glass begins, A0 on the second overtone, and Bb4 due to difficulties with the layout of the sounding board. Other notes worth flagging would be G4 or Gb4 for reference near rehearsal twenty-two, F6 or Cb7 for reference during the indeterminate section from rehearsal ten to rehearsal fifteen, Cb5 for the beginning of rehearsal twenty-five, are any of the pitches for reference at rehearsal thirty-six.

Perhaps most importantly for material selection in *Dancer on a Tightrope*, is the selection of the glass used for interior playing. Gubaidulina calls for a tumbler with bumps on the bottom. Although Gubaidulina included a graphic representation of the type of glass she intended for use in her sketches, the drawing is omitted in the printed score. I have included a picture of the intended glass, as drawn in the sketches, for reference in Figure 13.

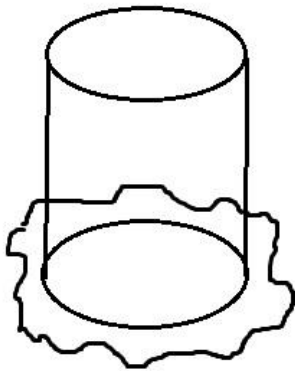


Figure 13. Diagram of Gubaidulina's glass¹⁶⁴ as included in her sketches.

The difficulty with a glass tumbler for the pianist is twofold. To hold a drinking glass, especially the sort used for alcohol made of thin glass, is difficult to do securely from the top of the glass, and can be potentially harmful to the pianist or dangerous to press against the pianist's right hand. The fragility of the glass, in combination with a design not intended to be held by the top, poses a risk to break the glass into the piano. This is particularly problematic when switching between a rehearsal and performance piano with different interior string layouts, as it is easy to hit the glass against the edge of the metal bout. Coupled with the thinner glass, the performer runs a risk of shattering a glass into a sounding board in rehearsal or performance. My recommendation is to use a canning jar for rehearsal and performance. Made of thicker glass, a canning jar is much more difficult to shatter, made to be opened, and the lid is designed to be held quite firmly by the hand from the top of the jar. Also, the bottom of many canning jars are grooved, similar to the bottom of a tumbler glass, allowing for Gubaidulina's intended catching of the strings

¹⁶⁴ Sofia Gubaidulina, *Dancer on a Tightrope*, complete sketches (Basel, Switzerland: Paul Sacher Stiftung, 1993), microfilm, 1001.

with less risk to pianist and piano.

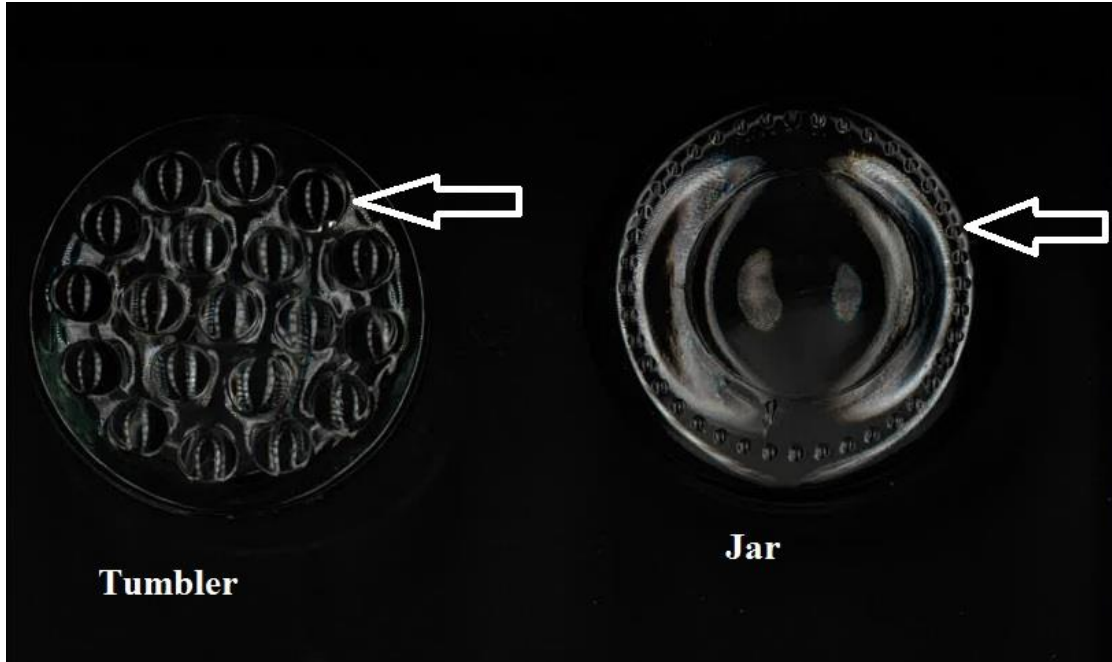


Figure 14. Bottom of glass tumbler and jar for reference.

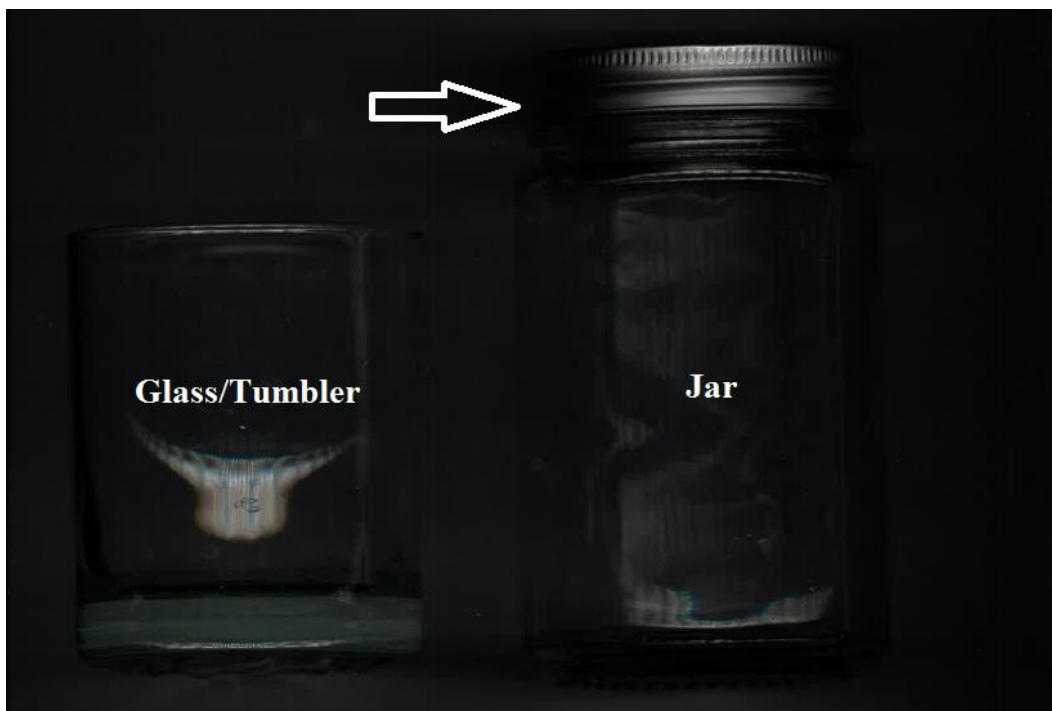


Figure 15. Glass tumbler type Gubaidulina recommends, and a canning jar.

A glass jar has been used in several performances of *Dancer on a Tightrope* that may be viewed on Youtube. To clearly see how the jar is used and angled in different ways to accommodate the bout of the piano, violinist Violaine Melançon and pianist Seth Knopp, in particular have made an excellent recording available¹⁶⁵. The only consideration with glass is to find one that does not strongly sympathetically vibrate at a pitch. This can pose a problem if you can hear the metal lid vibrate against the glass when struck. The other option is to choose a glass that sympathetically vibrates at one of the pitches in the piece. In this case, one should take a tuning fork or tuner glass shopping to approximate the pitch of the glass when struck empty if concerned with resonance.

Finally, for the interior piano playing in *Dancer on a Tightrope*, two more materials must be selected: something with which to hold the sostenuto pedal and thimbles for which to play on the strings. The pedal is depressed when the pianist enters two measures before rehearsal seven, and is never released. When the pianist finally sits to play at the keyboard at rehearsal thirty-eight, the score specifically re-states that the sostenuto pedal not be lifted. For this reason, a wedge may be placed prior to rehearsal or performance in order to hold down the sostenuto pedal. I suggest a soft wedge of felt or cloth that may easily be placed and removed without residue or pressure on the pedal.

¹⁶⁵ Sofia Gubaidulina, “*Dancer on a Tightrope*” (recorded performance), Violinist Violaine Melançon and pianist Seth Knopp, Posted November 12, 2015, Accessed November 26, 2016, <http://www.youtube.com/watch?v=RxWLDozHcHQ>.

This allows the pianist maximum freedom, and of course the pianist should not attempt to hold the pedal down while playing inside the instrument.

Thimble selection for *Dancer on a Tightrope* is slightly more complicated as thimbles are intended for sewing rather than dexterous piano playing. In selecting a material, it is important to choose something that will give an appropriately metallic sound, but is also a softer material than the piano strings. This will cause the least amount of additional damage to the strings, and would be accepted by most owners allowing interior piano playing. Two options exist commercially in a variety of sizes: gold plated brass thimbles and solid aluminum thimbles. Most craft stores sell aluminum thimbles in a multitude of sizes and gold-plated brass thimbles may be ordered through sewing websites, craft stores, and Amazon. It is also important to purchase thimbles in several sizes, so that they fit snugly on each finger without the possibility to drop the thimbles into the sounding board. I recommend that the pianist practice the rhythm first on a table or hard surface with the thimbles on before trying on the strings of the piano. An additional thimble in silicon or a non-acid plastic material may be purchased and worn to play rehearsal thirty-six without running the hand across the strings. This is optional, and if the hand is used, the strings should simply be wiped down with a cotton or muslin cloth. The sound will be minimally different between the hand and a thin plastic thimble in this section similar to playing on the interior strings with a glove on. Because of the difference in sound, this section should only be played with this extra precaution if requested by a piano technician.

The primary concern for the pianist is to develop the expertise of a substantial amount of interior playing without typically having access to an instrument that can be

played on the strings regularly. These suggestions are meant to facilitate a quick study of *Dancer on a Tightrope* so that rehearsal time can be used for practicing and rehearsing rather than logistical concerns. The materials that I have recommended are both for ease of the performer as well as for ease and consideration in requesting use of a piano for interior performance. It is my hope that this will remove obstacles to the performance of this deserving work.

VII. CONCLUSION

Sofia Gubaidulina's *Dancer on a Tightrope* is an exemplary late twentieth-century work for violin and piano. In my opinion, one of the chief objectives for contemporary performers should be advancing works created in their own era, and *Dancer on a Tightrope* is a programmable work for very standard instruments. Much of the lack of performance of contemporary repertoire is due to an unfamiliarity with unusual notation and extended techniques. This performers' guide addresses Gubaidulina's notation and common performance difficulties with *Dancer on a Tightrope*. The phrasing and musicality of classical music not rooted in tonal harmony can also pose challenges to performers' sentiments and traditional expectations of tonal realization. The analysis of micro-aspects and macro-form presented in this document should aid in the structural understanding of *Dancer on a Tightrope*. An understanding of the work's macro-form is essential so that performers may adequately interpret the piece as a whole. Finally, for Soviet composers, it is vital to have explanation and defense of their music in the West. There are many interpretations of the oppression faced by Soviet artists and the its implication for their music. This guide contributes to a broader knowledge of Gubaidulina's music, and provides context for a composer often viewed as being in the shadow of Shostakovich and the Soviet system. With insight into the biography and work, contextualization of the materials, analysis, and practical suggestions for performances, it is hoped that this guide will provide ample reference for further performances of *Dancer on a Tightrope*.

REFERENCES

- Biber, Julia. "Ten Etudes for Solo Cello by Sofia Gubaidulina." DMA Dissertation. City University of New York, 2016.
- Chandra, Pravin and Weisstein, Eric W. "Fibonacci Number." From *Mathworld A Wolfram Web Resource*. Accessed August 8, 2016. <http://mathworld.wolfram.com/FibonacciNumber.html>.
- Bunger, Richard. *The Well Prepared Piano*. Colorado Springs, CO: Colorado College Music Press, 1973.
- Ewell Philip A. "The Parameter Complex in the Music of Sofia Gubaidulina." *Society for Music Theory*, vol. 20, no. 3 (2013). Accessed December 31, 2016.
- Frolova-Walker, Marina. *Russian Music and Nationalism from Glinka to Stalin*. New Haven, CT: Yale University Press, 2007.
- Gubaidulina, Sofia. *Concordanza*. Hamburg, Germany: Sikorski, 1976.
- Gubaidulina, Sofia. *Dancer on a Tightrope for Violin and Piano*. Hamburg, Germany: Sikorski, 1993.
- Gubaidulina, Sofia. *Offertorium: Concerto for Violin and Orchestra*. Hamburg, Germany: Sikorski, 1986.
- Gubaidulina, Sofia. *String Quartet no. 2*. Hamburg, Germany: Sikorski, 1987.
- Gubaidulina, Sofia. *String Trio*. Paris, France: Chant du Monde, 1989.
- Gubaidulina, Sofia. "Dancer on a Tightrope" (recorded performance). Violinist Violaine Melançon and pianist Seth Knopp. Posted November 12, 2015. Accessed November 26, 2016. <http://www.youtube.com/watch?v=RxWLDozHcHQ>
- Gubaidulina, Sofia. Quintet, *Introitus, Dancer on a Tightrope*. Vladimir Kozhukar, Kyiv Chamber Players, Rieko Aizawa, Beatrice Rauchs, Vadim Sakharov, Gidon Kremer, August 26, 2003. BIS CD-808, 2003. CD.
- Gubaidulina, Sofia. *Rejoice! Sonata for Violin and Violoncello*. Hamburg, Germany: Sikorski, 1981.
- Gubaidulina, Sofia. *String Trio*. Hamburg, Germany: Sikorski, 1988.
- Hamer, Janice Ellen. "Sofia Gubaidulina's Compositional Strategies in the String Trio (1988) and Other Works." PhD Dissertation. City University of New York, 1994.

- Ishii, Reiko. "The Development of Extended Piano Techniques in Twentieth-Century American Music." PhD Dissertation. Florida State University College of Music, 2005.
- Kise, Lyudmila. "Part I: Sofia Gubaidulina's Approach to Pitch Centricity in 'Two Paths: Music for Two Violas and Orchestra A Dedication to Mary and Martha' (1999) Part II: Concerto for Clarinet and Orchestra." PhD Dissertation. The University of Utah, Salt Lake City, UT, 2011.
- Kurtz, Michael, Malcom Hamrick Brown, and Christoph K. Lohmann, eds. *Sofia Gubaidulina: a Biography*. Bloomington, IN: Indiana University Press, 2002.
- Lee, Young-Mi. "Musical Contents and Symbolic Interpretation in Sofia Gubaidulina's 'Two Paths: A dedication to Mary and Martha'." DMA Dissertation. Ohio State University, 2007.
- Library of Congress. "Romanization of the Russian Alphabet." Library of Congress. Accessed February 17, 2017. <https://www.loc.gov/catdir/cpsd/romanization/russian.pdf>.
- Lukomsky, Vera, and Sofia Gubaidulina. "'Hearing the Subconscious': Interview with Sofia Gubaidulina." *Tempo* no. 209 (1999): 27 – 31.
- Lukomsky, Vera and Sofia Gubaidulina. "My Desire is Always to Rebel, to swim against the Stream." *Perspectives of New Music*, vol. 36, No. 1 (Winter 1998): 5 – 41.
- Lukomsky, Vera, and Sofia Gubaidulina. "'The Eucharist in my Fantasy': Interview with Sofia Gubaidulina." *Tempo* no. 206 (1998): 29 – 35.
- Martin, Terry. *The Affirmative Action Empire: Nations and Nationalism in the Soviet Union, 1923 – 1939*. Ithaca, NY: Cornell University Press, 2001.
- Milne, Jennifer Denise. "The Rhythm of Form: Compositional Processes in the Music of Sofia Gubaidulina." PhD Dissertation. University of Washington, Seattle, WA, 2007.
- Moody, Ivan and Sofia Gubaidulina. "The Space of the Soul: an Interview with Sofia Gubaidulina." *Tempo* no. 266 (2011): 31 – 35.
- Morris, Mark. *A Guide to 20th Century Composers*. London, UK: Meuthen, 1996.
- Ryu, Ji-Yeon. "Musical Borrowing in Contemporary Violin Repertoire." PhD Dissertation. Florida State University College of Music, 2010.
- Sammlung Sofia Gubaidulina. Musikmanuskripte. Inventories of the Paul Sacher Foundation, vol. 21 (Mainz: Schott Musik International, 2001), Basel, Switzerland.
- Smirnov, Dmitri. "Sofia Gubaidulina: From Where I Sit." *Gramophone*, 2001.

Stroud, Cara. “‘A Metaphor for the Impossibility of Togetherness’: Expansion Processes in Gubaidulina's First String Quartet.” MM Thesis, University of North Texas, Denton, TX, 2012.

Sofia Gubaidulina List of Works and Biography. Hamburg, Germany: Sikorski, 2016.

Schmelz, Peter J. *Such Freedom, if only Music*. New York, New York: Oxford University Press, 2009.

Schwarz, Boris. *Music and Musical Life in Soviet Russia*. Bloomington, IN: Indiana University Press, 1983.

Seaman, Gerald R. *History of Russian Music from Origins to Dargomyzhsky*. New York, NY: Frederick A. Praeger, 1967.

Sitsky, Larry. *Music of the Twentieth-Century Avant-Garde: A Biocritical Sourcebook*. Westport, CN: ABC-CLIO, 2002.

Sul, Sookyung. “Symmetries and Asymmetries in Sofia Gubaidulina’s *Quasi Hoquetus* and *Ode to Broken Things*.” PhD Dissertation. University of Pittsburgh, 2014.

Taruskin, Richard. “Non-Nationalists and other Nationalists.” In *Russian Music at Home and Abroad*, p. 34 – 49. Berkeley, CA: University of California Press, 2016.

Taruskin, Richard. “The Birth of Contemporary Russia out of the Spirit of Music (not)”. In *Russian Music at Home and Abroad*, p. 350 – 357. Berkeley, CA: University of California Press, 2016.

Tomoff, Kiril. *Creative Union: The Professional Organization of Soviet Composers, 1939 – 1953*. Ithaca, NY: Cornell University Press, 2006.

Tomoff, Kiril. *Virtuosi Abroad: Soviet Music and Imperial Competition during the early Cold War 1945 – 1958*. Ithaca, NY: Cornell University Press, 2015.

Tsenova, Valeria. *Cislovyje tajny muzyki Sofii Gubaidulinoi*. Moscow, Russia: Moskovskaya gos. Konservatoria im PI Caikovskogo, 2000.

Williams, Joseph. “Discontinuous Continuity?: Structural Analysis of Sofia Gubaidulina’s String Quartets.” MM Thesis, University of Cincinnati, Cincinnati, OH, 2007.