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TEN ETUDES FOR SOLO CELLO BY SOFIA GUBAIDULINA

by

JULIA BIBER

A dissertation submitted to the Graduate Faculty in Music in partial fulfillment of the requirements for the degree of Doctor of Musical Arts, The City University of New York

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This manuscript has been read and accepted for the
Graduate Faculty in Music to satisfy the dissertation
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Abstract

TEN ETUDES FOR SOLO CELLO BY SOFIA GUBAIDULINA

by

Julia Biber

Advisor: Philip Ewell

Sofia Gubaidulina is regarded as one of the most original and highly respected voices in contemporary music today. Her use of the Fibonacci and its related series to structure her compositions has become a defining feature of her music and, therefore, most analysis has focused on pieces that incorporate this method, which she calls “rhythm of form.” Consequently, works written prior to her adoption of this method have garnered much less analytical attention. However, in her earlier works—from the late 1960s through the early 80s—Gubaidulina not only explores new sounds and colors, but also found creative ways to structure these pieces.

This dissertation will focus on the *Ten Etudes for Solo Cello* (1974), a seriously neglected piece in the solo cello repertoire. (The published name remains *Ten Preludes* at the suggestion of the cellist, Vladimir Tonhka.) Each etude explores multiple or single elements of cello technique (such as legato, staccato, ricochet or sul ponticello). I will discuss the various ways Gubaidulina explores and juxtaposes these elements to create structure and continuity in the work. I use a variety of analytical approaches in my analysis and include a number of musical and technical suggestions for the performer. I also include a discussion of the composer’s early life and education and a chapter on the development of her compositional style.

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TABLE OF CONTENTS

Abstract.....	iv
Acknowledgements.....	v
List of Figures, & Examples	viii
Preface.....	x
Introduction.....	1
Chapter 1: Compositional Style	11
Chapter 2: Introduction to the Etudes	26
Chapter 3: Etudes 1–5: Analysis and Performance Suggestions	34
Chapter 4: Etudes 6–10: Analysis and Performance Suggestions	71
Conclusion	100
Bibliography	104

LIST OF EXAMPLES & FIGURES

Table 1.1: Musical Elements Associated with Each Instrument (from Restagno, 209)	15
Table 1.2: Kholopova, characteristics.....	16
Example 3.1: M1 motive, Etude 1, mm.1–4	35
Example 3.2: Chromatic Ascent, Etude 1, mm. 1–12.....	35
Example 3.3: Three Versions of C3 Cycle, Etude 1	36
Example 3.4: Initial Statement and Continuation of C3(1), Etude 1, mm. 10–16.....	36
Example 3.5: Compound Cycle of M1, Etude 1	37
Example 3.6: Chromatic ascent, Etude 1, mm. 21–36.....	38
Example 3.7: Overlapping instances of M1, Etude 1, mm. 36–44	39
Example 3.8: Chromatic to cyclical C3(1) and C3(2), Etude 1, mm. 36–45.....	40
Example 3.9: Intervallic symmetry between phrases, Etude 2	45
Example 3.10: Instances of (0347), Etude 2, mm. 16–20.....	46
Example 3.11: Instances of infiltration between legato and staccato, Etude 2.....	47
Example 3.12: Compound cycle highlighting resonance, Etude 2, mm. 36–46.....	48
Example 3.13: Descent and compression in Section B, Etude 2, mm. 47–58	50
Example 3.14: Changes of legato characteristics, Etude 2, mm. 52–58	51
Example 3.15: Shorter distance in staccato passages, Etude 2, mm. 59–66.....	52
Table 3.1: Parameter Complex, Etude 2	54
Example 3.16: Etude 3	59
Example 3.17: Variety of ricochet bow strokes, Etude 4	60

Example 3.18: Expansion of intervals, Etude 4, mm. 25–35.....	63
Example 3.19: Statements of the motive, Etude 5	65
Table 3.2: C3 interval chart, Etude 5	66
Example 3.20: Descending chromatic line, Etude 5	66
Example 3.21: Interval expansion of the initial gesture, Etude 5	67
Example 3.22: Inverted melodic lines, Etude 5	68
Example 3.23: Beginning and ending comparison, Etude 5	69
Example 3.24: Variety of dynamic changes under <i>sul ponticello</i> , Etude 5	69
Example 3.25: Quick alternation of <i>sul ponticello</i> and <i>ordinario</i> , Etude 5	70
Example 4.1: Two types of harmonics, Etude 6, mm. 3 and 19	71
Example 4.2: Variety of false harmonics, Etude 6	72
Example 4.3: Quick changes of harmonic types, Etude 6	73
Table 4.1: Parameter Complex, Etude 6	75
Example 4.4: Chromatically descending lines, foreground and background, Etude 8	83
Example 4.5: Ascending chromatic M1b, Etude 8	84
Example 4.6, Chromatic motion in both directions, Etude 8.....	85
Example 4.7, Expansions of intervals, Etude 8	85
Figure 4.1: Twelve-tone matrix of the row P7. Etude 9	90
Example 4.8 Twelve-count of rows as they appear in the score.....	91
Table 4.2: Chart of the various rows with descriptions, Etude 9	92
Table 4.3: Parameter Complex, Etude 9	94
Example 4.9: Instances of 016, Etude 10.....	97
Example 4.10: Instances of 014, Etude 10.....	97

PREFACE

Despite her recognition as one of the most original and highly respected voices in contemporary music today, analysis of Sofia Gubaidulina's work is still in its infancy. Her music is inextricably linked to her spirituality and mysticism. Religious symbols, such as crucifixion and resurrection, often serve as subjects for her works, and she illustrates these symbols through a variety of compositional strategies. Over the span of her career Gubaidulina has written numerous works featuring the cello and with each work, she has nurtured and expanded the cello's unique expressive, dynamic and symbolic capabilities.

While *Canticle of the Sun* (1997) and *Seven Words* (1982) are perhaps the most frequently performed and analyzed works, *Ten Etudes* (1974) is the only piece written for solo cello. Gubaidulina says of analysis of her early work: "It seems to me that my early period (the 70s) is very difficult for musicologists to talk about. I was searching in areas that are impossible to describe in words."¹ I will argue, nevertheless, that some of the seeds for her later compositional ideas can be found in this early work.

Gubaidulina has led a fascinating and colorful life, much of it lived under the stifling Soviet regime that caused her significant personal and professional hardship. She has spoken frequently in interviews about the ways in which her childhood and early musical studies have shaped her as an artist; therefore, I have included a brief biography of her life spanning her childhood in Kazan to her eventual migration to Germany in 1991. Gubaidulina categorizes her music into three periods, and while significant structural changes happen with each new period, she does not abandon the principles that

¹ Vera Lukomsky, "'The Eucharist in My Fantasy': Interview with Sofia Gubaidulina," *Tempo* 206

came before. Even today Gubaidulina continues to push the limits of timbre and color, and she remains drawn to unusual instrument combinations in her writing. Most importantly, her spirituality and religious devotion continue to shape her approach to composition.

I am honored to have had the opportunity to meet and interview Gubaidulina in February 2015, in which—through a translator—she graciously answered many of my questions on the Ten Etudes, as well as on music in general. I include excerpts from this interview as they apply to the discussion of the etudes in Chapters 2–4. I will approach Ten Etudes from a historical, analytical and performance-practice perspective using a variety of approaches, including pitch set, gestural analysis, twelve-tone—as well as Valentina Kholopova’s expression parameters—where applicable. In doing so, I hope to illuminate—for the performer—the various ways in which these etudes are organized and structured. In some cases, I will offer technical and stylistic suggestions for a deeper understanding of the work and, consequently, a richer and more meaningful performance.

INTRODUCTION

Sofia Gubaidulina was born on October 24, 1931, in Christopol, in the former Tatar Autonomous republic (now the Republic of Tatarstan). The daughter of a Russian mother and Tatar father, Gubaidulina was steeped in a rich dichotomy of cultures that would have a profound impact on her life and work. Her mother, Fedosia Elkhova, was a schoolteacher and her father worked as a geodetic engineer. The name Gubaidulina came from her father's Tatar forebears whom she describes as "industrious and religious people, who, for generations, held the office of imam in their local mosques."² Because of his religion, her father, Asgad Gubaidulin, suffered much persecution in his lifetime. Yet, despite the family's rich religious tradition, he was himself an anti-religious technocrat. Gubaidulina's family was educated, but poor; however, it was such poverty that ignited a creative spark in the young Sofia.

It is very strange that something good can come out of poverty. But if poverty can be overcome, in some strange way, it is transformed into riches. I remember, for example, that in my childhood, there was nothing to entertain a child. We were a poor family, imagine, father an engineer . . . it was out of the question to buy toys of any kind or any books or go to the country for a rest in the summer, which would have been a change for the children. It was an absolutely grey, boring life. It was as if there was no map for a child's development. So what happened? I remember it all quite clearly. There was the house, the yard, not a single bush, not a blade of grass, and I had a longing for greenery, for trees—a real yearning. So suddenly, the child's imagination turned to the sky. I sat in that bare yard, with a rubbish dump in the middle, nothing else for a child's ideas. I looked up at the sky, and I began to live up there. The ground disappeared; you were walking into the sky. This moment is un-repeatable, you're walking in the sky. Of course, this all arose from poverty, but it was such richness.³

² Sofia Gubaidulina, interviewed by Barrie Gavin and Gerard McBurney, "The Fire and the Rose: A Portrait of Sofia Gubaidulina," *BBC 2*, June 10, 1990.

³ Gubaidulina, interview, June 1990.

The year after her birth, the family moved to the capital city of Kazan, a major center of commerce and culture at the time. In addition to its Tatar and Russian population, there were also a number of minority groups that lived in the area, including Bashkirs, Chuvash, Mari, Armenians, Jews, and Kalmyks. The musical talent of the Gubaidulins' youngest child was soon recognized and Sofia was enrolled at the Children's Music School, an intensive program for gifted children. Sofia's parents enthusiastically supported their daughter's musical talent, even making the huge financial sacrifice of purchasing a baby grand piano for the apartment. The delivery of the piano was, to Sofia, "the most powerful experience of my life"⁴:

When I started at music school, an instrument appeared in our flat. It wasn't an upright piano, but a concert grand. It played an important part—this piano whose lid you could lift. In purely acoustic terms, it was heavenly. You could sit underneath and hear unusual sounds. You could play directly on the strings, or the keyboard. There were so many possibilities. And then at music school, the teacher gave me some little pieces to learn. They were in two octaves, very poor compared to the possibilities of the instrument. So, once again, out of poverty, I developed the wish to compose. If humanity was so barren, I would start composing myself.⁵

Religion in Sofia's household, and in the Soviet Union, generally, was not tolerated at that time. Despite this, she discovered a profound connection to spirituality at an early age. On a family trip to Nizhny Usslon, a small village in the hills of the Volga, a young Sofia had a moment of epiphany:

⁴ Michael Kurtz, *Sofia Gubaidulina: A Biography*, trans. Christoph K. Lohmann (Bloomington, IN: Indiana University Press, 2007), 13. This biography is one of the few that exist on the composer and the only one translated into English, therefore, much of the general biographical information found in this chapter was ascertained from this source. There is also a biography in Italian by Enzo Restagno, ed., *Gubajdulina* (Torino: Edizioni di Torino, 1991), which consists of various interviews conducted by Restagno as well as analyses by Valentina Kholopova of specific compositions by Gubaidulina. Some of these analyses will be cited later in the chapter. Finally, there exists a quite good biography in Russian by Valentina Kholopova: See Kholopova, *Sofia Gubaidulina: Monografiia* (Sofia Gubaidulina: A Monograph), 3rd ed. (Moscow: Kompozitor, 2011).

⁵ Gubaidulina, interview, June 1990.

I remember when I was 5, we were staying in a village with a religious woman and she had an icon of Jesus Christ in the corner. And I recognized him . . . I recognized God. I recognized Christ. I was only five, inexperienced and I showed my feelings. My parents were frightened I was religious. From then on, I understood it was forbidden . . . and I hid my psychological experiences from grown-ups. But this religious experience lived within me.⁶

Gubaidulina was enrolled as a piano student at the Kazan Music Gymnasium from 1946 to 1949, where her interest in composition was soon discovered and encouraged by her teacher, Maria Pyatniskaya. Her first lesson in composing began as a teenager with Nazib Zhiganov. She refers to Zhiganov as “my first musical love affair.”⁷ Zhiganov encouraged his students to take an interest in their Tatar heritage and its folk music, and to incorporate it into their compositions. Gubaidulina wrote a number of folk-inspired works, yet even at that early age she regarded herself as “a universal human being.”⁸ Furthermore, she says, “I was not deeply introspective and thought that [Tatar] pentatonics would constrain me.”⁹

In fact, Gubaidulina has said she feels rooted in a multitude of cultures, not just the ones she was born into:

I feel I’m a mixture not just of two bloods, but of four. On my father’s side, I am a Tartar. And on my mother’s side, I am Slavic. But a large role was played in my life by the director of the music school. I took him as a second father—this is my Jewish blood. My most important teachers were Jews. And my spiritual nourishment came from German culture: Goethe, Hegel, Novalis, Bach, Webern, Haydn, Mozart, Beethoven.¹⁰

Gubaidulina continued her studies at the Kazan Conservatory, from 1949–1954, as a piano student; she also further broadened her musicianship with the study of

⁶ Gubaidulina, interview, June 1990.

⁷ Kurtz, 18.

⁸ Kurtz, 19.

⁹ Kurtz, 19.

¹⁰ Gubaidulina, interview, June 1990.

harmony and orchestration. Only in her third year there did she enroll in a composition elective course with Albert Leman, a pianist and composer at the school. Her abundant talent and love of performing provided a meaningful creative outlet for her, yet she was conflicted about which of two musical paths to take; composer or pianist. Despite teacher's and colleague's assurance that she could do both she insisted, "that was not possible for me. When I concentrated on piano, it sapped the energy I needed for composition. Also, because my training in both was not yet complete, I had to choose between these two paths."¹¹

Gubaidulina was enrolled as both a piano and composition student when she entered the Moscow Conservatory in 1954, yet by the end of her third year, she decided to focus completely on composition. Her main teachers were Nikolai Peiko and later Vassarion Shebalin. Gubaidulina has talked extensively about the strong influence of the great German composers on her writing, Bach and Webern, in particular:

First I studied all the standard technical forms . . . I was especially interested in the strict style of the 16th century and was very taken with the composers of that time. But I actually began with the German classics that my teacher indicated I should study: Haydn, Mozart, Beethoven, Bach. During my whole life, Bach has been central to my work. After that I began to go through all the different styles in music, paying particular attention to the Russian school. But when I was 19 or 20, I was completely taken with Wagner. I was also interested in the Second Viennese School, and then Shostakovich in the Russian school, and subsequently the composers from my own generation. When I look back on my path in music, the names of Bach and Webern lie at the center.¹²

Gubaidulina, like most young Soviet composers at the time, revered Dmitri Shostakovich. She says, "I met Shostakovich on several occasions and hung onto his

¹¹ Kurtz, 27.

¹² Anders Beyer, "Sofia Gubaidulina: Into the Labyrinth of the Soul," in *The Voice of Music: Conversations with Composers of our Time* (Burlington, VT: Ashgate Publishing Company, 2000), 51.

every word”¹³ and “it was his psychological makeup that attracted me. When I now look back to that time, it is clear to me that I could not have lived or breathed without Shostakovich—he was that important for me.”¹⁴ Michael Kurtz describes Shostakovich as “a revered father figure for a whole generation of composers and musicians. . . . Many hundreds of students showed him their works and asked for his counsel and help during the last twenty years of his life. In the West, people may be respectful and admiring of the arts, but in Russia, especially Moscow, illustrious artists command admiration and fervor bordering on religious devotion.”¹⁵

It was Gubaidulina’s teacher Peiko who arranged her first meeting with Shostakovich. She went to his apartment to play one of her symphonies on the piano. She recalls:

He listened to it and made some remarks, generally praising the music. But what struck me most was his parting phrase: “Be yourself. Don’t be afraid to be yourself. My wish for you is that you should continue on your own, *incorrect* way.” One phrase said to a young person at the right moment can affect the rest of his or her life. I am indefinitely grateful to Shostakovich for those words. I needed them at that moment and felt fortified by them to such an extent that I feared nothing, and failure or criticism just ran off my back, and I was indeed able to pursue my own path.¹⁶

Gubaidulina graduated from the Moscow Conservatory with the highest grade on her final examinations and was accepted as a graduate student there under Vissarion Shebalin. Yet this honor was not without controversy behind the scenes. Many of the other professors on the State Examination Committee found her work unacceptable, as it

¹³ Kurtz, 44.

¹⁴ Kurtz, 44.

¹⁵ Kurtz, 44.

¹⁶ Kurtz, 45.

strayed “too far” from the ideological parameters of social realism.¹⁷ In their discussions of her work, it was Shostakovich who came vigorously to her defense. Her symphony, along with the other successful diploma works by graduates, was later performed by the Moscow Philharmonic orchestra.

In a mixed review of this concert, in the August 1959 issue of *Sovietskaia muzyka*, Mikhail Chulaki described Gubaidulina’s symphony:

Obviously the young composer is now engaged in seeking for herself new means of musical expression, and in the process betraying a certain neglect of melodic possibilities. That is a pity, especially since the composer shows absolutely no lack of melodic gift. In the symphony, for example, the melodious lyricism of the principal theme, in the character of a pastorella, is captivating. However, it soon disperses in “generalized formulas of melodic motion” and returns again only at the very end in its enchanting original form.¹⁸

Gubaidulina’s post-graduate years were full of experimentation and change. She began to distance herself from the influences of her teachers in order to forge her own unique path. She experimented with electronic instruments, twelve-tone composition, and film scoring (which helped to pay the bills). She also began to form relationships with performers, such as the percussionist Mark Pekarsky and the bassist, Boris Artemiev. At the time, it was not easy to find musicians who would perform her unorthodox pieces for little or no money. With these two dedicated players, she began to experiment with new sounds and extended techniques. With Artemiev she explored string techniques such as *col legno* (playing with the wood of the bow) and *ricochet* (bouncing the bow).

¹⁷ Under Stalin, the Soviet government sought to maintain bureaucratic control in all fields of art. For music, this meant composers were required to strongly incorporate patriotic and folkloric elements into their works that were simple and accessible to the “masses.” Any deviation from this was forbidden and punishable under law.

¹⁸ Kurtz, 46.

Yet, finding her own voice was not without controversy. Access to any Western influences had to be done in secret. In January of 1974, Gubaidulina was visited by the KGB, which came to search her apartment for any sign of dissident material. Luckily, she had prepared for such a visit and had dispersed any incriminating material. However, the prospect of being arrested was a constant threat to Gubaidulina and her colleagues.

Another encounter with the KGB was even more disturbing. Kurtz describes this incident:

One evening, when Sofia stepped into the elevator, she encountered a strange man. On the seventh floor he blocked her exit, and the two rode up and down together. “A man perhaps twenty-five years old.” She recalled later, “with cold evil eyes. He grabbed my throat and slowly squeezed. My thoughts were racing: it’s all over now—too bad I can’t write my bassoon concerto anymore—I’m not afraid of death but violence. And then I told him: ‘Why so slowly?’ That may have bothered him, but I was able to trick him into leaving me alone.”¹⁹

Gubaidulina’s work—as well as the work of many of her fellow composers including Viacheslav Artyomov, Alfred Schnittke, and Edison Denisov—was continuously censored and forbidden from being performed. Furthermore, in 1979, at the meeting of the All-Union Congress of the Composers Union, Gubaidulina and six other composers (Elena Firsova, Dmitri Smirnov, Alexander Knaifel, Victor Suslin, Viacheslav Artyomov and Edison Denison) were blacklisted. They were disrespectfully referred to as the “Khrennikov Seven” and excerpts of the speech by Tikhon Khrennikov at the Congress were published in several important newspapers. The smear campaign had the desired effect and artistic life became even more difficult for all of these composers.

Yet, the hostility of their environment also helped forge even stronger friendships among some of the composers. In 1975, Gubaidulina, Suslin, and Artyomov formed an

¹⁹ Kurtz, 109.

improvisational group called *Astraea*. For her part, Gubaidulina already had a great fascination with percussion instruments. She explains:

The sound nature of percussion is very complex and irrational. For example, the sound and reverberation of kettledrums contain so many “inside-the-sound” events that one is amazed at their mysticism . . . or bells, that have a non-linear spectrum: so much happens after they have been struck! Their reverberation has an extremely complicated inner life.²⁰

Artyomov, a drummer, had taken a number of trips to Central Asia and returned each time with variety of new folk instruments. Over the years he had filled his studio apartment with a large collection. While the improvisation sessions began casually, they gradually became more deliberate and organized. Kurtz says: “They were inspired by the natural spontaneity of folk musicians, but they wanted to go beyond mere imitation or re-creation of musical folk traditions.”²¹ Together, they explored the complexity and endless possibilities of sound. The experiences in this group had a profound impact on Gubaidulina’s composition style and on her use of a wide variety of improvisational elements in many works.

Eastern instruments, in general, were of great interest to Gubaidulina. She recounts:

I discovered that playing Eastern instruments allows you to understand more about yourself. And this is the method of using sound to concentrate the mind, used in the East. This experience of being submerged in the center of the sound has had great significance for me. I believe that for a composer, the meditational attitude to sound is important. Eastern people possess it and it is, perhaps, within the instruments.²²

In 1981, with Victor Suslin’s emigration to West Germany, *Astraea* was disbanded. Gubaidulina continued to support herself primarily through state-approved

²⁰ Vera Lukomsky, “‘The Eucharist in my Fantasy’: Interview with Sofia Gubaidulina,” *Tempo* 206 (October 1998): 31.

²¹ Kurtz, 120.

²² Gubaidulina, interview, June 1990.

and funded film music. Yet, despite the stifling restrictions on artistic freedoms, the government rewarded and provided economic security to those artists and composers whose work aligned with government rules. This support came in the form of grants, commissions, subsidized trips abroad, and two months a year in artist colonies. However, many artists like Gubaidulina continued to pursue their secret artistic lives. Gubaidulina refers to this as “our real life.”²³

Therefore, the onset of *perestroika* in the late 1980s came as a mixed blessing, as much of the state funding disappeared. Gubaidulina recalls, “In Russia we no longer have to endure ideological restrictions, but censorship for material reasons. That’s the sad destiny of this country.”²⁴

One of the major turning points in her career was her chance encounter with Gidon Kremer in a taxicab. Gerard McBurney describes the encounter:

Probably in the winter of 1977–78 . . . Gubaidulina and Gidon Kremer happened to share a taxi after a concert. It may have been after a performance at Grigory Frid’s Moscow Youth Musical Club when the violinist, just on the verge of gaining worldwide renown, said to the composer: “Wouldn’t you like to write a violin concerto?”

While Kremer soon forgot his question to Gubaidulina, she took it very seriously, as she was a great admirer of Kremer’s artistry. She subsequently attended as many performances of his as she could to get a sense of his unique musical aesthetic. After much struggle with government authorities, her concerto, *Offertorium*, had its premiere, followed by multiple performances with renowned orchestras around the world (including Berlin, Boston, Montreal and Sweden), with Kremer as the soloist. These

²³ David Drew, Dmitri Smirnov, and Viktor Suslin, “Herschkowitz Encountered,” *Tempo* 173 (June 1990), 40.

²⁴ Janice Ellen Hamer, “Sofia Gubaidulina’s Compositional Strategies in the String Trio (1988) and Other Works” (PhD diss., City University of New York, 1994), 11.

concerts marked the beginning of her international recognition and success abroad. In 1984 she was allowed to travel to the West for the first time to hear *Offertorium* played at the Helsinki Festival. By 1986, with travel restrictions finally lifted, she embarked on a busy schedule of traveling to various foreign countries to hear her works performed.

In the fall of 1990, the political upheaval and instability in Soviet Russia had created an atmosphere of chaos and danger. By January, 1991, Gubaidulina had reached her breaking point. “It really got to me,” she said, “and I was unable to write music. It was an either-or proposition for me: either leave Moscow or death—that is, the death of my work and with that the death of my existence.”²⁵ With the help of friends and allies, Sofia left Moscow with two suitcases, headed for a new start in Germany. The sale of many of her manuscripts to the Paul Sacher Foundation allowed her to buy a house of her own, next door to her close friend Victor Suslin in Appel, near Hamburg. She has lived there ever since, building on her international success with many more acclaimed compositions and traveling to hear her music all over the world.

²⁵ Kurtz, 216.

CHAPTER 1:

COMPOSITIONAL STYLE

Gubaidulina has said that all of her mature works can be classified into one of three style periods. Yet, while each period represents a significant shift in compositional approach, they all share some overriding themes. The most important of these is a prevailing sense of spirituality, religiosity, and mysticism. She is often preoccupied with religious musical symbols, such as the cross, crucifixion, and the resurrection, which all appear frequently in her work. She has describe her artistic connection to religion as follows:

I understand the word “religion” in its direct meaning: as *re-ligio* (*re-legato*), that is a restoration of *legato* between me (my soul) and God. By means of my religious activity I restore this interrupted connection. Life interrupts this connection: it leads me away, into different troubles, and God leaves me at these times This is unbearable pain: by creating, through our art, we strive to restore this legato.²⁶

Gubaidulina has also clarified that the religiosity of her music is not a literal interpretation of church doctrine. She says of her pieces, “they are neither Catholic nor Russian Orthodox; they are outside the church liturgy. I mean they are conceptually, not strictly, orthodox: they are my fantasy. Actually all my works are religious. As I understand it, I’ve never written non-religious pieces.”²⁷

Her involvement with Astraea, and her hands-on connection to a variety of folk instruments, no doubt had an influence on Gubaidulina’s preoccupation with sound and colors, especially in her early period. In her search for unusual timbres on traditional instruments, she often incorporates the use of extended techniques. In *Seven Words*,

²⁶ Lukomsky, 33.

²⁷ Lukomsky, 31.

dedicated to Vladimir Tonkha, the cellist is asked to play on the opposite side of the bridge. In many of her pieces for winds, multiphonics, vocalization, and other unusual requests are made of the performer. She has also written a number of pieces specifically for uncommon instruments.

A friendship with the bayan player Frederic Lips led to a few works, such as *De Profundis* (1978), for the instrument. Of the bayan, she has commented, “Do you know why I love this monster so much? Because it breathes.”²⁸ In collaboration with Lips, Gubaidulina revealed new techniques and sounds possibilities on the instrument, such as tonal *glissando*. Her curiosity about the instrument was quite notable to Lips and he later commented:

I was astonished how pedantically she asked about all the details, how meticulously she probed every detail which seemed of little importance to us bayan players. She was striving, one can say, to penetrate under the hide of this monster (as she subsequently called the bayan) and to get to know it from the inside . . . I was enchanted not only with the music, but also how well she used the reeds of the bayan, which showed the acoustic potential of the instrument in a fresh new way.²⁹

Gubaidulina considers her first mature work to be *Five Etudes* (1965) for harp, double bass, and percussion. This first period spans roughly from 1965 to the 1980s, characterized by this search for new timbres and unusual instrument combinations. She says:

In the 1970s, I was interested in such things as interval and timbre concepts . . . Also, I experimented with all kinds of non-traditional methods of sound production with different instruments. Furthermore, it seems to me that my early period is very difficult for musicologists to talk about. I was searching in areas that are impossible to describe in words.³⁰

²⁸ Kurtz, 134.

²⁹ Kurtz, 134.

³⁰ Lukomsky, 34.

Gubaidulina also makes considerable use of uncommon ensemble groupings, placing unexpected instruments in soloistic roles. Some examples include her popular concerto for bassoon and low strings (1975), *Pantomime*, for double bass and piano (1966), *Rumore e silenzio*, for percussion and harpsichord (1974), and *Lamento*, for tuba and piano (1977). In this early period, the search for new sounds and timbre trumps the need for a strict structure. However, some of these earlier works are loosely based on sonata and concerto forms. Furthermore, Gubaidulina finds cohesion by assigning each instrument a symbolic role. Each instrumental “personality” plays a unique part in the musical drama. For instance, in the concerto for bassoon and low strings, she describes the role of soloist versus orchestra: “The concerto for Bassoon and low strings is very theatrical. The bassoon represents a lyric hero; the ‘low strings’ personify a ‘low’ and aggressive crowd, which destroys the hero. Their *pizzicato* and *col legno* sound like ‘pinching’ and ‘beating.’”³¹

For Gubaidulina, the formal concept of concerto, in general, has dramatically shifted and transformed in the 20th century, and rightly so. She says:

In the 20th century, as in the past, the combination of a soloist and orchestra is attractive to composers. The concept of the concerto, however, has changed drastically since the 19th century. In particular, the concept of a hero (personified by the soloist) is now completely different. The soloist is no longer a hero in the same sense as in the classical and romantic concertos. At that time, the hero was victorious: an outstanding individual, a winner in unequal competition. The main presumption was that the hero knows the absolute truth, knows where to lead the crowd. Accordingly, the typical musical concept was the opposition of the soloist and the orchestra, which represented such dramatic oppositions as a hero and a crowd, a hero and an army, an orator and an audience. In the 20th century these concepts have become irrelevant and anachronistic, as has the concept of the victor. In the 20th century the situation is quite different: the hero is disappointed in everything, nobody knows what the truth is. And contemporary

³¹ Lukomsky, 30.

composers need to search for new concepts, for new interpretations of soloist-orchestra relations. I too am searching.³²

Her piano concerto *Introitus* (1978) is another example of an atypical concerto format. It is based on the four changing texts of the Proper of the Catholic Mass: Introit, Offertory, Gradual, and Communion. While the form follows some elements of a typical concerto, Gubaidulina once again finds a completely different role for soloist and orchestra. She describes the work as follows:

This is unlike a typical concerto. One could say it is not a concerto at all. The piano part is purely meditative, completely deprived of virtuosity. Everything is meant to sound *pianissimo*; the pianist listens to an extremely long major tenth, trying to enter into the depth of it. I do not want either virtuosic or assertive passages; I do not want loud chords. My soloist penetrates into the depth of the sound; he/she listens and invites all the others to listen, too.³³

In addition to assigning general instrumental “personalities” in her works, Gubaidulina also designates very specific symbolic meaning, not only to these individual instruments but also to the result of their interactions. *In Croce* (1979), for organ and cello, dedicated to Vladimir Tonkha, is a notable example of this. Valentina Kholopova, a good friend and colleague of the composer, has analyzed many of Gubaidulina’s works. Of this piece, she says:

In Croce involves, conceptually, the entrusting of specific symbolism to certain musical elements, chief among which is the symbol of the register. As Sofia Gubaidulina says, “the common usage of musical instruments, according to which a high, a medium and a low register is used, comes to be utilized in a way which forms a bridge of registral crossroads between the two instruments (organ and cello) which one perceives inwardly as signifying a variety of things: not only as the geometry of the cross, but also as a symbol of the cross.”³⁴

³² Lukomsky, 29.

³³ Lukomsky, 30.

³⁴ Enzo Restagno, ed., *Gubaidulina* (Torino: Edizioni di Torino, 1991), 207, as translated by Fay Damaris Neary, “Symbolic Structures in the Music of Sofia Gubaidulina” (DMA diss., Ohio State University, 1999).

Kholopova points out that each instrument “constitute[s] two dramaturgically-opposite poles.”³⁵ In essence, these two poles represent two distinctly different characters that, through their interactions, work to create a sonic representation of the cross. In the first section of the piece, each instrument maintains its own unique set of musical elements. She identifies these as shown in Figure 1.

Table 1.1: Musical Elements Associated with Each Instrument (from Restagno, 209)

Organ:	Cello:
High register	Low register
Diatonic, major	Microchromatic
Legato, melody	Detached
Continuous	Fragmented

By assigning each instrument a unique set of musical characteristics in the first part of the piece, Gubaidulina solidifies the original role of each “character.” This has powerfully effective consequences for the listener once these roles begin to exchange. By measure 48, the characteristics of each instrument have almost completely transformed, united only by a shared continuous texture.

³⁵ Restagno, 209.

Table 1.2: Kholopova, characteristics³⁶

Cello:	Organ:
High register	Low register
Diatonic, major	Cluster
Smooth melody	Sonority after the event of turning off instrument
Continuity	Continuity

Of this piece, Gubaidulina has said:

In [this] particular combination, I imagined the organ as a mighty spirit that sometimes descends to earth to vent its wrath The cello on the other hand, with its sensitively responsive strings is a completely human spirit. The contrast between these two opposite natures is resolved spontaneously in the symbol of the cross.³⁷

Therefore, the instruments themselves not only represent specific characters playing specific roles, but their individual or unique sonorities and their subsequent interactions both create the formal structure of the piece. Furthermore, the juxtaposition of the earthly versus the heavenly, light versus dark, and the striving for reconciliation between the two, has been a constant theme in Gubaidulina’s music throughout her life.

Gubaidulina views performers and their unique personalities as directly connected to the work and, in the act of performing, as not only the executors of the notes on the page, but also directly linked to a composition’s spiritual life. She says: “The artist is like a victim. The strength of this devotion to sound is so great . . . that it turns the sound into

³⁶ Restagno, 210

³⁷ Kurtz, 140.

a religious act. This artistic phenomenon gives a composer the right to create something based on this quality.”³⁸

In addition to Frederik Lips, Gubaidulina has been fortunate to have a number of devoted and inspired performers in her life. Pekarsky, her percussionist and close friend, was the inspiration for a number of percussion works, including *Misterioso* (1977) for seven percussionists, and *Jubilato* (1979), for four percussionists. She says: “I first met Mark Pekarsky when we were both students. He asked me to write something. His way of producing sound—touching the membrane of the instruments was the inspiration for the shape of the composition.”

Another important relationship has been with the cellist Vladimir Tonkha. Gubaidulina has dedicated a number of works to him, all directly inspired by the way he produces and connects to sound. She says, “When [Tonkha] produces these scintillating chords, he experiences them as a mystical act. He told me so himself. Something happens which seems acoustically impossible.”³⁹ These important relationships with performers not only influenced the works she decided to write but, through the fruits of the collaboration, gave her a deeper understanding of the character of each instrument.

Also significant in Gubaidulina’s music is the symbolic nature of the instrument itself, an idea that permeates much of her work, including pieces written in this early period. *Seven Words* (1982) for bayan, cello, and strings, is a notable example of this. Instruments can, by the nature of their specific shape and character, imply a certain symbolism. Gubaidulina talks about the cello in particular:

I like very much the idea of instrumental symbolism, when the instrument itself, its nature and individuality, hints at or implies a certain meaning.

³⁸ Gubaidulina, interview, June 1990.

³⁹ Gubaidulina, interview, June 1990.

The word “symbol” means “synthesis, or fusion of meanings.” I wanted to find the idea of the cross in the instruments themselves. The first thing that came to mind, obviously, was the “crucifixion” of a string. This idea is employed throughout the entire composition, from the very beginning. The first movement is the crucifixion of the A string: it is crucified by means of glissandos. The sound of the open A string is “cut off” by the glissando from Bb to G#, which the cellist performs on the neighboring D string. In other movements all the other cello strings undergo “crucifixion.”⁴⁰

Another depiction of crucifixion occurs in the final movement of the piece, where, “the cellist ‘crucifies’ the string by means of the bow, which gradually moves closer and closer to the bridge. The sound becomes more and more unpleasant, expressive and eerie. And then-an eerie shout on the bridge! Then a shout as if it were jumping away. The bow moves toward the bridge-and steps over this border! That is, the cello itself becomes the cross, a place of crucifixion.”⁴¹

Yet the instrument alone does not make this connection to crucifixion possible; the gesture of the performer allows this phenomenon to occur. In fact it is the synthesis of composer, performer, instrument and gesture, collectively, that creates the musical meaning.

Gestural analysis of 20th-century music has been explored by a number of musicologists. Michael Berry, in “The importance of Bodily Gesture in Sofia Gubaidulina’s *Music for Low Strings*,” has argued that:

Instrumental music in the 20th century has seen an increase in the importance of the body in performance. Many works incorporate (either directly or indirectly) an element of theatricality in addition to the purely sonic content. Sofia Gubaidulina is one of many composers whose music features an increased attention to the body. Some of her works require spatial separation of performing forces; others require interaction between

⁴⁰ Vera Lukomsky, “Sofia Gubaidulina: ‘My Desire Is Always to Rebel, to Swim against the Stream!’” *Perspectives of New Music* 36 (1998): 20.

⁴¹ Lukomsky, “My Desire is Always to Rebel,” 20.

live music and recorded sound. Both techniques rely on the audience's visual inspection of the performance arena.⁴²

Berry differentiates between two basic gestural forms: *practical* and *expressive*. A *practical* gesture is one that is involved in the actual making of sound (such as natural movement of the bow or placing the fingers of the left hand); an *expressive* gesture is meant to convey something extra-musical, not necessary to basic sound production on the instrument.

Gubaidulina was also interested in intervallic ideas in this early period, reflected in her first two string quartets (1971, 1987) and her cello concerto *Detto-2* (1972). In these she makes use of various techniques, such as *wedge expansion*, in which pitches in the piece gradually radiate outward from a single tone. She also makes extensive use of the process of gap-and-fill, in which an interval is established and subsequently filled in chromatically, as she does quite often in the Ten Etudes.

In the 1980s, Gubaidulina began to shift her focus from primarily elements of timbre and instrumentation to what she calls “the rhythm of form.” She observes:

[T]he problem is that the 20th century has moved from atonality and serialism to sonorism. As a consequence, our musical material, like our world, became extremely rich and over-complicated. Besides traditional musical sonorities, it includes noises, whispering, conversations, shouts, moans, sighs, and electronic sounds. But in my opinion, art does not need so much richness. There was a period in my life where I was actively involved in a search for new timbres, new textures, new types of articulation. Now I am calmer about it. My main concern is to cure the excessiveness of musical material by the method of time structuring.⁴³

This is not to say that Gubaidulina became disinterested in timbre and color; rather, she was searching for a better way to organize the rich sonorous material of her

⁴² Michael Berry, “The Importance of Bodily Gesture in Sofia Gubaidulina’s Music for Low Strings,” *Music Theory Online* 15, no. 5 (October 2009), paragraph 1.

⁴³ Lukomsky, “The Eucharist in My Fantasy,” 28.

“fantasy” on a deeper level. Inspired by the theorist Pyotr Meschaninov, Gubaidulina became attracted to the idea of rhythm as being the fundamental element and organizing principle in her music.⁴⁴

Gubaidulina has described the development of music as being similar to a tree; its roots, trunk, and leaves create an organic progression of transformation. And three trees represent each era of music history: The roots represent the idea, the trunk represents the realization of the idea, and the branches or fruit are the musical transfiguration of those ideas. The first tree represents the mostly linear vocal music that existed before the 17th century. The second tree represents mostly homophonic music of the classical and romantic eras, and the third tree represents music of the 20th century. She explained these ideas to McBurney in the 1990 documentary.

On the first tree, the roots represent a vocal line or melody, the rhythm emerges as the trunk because, “in essence, the rhythm of the word defined the form,”⁴⁵ and finally the leaves sprouting from the trunk signify the suggestion of harmony. As in nature, those leaves fall to the ground, laying the seeds for a new tree.

On this second tree, harmony forms the roots. Stemming from this “harmonic essence,” the trunk then represents the melody or theme and its development. The leaves represent rhythm. Once again, the leaves of the second tree fall to the ground to form the roots of the third tree. Here the roots represent rhythm, the trunk represents “everything vertical to do with pitch.” Finally, the leaves represent melody.

This revelation of the idea that the foundation of 20th-century music is rhythm led Gubaidulina to the natural elegance of the Fibonacci series. The Fibonacci series, or the

⁴⁴ Kurtz, 84–86.

⁴⁵ Gubaidulina, interview, June 1990.

progression of numbers (1, 1, 2, 3, 5, 8, 13, 21. . .) in which each number after “1” is the sum of the previous two numbers, was named after Leonardo of Pisa (also known as Fibonacci; 1180–1228). After traveling extensively in the Middle East, Fibonacci came into contact with many works of mathematics in the Arabic world. He first wrote about the series and its implications in his book, *Liber Abaci* (1202). In it he posed a now famous mathematical problem based on the reproduction patterns of rabbits. Eduard Lucas, a 19th-century number theorist, was the first to use the term “Fibonacci Sequence.” Part of Gubaidulina’s fascination with the Fibonacci Series was its intrinsic relationship to the Golden Ratio (also known as the Golden Section). The ratio of any two adjacent numbers in the Fibonacci Series is equivalent to the golden ratio (0.618).

Gubaidulina has commented:

The ratio of parts in the Golden section is not only a rule of great importance in architecture (ancient Greeks proportioned their temples in this way); it is a principle organizing all organic life The asymmetry between any two numbers from the Fibonacci series is a perfect asymmetry.⁴⁶

Gubaidulina has said, “art has to have limits. It cannot live with total freedom.”⁴⁷

In these numbers, she found a way to root the elements of her “fantasy” within a mathematical structure that seemingly follows the rules of nature. To Gubaidulina, numbers themselves contain an innate mysticism. Historically, certain numbers and sequences have had great significance for artists and composers. Gubaidulina has often expressed her deep admiration of J. S. Bach, in part because she is convinced that he too structured some of his works on number sequences. To Gubaidulina, these numerical

⁴⁶ Lukomsky, “The Eucharist in My Fantasy,” 34.

⁴⁷ Ivan Moody, “‘The Space of the Soul’: An Interview with Sofia Gubaidulina,” *Tempo* 66 (2012): 33.

relationships “reflect his deepest and most personal relation to God.”⁴⁸ For instance, in her own analysis of the last chorale written by Bach, “Vor deinen Thron tret ich hiermit”

(I step Before Thy Throne, O Lord), she discovered that:

[H]e uses “his own” numbers 41, 14, 23. Scholars of Bach’s music know that each of these numbers represents his name, like his signature. For example, the number 41 means “Johann Sebastian Bach”; it is the sum of all the letters constituting his name. Bach transferred letters of the alphabet into numbers and added them together. The number 14 means “Bach”; the number 23 means “J. S. Bach.” As far as I remember, 37 means “Jesus Christ”; 73 means “Death of Christ.” In his last chorale Bach used all of these symbolic numbers. Every single counterpoint contains one of the “Bach” numbers (41, 14, or 23). Their usage is so beautiful that one might conclude that, addressing God in this chorale, Bach meant: “Look, God: I, Johann Sebastian Bach, step before thy throne.”⁴⁹

Gubaidulina explains that the “rhythm of form” is achieved when different sections of a work are proportionally related to each other on both a large and small scale.

She notes that:

I like this system because it does not deprive me of my freedom, does not limit my fantasy . . . Freedom is the most important thing for me, particularly the freedom to realize myself. I hear, and my spontaneous hearing as most precious to me. But what I hear is my subconscious. There not only good things, but evil things, too! The subconscious is a terrifying abyss: there is both light and darkness. And when I take things out of there—if I have reached the depths of the subconscious and heard its pulse, its vibration, I have no right to expose them to people in their pure form because they are fearful! I must elucidate them, elucidate by means of structural work. And I choose rhythm in the broad sense, in order to clarify my subconscious and not damage its essence. I like building a ration of spontaneousness and conscious self-limitation; it attracts me most of all in my creative work.⁵⁰

For Gubaidulina, great art comes from this balance of the intellectual and the intuitive and cannot exist without both. Furthermore:

⁴⁸ Lukomsky, “My Desire is Always to Rebel,” 17.

⁴⁹ Lukomsky, “My Desire is Always to Rebel,” 17–18.

⁵⁰ Lukomsky, “Hearing the Subconscious,” 30.

It is impossible to touch the intuitive work, which, of course, is the most important component in the composer's creative work. It distinguishes the composer from the scientist, the scholar. We possess the unique ability to enter into the subconscious, to pull something from there, and to reveal it. If it were only intellectual work, we would not be needed; it could be done by scientists . . . but this intuitiveness richness must be structured, must be illuminated by intellectual work. We have artwork only if the artist combines these two sides of activity.⁵¹

One of her largest works of this period in which she uses the Fibonacci series is the orchestral piece, *Stimmen . . . verstummen* (1986). This piece consists of twelve movements, with all the odd-numbered movements organized using the Fibonacci series, while all even-numbered movements are freely composed. She expresses the Fibonacci numbers (in odd-numbered movements) by composing the exact number of quarter notes of the number in the series. Thus, the first movement has 55 quarters, the third 34, the fifth 21, and the seventh 13. In the ninth movement there is a "conductor's solo," expressed by beating time (in silence) according to the first seven numbers in the series (1, 1, 2, 3, 5, 8, 13.) Here also, the importance of gesture is extremely significant: The orchestra ceases playing during this section and therefore the movement of the conductor's arms changes from *practical* to creating a dramatic visual effect for the audience.

In the 1990s, Gubaidulina built on her work with Fibonacci series, using series derived from it, primarily the Lucas and Evangelist series. Her piece, "Early in the morning, right before waking," for three 17-string kotos and four 13-string kotos (1993), is based on the Lucas series, and the Evangelists series serves as the structure for *Silenzio* for bayan, violin, and cello (1991). She also began to combine certain series within the same work. In turn, these series represent the different "characters" she had created in

⁵¹ Lukomsky, "The Eucharist in My Fantasy," 35.

many of her works up to this point. For example, she combines these series as multiple layers in *Now Always Snow* for chamber choir (1993).⁵²

In the early 90s, Gubaidulina also began to experiment with microchromaticism. Like many other composers, she felt that the possibilities of pitch needed to be expanded. Therefore, she began to work with a twenty-four tone system. Yet, she thinks of these twenty-four pitches as actually two sets of twelve pitches, with each set representing a very different idea:

I understand it as a unification of two spaces: the first is the twelve-tone semitonal space, and the second is another twelve-semitonal space a quarter note higher. For me this is a metaphor of the image and its shadow, or day and night. From my point of view, in the twelve tone compositions of the twentieth century, everything is as in the daytime; everything is enlightened and rationalized; there is no place for “night.” “Night” existed as a supplement of the diatonic system: the diatonic sphere was “day,” whereas the chromatic sphere was “night”: one could go there and return. That blessed situation gave us classical and romantic composers. In twelve-tone compositions we lost “night”: everything became “day.” But within the twenty-four tone scale, we may have not only “a day,” but also “a night.”⁵³

In *Quarternion*, for four cellos (1995), Gubaidulina divides the four cellos into two groups of two; one plays in the “tonal space,” the other in the “atonal space.” The relationship between the two is that of an image and its shadow, or light and dark. In her piece *Music for Flute and Strings* (1995), one half of the orchestra is tuned a quarter-tone lower from the other, which is tuned normally. Between the two tunings lies the solo flute, which explores elements of each “color” of the orchestra with its ability to play quarter-tones and through explorations of glissando between the two worlds. By partitioning each group of instrumental tuning on separate sides of the stage, she makes

⁵² Lukomsky, “Hearing the Subconscious,” 29.

⁵³ Lukomsky, “My Desire is Always to Rebel,” 11.

clear that the quarter-tones are in fact intentional, not simply an orchestra playing out of tune.

With each new period of output, Gubaidulina maintains elements from the previous, often building on them. She continues to write works using elements of the Fibonacci series in her quarter-tone music and elements of religion also form a basis for many pieces. She also continues to search for new sounds and colors as she began to do in the 1970s, expanding her range of extended techniques and improvisational elements even further.

CHAPTER 2:

INTRODUCTION TO TEN ETUDES FOR SOLO CELLO

Ten Etudes is an early work for Gubaidulina and therefore she makes no use of Fibonacci or Lucas series. As mentioned in the previous chapter, her work in the 1970s and 80s was marked by her fascination and exploration of sound and color, often involving the use of unusual instruments and instrumental combinations. Gubaidulina considers her early works more “intuitive” than “intellectual,” saying, “. . . it seems to me that my early period is very difficult for musicologists to talk about. I was searching in areas that are impossible to describe in words.”⁵⁴ Consequently, these early works have not received as much analytical attention as those that incorporate Fibonacci. However, while the more “intellectual” Fibonacci works are perhaps more neatly analyzed, there is much to talk about in these early pieces.

Many interesting themes and ideas emerged in my interview with Gubaidulina, particularly in our discussion of the etudes, including the significance of this early work and its impact on her later compositions. She emphasized: “for me, these etudes serve as very large imprints for future works of mine.”⁵⁵ Perhaps because Gubaidulina had not yet begun to work within the mathematical limitations of the Fibonacci series, there is an unbridled sense of freedom, curiosity and exploration in these pieces. Yet within this aesthetic, she had found unique ways to structure and organize her ideas. I explore these approaches later in this chapter. Depending on the etude, I will use a variety of analytical approaches, including pitch-set analysis, gestural analysis, and the use of Kholopova’s

⁵⁴ Lukomsky, “The Eucharist in My Fantasy,” 35.

⁵⁵ Sofia Gubaidulina, interview by author, Chicago, IL, February 27, 2015.

Parameter Complex. In all cases my analysis is geared toward the performer gaining a deeper understanding of the work, in order to make more informed and successful performance decisions.

The Ten Etudes were originally commissioned by Grigory Pekker, professor at the Novosibirsk Conservatory, in Russia. He was interested in compiling a collection of strictly pedagogical etudes, by various composers, to use with his students. Unfamiliar with contemporary music, however, Pekker was understandably baffled by the ten miniatures he received, and ignored them. Gubaidulina explained:

The story is that he wanted the etudes for cello to be for specifically pedagogical purposes. But for this purpose, the etudes don't work. They are my fantasy rather than etudes examining a pedagogical aspect. Imagine an artist who first draws sketches. The etudes are a sketch of an artistic production. But apart from this, I really wanted varietal types of articulation for cello also to fit into this idea. From one point of view it's an artistic sketch, but from another point of view, it's definitely a sampling of various types of cello sounds.⁵⁶

The term “etude” has immediate implications in the mind of the performer. First, there is the assumption that an etude is primarily for the benefit of the performer. Second, the piece, while presumably musical and enjoyable to play, is written specifically for the purpose of refining a particular technical skill, isolated in the context of a short composition and explored in a variety of ways. In one sense, Ten Etudes fulfills these traditional expectations by exploring contemporary cello techniques, such a *ponticello* and *flagioletti*, the way a David Popper etude might explore a fingering pattern in thumb position. Yet in another sense, the Etudes as singular pieces have broader implications. They are not simply etudes for the performer; they are etudes for Gubaidulina, the composer, in which to explore her “fantasy.” “I examine it this way” she said: “these

⁵⁶ Gubaidulina, interview, 2015.

were distinctively my etudes for future pieces.”⁵⁷ Therefore, any traditional role these etudes fulfill is simply a byproduct of their primary function as a playground for Gubaidulina, in experimenting with larger compositional ideas. However, for the cellist they serve as both a wonderful addition to the solo cello literature and as studies in which to hone contemporary cello technical skills.

Three years after the Etudes were written, Gubaidulina—eager to have them played—contacted the cellist Vladimir Tonkha to see if he was interested in performing them. Tonkha agreed and she went on to dedicate a number cello works to him, including *Seven Last Words*, *In Croce*, and *Quarterion*). After first hearing Tonkha play the Etudes, Gubaidulina recalls:

This was for me the birth of this composition Before that I thought it was a hopeless thing Vladimir Tonkha has an unbelievable talent and the most important thing is his depth, timbral variety, melodic expression and technical authenticity.⁵⁸

Furthermore, Gubaidulina has remained deeply drawn to the unique way Tonka produces sounds and the raw passion and commitment he brings to a performance. She has said:

When [Tonkha] produces these scintillating chords, he experiences that as a mystical act. He told me so himself. Something happens which seems acoustically impossible. Suddenly there it is—he says he goes out of his mind.⁵⁹

In publication, the Ten Etudes is currently titled Ten Preludes,⁶⁰ but this change was made only at the behest of Tonkha. Gubaidulina recalls that, when Tonka eventually got his hands on the etudes and began performing them, he mentioned to her that he

⁵⁷ Gubaidulina, interview, 2015

⁵⁸ Gubaidulina, interview, 2015.

⁵⁹ Gubaidulina, interview, June, 1990.

⁶⁰ In the Sikorski catalogue of Gubaidulina’s music, the composition is titled “Ten Preludes (Etudes).”

believed they should not be called etudes. He explained, “[They] are strikingly artistic works and that is why I suggested they be renamed ‘Preludes.’”⁶¹

In our interview, Gubaidulina explained the title change:

I really regret it because Ten Etudes is a great name and it is correct . . . This occurred because of my lack of character and a depressed mood. Tonkha told me that [they] didn’t work as “etudes.” Although he was happy to play them, he said they are not “etudes.” He said it was best to name them something else. I said, “What?” He said, “For example, ‘Preludes.’” At this moment, I really regret that I didn’t stand my ground. I had the feeling that whatever he wants to do he should do because they probably won’t be performed anyway.⁶²

Despite her preferring the name Ten Etudes, it would be unnecessarily complicated to change the title once more.⁶³ However, because Gubaidulina prefers Ten Etudes, I have used this original title throughout this dissertation and suggest that it henceforth be programmed as such.

The Ten Etudes are titled after various string techniques and Gubaidulina uses the playing techniques themselves to create unity and form:

I examined these etudes as not only a sampling of various types of sounds [on the cello] but the idea of a two-part form fascinated me. Say, from one type of transition to another. This really interested me. For example, at the beginning, playing the bow at the frog and then eventually coming to the tip of the bow; this creates a two-part form.⁶⁴

Because these techniques and their interactions often dictate the formal structure of the etudes, Gubaidulina is especially interested in pairing opposites, thus highlighting the nature of each extreme and exploring it in detail. Eight of the ten etudes pair two opposite techniques together, but there are two (nos. 4 and 6)

⁶¹ Email correspondence with Vladimir Tonkha.

⁶² Gubaidulina, interview, 2015.

⁶³ It is complicated for GEMA, the performing rights collection agency in Germany, to change it.

⁶⁴ Gubaidulina, interview, 2015.

that explore different elements of just one technique, and one (no. 5) that explores three elements.

The titles of the Ten Etudes for Solo Cello are as follows:

- I. Staccato, legato
- II. Legato, staccato
- III. Con sordino, senza sordino
- IV. Ricochet
- V. Sul ponticello, ordinario, sul tasto
- VI. Flagioletti
- VII. Al Taco, da punta d'arco
- VIII. Arco, pizzicato
- IX. Pizzicato, arco
- X. Senza arco, senza pizzicato

While two-part forms are common in music, their structure is less often dictated by timbre or articulation. Such musical elements are typically considered surface material rather than structural. Gubaidulina regards these elements as equally important to elements of harmony, rhythm, and texture.

Valentina Kholopova has written extensively about this idea. About twenty-five years ago, Kholopova identified a method of analyzing the music of Gubaidulina, which she calls “expression parameters” (hereafter EP). She discovered that the composer tends to group together five types of EPs: 1) articulation and methods of sound production, 2) melody, 3) rhythm, 4) texture, and 5) compositional writing. Additionally, each of these parameters function as either a consonant or dissonant EP within each piece. Kholopova explains:

The “Expression Parameter” is so named because its elements are very immediate in emphasis and directly convey a musical-emotional

expression. Despite its name, it belongs not to the category of musical character but, rather, to that of musical composition, standing in an array of such concepts as harmony, rhythm, and texture.⁶⁵

Additionally, she notes:

At the basis of the EP, like those elements of music that are not yet recognized as structural in the history of composition: the devices of articulation and the methods of sound production, which in the past have pertained to the performer and not the composer. Several elements of melody, rhythm, and texture—organized in a specific fashion—are associated with these devices of articulation. That it has a clear functional organization, similar to how classical harmony is organized by “T, S, D” functions, serves as an indicator and guarantee of the EP’s existence.⁶⁶

The Ten Etudes exemplify this idea, perhaps in its most distilled form. While a majority of contemporary composers are deeply interested in the intricacies of sound production, Kholopova has found a pattern in Gubaidulina’s music where the composer takes these elements to a core structural level. Furthermore, by identifying the function of each element of sound production as either consonant or dissonant, a more cohesive structural picture emerges, valuable to both theorist and performer. I have found this kind of analysis to be especially helpful in performing the etudes, because knowing the consonant or dissonant functions of each element of sound production inevitably raises important questions. For example, how do elements within each category relate to each other? How much should differences be brought out and where? Do the consonant and dissonant elements interact and, if so, how?

In an earlier interview with Lukomsky, Gubaidulina elaborated further on her intentions with the Ten Etudes:

⁶⁵ Kholopova, “Parametr ekspressii v muzykal’nom iazyke Sofii Gubaidulinoi” (The Expression Parameter in the Music of Sofia Gubaidulina), *Moscow Forum*, Moscow Conference proceedings, vol. 25 (Moscow: Moscow Conservatory, 1999): 153–60. Cited and translated by Philip Ewell in “The Parameter Complex in the Music of Sofia Gubaidulina,” *Music Theory Online* 20.3 (September 2014), paragraph 2.

⁶⁶ Kholopova, 1999; Ewell, 2014, “The Parameter Complex,” paragraph 2.

These miniatures, which evoke polar opposites in the sphere of sound production on a string instrument, are little scenes in which the heroes are: 1) certain aspects of string instrumentation, 2) methods of sound production, and 3) various bowings . . . In almost all of the pieces the opposites interact in pairs.⁶⁷

By referring to elements of cello technique as “heroes,” Gubaidulina essentially personifies their role within the drama of these “little scenes.” She has brought these instrumental techniques to life, treating them more as characters in a play than simply articulations for cellists to execute.

When I asked Gubaidulina what draws her to the idea of musical juxtaposition, she responded:

In almost all my pieces, there is the juxtaposition of dark and light. Why does this interest me so much? Because this is the foundation of the world. I attribute a lot of meaning to the art of music. I think the art of music reveals itself as a paradigm of the world. For example: pushing and pulling away, dissonance and consonance, gravitational pull and expansion of the universe. And this association exists in no other art form than music. Because, precisely, the expansion of energy and gravitational pull is vibration. And music is the only art form that contains material and noise in which there is vibration. There exists no other art form that contains material that has as its foundation the root of existence.⁶⁸

The juxtaposition of opposites clearly has philosophical and scientific roots for Gubaidulina. Since the art of music is essentially a “paradigm of the world,” it is not surprising that she works with the idea of opposites so often. Yet, even beyond the scientific and philosophical explanations, these principles are most deeply rooted in her spirituality. I return to the earlier interview with Lukomsky, where Gubaidulina explained:

I understand the word “religion” in its direct meaning: as *re-ligio* (*re-legato*), that is, a restoration of *legato* between me (my soul) and God. By means of my religious activity I restore this interrupted connection. Life

⁶⁷ Kholopova, *Sofia Gubaidulina: Monografiia* 137; Ewell, “The Parameter Complex,” paragraph 13.

⁶⁸ Gubaidulina, interview, 2015.

interrupts this connection: it leads me away, into different troubles and God leaves me at these times This is unbearable pain: by creating, through our art, we strive to restore this legato.⁶⁹

For Gubaidulina, there is one major juxtaposition in life: God and the soul. The goal of all of her music is to restore a connection between the two. Even within the word “religion,” Gubaidulina extracts an articulation. *Legato*, for example, is the means of restoring this connection. Furthermore, she says:

I am totally convinced that there is no more serious task for the artist than to recreate this connection because our whole life is fragmented. Daily life takes place in a kind of *staccato*. We have no time to create any continuity in our lives.⁷⁰

Because, for Gubaidulina, the restoration of *legato* between the soul and God is the underlying intent of her work, it makes logical sense that *staccato* represents the opposite of this ideal. *Staccato* signifies our disconnection to God and, in a sense, our human frailty. Therefore, that she devotes both the first and second etude to this pairing comes as no surprise. Gubaidulina understands the relationship between *legato* and *staccato* to be the most basic and important. While the function of an EP can vary from one work to the next, Kholopova has clarified that *legato* always functions as a consonant EP and *staccato* always functions as a dissonant EP; essentially, all other opposite articulation pairings are inherently rooted in one or the other. It is significant that these ideas, which continue to shape her approach to composition today, are explored so compellingly in this very early work.

⁶⁹ Lukomsky, “The Eucharist in My Fantasy,” 33.

⁷⁰ Gubaidulina, interview, 1990.

CHAPTER 3:
ETUDES 1–5: ANALYSIS AND PERFORMANCE SUGGESTIONS

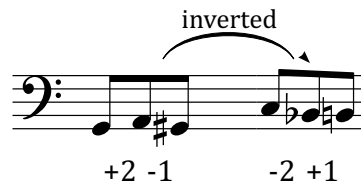
Etude 1: Staccato — Legato

Etude 1 is a notable example of the ways in which Gubaidulina explores opposites and juxtaposition in her music. Staccato and legato, both specific articulations, receive significant individual time in this piece. Staccato predominates the first half and, at m. 35, switches to strictly legato until the end. By simply separating each of these opposite articulations into a different section of the piece, Gubaidulina highlights their innate differences; however, underlying connections link the two. Most significantly, both make use of the same basic motivic and cyclical ideas that dominate the pitch and rhythmic space of the whole piece.

Etude 1 begins with a three-note figure made up of the ordered pitch intervals⁷¹: +2, -1 (henceforth “M1”). M1 permeates and structures the movement in a variety of ways. In m. 4, the motive is inverted with ordered pitch intervals -2, +1 (Ex. 3.1). This version of M1 occurs most frequently in the movement.

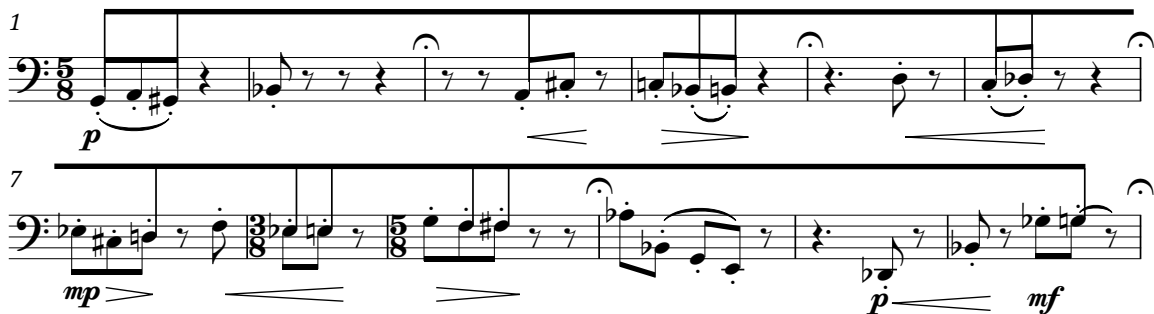
⁷¹ Joseph N. Straus, *Introduction to Post-Tonal Theory*, 4th ed. (New York: W. W. Norton & Company, 2016), 9. A pitch interval (*pi*) is defined as “the distance between two pitches, measured by the number of semitones between them.” In my dissertation, I will use ‘*pi*’ to refer to such pitch intervals. Integers preceded by plus or minus signs are ordered pitch intervals, while those without plus or minus signs are unordered pitch intervals.

Example 3.1: M1 motive, Etude 1, mm.1–4



Through the repetition of this figure, Gubaidulina creates a gradual upward chromatic line. In mm. 1–12 the interval of an octave (G2–G3) is filled in.

Example 3.2: Chromatic ascent, Etude 1, mm. 1–12

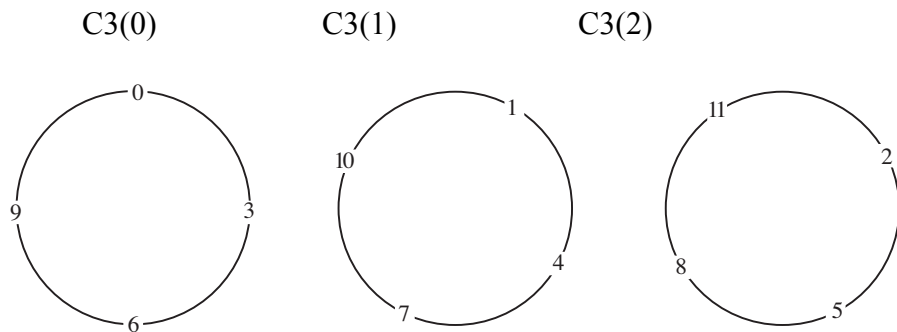


The use of C3 interval cycles is also significant in the piece.⁷² It is probably first heard most clearly in mm. 10–11 (B \flat -G-E-D \flat); however, it is presented in more concealed ways and over longer stretches of music throughout the etude. For instance, immediately following the initial statement, this string of C3(1) continues, albeit more

⁷² Joseph N. Straus, *Introduction to Post-Tonal Theory*, 4th ed. (New York: W. W. Norton & Company, 2016), 163-164. There are three versions of the C3 interval cycle and the numbers that correspond to each (0, 1 or 2), represent the lowest pitch class integer of the cycle.

concealed in the texture, through m. 16, culminating with G2. Additionally, there are two statements of M1 (A^b - G^b -G).

Example 3.3: Three versions of C3 cycle, Etude 1



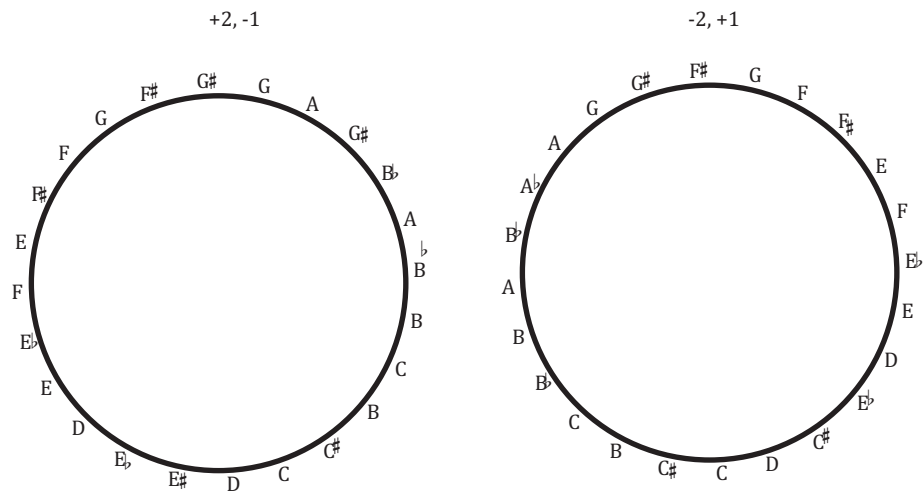
Example 3.4: Initial statement and continuation of C3(1), Etude 1, mm. 10–16

The musical score for measures 10–16 of Etude 1 is shown in bass clef with a time signature of 8/8. The key signature has one flat (B-flat). The score includes dynamic markings *p* and *mf*. A circular diagram of the C3(1) cycle, with points 1, 4, 7, and 10, is positioned to the right of the musical notation.

There are instances of all three versions of C3 in Etude 1. Interestingly, the first three notes of the etude (G-A-G \sharp) each form a member of one of the three distinct interval cycles. They constitute a foreshadowing of the prevalence of the cycles to be explored throughout. Because these three notes also make up the M1 motive, they demonstrate convincingly the close relationship between these two main elements in the piece.

Consequently, there is an innate cyclicity to this etude. Multiple statements of M1 (moving up or down chromatically) create a compound cycle of intervals made up of twenty-four notes (Ex. 3.5). This etude uses every version of M1 possible and all three versions of C3. Arguably, M1 and C3 are closely related due to the minor third that connects any two stepwise statements of an M1. For example, two statements of M1 appear from mm. 4–6 (C-B \flat -B and D-C-D \flat). The interval that connects the two (B-D) is a minor third.

Example 3.5: Compound cycle of M1, Etude 1



In m. 21, C3(1) begins an extended chromatic ascent that culminates in the B \flat 5 at m. 36 (see Ex. 3.6). I would suggest that the overall motion in mm. 1–36 forms a rising chromatic line, from the opening G to the high B \flat (found in m. 36) at the climax. The one exception to this idea is the final A, before reaching B \flat , coming immediately after

the B \flat , not before. However, this minor break in the chromatic motion fails to significantly detract from the driving chromatic motion that has clearly been leading to the high B \flat from the beginning. In fact, it adds to the excitement, as if the line were so impatient to get to its goal that the A is briefly sounded.

Example 3.6: Chromatic ascent, Etude 1, mm. 21–36

The musical score for Example 3.6, 'Chromatic ascent, Etude 1, mm. 21–36', is presented in three staves. The first staff (mm. 21–26) begins with a *mf* dynamic, followed by a *f* dynamic, then a *p* dynamic, and ends with a *f* dynamic. The second staff (mm. 27–32) starts with a *p* dynamic, followed by a *f* dynamic, and ends with a *mf* dynamic. The third staff (mm. 33–36) begins with a *f* dynamic. The score includes various musical notations such as slurs, ties, and dynamic markings.

The clear climax of the movement occurs at m. 36; a number of contributing factors support this reading. Measure 36 begins the first section that sustains a *forte* dynamic for more than a measure. The articulation from here until the end of the movement is strictly legato, unlike the primarily staccato music up to this point. Also relevant to this reading is the chromatic motion, which begins a downward progression, unlike the previous music with primarily ascending motion.

Additionally, there are instances where two versions of M1 overlap, as in mm. 36–37, where two M1's A-G-A \flat and A \flat -G \flat -G share an A \flat . An A \flat is also shared in m. 40 and an A \natural in mm. 43–44. This overlap adds a layer of restlessness to the section (Ex. 3.7).

Example 3.7: Overlapping instances of M1, Etude 1, mm. 36–44



Gubaidulina also manipulates silence in notable ways throughout Etude 1. In the first half she leaves generous space between instances of M1 and C3, allowing the listener to become familiar with each idea individually. That silence gradually decreases as the piece progresses and, by the time we get to the climax at m. 36, there are few rests if any. This gradual receding of the silence adds significantly to the dramatic impact of the climax.

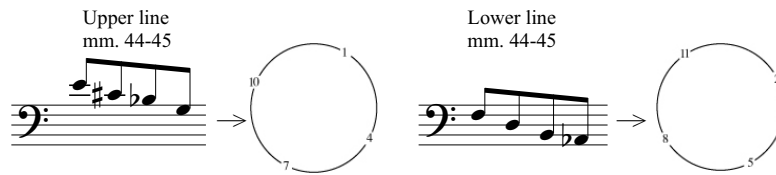
As mentioned earlier, Gubaidulina has often emphasized the importance of the golden ratio in her music. While she uses it very deliberately in her second and third periods, it also occurs frequently in her earliest works; therefore, this etude forms an example of her “intuitive” use of the golden ratio. Etude 1 includes fifty-seven measures; the climax occurring at m. 36 places it in direct proportion to the golden ratio (0.618). So,

in addition to the more surface level factors discussed above, the composer's organic structural foundation also shapes the piece.

B \flat saturates mm. 36–41 (see Ex. 3.8). In mm. 36–44 a downward chromatic movement appears from B \flat to E (culminating on the second eighth note of m. 44). Interestingly, from mm. 36–41, the downward motion is repeatedly held back by the repetition of the B \flat , delaying the sequence of -2, +1, as if this figure is temporarily unable to gain traction. However, in mm. 44–45, the line abruptly abandons its chromatic motion and breaks up into two separate voices made up of C3 interval cycles. The top line is a C3(1) cycle (E-C \sharp -B \flat -G) and the bottom line (mm. 43–46) a series of C3(2) (B-G \sharp -F-D-B-Ab).

Example 3.8: Chromatic to cyclical C3(1) and C3(2), Etude 1, mm. 36–45

The musical score for Example 3.8, Etude 1, measures 36–45, is presented in three systems. The first system (measures 36–39) is in treble clef, 8/8 time, with a key signature of one flat (B-flat). It begins with a forte (f) dynamic. The second system (measures 40–43) continues in the same clef and key signature. The third system (measures 44–45) is in bass clef, 8/8 time, with a key signature of one sharp (F-sharp). It begins with a mezzo-forte (mf) dynamic. The score shows a transition from chromatic movement to cyclical C3(1) and C3(2) interval cycles.



It is worth noting that B-A \flat is an augmented second and, enharmonically, also a minor third, so the pattern is occurring on a number of levels—as if the tension that built up from mm. 36–44, with its repetitive chromaticism, leads to the music exploding into these two separate lines. Measures 44–47 also contain the largest intervals in the movement so far, adding to this idea of explosion. M1 can be found within this expanded interval range (in m. 47) with the notes Ab- G-F#. And again, each of these pitches is a member of a different C3 cycle.

With the diminuendo from m. 47 to the end, the musical tension gradually decreases. The A \flat in m. 47 initiates an upward chromatic line that culminates in the final note of the movement (F#4). In m. 50, M1 is heard in the original order of pitch intervals, as in the first measure (+2, -1). Other occurrences of this appear in mm. 51–52 and in mm. 55–56. So, while most of the movement is made up of M1 (the version using -1, +2), the M1 version using +2, -1 bookends the etude. While some elements of resolution appear at the end of the etude—such as its return to the original M1, the return of a consistent piano dynamic, and the upward direction of the chromatic line—there is also a sense of things unresolved, for instance, the etude ending on an F#.

The music comes very close to returning to the G, but never quite makes it, even fading away with a diminuendo in the last bar. Furthermore, the timbre has changed significantly in these final five bars. For the first time in the movement, Gubaidulina calls

for an ascent to the higher register of the D string, an area of the cello with a unique, almost “fuzzy” timbre, which speaks much differently than other parts of the instrument. Therefore, the end does not simply resolve but almost seems to be heading off in another direction altogether, in a sense leaving the door open for the next etudes.

As mentioned earlier, staccato and legato not only represent two opposing articulations, but they also have a deeper spiritual meaning for Gubaidulina. It is significant that at the end of this etude, she restores the legato. The piece takes the listener from staccato to legato through the exploration and transformation of two basic motives and an overall arc of rising and falling chromatic movement.

Etude 2: Legato — staccato

The second etude, like the first, is an exploration of legato and staccato. However, rather than separating each articulation to one half of the piece, Gubaidulina's approach alternates between sections of legato and staccato, each articulation representing a starkly different character. Additionally, while the first etude consisted almost solely of eighth notes, the second has a much greater variety of rhythmic, textural, and harmonic elements. Perhaps most notable is the textural difference between the two etudes; the second is written completely in double stops, while the first is strictly monophonic.

Etude 2 can be divided into two main sections. Section A is contained in mm. 1–35, and Section B in mm. 36–77. In Section A, the alternating legato and staccato ideas are introduced and separated by rests, most often a full bar of silence. This silence helps to enhance the differences between legato and staccato, allowing listeners to familiarize themselves with the unique characteristics of each. Furthermore, certain note values are limited to either sections of legato or staccato; legato sections contain no note values shorter than a quarter note, whereas sections of staccato have no note values longer than an eighth. Additionally, rubato is only indicated in staccato sections and trills are limited to sections of legato. By categorizing note values and certain methods of sound production to a particular section, Gubaidulina further distinguishes and solidifies the unique profile of each. Because she so clearly delineates elements of legato and staccato in the A section, I have included a Parameter Complex at the end of my analysis in order to clarify, for the performer, the consonant or dissonant function of a various elements in the piece.

One of the most unifying features of Etude 2 is Gubaidulina's use of open strings on the cello to serve as "guideposts." Each legato section (in Section A) is structured around an open string drone while other pitches move obliquely above or below. The movement from away from a pitch in each of these sections always involves a wedge expansion outward, chromatically, from the open string. For example, m. 3 begins with a unison on G and the intervals expand chromatically downward to a pitch interval (hereafter "*pi*")⁷³ 4 on D#. This idea is developed in the second legato phrase in mm. 9–15, where a unison on A expands outwards to a *pi* 3 in m. 9, then contracts to *pi* 1 in m. 15. Interestingly, in each section of legato, a semitone above or below (in the opposite direction of the chromatic expansion) is always heard. By "circling" the droned open-string pitch by at least one semitone in each direction, Gubaidulina further emphasizes its importance.

The composer creates a sense of balance among legato sections with the alternating direction of wedge expansion with each consecutive occurrence. For example, the first legato section (mm. 1–6) creates a wedge around open G, travelling up to G# and down to D#. Conversely, in the second legato phrase (mm. 9–15), the pitch goes down to G# and up to C, circling the open A. The first section (mm. 1–6) is +1, -5 and the second (mm. 9–15) -1, +4, creating two well-balanced, symmetrical phrases with a close inversive relationship. Furthermore, within the third section of legato (mm. 27–29) +1, -4 around the open string (D) creates an exact intervallic inversion with the second legato section (Ex. 3.9).

⁷³ I remind the reader that a "*pi*" is the distance between two pitches, measured by the number of semitones between them.

Example 3.9: Intervallic symmetry between phrases, Etude 2

mm. 2–4 mm. 9–10 mm. 27–29

+1 -5 -1 +4 +1 -4

p *f espr.* *f* *ff* *p sub.*

The staccato sections, instead of lingering around an open string, connect sections of legato by chromatically filling in the pitch space between open strings. Unlike the legato sections, with essentially one musical character, there are two distinct staccato characters in the staccato sections. The first (hereafter “S1”)⁷⁴ initially occurs in m. 7 and sounds almost like an afterthought to the legato section preceding it. S1 never last more than a measure and is characterized by chromatic movement in eighth-note triplets or sixteenth notes. Each instance involves a dramatic diminuendo to *piano* or *pianissimo* (sometimes enhanced by rubato). In Section A of Etude 2, S1 is found in mm. 7, 30, and 34.

The sections marked *piu mosso* make up the second staccato character (hereafter “S2”). These sections exude a Shostakovich-like playfulness, particularly distinguishable by the use of slides and leaps. S2 occurs only twice in the etude, but has a significantly longer duration than every instance of S1. S2 first occurs in mm. 16–25, and again from mm. 59–66. While the two staccato characters sound remarkably different, they share a strong intervallic connection. Instances of (0347) saturate the pitch space of both S1 and S2. The set is created when adjacent dyads are combined. For example, (0347) is found in

⁷⁴ The “S” of S1 and S2 stands for *staccato*.

mm. 16–17, with the pitches F#, A, D, F. Similarly, the downbeat of both mm. 18 and 19, with the pitches D, Bb and F, Db, forms another (0347). Interestingly, mm. 18 and 19 each contain three sets of (0347), overlapping. In S1, instances of (0347) occur in two *pi* 4s, related by T3 and in S2, when either two *pi* 3's are related by T8 or two *pi* 8s are related by T3 (Ex. 3.10).

Example 3.10: Instances of (0347), Etude 2, mm. 16–20

mm. 16–20

Sections of legato and staccato are clearly defined early, but an interesting feature lies in the various ways elements of these contrasting characters infiltrate one another over the course of the etude. This process begins subtly and becomes gradually more apparent as the etude progresses. For example, the first legato section begins with a *pi* 8 and ends with its mod-12 equivalent, *pi* 4. The staccato section (in m. 7) consists exclusively of parallel *pi* 4's. So, while the overall first impression of each character (legato, staccato) starkly contrasts the other, the intervallic makeup is quite similar. Additionally, S2 also intervallically connects to the opening legato section, with its consistent use of parallel *pi* 8's. As mentioned, legato sections are defined primarily by the way they feature open strings; yet, in the second section of staccato, open strings

infiltrate the chromatic texture. Measures 22–23 contain an open D; open D and added A appear in both mm. 24 and 25.

Similarly, elements of staccato also influence sections of legato. For instance, the slides first found in S2 also occur in the legato section at mm. 31–33, where the composer connects the B \flat to the high C \sharp interval (+15) with a slide. Over the course of Section A, wedges around open strings have gradually expanded, reaching a +11 (D-C \sharp), in m. 29, and eventually the +18 (G-C \sharp), in m. 34.

Example 3.11: Instances of infiltration between legato and staccato, Etude 2

Infiltration of intervals from legato passages into staccato passages:

Infiltration of glissando from staccato passages into legato passages:

Section A of this etude has been “goal oriented” toward the open strings of the cello, and therefore each legato section has served as somewhat of an arrival. However, one of the most appealing features of open strings is the purity of their resonance and, so far, the legato sections have been stifled by dissonant chromaticism. Measure 36 marks the beginning of the B section, where the textural landscape begins to shift significantly. For the first time since m. 1 an open C drone and *pi* 8 (C-G \sharp) signal a new beginning of

interval of the piece) adds another layer of drama and complexity. This digression (mm. 45–46) also bears a certain resemblance to S1. The line moves chromatically and the articulation, slightly ambiguous as to whether heard as trills or 32nd notes, is reminiscent of both the trills in the first legato section and the movement by sixteenth notes in S1. The *diminuendo* to *pianissimo* gesture, also present here, further recounts the character of S1.

There are a number of factors that establish the arrival at m. 47–48 as the climax of Etude 2. First, the C in m. 48 is the highest note of the whole piece. The fact that the etude begins with C2 (the lowest pitch available on the cello) and ends up three octaves higher, through a gradual expansion in pitch space, emphasizes the significance of this arrival. Additionally, like the first etude, the overall form of this piece follows the ratio of the golden section. The movement spans a total of seventy-seven measures and consequently, the clear climax can be found in m. 47. Calculated mathematically: $0.618 \times 77 = 47.5$. Furthermore, m. 47 is the first occurrence of fortissimo in the movement. Gubaidulina's addition of *espressivo* further emphasizes the importance of this measure.

While alternating sections of legato and staccato continue after the climax, certain elements have dramatically shifted. Before the climax, the melodic direction of staccato sections moved upward; after m. 47 (through the end) they move downward chromatically. The wedge expansion that occurred against open strings in sections of staccato in Section A also changed directions, as in mm. 55 and 58, where the wedge compresses rather than expands.

Example 3.13: Descent and compression in Section B, Etude 2, mm. 47–58

mm. 47–58

The musical score consists of three staves. The top staff is in treble clef and contains a series of notes with a slur over a group of five notes, followed by a triplet of three notes. The middle staff is in treble clef with a bass clef below it, showing a similar pattern of notes with a slur over a group of five notes and a triplet of three notes. The bottom staff is in bass clef and also features a slur over a group of five notes and a triplet of three notes. Dynamic markings include *ff* and *p*. Annotations include "descending rather than ascending" and "compression rather than expansion".

Interestingly, the rests that separated sections of legato and staccato in the A section have shifted locations in the B section. Instead of separating legato sections from staccato sections, the composer combines the fragments of each articulation to form one phrase (Ex. 3.14). These hybrid phrases are now separated by rests, confirming that the specific aspects of each articulation have been combined and transformed.

The characteristic elements of legato, such as oblique chromatic movement or hovering around an open string, have also disappeared in Section B, replaced by short groupings of parallel *pi* 8's. Here, the first instance of a *pi* 8 in a legato section appears in the piece, another significant example of staccato elements continuing to infiltrate the

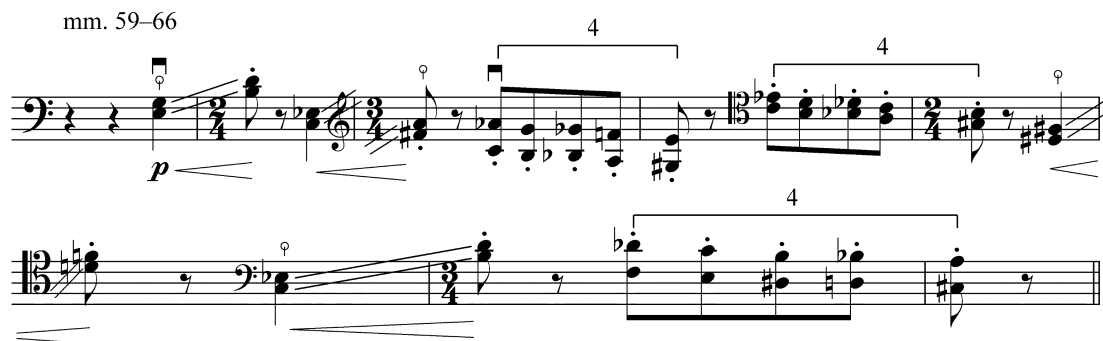
legato. All that remains of the etude's original legato identity are the longer note values, legato articulation, and *ff espressivo* indications. The intervallic structure of these fragmented sections of legato are also affected by staccato (Ex. 2.14). The legato dyad, in m. 53 (E-C) and in m. 57 (C#-A), forms an (0347), directly reminiscent of the way dyads relate in S2.

Example 3.14: Changes of legato characteristics, Etude 2, mm. 52–58

The shortened staccato elements have also been further infiltrated by legato. For instance, in mm. 55 and 58, the composer indicates tenuto markings on the triplet figures, blurring their staccato function and adding an element of legato to the gesture.

Open strings no longer function as primary goals in Section B. While Gubaidulina separates with rests the combined staccato and legato sections in the same way as Section A, a new sense of restlessness emerges in these passages, created by the short fragmented nature of each phrase within the rests. The music has become more dense and compact. Furthermore, the intervals spanned in each staccato passage no longer cover the full distance between open strings (Ex. 3.15). They are instead limited to the span of *pi* 4 (in almost every instance).

Example 3.15: Shorter distance in staccato passages, Etude 2, mm. 59–66



Measures 67 to the end comprise a long series of dissonant chords over a gradually building crescendo. These chords do not closely resemble anything in the piece before them. While they fit most squarely in the staccato category, with their eighth-note duration, they have no staccato markings, as do almost all other eighth notes in the piece. Whether these eighths should take on a slightly more legato feeling is a decision left to the performer, but based on the absence of the dots, I believe the legato should be brought out. As if spinning out of control, the music surges through the final *fff* (in the last bar), only to be abruptly cut off by silence. This last fermata is a welcome relief, as if the tension building to the end required an allotted silence to diffuse the intensity.

Interestingly, almost every chord over these measures contains at least one open string. They go by so quickly, however, stacked against such dissonance, that their significance can easily be ignored. If the movement thus far has been a competition of sorts between articulations, neither staccato nor legato has prevailed. Instead, each

element has permeated the other to the point where both have become almost indistinguishable.

Despite the level of infiltration that occurs over the course of the movement, the performer might retain a clear sense of the original characteristics of staccato and legato, to identify and bring out the unique differences for as long as possible. It is especially important to highlight the contrasting characters of legato and staccato in the A section where they have more extended individual time. This way, when they become more fragmented and obscured in the B section, the listener will be familiar enough with each to recognize them in the denser textures of the etude.

Kholopova's Expression Parameters (EPs) provide a helpful way to identify these characteristics. Based on both Gubaidulina's own words and the principles of Kholopova's EPs, legato in this movement (and as a general rule in Gubaidulina's music) can be classified as consonant, while the staccato sections fit squarely in the dissonant category. Therefore, I include compositional elements that occur simultaneously with either staccato or legato in their corresponding category. My parameter complex for this movement is shown in Figure 3.1.

Table 3.1: Parameter Complex, Etude 2

Consonant EPs	Dissonant EPs
1. Articulation and Means of Sound Production: <ul style="list-style-type: none"> • Legato • Trills • Espressivo 	1. Articulation and Means of Sound Production: <ul style="list-style-type: none"> • Staccato
2. Rhythm <ul style="list-style-type: none"> • $\text{♩} = 76$ • Meno Mosso ($\text{♩} = 100$) • Dotted half notes • Half notes • Quarter notes • Quarter note rest 	2. Rhythm <ul style="list-style-type: none"> • Piu Mosso (dotted half = 69) • Eighth notes • Eighth note rests • Triplets (eighth note) • Quintuplets (sixteenth note) • Sixteenth notes • Rubato
3. Texture <ul style="list-style-type: none"> • Slurs • Fermatas 	3. Texture <ul style="list-style-type: none"> • Separate notes • Three note chords

A successful performance of Etude 2 will highlight the different characteristics of legato and staccato with clarity and intention. The performer should exaggerate the shortness of the staccato and the length and smoothness of the legato. When necessary, the performer must shift nimbly between the two. Special attention should be paid to making smooth bow changes in the legato sections to maintain a fluid, connected line. When there are trills, they should remain at a consistent speed with little fluctuation.

Because there are two types of staccato in the etude, it is important to make a slight distinction between S1 and S2. I suggest a slightly heavier staccato with a

consistent vibrato in the left hand for all S2 figures in order to bring out its jovial, playful character. For the S1 figures, a lighter and dryer staccato—played toward the middle of the bow—helps to emphasize the “tossed-off” quality of this short idea. A clear diminuendo on all instances of S2 also helps to give the impression of these figures fading away into the rests that follow them. These rests are also significant and should be held out fully as they initially help to “clear the air” between sections of legato and staccato, further emphasizing the initial contrast.

Because the *piu mosso* triple-meter tempo (dotted half = 69) at m. 16 is not indicated with quartet notes, the music should feel as if in one. Therefore, only the downbeats should be emphasized and the second and third beats played lighter with more release in the sound (as in a waltz). Rubato in the staccato sections can also be exaggerated according to the performers taste in order to highlight the contrast with the steadier meter in the legato sections. Legato and staccato sections each have their own specific tempo indications and the performer should, at least initially, practice with a metronome in order to internalize the rhythmic subtlety of each character.

Etude 3: Con sordino — senza sordino

Like the second etude, open strings play an important structural role in Etude 3. Gubaidulina emphasized in interview that, “in general, these four strings mean a great deal to me I feel the personalities of four individuals.”⁷⁵ Each open string occurs under a fermata, highlighting its importance and giving the cellist time to place and remove the mute while creating a sense of stillness. Rhythmically steady scalar material (often within an A Phrygian tonality) connects each open string, intended to assist in a smooth connection between them. Additionally, every open string is heard at least once with mute on and once with it off, as if Gubaidulina repeatedly flips a switch in order to highlight the subtle difference in sound.

Like the first two etudes, the third also fits the proportions of the golden ratio. At twenty-eighth measures long, with the climax occurring at m. 17, calculated mathematically the ratio is $0.614 \times 28 = 17$. An extended crescendo from mm. 15–16 leads to the highest and loudest note of the piece (A^b), descending immediately after to the first occurrence of the open C string at m. 22.

Many works of Gubaidulina seem to highlight the importance of gesture. However, when I asked her about the role of gesture in her music, she maintained she thinks nothing about the visual when composing, emphasizing no differentiation between sound and visual elements. She insists, “I can’t separate now one from the other I think all of this is a combined fantasy.”⁷⁶ Despite this denial, I contend that gesture indeed plays a significant role in her music and in Etude 3 particularly, for a number of reasons.

⁷⁵ Gubaidulina, interview, 2015.

⁷⁶ Gubaidulina, interview, 2015.

Berry has written compellingly on the subject of gesture as it relates to Gubaidulina's music. He categorizes musical gesture into two basic groups, practical and expressive: "A musical gesture is a movement of the body that is intended to produce sound or to convey non-musical (non-sonic) information to the audience about the performance. The former I call practical movements; the latter, expressive."⁷⁷ According to Berry's theory, if a movement, such as the placement of the left hand on the fingerboard, is made for the exclusive purpose of making a clean, clear sound, then it would be considered a "practical" gesture. Alternately, "expressive" gestures are those that are meant to convey something extra-musical and not necessary to basic sound production on the instrument. Berry argues that Gubaidulina "exploits the co-expressive potential of music and gesture—both expressive and, perhaps more importantly, practical."⁷⁸

I agree that Gubaidulina's music often blurs the line between expressive and practical gestures. Gestures considered practical in the context of another composer's work become emotionally charged in her music. The alternating use of mute in the third etude forms a fitting example of this idea. The marking *con sordino* has been used since the seventeenth-century, and various types of mutes for string instruments create slightly different sounds, most often characterized as somewhat nasal and slightly veiled. It has historically been the delicate task of the performer to create as little interruption as possible when placing or removing the mute, so as not to distract the listener from the intended effect.

⁷⁷ Berry, para 10.

⁷⁸ Berry, para 16.

In Etude 3 Gubaidulina works, as usual, with two opposites; mute on and mute off. Yet, because the subject of this etude is clearly the contrast of muted and unmuted sound, she inherently draws attention to the gesture required of the performer in executing the different sounds. She does this in three ways. First, the gesture is repeated six times over the course of this short 27-bar movement. Simply requiring this repetitive motion from the performer inevitably draws attention to the visual aspect of the performance. Second, the gesture is always made while simultaneously playing an open string. While the subtle change from one timbre to the other is quite immediate and dramatic, the gesture itself draws more attention than the changes of sound from the open string. Third, the structure of the etude is inherently based on the placement of the mute.

By highlighting a practical gesture, one could argue that Gubaidulina has transformed it into an expressive one. However, the goal of this music is not to transform the meaning of the gesture, but rather to heighten the audience's awareness of a gesture from the performer (historically taken for granted), to appreciate its simplicity. In the same way someone might focus on the breath in meditation to achieve higher spiritual awareness, the repeated gesture of the player in this etude produces an expressive effect. In essence, Gubaidulina has created a profoundly meditative and arguably spiritual atmosphere in this etude.

Gubaidulina has been deeply influenced by Eastern cultures, both personally and in her music. She has also expressed an interest and belief in what she describes as a “meditational attitude toward sound.”⁷⁹ The concept of an etude shares certain characteristics with meditation, often defined as continued or extended thought, reflection, and contemplation. The purpose of an etude is to explore an idea repeatedly, in

⁷⁹ Gubaidulina, interview, 1990.

a number of ways, to achieve a higher level of execution. Similarly, the process of meditating often involves the repetition of a particular mantra or idea to achieve a higher state of being. The word “meditation” might be considered synonymous with study, and Gubaidulina uses Etude 3 to explore this aspect of her fantasy.

Example 3.16: Etude 3

$\text{♩} = 54$

1 *mp* *con sord.* *senza sord.* *con sord.*

5 *senza sord.* *con sord.*

10 *senza sord.*

14 *f*

18 *con sord.*

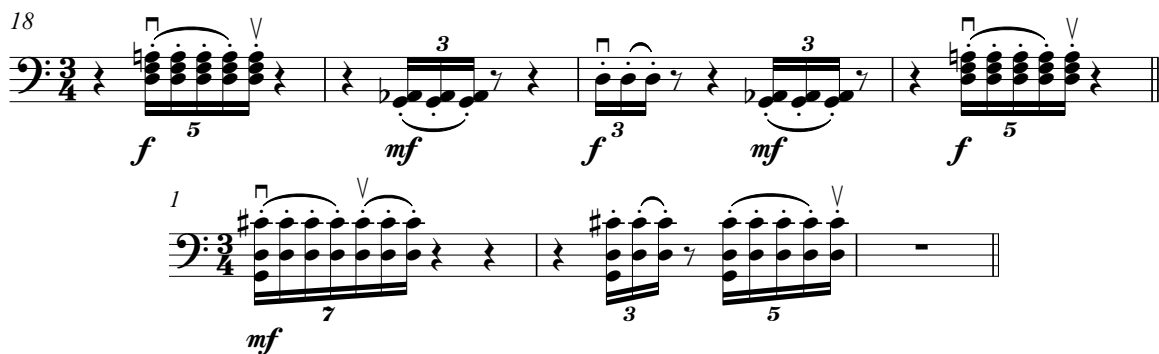
23 *p*

III -----

Etude 4: Ricochet

Etude 4 centers on the use of *ricochet* bowing throughout.⁸⁰ While *ricochet* can be found in common practice period music, it is most often used sparingly. In this movement Gubaidulina uses *ricochet* only, in a variety of bow strokes, frequently altering the number of notes played under one thrown bow stroke and the direction of the bow in which the stroke occurs. Therefore, the performer must possess a high level of precision to perform this etude successfully.

Example 3.17: Variety of ricochet bow strokes, Etude 4



The etude requires the stroke be played at various dynamic levels and on every string. To execute these markings, the performer must make a number of technical adjustments. For instance, *ricochet* on the C string requires more arm weight and a slower bow speed than *ricochet* on the A string. Because this entire etude is written in double or triple stops, the performer must also ensure that the bow is balanced in a way that every

⁸⁰ The *ricochet* bow stroke—also known as *Jeté*, meaning a “thrown” bow—is a bowing technique where the upper half of the bow is thrown onto the string from a distance, causing it to bounce several times, resulting in a series of quick staccato notes.

note of the chord is voiced clearly. Additionally, subtle adjustments must be made when dynamic changes are marked. However, like a traditional etude, once this short work is mastered, the technique becomes almost second nature and easily applied to other pieces where the technique is found more sparsely.

This is one of only two of the ten etudes titled after a string technique and Gubaidulina conceives multiple characteristics in various ways. Silence is an especially important consideration in this etude since over eleven full bars of rest appear in the 43-measure piece. Furthermore, of the 129 beats of music, over ninety-one are silent. With more than half of the etude unsounded, silence itself becomes active. Acknowledging this silent role is vitally important for the performer; thus, it becomes imperative not to rush through the rests. The expansive silence also helps to sharpen and highlight the sounded *ricochet* stroke.

There are four varieties of *ricochet* in this etude: septuplet, triplet, quintuplet and a “free” *ricochet* (so called because the number of articulations on these chords is not strict and the decision of duration is partially left to the performer). Each of these strokes has a distinct character and tendency within phrases, and must be executed with precise accuracy to bring out the unique function of each. For example, Gubaidulina tends to use the free *ricochet* to end phrases, always heard under a diminuendo, the triplets most often come in groupings of either two or three, leading directly to a quintuplet. Septuplets mostly appear toward the end of phrases.

Measures 1–4 form an introduction that serves to immediately familiarize the listener with each version of *ricochet* in the piece. The pitches of the chord (G-D-C#) remain unchanged in these bars, allowing focus solely on the bow stroke. Measures 5–24

comprise four phrases. The first phrase (mm. 5–8) is three bars plus a 1-measure rest; the second (mm. 9–13) is four bars and a 1-measure rest; the third (mm. 14–17) is another three bars plus a 1-measure rest; and the fourth (mm. 18–24) is four bars plus a 1-measure rest with an added one-bar phrase, plus one measure rest.

The first two phrases are nicely balanced in their intervallic symmetry. The top note of the chord in mm. 5–6 travels up from C# five semitones to F# and back (-5) semitones to C#. Conversely, in mm. 9–11, the top pitch travels from A♭ down (-5) semitones to E♭, back up (+5) to A♭, and then -5 again to E♭. Each of these phrases ends with a bookended open-string chord; the first (m. 7) is a quintuplet and the second (m. 12) expands to a septuplet, reflective of how the overall phrase length expands between the first and second phrases. The third phrase is similar in direction to the first, but the intervals are smaller. Measure 14 moves from D♭ +2 to E♭ and -2 back to D♭. The next move is -5, once again, down to A♭ (m. 23), signaling the end of this phrase and correlating to the beginning of the second phrase, which also began on A♭ (m. 9), one octave higher.

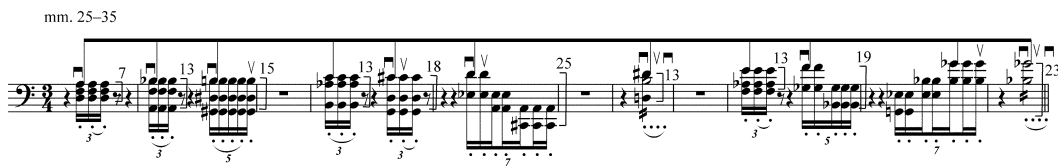
The fourth phrase in this section (mm. 18–24) sets up two alternating voices, distinguished by both dynamics and intervallic density. It is critical for the performer to highlight these dynamic changes, as well as the resonant versus dissonant character of each alternating chord. The phrase alternates between a resonant D-F-A chord and a dissonant G-A♭ dyad. The D-F-A chord, always more prominent, is marked *forte* whereas the more dissonant G-A♭ dyad is marked *mezzo forte*. I would argue that this

contrast could be further exaggerated by substituting a *mp* for the *mf* marking.

Interestingly, the last dissonant dyad (m. 23) marks the halfway point in the etude. The piece began with a wide openly spaced chord (G-D-C \sharp), forming an outside interval of +18, and has gradually contracted to the smallest interval available.

In mm. 25–35, the outer intervals begin to gradually expand again, leading into the climax at m. 35. From m. 25, *pi* 7 expands to *pi* 13 and *pi* 15 in m. 26. The *pi* 18 appears in m. 28 and m. 29 spans a *pi* 25, an interval so large that Gubaidulina breaks up the chord over the septuplet (Ex. 2.18).

Example 3.18: Expansion of intervals, Etude 4, mm. 25–35



Concurrently, the highest note of each chord in these measures forms a rising chromatic line, beginning on A and ending on a high G-flat, at m. 35. Measures 36 through the end function as a postlude, calmly shifting back to the low register of the cello and closing on a low F \sharp , a respelling of the high G \flat in m. 35.

Etude 5: Sul ponticello, ordinario, sul tasto

Unlike the other etudes, where Gubaidulina explores either one or two techniques, the fifth explores three. *Sul ponticello* and *ordinario* are easily distinguishable and pair well as opposites; however, it requires more technical subtlety to separate *sul tasto* from *ordinario*.⁸¹ Etude 5 might be grouped into three sections: Section 1 (mm. 1–20), characterized by only *sul ponticello* articulation; Section 2 (mm. 21–44), characterized by alternating *ordinario* and *sul ponticello*; and Section 3 (mm. 45–77), played completely *sul tasto*. While these sections are clearly delineated on a surface level, a number of motivic, intervallic, and chromatic connections occur beneath the facade. Each of these elements serves to unify sections individually and also to connect different sections with one another. One of these unifiers is the M1 motive from Etude 1.

Measures 1–20 contain four statements of M1. With each statement, the basic intervallic structure remains the same while certain compositional elements are varied (Ex. 2.19). For instance, the first statement, mm. 3–5 (F[♯]-G[♯]-G), is a +2-1. The second, mm. 7–8 (E[♭]-F-E[♯]), contains the ordered pitch intervals -10 -1. While the general intervallic distance is different, both share the same unordered pitch-class intervals of 2 and 1. Also notable is that the first statement is separated by a bar or rest between F[♯], G[♯], and G[♯], while all three notes of the second statement lie directly adjacent to one another. The third statement of M1, in mm. 10–12 (C-D-C[♯]), shares the same ordered pitch intervals (+2 -1) with the first statement but, like the second, all the pitches lie directly adjacent with no rests.

⁸¹ The marking *sul ponticello* means to play with the bow as close to the bridge as possible, which produces a metallic ethereal quality of sound that emphasizes the higher harmonics of the pitch; *Ordinario* means to play normally, usually written after *sul ponticello*; and *sul tasto* means to play over the fingerboard, which produces a mellow yet rich sound.

In mm. 16–20 a somewhat more obscured fourth statement of the motive appears. While this version (C-B-B \flat) shares the same interval class content as the earlier statements, it moves downward chromatically rather than changing direction, allowing for a smooth transition to Section 2 of the etude.

65

Table 3.2: C3 interval chart, Etude 5

	C3(0)	C3(2)	C3(1)
1 st statement Mm. 3–5	F [♯]	G [♯]	G [♭]
2 nd statement Mm. 7–8	E [♭]	F	E
3 rd statement Mm. 10–11	C	D	C [♯]
4 th statement Mm. 16–19	(C)	B	B [♭]

In addition to their intervallic and cyclical relationships, the various statements of M1 are also connected by two descending chromatic lines (Ex. 3.20). The first line spans the first two statements of the gesture (mm. 1–8), beginning on G and ending on E. The second line begins on the high E[♭] in m. 7, and extends gradually downward to F, in m. 30 (Ex. 3.20).

Example 3.20: Descending chromatic line, Etude 5

a) mm. 1–7

b)

The arrival notes at the end of each descent take on an important role in mm. 35–44, where the E and F represent two different characters. Primarily defined by their contrasting registers, the dizzying interaction over these bars serves to build dramatic tension. Gubaidulina achieves this effect with frequent travel by slide over the large intervallic distance, quick alternation between *sul ponticello* and *ordinario*, as well as rapid dynamic changes.

Section 3 of Etude 5 (mm. 45–77) signals a significant change of direction, while also maintaining a direct connection to the preceding material. This section begins, like the first, with an initial gesture reminiscent of M1 in mm. 47–49 (F#-A#-G#). Both sections start on the same pitch and move in the same direction, yet in Section 3 the intervallic distance between notes has doubled. Instead of +2-1 (of the F#-G#-G \sharp), the ordered pitch intervals are +4, -2 (Ex. 3.21).

Example 3.21: Interval expansion of the initial gesture, Etude 5

The example consists of two musical staves. The first staff is in bass clef, 3/4 time, and shows measures 3-5. It begins with a half note F# (p), followed by a quarter note A# (f), and then a half note G# (p). Above the staff, brackets indicate intervals of +2 and -1. The second staff is in treble clef, 3/4 time, and shows measures 47-49. It begins with a half note F# (p), followed by a quarter note A# (pp), and then a half note G# (pp). Above the staff, brackets indicate intervals of +4 and -2. Dynamics are marked as p, f, p, pp, and pp.

Even with this intervallic expansion, the gesture still shares two of three pitches, each note of the gesture relating to a separate C3 cycle but in a different order: F# = C3(0), A# = C3(1), G# = C3(2). The statement repeats in mm. 51–52, on A-C#-B.

The last few lines of the etude nicely correlate with the corresponding phrases in Section 1. Measures 58–62 form an exact intervallic inversion of mm. 21–24. The same

is true of mm. 26–27 through mm. 63–65. Measures 29–33 also closely relate to mm. 67–71.

Example 3.22: Inverted melodic lines, Etude 5

a) mm. 21–24 mm. 58–62

b) mm. 26–33

mm. 63–71

As in Section 1, Gubaidulina connects various gestures using background chromatic motion. Whereas the line descended in Section 1, the line ascends in Section 2, beginning on C (m. 52), to the high G (m. 64). From there, the line descends again chromatically to the D in m. 73.

The last four bars (mm. 74–77) repeat the first three pitches of the etude, G-F#-G#, but over a wider and higher register. Instead of resolving back to a repeated G♭, as in m. 5, the pitch gradually slides up to a *pianissimo* harmonic A in the upper stratosphere of the cello, as if floating away.

Example 3.23: Beginning and ending comparison, Etude 5

mm. 1–6
sul pont.
 $p < f > p$ p $p < f > p$

mm. 73–78
(sul tasto)
 p pp

Sul Ponticello, a frequent color used by contemporary composers, appears prominently in this etude as Gubaidulina explores a number of specific technical challenges related to the articulation. Measures 1–19 require quick changes of dynamics under a tremolo *ponticello*. To execute these accurately, the player must balance control of the arm weight, and bow speed (affecting the drastic and sudden dynamic shifts), while simultaneously maintaining a consistent *ponticello* sounding point near the bridge, also alternating tremolo and non-tremolo.

Example 3.24: Variety of dynamic changes under *sul ponticello*, Etude 5

1 sul pont.
 $p < f > p$ p $p < f > p$

14
 $p < ff > p$ $mf > p$ pp

In mm. 20–50 there is the added challenge of alternating between *ordinario* and *sul ponticello*. A successful performance of this etude requires highlighting the contrast between these two distinct colors; thus, close attention must be paid to the different sounding point required by each articulation. This is especially important in mm. 35–42, where these kinds of changes happen quickly.

Example 3.25: Quick alternation of *sul ponticello* and *ordinario*, Etude 5

35 ord. → sul pont. → ord. → sul pont.

p III *ff* *p* *f* *p*

40 ord. → sul pont. → ord.

pp *mp* *pp*

When executed properly, this passage has the mercurial effect of emphasizing two starkly different characters interacting in quick alternating dialogue. Essentially, the teaching point of Etude 5 is to explore the intricacies of each articulation, both separately and in close proximity, in order to acquire a nimbleness of bowing technique and an ability to switch from one extreme to the other with ease and assurance. In this way, the fifth etude fulfills the traditional role of an etude.



CHAPTER 4:

ETUDES 6–10: ANALYSIS AND PERFORMANCE SUGGESTIONS

Etude 6: Flagioletti

Artificial (or false) harmonics, an extended technique where the player holds down a note on the fingerboard with a lower finger of the left hand, while another finger of the same hand lightly touches a higher point on the neck. The pitch sounded, the fourth partial of the overtone series, is typically two octaves above the lower note, although other partials are possible. In the sixth etude, *Flagioletti*, Gubaidulina explores this technique at length.⁸² While she uses both false and natural harmonics in this etude, the former predominate.⁸³

Example 4.1: Two types of harmonics, Etude 6, mm. 3 and 19

False:	Natural:
	

A false harmonic allows the player to produce a harmonic-like sound on any note, rather than simply on the natural harmonic overtone series of the four open strings. This creates a wider palette of colors for a composer to work with. *Flagioletti* take a great deal

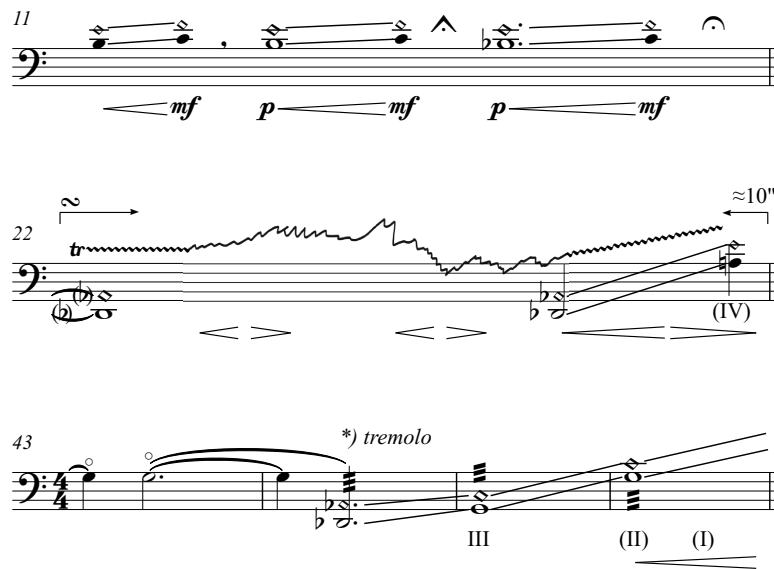
⁸² The word *flagioletti* comes from the French word *flageolet*, which was a small duct flute pitched in D, popular in 17th-century France. The *penny whistle* is a modern version of the *flageolet*. Because harmonics on a string instrument make a whistle-like sound, they are named after this instrument. It is unclear why Gubaidulina uses the Italian spelling instead of the French.

⁸³ Natural harmonics are produced when a single finger touches the open string lightly at a specific place on the fingerboard to produce the sound.

of accuracy and finesse to execute properly, especially while sliding or trilling.

Gubaidulina's Etude 6 is saturated with this technique (straying from it for only a few bars), making use of it on every string and in various positions on the cello. She incorporates a variety of bowings, dynamics, articulations, as well as elements of improvisation. Improvisatory interludes, indicated in the score as "non-metrical passages," always occur during a trilled false harmonic. Gubaidulina indicates the duration in seconds, and squiggly lines loosely suggest the trill's pitch direction and speed. The flexibility of these indications inevitably broadens the interpretive responsibilities of the performer and allows her a significant amount of creative freedom.

Example 4.2: Variety of false harmonics, Etude 6



Making a clear sounding false-harmonic pitch requires attention to a number of specific technical details. First, the finger playing the lower note of the harmonic (usually the thumb) must securely depress the string on the exact pitch indicated. At the same

time, the whole left hand must remain supple and flexible enough to lightly touch the top note (usually with the third finger), effortlessly making the subtle adjustments of distance between the thumb and third finger—those necessary to maintain a fourth when sliding and trilling up and down the fingerboard.⁸⁴

The recurring *giocoso* character in this etude, calls for an off-the-string stroke, perhaps played towards the upper half of the bow, to bring out the playful nature. I suggest always starting this staccato stroke from the string to maintain a consistent and clear sounding pitch. I also suggest experimenting with a sounding point closer to the middle or lower half of the bow for consistent clarity of sound. There are also instances where the player must shift quickly between the two types of harmonics, which often involves string crossings and long shifts. Slow practice is necessary to accurately execute such passages.

Example 4.3: Quick changes of harmonic types, Etude 6



Like the fourth etude, Gubaidulina also titled Etude 6 after a single technique; yet she creates juxtaposition and structure within the piece in various ways. This etude explores two contrasting sound worlds. Each should be delineated by consistently

⁸⁴ The distance of a fourth, between the thumb and third finger, is the most common indication in the piece; however, there are instances where the distance of a fifth is required, which is the third partial of the overtone series, as in mm. 21–22 and in m. 43.

maintaining individual characteristics of articulation, meter, tempo, dynamics and compositional writing throughout the piece. The first character introduced is the playful *giocoso* (merrily), always indicated with a specific metronome marking of a dotted quarter = 112. These sections begin and end the etude, occurring four times over the course of the piece. Alternating with each *giocoso* section are contrasting passages of primarily aleatoric music. The composer marks these sections as either *doloroso* (plaintively), with a metronome marking of quarter = 84, *sostenuto*, *meno mosso*, or simply with by an abrupt change in articulation, duration and dynamics.

A successful performance of Etude 6 requires a detailed understanding of the elements constituting each sound world. Thus, a parameter complex can be quite helpful for the performer in order to clarify, understand, and eventually communicate the unique characteristics of each (Fig. 4.1). Again, legato is labeled as consonant and staccato as dissonant; I have categorized other elements based on their simultaneous relationship to one of these two articulations.

Table 4.1: Parameter Complex, Etude 6

Consonant EP's	Dissonant EP's
1. Articulation and Means of Sound Production: <ul style="list-style-type: none"> • Legato • Doloroso • Tremolo • Sostenuto 	1. Articulation and Means of Sound Production: <ul style="list-style-type: none"> • Staccato • Giocoso
2. Rhythm: <ul style="list-style-type: none"> • 4/4 meter • $\text{♩} = 84$ • Meno mosso • Quarter note or larger • Quarter note rests • Fermatas 	2. Rhythm: <ul style="list-style-type: none"> • 6/8 meter • $\text{♩} = 112$ • Eighth note or smaller • Eighth note rests • Dotted quarter note rests
3. Dynamics: <ul style="list-style-type: none"> • piano • mezzo-forte 	3. Dynamics: <ul style="list-style-type: none"> • pianissimo • crescendo/diminuendo
4. Compositional writing: <ul style="list-style-type: none"> • aleatoric 	4. Compositional writing: <ul style="list-style-type: none"> • precise

One of the most notable differences between consonant and dissonant elements in this etude—besides staccato and legato—is the specific changes in meter between *giocoso* and *sostenuto*. Therefore, it is imperative that the dance-like quality of the dissonant *giocoso* sections be emphasized by feeling the music in two, with an emphasis on the first and fourth beats, or a light release of notes occurring on the off beats. These sections should remain rhythmically steady in order to contrast the consonant aleatoric sections where the tempo can fluctuate significantly or disappear altogether. The dynamics in the *giocoso* sections should also remain steady. These are consistently marked *piano* and should remain so throughout with little fluctuation. Conversely, the

frequent hairpins in the aleatoric sections should be exaggerated to emphasize the contrast.

In general, the improvisatory nature of the aleatoric sections should be emphasized and performers should exercise significant interpretive freedom in these measures by varying the trill speed, sounding point, bow speed, and dynamics. Conversely, the *giocoso* sections, while playful in nature, should remain steady and consistent in both dynamics and rhythm. The specific tempo markings in the etude should be practiced initially with a metronome in order to internalize their specific rhythmic character as it relates to either a consonant or dissonant section.

Close attention must also be paid to the transitions from one character to the other. In almost every case, a new section begins either on the same pitch, pitch class, or a pitch class one half-step away in either direction from the previous. The subtle importance of these transitions is perhaps found most clearly in the way Gubaidulina progresses from the opening *giocoso* into the first *doloroso*. While the actual pitch stays the same, the opening D \flat is respelled as a C \sharp once the *doloroso* begins. This respelling should signal a clear shift in the mind of the performer and inspire at least a slight change of color. Similar attention should be paid to all other transitions, since this idea is what creates a sense of connection between the two varying sound worlds.

Etude 7: Al Taco, da punta d'arco

Like the third etude, a gestural perspective might also be brought to Etude 7. Titled, “Al Taco, da punta d’arco” (From the frog to the tip of the bow), two characters in this piece clearly derive from the frog and tip of the bow. While the placement and removal of the mute in the earlier etude is essentially like flipping a switch on the sound, the movement of the bow arm and the subtle adjustments required for proper sound production, at either end of the stick, pose more technically complex challenges for the performer. Essentially, there is a choice between a performance that highlights the visual gesture of “jumping” from the frog to the tip, or one that is primarily focused on producing the intended sound.

Ewell has analyzed this movement using Kholopova’s method, interpreting the up bow as “consonant” and down bow as “dissonant.” He explains:

In deciphering the prelude’s title, “Al Taco-da punta d’arco” (From the frog to the tip of the bow), one must determine whether the repeated down bows right at the beginning are consonant or dissonant. I have chosen the latter for three reasons: the piece ends on all up bows, and Gubaidulina has a penchant for ending pieces on a consonance; the opening features irregular five-note groups in a duple meter, which can be considered dissonant in this context; and there are accents on the quintuplets which also points to a possible dissonant expression.⁸⁵

Additionally, Ewell places Berry’s practical gesture in the consonant category and his expressive gesture in the dissonant category. Ewell demonstrates in an accompanying video that, on a string instrument, the down bow is played from the frog and the up bow is played from the tip. He also shows how it is possible to play a down bow close to the tip, or an up bow close to the frog (the latter slightly more awkward to execute). Guided by Kholopova’s EPs, Ewell notes that a convincing performance should involve

⁸⁵ Ewell, para 17.

highlighting expressive horizontal movements of the bow, from frog to the tip, to emphasize the distance between the two parts of the bow. In order to do this, he suggests that all up bows be played near the tip of the bow and all down bows near the frog (excluding mm. 47–53, marked “*detache*”).

Ewell’s suggestions work in the context of the etudes as a whole, and the way Gubaidulina is consistently highlighting opposites. However, performing Etude 7 thus, a performer risks affecting the quality of the sound. For example, the piece begins with a long series of down bows, marked “*al taco*” (at the frog), with a *mezzo-forte* dynamic. The first up bow occurs only at the end of m. 5. Visually, it is quite dramatic to jump to the tip of the bow for this up bow (sounding the notes open G and C), especially because of its appearance as the first up bow of the etude. And while it is possible to play this fifth while maintaining the *mezzo-forte* and producing something near an accent, it is virtually impossible to play it as convincingly, with respect to sonority, as when playing the up bow closer to the frog.

In live performances of Etude 7, players must make certain informed decisions.⁸⁶ I think a convincing performance is certainly viable using Ewell’s jumping method, despite some of the sound quality lost. However, when I asked Gubaidulina if she thought exaggerating the motion from frog to tip was necessary, she responded:

Of course not . . . in general it has to be said that this idea shouldn’t be read literally. And I didn’t want to be demanding of a strict logic. I, of course, wanted to fantasize . . . [this method] is not needed, it is the artist’s work.⁸⁷

While Gubaidulina clearly finds it unnecessary to jump from frog to tip, I think the idea of opposites in this etude can be brought out if the performer conceives the

⁸⁶ Obviously, recorded performances limit the significance of visual execution.

⁸⁷ Gubaidulina, interview, 2015.

motion from frog to tip as occurring gradually over the course of the movement, rather than between each up bow and down bow.

The marking “al taco” occurs twice in Etude 7: at the opening (m. 1) and right after the climax (m. 54). Measure 67 is marked “poco a poco da punta d’arco” (little by little to the tip of the bow). As this is the only place in the etude (apart from the title) where Gubaidulina indicated “punta d’arco,” arguably it is the only place she wanted it. After all, the up bow does not directly imply playing at the tip and down bow does not necessarily imply playing at the frog.

In general, a gradual movement from frog to tip occurs over the course of the etude with each new section. (Section 1, from mm. 1–29, Section 2, from mm. 29–47, and Section 3, mm. 54–end.) In the second section, two major changes occur. First, the general direction of the chromatic line begins to ascend, rather than the previously descending motion, and the repeated down bows reverse to repeated up bows. This change of bow direction should require a shift in the sounding point. While you can make an adequate sound playing at the tip of the bow on these repeated up bows, a more resonant and controllable sound can be achieved by playing slightly above the frog and closer to the middle of the bow. This sounding point is especially helpful technically, considering that travel to the frog to play intermittent down bows is required over these measures. Quick travel between the middle and the frog is much easier to control than travelling the distance from frog to the tip. So with the change in sounding point on these up bows (primarily) over mm. 30–46, the overall motion to the tip, occurring over the course of the etude, has begun.

Section 2 (mm. 47–53) marks the first time in the movement where the melodic material moves exclusively by leap, and a consistent alternation of up bow and down bow with no repeat of bow direction. Significantly, this section is marked *detache*, a bow stroke that works best when played in the middle of the bow. Here again, the overall motion of the bow has moved further up the stick to the middle.

Section 3 (mm. 54–66) briefly reverts again to “al taco,” but in the last five measures of piece Gubaidulina finally fulfills the goal of the title of the etude—to get to the tip of the bow. Marked “poco a poco da punta d’ arco,” these measures mark the only place where Gubaidulina explicitly asks for notes to be played toward the tip. Although the audience must wait longer to feel the sense of opposition and juxtaposition in this piece, the delay is extremely effective. The chromatically rising melodic line over these last five bars, into the higher register of the cello, further emphasizes a motion upward and away from the frog, as if it continues even after the music has ended.

Etude 8: Arco — pizzicato

Etude 8 pairs two of the most common cello articulations; arco (bowed) and pizzicato (plucked). Like the first etude (Staccato — legato), each articulation in Etude 8 is separated into one part of the piece. The first section (arco), from mm. 1–46, has a significantly longer duration than the following section of staccato, from mm. 47–63 (end). The arco section is played exclusively in sixteenth notes (with the exception of the opening pitch, C), and the pizzicato section contains only eighth notes (except the first A and the penultimate note, D). Therefore, unlike Etude 2, the articulations do not directly infiltrate each other's space; instead, Gubaidulina allots them individual time. The *vivo* ♩ = 120 marking is the fastest tempo indication of all ten etudes and thus important that it remains fairly consistent throughout.

The opening arco section is based on a motivic idea shared with Etude 1. The M1 motive, +2, -1, and its inversion, -2, +1, essentially structure both etudes. Because the composer uses both versions of the motive with similar frequency, in Etude 8 I will refer to -2, +1 as M1a and +2, -1 as M1b. The continuous repetition of the motive, with its creeping chromaticism at different pitch levels within a swift tempo, creates an atmosphere of anxious unpredictability, giving the impression of insects scattering. Essentially, the whole arco section is one continuous stream of M1a and M1b, intermittently displaced by rapid shifts at varying intervallic distances.

The primary technical challenge of the *arco* section is to maintain accuracy of pitch within the brisk *vivo* tempo. Yet an understanding of the general structure, overall chromatic motion, and repeated patterns occurring within the texture can help immensely,

both in learning the notes and in making informed interpretive decisions. Otherwise, this section may seem simply like a random barrage of sixteenth notes.

Because the rhythmic texture is unwavering, it is important to identify some overall landing points. The arco section can be divided into three smaller sections:

Section 1, mm. 1–17; Section 2, mm. 18–32; and Section 3, mm. 33–46.

It is also necessary to understand the basic tonal implications inherent in the M1 motive; the last note as the goal essentially constitutes a harmonic resolution of the figure itself. For example, in the first instance of M1a (m. 6; C-B \flat -B), the role of C and the B \flat is to “circle” the final B in the same way that a leading tone resolves to a tonic from a half-step below. To stress the importance of the third note of the motive, Gubaidulina consistently places it on a strong beat within the measure. In order to maintain this pattern, despite the frequent intervallic interruptions, she often adds a note a half-step away in either direction after a leap or jump, getting the rhythmic impetus back on track.

In Section 1, mm. 6–14 are primarily made up of M1a. Over these measures, a background chromatic motion occurs from C (m. 6) to B (m. 10) to B \flat (m. 12). From each of these pitches there is a foreground chromatic descent. In mm. 6–9, the opening C is reiterated four times, stubbornly inhibiting the descent of the M1a cycle (Ex. 4.4). After each restatement of the C, the cycle is able to descend a little further, creating an expanding series of intervals. In m. 6 a *pi* 3 appears, in m. 7 a *pi* 4, and in m. 8 a *pi* 5. In m. 9 the cycle finally descends for three uninterrupted beats, leading to the F \sharp at m. 10.

Example 4.4: Chromatically descending lines, foreground and background,
Etude 8

a) mm. 6–14

In mm. 10–12, the chromatic motion from the high B descends to F \sharp in m. 11 (reiterated in m. 12). The B \flat in m. 12 leads down chromatically to G, in m. 14. Gradually, Gubaidulina has expanded the distance of the interrupting intervals to one large enough to give the impression of the cycle occurring in two separate voices. For example, in m. 10, the M1a cycle is interrupted by a leap down -6, where the cycle occurs in the lower range for a few beats. Interestingly, when the pitch leaps back up to the top voice, in m. 11, the pattern continues exactly where it left off in the cycle. In m. 14 a -7 leap to the lower voice occurs, followed by a motion back up to the corresponding pitch of the cycle in the top voice. By maintaining continuity within the voices, despite their interrupting each other, Gubaidulina further solidifies their independence.

While the M1a cycle naturally descends, the M1b ascends. In mm. 14–17, M1b initiates upward chromatic motion from E (the last note of m. 14) to D \flat (downbeat of m. 18) (Ex. 4.5).

Example 4.5: Ascending chromatic M1b, Etude 8

b) mm. 15–18

The musical score for measures 15–18 of Etude 8 is presented on a single staff. Measure 15 begins with a treble clef, a key signature of one flat (B-flat), and a 3/4 time signature. The melody consists of eighth notes: B-flat, A, G, F, E, D, C, B-flat. A bracket under the first four notes (B-flat to F) is labeled with '+2 -1' and 'M1b'. Measure 16 continues the chromatic ascent with eighth notes: B, A, G, F, E, D, C, B-flat. Measure 17 continues with eighth notes: B, A, G, F, E, D, C, B-flat. Measure 18 concludes the phrase with eighth notes: B, A, G, F, E, D, C, B-flat, marked with a fortissimo (*ff*) dynamic. The staff is marked with measure numbers 15, 16, 17, and 18.

Essentially, the D \flat in m. 18 has been the goal of the etude thus far and, despite the laborious effort of the previous music, the pitch has only ascended one half-step from the opening C. Therefore, m. 18 should feel like a significant arrival for both the performer and the listener. The performer should exaggerate the crescendo in mm. 16–17, and the resulting fortissimo at 18, to clarify this arrival.

Measure 18 emulates mm. 4–5 of the etude, but instead of vacillating between C and B, the pitches vacillate between D \flat and C. Combining these two figures creates another instance of M1 (C-B-D \flat or B-D \flat -C). In Section 2 of the arco, the pitch travels both up and down, unlike section A where the highest pitch remains on the opening C.

Measures 19–22 combine both M1a and M1b, allowing gradual chromatic motion in both directions. For example, a rising chromatic line, from mm. 18–22, beginning on the original D \flat , eventually lands on the high F by skip (m. 21), and by chromatic motion (m. 22). I would argue this line as essentially a continuation of the motion that began on E, in m. 14. Concurrently, the line also descends in the opposite direction, forming a wedge expanding outward from the D \flat , in m. 18 (Ex. 4.6).

Example 4.6, Chromatic motion in both directions, Etude 8

c) mm. 19–22



After the F5 is reached (mm. 21–22), the remainder of the music leading into Section 3 primarily comprises the M1a cycle interspersed with gradually expanding intervallic interruptions. In mm. 21–23, the F functions similarly to the C in mm. 6–9, delaying the descent of the cycle with the reiteration of the pitch. In m. 23, like m. 9, three full beats of uninterrupted M1a occur after a release from the repetition of the top pitch. Again, the music is allowed to continue its descent.

From mm. 24–32, the impression of two independent lines again emerges as the intervallic interruptions expand (see Example 4.7).

Example 4.7, Expansions of intervals, Etude 8



In the opening of Section 3 (mm. 33–35), the pitch fluctuates between G and Ab, another set of two half-step related pitch classes, yet the interval is a compound minor

ninth (*pi* 13) not the simple minor second (*pi* 1) of the beginning of Sections 1 and 2. This larger distance between the dyad reflects the general intervallic expansion up to this point of the etude. The first half of Section 3 (mm. 33–41) shows a general motion downward, into the second half of the section (mm. 42–46). Another gradual expansion of intervals appears, starting in m. 37, with a *pi* 3, m. 38, a *pi* 4, and m. 39 a *pi* 6. In mm. 40–41 the expansion skips, with a *pi* 8 in m. 40, and a *pi* 10 and *pi* 13 in m. 41. In m. 42, the second set of important dyads is reached, alternating between a D \flat -C (*pi* 13), with the same articulation as the dyads in mm. 33–34. From mm. 43–46, a series of the M1b motive creates a chromatic ascent from C to A (m. 47), which begins the *pizzicato* portion of the etude.

The *pizzicato* section not only signals a major shift in articulation, but also in texture and dynamics. While the *arco* section was strictly melodic, the *pizzicato* section remains primarily chordal. The dynamics in this section also fluctuate with more frequency and extremes; however, the M1 motive still clearly plays a structural role. For example, in m. 47, the notes A-B \flat -B form another M1. Some other instances include C-C \sharp -D (m. 51), D-E \flat -E (m. 52), and C-C \sharp -D (m. 54). There is also a general chromatic motion upwards, sometimes emphasized by accents on significant pitches, for example, the accents on C-C \sharp -D-E \flat and E (mm. 51–53). The last four measures of the *pizzicato* section form a series parallel chromatic chords, which might be heard as a musical joke, after all the winding cyclical material of M1 throughout the piece. The final two pitches, D-E \flat again form a dyad made up of adjacent pitch classes, but separated by a the distance of *pi* 13 rather than *pi* 1.

Etude 9: Pizzicato — arco

Etude 9 is especially unique in its use of serial techniques and I was surprised to find them in this piece, since Gubaidulina rarely incorporated them into her work. In the 1950's, she did not embrace the compositional techniques of the Second Viennese school as immediately or as seriously as some of her Soviet colleagues, such as Denisov, Schnittke or Pärt, who wrote twelve-tone music over longer periods of time in their careers. She said, "I was afraid that this twelve-tone technique did not suit me and for that reason I used it only in practice."⁸⁸ However, she did use the techniques in some early compositions such as her *Sonata for piano* (1965) and in a movement from *Musical Toys* (1969), a piano piece for children.⁸⁹

In an interview with Enzo Restagno, Gubaidulina recalled the nature of her involvement with serialism:

My relationship with serialism did not develop in the same way as that of other composers, especially Schnittke and Denisov. They actively sought out this technique and went through an important phase with it. I, on the other hand, approached dodecaphony as a researcher, analyzing it as eagerly and thoroughly as one would any historical period. I plunged into this technique just as I plunged into the style of strict sixteenth-century counterpoint or later into tonality. For me, dodecaphony was already a fully matured and possibly even historically complete tradition, and for this reason I set myself the task of moving beyond it. Some composers of my generation lived in this tradition and others went beyond it; I am one of the latter.⁹⁰

Perhaps because she considers Ten Etudes as studies for the composer, Gubaidulina found an ideal place to plunge into serial techniques as a researcher. At the time of our interview, I had not yet analyzed this etude, but I did ask Gubaidulina her

⁸⁸ Kurtz, 65.

⁸⁹ For more analysis of this work, see Seong-Sil Kim, "A Pedagogical Approach and Performance Guide to *Musical Toys* by Sofia Gubaidulina" (DMA diss., University of Iowa, 2015).

⁹⁰ Kurtz, 65.

opinion of constructed sets or rows in post-tonal music, and whether she incorporated any such elements into *Ten Etudes*. She said: “In all instances, notes [were] picked by intuition, strictly by fantasy.” Furthermore, she said:

I have to say that I don’t really like construction of sounds. For me, the interference in the material in this kind intellectual way is the same as making artificial flowers. The thing I hold most dear, in principle—despite the fact that I work with various structural elements—the most important thing for me is the reality of the soul.⁹¹

The ninth etude—clearly structured by a twelve-tone row—seems a stark contradiction to these statements. While *Ten Etudes* is understandably not fresh in the composers mind, it does seem that this overall contradiction between the intellectual and the intuitive is an issue that Gubaidulina has been grappling with for quite some time. While the intuition and fantasy clearly drive Gubaidulina’s approach to composition and perhaps most fully reveal her concept of the “reality of the soul,” she also emphasizes the importance of limitations and structure on the composer in order to balance the intuitive elements. She explained:

With the help of a structure of some sort I want to limit the intuition spring, otherwise it is too strong. It has to be absolutely limited.... From my point of view, art is an area of intersection between the intuitive spring and intellectual limitation.”⁹²

She elaborates on this connection in an interview with Ivan Moody, where she explained:

I see the whole 20th century as an enigma—what to do, how to reconcile a desire to reach the subconscious and at the same time find a way of limiting things. Personally, I found a means of limiting my fantasy, this enormous wave from the subconscious. You may ask if this is not a contradiction, and yes, it is a contradiction that I was searching for, and

⁹¹ Gubaidulina interview, 2015.

⁹² Gubaidulina interview, 2015.

found in the Fibonacci sequence. When this wave appears and is contradicted, art appears.⁹³

Because the “subconscious wave” of her fantasy had not yet been successfully harnessed by Fibonacci structures in these early works, she is clearly searching in various other ways to find balance. The ninth etude demonstrates just one of the many approaches she explored.

While the rules are not strictly enforced in Etude 9, the piece is clearly structured on the row P7, which begins the piece: G-F#-E-Eb-Bb-C-B-C#-F-D-G#-A. Figure 4.2 is a 12-tone matrix of the original row P7, on which all the other rows are based.

⁹³ Ivan Moody, “‘The Space of the Soul’: An Interview with Sofia Gubaidulina,” *Tempo* 66, no. 259 (January 2012): 34.

Figure 4.1: Twelve-tone matrix, Etude 9

	I ₇	I ₆	I ₄	I ₃	I ₁₀	I ₀	I ₁₁	I ₁	I ₅	I ₂	I ₈	I ₉	
P ₇	G	F#	E	D#	A#	C	B	C#	F	D	G#	A	R ₇
P ₈	G#	G	F	E	B	C#	C	D	F#	D#	A	A#	R ₈
P ₁₀	A#	A	G	F#	C#	D#	D	E	G#	F	B	C	R ₁₀
P ₁₁	B	A#	G#	G	D	E	D#	F	A	F#	C	C#	R ₁₁
P ₄	E	D#	C#	C	G	A	G#	A#	D	B	F	F#	R ₄
P ₂	D	C#	B	A#	F	G	F#	G#	C	A	D#	E	R ₂
P ₃	D#	D	C	B	F#	G#	G	A	C#	A#	E	F	R ₃
P ₁	C#	C	A#	A	E	F#	F	G	B	G#	D	D#	R ₁
P ₉	A	G#	F#	F	C	D	C#	D#	G	E	A#	B	R ₉
P ₀	C	B	A	G#	D#	F	E	F#	A#	G	C#	D	R ₀
P ₆	F#	F	D#	D	A	B	A#	C	E	C#	G	G#	R ₆
P ₅	F	E	D	C#	G#	A#	A	B	D#	C	F#	G	R ₅
	RI ₇	RI ₆	RI ₄	RI ₃	RI ₁₀	RI ₀	RI ₁₁	RI ₁	RI ₅	RI ₂	RI ₈	RI ₉	

Throughout the etude, some rows are complete, such as R5 and I10, while others are not. For instance, I4 is missing a G# and a C#. In other instances, two forms of a row are combined, such as R1 and I1, and R1 and P1. Interestingly, most new rows do not begin on the first note, but instead wrap around. For instance, row R2 begins on B rather than E. So the notes of the row remain in the correct order, but start on a pitch other than the first note. Example 4.8 identifies the various rows as they appear in the score and Figure 4.3 lists the rows in the order they appear, with a description of each.

Example 4.8: Annotated score with twelve count of rows, Etude 9

Largo ♩ = 54

The score is divided into 12 rows, each containing musical notation with various annotations:

- Row 1:** P7, pizz., 1 4 2, 3 4 5 6 7 8, 9 10 11, 12, 11 12, 5 6 7, 1 2 4 1.
- Row 2:** I6, 5 11 12, (IV), 1 2 3 4 5 6, 7 8 9, 10 11 12, I4, 1 4 7.
- Row 3:** I4, 9 8 9 10 11 12 1 2 3, III, R2, 10 11 12 1 2 3 4 5 6 7.
- Row 4:** R2, 12 8 10 11 12 1 2 3, RI1, arco, p, 4 5 6 7 8 9, I1, 2 R11 1, 7 8 9.
- Row 5:** R11, 17 10 11 12 1 2, I10, 10 11 12 1 2 3 4.
- Row 6:** 23 I10, 5 6 7 8 9, I9, 8 9 10.
- Row 7:** 28 I9, 10 11 12 (3), 1 2, 3.
- Row 8:** 33 I9, 3 4 2, R1, 1 2 3 4 5 6 7 8, P1, 10 11 12 1 2, pp.

^{*)} Die Verbreiterung der Balken bedeutet *accelerando*, die Verengung *allargando*.
Widening beams indicate *accelerando*, contracting beams indicate *allargando*.

Table 4.2: Chart of the various rows with descriptions, Etude 9

Row	Measures	Description
P7	1-3	•Complete
RI6/I6	3-5	<ul style="list-style-type: none"> •First three pitches A-G-F# are from RI6 •Remaining pitches are a wrap around I6 starting on D# •missing A#
R5	6-7	•Complete
I4	8-10	<ul style="list-style-type: none"> •Wrap around starting on B •missing G# and C#
R2	11-12	<ul style="list-style-type: none"> •Wrap around starting on B • missing A#
R1/I1	12-15	<ul style="list-style-type: none"> •First six notes (R1) are a wrap around starting on E •Second six notes (I1) are a wrap around starting on F
R11	16-18	<ul style="list-style-type: none"> •Wrap around starting on E •D#, A, F and F# missing
I10	19-26	<ul style="list-style-type: none"> •Complete •Wrap around starting on Eb
I9	26-33	<ul style="list-style-type: none"> •Wrap around starting on Eb •A, C, Ab repeated •C#, F# and E missing
R1/P1	33-37	<ul style="list-style-type: none"> •First six notes are a wrap around (R1) starting on A •Second six notes are a wrap around (P1) starting on E •B is missing

Etude 9 pairs the same articulations as Etude 8, but in the opposite order:

pizzicato, then arco. Like Etude 8, the articulations are separated into sections—the first half (mm. 1–12) all pizzicato and the second half (mm. 13–37) all arco. While the two etudes sound entirely different, Etude 9 builds on some ideas introduced in Etude 8. For

instance, Etude 8 ends with a long glissando from D up to E \flat , and Etude 9 begins with a long glissando from G down to F \sharp . While much of Etude 8 features tight chromatic motion, it takes form as a gradual expansion of intervals occurring throughout the piece. The simple half-step related dyads (*pi* 1) that began Sections 1 and 2 (C-B and C-D \flat) appear as compound intervals in Section 3; G-A \flat (mm. 33–35) and D \flat -C (m. 43), this time related by minor ninth's (*pi* 13). Etude 9 picks up with this *pi* 13 intervallic idea in the opening dyad of the row, G- F \sharp .

The two pitches that follow, E-E \flat , in m. 2, are also adjacent pitch classes; yet instead of *pi* 13, we see *pi* 11. Throughout Etude 9, Gubaidulina explores expanded adjacent pitch-class dyads; therefore, an adjacent pitch class dyad (either *pi* 1, *pi* 11 or *pi* 13) occurs in almost every measure of the piece. Additionally, while there are thirty-four adjacent dyads in this etude, fourteen are connected by a slide, which further emphasizes the intervallic distance covered.

While both the *pizzicato* and *arco* sections of Etude 9 share certain features, such as large intervals, slides, and a consistent *piano* dynamic, other features are unique to just one particular section. The performer should emphasize these different characteristics. The following Parameter Complex, shown in Figure 4.4, outlines the consonant or dissonant function of each contrasting element. As in the previous Parameter Complexes, legato is considered a consonant and, therefore, the whole *arco* section, with its legato articulation, serves a consonant function. Conversely, *pizzicato*, inherently a staccato articulation, belongs in the dissonant category.

Table 4.3: Parameter Complex, Etude 9

Consonant EP's	Dissonant EP's
<p>1. Articulation and Means of Sound Production:</p> <ul style="list-style-type: none"> • arco • legato • harmonics 	<p>1. Articulation and Means of Sound Production:</p> <ul style="list-style-type: none"> • pizzicato
<p>2. Rhythm:</p> <ul style="list-style-type: none"> • 6/4 meter • whole notes • dotted half note 	<p>2. Rhythm:</p> <ul style="list-style-type: none"> • sixteenths notes • eighth notes • triplets • quadruplets • quintuplets
<p>3. Compositional Writing:</p> <ul style="list-style-type: none"> • Precise (steady) 	<p>3. Compositional Writing:</p> <ul style="list-style-type: none"> • Aleatoric

While Gubaidulina marks the etude *largo* ♩ = 54 throughout, the difference in rhythmic pacing is one of the most distinguishing features of each section. The *pizzicato* portion features three instances of aleatoric writing, marked by widening and contracting sixteenth-note beams. In a performance note, Gubaidulina indicates *accelerando* for the widening beams and *allargando* for the contracting beams. These tempo changes, in addition to the various unpredictable rhythmic groupings, create a feeling of drunkenness; however, the extent to which these are brought out remains the performer's choice. I suggest emphasizing the improvisational character of the *pizzicato* section in a few ways. For example, the various rhythmic values need clear delineation, but the performer should also vary the speed of the slides and the degree of *accelerando* and *allargando* in

the aleatoric figures. It is also important to distinguish between the slurred and un-slurred *pizzicato* by avoiding rearticulating the second pitch of the slurred note.

Because the *arco* section has no instances of aleatoric writing or tuplet groupings, its rhythmic effect is much steadier, and the performer should emphasize this more simplistic approach to rhythm. The speed of the slides should remain consistent and in a steady tempo, to contrast the drunken character of the *pizzicato* section. The primarily legato nature of this section should also be exaggerated. Because there are so many shifts and string crossings (some over two strings at once), special attention must be given to avoiding unwanted accents. Bow changes should be carefully planned and bow speed should remain steady. In a sense, the intervals in the *pizzicato* section should feel more labored than those in the *arco* section.

Etude 10: Senza arco, senza pizzicato

The title itself implies an ending in Etude 10, since all of the other etudes introduce the *presence* of various articulations, while it announces the *cessation* of articulations. The previous etudes, 8 and 9, also titled after *arco* and *pizzicato*, deepen the feeling of absence of these sounds in Etude 10.

Compared to the other etudes of the set, the tenth stands out as not requiring even a bow or, for a significant portion of the piece, the right hand. The juxtaposed characters in this etude, *senza arco* and *senza pizzicato*, alternate throughout the piece, lasting varying amounts of time. The *con le dita* (with the fingers) articulation is achieved by striking the left-hand fingers on the fingerboard, creating a labored “clanking” sound on every pitch.

The predominating motivic ideas that make up the *con la dita* passages center around the pitch-class sets (014) and (016). For instance, the opening three notes, G[#]-C[#]-D, form an (016) trichord, and B^b-D-C[#] form an (014) trichord in m. 4. Instances of each set class occur in both overlapping and non-overlapping fashion. For example, in m. 11 the five notes of the measure (E-E^b-B^b-A-C[#]) form three overlapping sets; there are two instances of (016) (E-E^b-B^b) and (E^b-B^b-A), as well as an (014) (B^b-A-C[#]).

While there are a significant number of (014)’s, the (016)’s dominate the texture. The jigsaw-like effect of these motives creates a clear continuity throughout the etude.

Example 4.9: Instances of (016), Etude 10

Example 4.10: Instances of (014), Etude 10

Interspersed with the sections of *con la dita* sections are interludes of improvisatory material. Because Gubaidulina appreciates the “fantasy” that each performer brings to her music, it is not surprising that she has incorporated various improvisational elements into her pieces. While there have been instances of aleatoric and improvised material in the previous etudes of the set, the most extreme example occurs in the interludes of the tenth. When I pointed to these sections of improvisation in

the interview with Gubaidulina, and asked how she would like them to be played, she replied:

It should be absolutely free. And for me it is very interesting to observe [the performer]. Many, many cellists play this with an absolutely fantastic result.... Some really like to improvise, others are very afraid. When Ulyses Berger improvises, it is completely different than when Vladimir Tonkha does. This etude was a great gift for me. Every performer brings his own conception.⁹⁴

While Gubaidulina clearly stresses that she expects each cellist to bring their unique fantasy to the piece, she is also extremely specific in the score about exactly how she wants the improvised sections to be played. A footnote in the music explains, “The tremolo is played on the C string with the thumb of the right hand. At the same time the left-hand thumbnail remains on the string. The sound thus produced is supposed to imitate a side drum roll. During glissando notes, the string is depressed in the normal way.”⁹⁵

Yet, in videos and recordings of Vladimir Tonkha (a most trusted interpreter) playing Etude 10, most of the detailed requests in the score go completely unheeded. Apart from maintaining a primarily consistent tremolo throughout, he ignores completely all other specified elements listed above. Despite this disregard, Gubaidulina seems to savor the way each performance is completely unique. She particularly appreciates the way Tonkha closes the work, saying, “Vladimir Tonkha ends this with a tragic exit from life. He uses absolutely every possibility without the bow. In some places I felt he was just praying ecstatically.”⁹⁶

⁹⁴ Gubaidulina, interview, 2015.

⁹⁵ Sofia Gubaidulina, *Ten Preludes for Violoncello Solo* (Hamburg, Germany: Sikorski, 1979).

⁹⁶ Gubaidulina, interview, Gavin and McBurney. 1990.

Indeed, Tonkha covers most registers of the cello in the improvised sections, playing on all strings with a wide variety of dynamics. On all of the videos and recordings of this etude that I have seen or heard, he ends with a dramatic decrescendo to a *pianissimo*, culminating in a position where his thumb barely touches the C string, making no sound at all. This soundless gesture is quite dramatic and although not specified by Gubaidulina, makes for a powerful performance.

In sum, cellists playing Etude 10 should not feel overly restricted by the technical instructions written by the composer. In particular, the improvised sections should be played extremely free in all aspects. Gubaidulina is clearly more concerned with each performer bringing his or her own unique voice to the piece, rather than diligently following such specific rules. Such details act as guidelines rather than to restrict the performer, thus serving as a springboard for the cellist to express her own “fantasy.”

CONCLUSION

The idea of opposites remains a common theme in Gubaidulina's music, but her eventual discovery of the Fibonacci series, to structure her works, became the ideal means of reconciling the relationship between a major juxtaposition in her life: intellect and intuition. Indeed, for Gubaidulina, "art is the area of intersection between the intuitive spring and intellectual limitations."⁹⁷ This musical aesthetic is inextricably linked to her spirituality and mysticism, which she discovered at a very early age. Furthermore, the rich dichotomy of the cultures into which she was born—Tatar and Russian—has profoundly impacted her life and development as an artist.

The Ten Etudes—and other works written prior to *Perception*⁹⁸—show a Gubaidulina not yet inhibited⁹⁹ by Fibonacci numbers; therefore her approach to form is more free, experimental and intuitive. While the various articulations help to dictate the general structure of each etude, the variety of compositional approaches creates continuity and cohesion in the work. For example, the M1 motive that opens Etude 1—a seemingly simple three-note chromatic cell—serves as a structural foundation for the

⁹⁷ Gubaidulina, interview, 2015.

⁹⁸ Gubaidulina notes that this was the first piece where she incorporated elements of Fibonacci. Lukomsky, "Hearing the Subconscious," 29.

⁹⁹ Gubaidulina uses the golden ratio as a structural basis for much of her music in part because she inherently connects with the idea that the Fibonacci numbers directly reflect proportions often found in nature (seashells, sunflowers, crystals, pinecones, for example), and therefore it provides an ideal method of organically connecting to God through her music. Many scholars have refuted some of the apparent occurrences of the ratio in nature. For further reading on this argument see Condat, Jean-Bernard. *Leonardo* 21, no. 2 (1988): 217-18. Ernő Lendvai argues the appearance of the golden ratio in the music of Bartók in his book, *Béla Bartók: An Analysis of His Music* (London: Kahn & Averill, 1971). Yet, many theorists question the accuracy with which he draws his conclusions. For further reading on this, see Roy Howat, "Bartók, Lendvai and the Principles of Proportional Analysis," *Music Analysis* 2, no. 1 (1983): 69-95.

piece. Gubaidulina dissects and explores this figure patiently and meticulously. Apart from inversion and repetition at various pitch levels, she connects the different statements of the figure with background chromatic motion and highlights its innate cyclicity using interval cycles. Her exploration of this figure continues with the return of M1 in Etudes 5 and 8 where she expands on it even further.

In all instances of my analysis, it has been my intention to highlight elements of structure, both small and large, that are essential in adding clarity and intention to performance decisions. As performers, we are often creating a hierarchy in our heads of what elements should be brought out and where. Such decisions help tremendously in constructing a successful narrative for the listener in performance. Consequently, unsuccessful performances are often the result of not making enough of these types of decisions. For instance, understanding M1 as the single basic motive that structures all of Etude 1 is inherently helpful for the performer; each time the motive is encountered in the music, there is at least a slight acknowledgment of its importance which—however subtle—affects the way it is played. Awareness about the ways in which the motive is transformed requires decisions about how to bring out such changes, if at all. Furthermore, knowing that each statement of that gesture is structurally connected by a background chromatic line adds another important layer of information; this consequently affects performance decisions regarding dynamic pacing, articulation, and perhaps the hierarchy of notes within the motive itself.

While she argued in our interview that the presence of the golden ratio was not intentional with the etudes, the proportions do exist in some of them, and they help to organically guide the gradual culmination of technical elements into a clear overall

structure. For instance, in Etude 2, the initial wedge expansion around open G is progressively broadened—chromatically and intervallically—leading to a resonant compound cycle that opens up into the climax of the piece. Perhaps the “intuitive” nature of these examples paves the way for more deliberate use of Fibonacci elements in her later work. She so instinctively uses them in these early pieces that it would seem a natural progression to incorporate them deliberately and with more precision in later compositions.

Gubaidulina consistently pays close attention to intervallic symmetry in her music; consequently a sense of structural balance is achieved. An initial phrase that moves by pitch in one direction is often followed by a consequent phrase in the opposite direction. For example, in Etude 2, the second legato section travels up by four semitones and the third legato section travels down by four semitones. In Etude 4, the first phrase travels up five semitones, and the second, down five semitones. Gubaidulina expands on this idea in Etude 5, by repeating a longer melodic line found at the beginning of the etude in inversion at the end. Thus, symmetry is found on both a local and more distant levels, adding cohesion and balance to phrases.

Gubaidulina has written extensively for the cello, yet in the Etudes, her only solo work for the instrument, she not only worked out certain formal compositional ideas that would serve as “imprints for future works,”¹⁰⁰ but also became intimately acquainted with the expressive capabilities of the cello as an instrumental personality. Thus, she could explore the extremes of the more traditional articulations (*staccato–legato*) and the more contemporary (*con la dita, flaggioletti*). These articulations represent characters, or perhaps contrasting moods, of the cello’s personality, at play in various contexts. The

¹⁰⁰ Gubaidulina, interview, 2015.

ways these articulations interact and engage with one another in the etudes create a structure based on natural dialogue and discourse between two individuals. For instance, in Etude 2 the articulations, staccato and legato are initially very clearly delineated but gradually begin to invade each other's space. This disruption builds tension and allows the musical drama to unfold in a natural and coherent way.

In certain cases for Gubaidulina, an articulation goes beyond character representation and takes on a deeper spiritual meaning. Legato is not simply a method of sound production—it becomes the means by which she restores the connection between her soul and God. Her spiritual connection to articulation is in part why Kholopova's parameter complex can be quite helpful to the performer. Each piece by Gubaidulina is shaped by consonant and dissonant elements, and in the ways they interact. Because the most fundamental of these opposites is legato and staccato, a parameter complex of more nuanced elements can be constructed around these basic articulations, depending on the piece. In doing so, a performer makes crucial decisions about the origins of each compositional element, as rooted in either consonant or dissonant, light or dark. A performance is strengthened by taking the time to thoughtfully define and shape these elements according to category and the composer's intention.

This interplay of opposites, and Gubaidulina's admitted personification of both the cello as a whole and its specific technical elements, directly fuels the creative process of interpretation for the performer. Exploring the spectrum of both the light and dark elements in the work is not only helpful in understanding the piece structurally, but a satisfying and rewarding practice for a performer, in general. Perhaps one reason so many performers connect with Gubaidulina's music is because the intuitive imagery that guides

much of her music can be so directly related to the mind-set of performance. It is important to remember that Gubaidulina was for many years focused on performance and it is therefore no surprise that she brings this energy to composition.

The performer plays an integral role in the musical drama that unfolds in ten etudes, and not simply by executing the notes. The attention brought to the gesture of the cellist in placing and removing the mute in Etude 3, and the many instances of aleatoric writing throughout the etudes (especially Etude 10), are just a few ways she highlights the individuality and spontaneity of the performer. The intermittent “visibility” of the cellist herself through these gestural and improvisational windows initiates yet another pairing of opposites. Thus the cellist—as an individual—shifts from the background to the foreground of the performance at various times over the course of the work.

Ten Etudes demonstrates the refinement, curiosity, and patience Gubaidulina brings to her writing for strings. Her unique approach to sound is on full display in this work and represents an early cultivation of her stylistic approach to writing for cello. Cellists interested in performing these pieces need resources for gaining a deeper understanding of the technical and structural intricacies of the work, but also of its historical context and what this information reveals about Gubaidulina’s early style and development as a composer. Without these tools, interpretation becomes significantly more arbitrary and much less rooted in the intentions of the composer.

Future research might focus on other early solo works, such as *Serenade for Solo Guitar* (1960), *Toccata for Solo Guitar* (1969), *Chaconne for Piano* (1962), *Invention for Piano* (1974), *Sonata for Double Bass* (1975), *Light and Darkness for Solo Organ* (1976), or *Sonatina for Solo Flute* (1978). Little has been written about these pieces, the

ways she approaches the sound and personality of each instrument, her methods of creating structure and any correlations to Ten Etudes. There is much to be discovered about Gubaidulina, her music, and the ways in which her spirituality continues to fuel her creativity.

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