

‘A “new music” from nothing’: György Ligeti’s *Musica ricercata*

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Abstract: The beginning of the 1950s marks a turning-point in György Ligeti’s early career. By that time Ligeti had become disappointed regarding his rather marginal position in Hungarian musical life, and he might well have felt some dissatisfaction with his own artistic output, as well. He recognized that he should leave his former style and build up his own expressive means and musical language from elementary material. For this purpose, he set himself certain compositional tasks, and imposed restrictions on pitch content, intervals, and rhythms ‘as if to build up a “new music” from nothing’. Accordingly, *Musica ricercata*, which is the first fruit of his experimental project, marks a renewal of Ligeti’s musical thinking primarily on terms of the compositional technique. The present study examines the main problems of compositional technique raised in *Musica ricercata* (primarily that of chromaticism and dense polyphony) and points out significant influences shown in the work (such as those of Bartók, Stravinsky, and Romanian folklore).

Keywords: György Ligeti, compositional technique, chromaticism, dense polyphony

The last two decades have witnessed a growing interest on the part of both musicians and the public, as well as of musicologists, in György Ligeti’s works composed prior to his emigration from Hungary in December 1956. While literature on Ligeti published up to the middle of the 1980s almost neglected the first phase of his oeuvre as being of little significance for his later development, new biographies tend to pay more and more attention to Ligeti’s early compositions. *Musica ricercata*, a set of piano pieces written between 1951 and 1953, is widely regarded by both pianists and analysts as one of the most important work from this period.

Musica ricercata has been thoroughly analysed by Wolfgang Burde and Ferenc László, and careful analytical observations have also been made by Ulrich Dibelius and Richard Steinitz.¹ Although Friedemann Sallis's book on Ligeti's early works does not include a detailed analysis of the set, Sallis succeeds in revealing significant connections between *Musica ricercata* and other pre-1957 compositions by Ligeti, as well as some of its links to Béla Bartók's and Girolamo Frescobaldi's music and Sándor Weöres's poetry.² Analysts of *Musica ricercata* often note that despite obvious stylistic differences, the work has a number of features in common with many of Ligeti's 'mature' compositions, which are in a sense rooted in *Musica ricercata*.³

I think, too, that the fundamental aspects of Ligeti's compositional interest, his characteristic types of expression and even of his devices of composition already made their appearance in his early music, especially from *Musica ricercata* on. However, the unity of his oeuvre, as well as the web of connections between *Musica ricercata* and other works can only be shown if the compositional problems raised in the works are thoroughly analysed and fitted into the context of the composer's artistic development. Hence, the present study has a dual goal: it aims at examining the main compositional problems raised in *Musica ricercata* while fitting it into the context of Ligeti's early development. For this purpose reference will frequently be made to the most important work of this period, String Quartet no. 1 (*Métamorphoses nocturnes*) written in 1953–54, which is the most complete summation of Ligeti's achievements and development up to 1956.

1. Introduction

Ligeti began his studies at the Academy of Music in Budapest in Sándor Veress's composition class in the autumn of 1945. After Veress had left Hungary at the time of the Zhdanovian musico-political change in early 1948, Ligeti was taken on by his former professor in Kolozsvár (Cluj, Romania), Ferenc Farkas. During his four years at the Academy, Ligeti composed quite a lot: the catalogue of his early works compiled by Friedemann Sallis⁴ includes 36 finished compositions

1. Wolfgang Burde, *György Ligeti: Eine Monographie* (Zürich: Atlantis Musikbuch, 1993), 91–102; Ferenc László, 'Ligeti a hídon: A Musica ricercata és a Hat bagatell: az exodus zenéi' [Ligeti on the Bridge: Musica ricercata and Six Bagatelles: Music of the Exodus], *Magyar Zene* 42/4 (2003), 361–375; Ulrich Dibelius, *György Ligeti: Eine Monographie in Essays* (Mainz: Schott, 1994), 48–49; Richard Steinitz, *György Ligeti: Music of the Imagination* (London: Faber & Faber, 2003), 53–59.

2. Friedemann Sallis, *An Introduction to the Early Works of György Ligeti* (Köln: Studio, 1996), 100–121.

3. See, for example, Burde, *Ligeti*, 100–102, Constantin Floros, *György Ligeti: Jenseits von Avantgarde und Postmoderne* (Wien: Lafite, 1996), 83, and Pierre Michel, 'Die Sechs Bagatellen für Bläserquintett von György Ligeti und ihre musikalische Substanz im Vergleich mit Musica ricercata und seinen Werken der folgenden Perioden', in *Zwischen Volks- und Kunstmusik: Aspekte der ungarischen Musik*, hrsg. von Stefan Fricke, Wolf Frobenius, Sigrid Konrad und Theo Schmitt (Saarbrücken: Pfau, 1999), 155–161.

4. See Sallis, *Introduction*, 262–291. Data on instrumentation, first publication, first performance, etc., of compositions in question are, unless indicated otherwise, taken from this catalogue.

written between October 1945 and May 1949 (rewritten and rearranged versions of the same compositions are also counted). Half of them are vocal, half of them are instrumental; in the former group, there are mostly works for choir, while in the latter, piano pieces are in the greatest number. During these years, it was indisputably Bartók's oeuvre that most fascinated Ligeti:

I was completely awed by Bartók. He was the great, great model... it was simply Bartók's music. You know, the students at the Music Academy, they all knew Bartók's works.⁵

Ligeti mentions that Stravinsky, although to a much lesser extent than his idol, also influenced him at that time.⁶ However, with regard to his numerous works for choir, there is another composer that cannot be left unmentioned: Zoltán Kodály. Between 1945 and 1949, Ligeti's choral works, written in more or less folk-like idiom, easily met the demands of the flourishing choir movement of the period. Nevertheless, Ligeti's more adventurous compositions, that are tonally freer and more dissonant, are not his choral works but his songs and piano pieces (*Három Weöres-dal* [Three Weöres Songs], 1946–47, *Capriccio I and II*, 1947, *Invenció* [Invention], January 1948). These are also the compositions in which the influence of Bartók and Stravinsky can best be detected. *Capricci* are influenced also by Hindemith, whose music was quite well-known to the young Ligeti.⁷

However, this was exactly the kind of music that gradually fell out of favour in Hungary after the musical resolution of the Central Committee of the Soviet Communist Party had been published in *Szabad nép* [A Free People] on 17 February 1948.⁸ Afterwards, with the liquidation of the Hungarian Social Democratic Party and the foundation of the Hungarian Worker's Party (Magyar Dolgozók Pártja), dictatorship had become totalitarian, and a 'battle against formalism' was launched. The door was closed to the majority (or, at least, the more valuable part) of twentieth-century music. Zhdanov's directives prescribed what the new, socialist realist music had to be like: it had to be rooted in folk music, easy to understand, optimistic and uplifting.⁹ At first, these requirements were not alien to Ligeti. Although he was not a member of the Communist Party,¹⁰ he had sympathy with communist views and believed that music should have been addressed to the whole of society:

5. 'Ich war ganz von Bartók eingenommen. Der war das große, große Vorbild. Einfach, die Bartóksche Musik, also dieser ganze Schülerkreis an der Musikhochschule, die kannten alle Bartóks Stücke.' '“Ja, ich war ein utopischer Sozialist”': György Ligeti im Gespräch mit Reinhard Oehlschlägel', *MusikTexte* 28/29 (1989), 92.

6. 'Interview with the composer', in Paul Griffiths, *György Ligeti* (London: Robson Books, 1983), 18.

7. Steinitz, *Ligeti*, 45.

8. Danielle Fosler-Lussier, *Music Divided: Bartók's Legacy in Cold War Culture* (Berkeley and Los Angeles: University of California Press, 2007), 5.

9. György Kroó, *A magyar zeneszerzés 30 éve* [30 Years of Hungarian Composition] (Budapest: Zeneműkiadó, 1975), 138.

10. Oehlschlägel, *Ja, ich war*, 93.

Anyway, I was a radical socialist, and there were many of us who wanted to believe that Soviet communism was one way to create a socialist system. I had a lot of sympathy with that, being so very left and having so many friends who were, and they convinced me that I ought to write music that, you know, everybody can understand. So I forced it a little bit. At the beginning I really wanted to come away from this chromatic style and come more towards a sort of Hungarian folk style – not really Kodály, but somewhere between Bartók and Kodály. [...] in 1947–8, I wanted to write a very simple, diatonic music, because I believed that music ought to be more popular.¹¹

In this regard, titles alone such as *Nyolc kis induló* [Eight Little Marches], *Tánc* [Dance], *Menetdalok* [Marching Songs], *Katonatánc* [Soldier's Dance], *Régi magyar társas táncok* [Old Hungarian Ballroom Dances], and *Népdalharmonizálás* [Folk Song Harmonization] are telling.¹² The two largest-scale compositions dating from his years at the Academy, *Bölcsőtől a sírig* [From Cradle to Grave], a 25-minute cycle of folk songs and dances (November 1948), and *Kantáta az ifjúság ünnepére* [Cantata for a Youth Festival] (1948–49),¹³ bear witness to the same ambition, too. The latter, a three-movement cantata for soli, mixed choir and orchestra intended to be his final graduation piece at the Academy, he started in the middle of 1948:

It was in a very popular style, a sort of Kodály–Handel–Britten style. There was a big fugue: I was very good at counterpoint. And it was absolutely what I wanted: completely diatonic, though not tonal but modal. The text was against imperialism and all those things, and I believed in it, at that moment.¹⁴

This belief, however, did not last for a long time. It seems that it was exactly the Zhdanovian cultural policy that caused Ligeti's disappointment in the communist system. He became aware that this policy was very similar to that of the Nazis.¹⁵ Ligeti, however, could not abandon composing the cantata on Péter Kuczka's ideological, pro-Soviet words, especially because he had been encouraged to have it premiered at the International Youth Festival in Budapest in August 1949. By this time Ligeti was apparently opposed to the political system¹⁶ but it did not

11. Griffiths, *Ligeti*, 18–19.

12. These works were composed between September 1948 and May 1949. With the exception of *Régi magyar társas táncok* for string orchestra with flute and clarinet ad libitum, which was published by the Hungarian music publisher Zeneműkiadó in 1950, all of them are considered to be lost.

13. Both works are unpublished, their manuscripts are kept in the György Ligeti Collection of the Paul Sacher Foundation in Basel. *Kantáta az ifjúság ünnepére* is analysed by Sallis, *Introduction*, 82–99, and its full text is translated on pages 221–222.

14. Griffiths, *Ligeti*, 20.

15. Oehlschlägel, *Ja, ich war*, 93; Griffiths, *Ligeti*, 19.

16. In early 1949, Ligeti resigned his post as president of the Academy's student association, for political reasons. See Burde, *Ligeti*, 45–46.

affect his composing yet. He continued trying to write music which 'everybody can understand' – in this respect, his efforts met the official requirements:

I was still a believer in left-wing socialism, against Communism. However, I believed that there could be a free zone despite this awful dictatorship and I could try to write music which preserved the great ideals of liberty and justice. It had to be a kind of music that (so far opportunistic) could yet be performed.¹⁷

As a matter of fact, Ligeti did have some success producing music that 'can yet be performed': five of the compositions mentioned above were played at concerts or on the radio soon after they had been finished. The most popular was *Régi magyar társas táncok*, which alone was performed on 21 occasions in 1951. Still, it can be seen as typical of the official attitude towards Ligeti that he, in fact, won renown for an arrangement, not for an original work.¹⁸

After all, making arrangements, primarily those of folk melodies, became the main activity of composers in these years. The sentence borrowed from Glinka was frequently echoed: 'Music is created by the people, we composers only arrange it.'¹⁹ Ligeti, too, took his share in this work: nearly half of his compositions following the Cantata, and almost all of his choral works are arrangements of folk songs. From 1949 onwards Ligeti appeared on the Hungarian musical scene almost exclusively as a composer of folk song arrangements, and many of these pieces could even be published. Still, not all of them were able to fulfil the severe requirements of socialist realism – for example, *Pápainé* [Widow Pápai] for mixed choir (1953) was not allowed a performance because it was found to be too dissonant.²⁰ Almost nothing of Ligeti's original works (songs and choral compositions, piano pieces, chamber music, and orchestral pieces) could be played in public. Even innocent and folk-like compositions such as *Concert Românesc* [Romanian Concerto] (1951) for orchestra, *Haj, ifjúság!* [Oh, Youth!] (1952) for mixed choir on folk texts, and the Cello Sonata (1948/53) were banned. Performance of *Öt Arany-dal* [Five Arany Songs] (1952), another folk-like cycle, whose piano part was reminiscent of the accompaniment of Bartók's folk song arrangements, was also out of the question.²¹

Whereas the above works, in spite of their stylistic limitations, show the young Ligeti as a skilled composer full of imagination, his compositions which

17. 'Ich war doch ein gläubiger Linkssozialist, gegen den Kommunismus, aber mit dem Glauben, es gäbe noch einen Freiraum trotz dieser schlimmen Diktatur, und ich versuche eine Musik, die die großen Ideale der Freiheit und Gerechtigkeit bewahrt. Das muß eine Musik sein, die – also so weit noch opportunistisch – noch aufgeführt werden kann.' Oehlschlägel, *Ja, ich war*, 94.

18. *Régi magyar társas táncok* is entirely 'based on melodies by Hungarian masters of the so-called Verbunkos style.' See Sallis, *Introduction*, 279.

19. Kroó, *A magyar zeneszerzés*, 53.

20. Ove Nordwall, *György Ligeti: Eine Monographie* (Mainz: Schott, 1971), 60.

21. Steinitz, *Ligeti*, 50, 52, 61–62; Griffiths, *Ligeti*, 21.

are further from folk-like idiom bear witness to one who is unsure of himself. This is best exemplified by the other final graduation piece, *Andante and Allegretto* for string quartet (1950).²² With its romantic tone and traditional, almost functional harmonization it is perhaps Ligeti's most uncharacteristic composition. One can feel similarly embarrassed listening to, or reading the score of the *Sonatina* for piano four hands written in the same year. Despite being a handsome piece that even contains some interesting ideas, its compositional problems actually appear to be too simple compared to that of, say, *Capricci* written three years before. When outside the realm of folklore, Ligeti seems to be unsure in which style he should write. It may be seen as natural for a young composer having just finished his studies to be unsure which way he should follow – especially in such a politico-cultural situation that was in Hungary at the turn of the fifties.

For Ligeti, working with folk material gradually became a routine procedure – a *task* which nevertheless requires compositional skills and some imagination, but which he can at any time carry out. However, creating an original work is quite different: there is no given task. In this case, the 'task' is the work of art itself, therefore it is primarily the 'task' itself that has to be found. At the moment Ligeti did not find it but he felt he had to find it to become a *real* composer.

2. Structure of *Musica ricercata* and its connections with the *Sonatina*

About 1950 it became clear to me that developing the post-Bartókian style, in which I had composed before, would not further me. I was twenty-seven years old and lived in Budapest completely isolated from all the ideas, trends, and techniques that had emerged in Western Europe after the war. In 1951 I began to experiment with very simple structures of rhythms and sonorities as if to build up a 'new music' from nothing. I regarded all the music I knew and loved as being, for my purpose, irrelevant. I asked myself: what can I do with a single note? With its octave? With an interval? With two intervals? With certain rhythmic relationships? In this way, several small pieces resulted, mostly for piano.²³

22. Ligeti writes about *Andante and Allegretto*: 'They reflect my stylistic uncertainty in the early years of the Communist dictatorship in Hungary.' (Sie spiegeln meine stilistische Unsicherheit zu Beginn der kommunistischen Diktatur in Ungarn wider.) CD booklet for the Sony recording SK 62306 (1996), also in György Ligeti, *Gesammelte Schriften*, hrsg. von Monika Lichtenfeld (Mainz: Schott, 2007), Bd. II, 150.

23. 'Um 1950 wurde mir klar, daß eine Weiterentwicklung des nachbartókschen Stils, in dem ich bis dahin komponiert hatte, mich nicht vorwärtsbringen würde. Ich war siebenundzwanzig Jahre alt und lebte in Budapest völlig isoliert von allen Ideen, Trends und Techniken der Komposition, die sich nach dem Krieg in Westeuropa entwickelt hatten. 1951 begann ich, mit einfachen rhythmischen und klanglichen Strukturen zu experimentieren, um eine "neue Musik" sozusagen aus dem Nichts aufzubauen. Alle Musik, die ich bis dahin kannte und liebte, betrachtete ich als irrelevant für mich. Ich fragte mich, was kann ich mit einem einzelnen Ton, was mit seiner Oktave tun, was mit einem Intervall, mit zwei Intervallen, mit bestimmten rhythmischen Verhältnissen. Auf diese Weise entstanden mehrere kurze Stücke, vorwiegend für Klavier.' Program notes for a performance on 13 January 1978 in the concert series 'Das neue Werk des Norddeutschen Rundfunks Hamburg', also in

In 1951 Ligeti recognized that his task was to leave his former style and to create his own expressive means and language from elementary musical material. Prior to that he had to reconsider and re-examine his compositional technique. So he set himself certain compositional tasks, and imposed restrictions on pitch content, intervals, and rhythms. 'To build up a "new music" from nothing' means that Ligeti wanted, above all, to make a thorough examination of the very elements of music, of musical material itself. Having just finished his studies he very consciously began to educate himself in order to be able to fully master the musical material, as well as to widen the compositional and expressive means of his music. In so doing he strove to take decisive steps towards a more individual musical language and style.²⁴

He succeeded in the experiment. It resulted in *Musica ricercata*, a set of eleven piano pieces composed between October 1951 and March 1953,²⁵ which happened to be Ligeti's earliest work to be included in the regular twentieth-century concert repertoire.

Musica ricercata is a set of brief character pieces, of compositional studies. (That Ligeti himself regarded these pieces as studies, is shown by the subtitle of the series, *11 tanulmány* [11 Studies], which is not included in the printed score, only in the autograph.) The average duration of each piece is about two minutes; according to the *durata* in the printed score, the shortest one (no. VI) lasts only 30 to 40 seconds, whereas the longest one (no. XI) lasts 3 minutes and 50 seconds. As it is a result of Ligeti's self-education, the most characteristic feature of both the individual pieces of *Musica ricercata* and the cycle as a whole is that they are very systematically constructed. All of the pieces are concentrated in form (that is, all of them have their own respective characters and focus on a clearly definable compositional problem) and their respective pitch contents gradually increase pitch by pitch. The first piece is made up of two pitch classes only (A and D), the second is made up of three, the third of four, and so on until the last piece which contains all twelve pitches for the first time.²⁶

It is not exactly known in which phase of the one-and-a-half-year long compositional process Ligeti decided to arrange the single pieces into a set built on

Ligeti, *Gesammelte Schriften*, Bd. II, 154. For an earlier, 1967 version of this text see page 75 of the same volume. For English translation of this original version see LP notes for the Wergo recording 2549 011 (1967), partly quoted also in Steinitz, *Ligeti*, 54.

24. Cf. Dibelius, *Ligeti*, 48.

25. On the title page of the autograph there are the following dates: '1951 X – 1953 III'. The exact date of finishing the composition can be read at the end of the draft of the last piece: 'FINIS 1953 márc 27'. Both sources are kept in the György Ligeti Collection of the Paul Sacher Foundation in Basel.

26. Regarding the pitch structure of the series, Ligeti speaks about an unconscious connection between the compositional principles of *Musica ricercata* and serialism: 'Certain features of these problems and their solutions have something in common with the principles of serial composition. This is surprising, as I had approached them from totally different premises and a totally different route. At that time, I hadn't the faintest idea of the developments which led up to serial music and which were then evolving in Western Europe.' LP notes for the Wergo recording 2549 011 (1967), quoted in Steinitz, *Ligeti*, 54.

the principle of gradual increase of pitch content. A letter from Ligeti to his friend and first biographer, Ove Nordwall, provides some information on the chronology of composition:

[...] I wrote the pieces one by one and finished each of them for its own sake. Thus the first two or three pieces were composed in 1951, the last two in 1953 (the last one as an organ piece first), and the remaining middle ones in 1952.²⁷

According to Ligeti, the pieces of *Musica ricercata* were written more or less in the same order as they follow each other in the final score, but they were originally conceived as individual compositional studies. However, it seems probable that the idea of the cycle emerged at the latest when, in late 1951, or in 1952, Ligeti was working on the third one. This playful piece is a rewritten version of the first movement of the Sonatina for four hands, finished on 30 December 1950. Whereas the original version is unambiguously in B \flat major and contains all twelve pitches, the new version is transposed into C and its pitch content is reduced to four pitch classes only. It is hardly thinkable that without any idea of a set built on the principle of pitch content Ligeti would have changed the music to such an extent – especially after he had composed the first two pieces.

As not only the first but also the second movement of the Sonatina was rewritten to be included in this innovative set, we have to deal with these rearrangements before making a general survey of Ligeti's compositional technique as exemplified in *Musica ricercata*. How did Ligeti reshape these two movements? Regarding no. III of *Musica ricercata*, it is of course the radical reduction of pitch content that is the most striking. The opening movement of the Sonatina is dominated by the interval of a third: it is the third that controls both the thematic–motivic and the harmonic aspects of the music and, moreover, it even seems to be more effective in ruling harmonic progressions than the conventions of functional tonality (Ex. 1).

The prevalence of the interval of a third made it possible to transfer the musical material from the opening movement of the Sonatina to no. III of *Musica ricercata*, whose pitch content offers an opportunity for tonal ambiguity (C major/minor), as well as of contrasting two minor or major thirds, respectively (C–E \flat versus E–G, or C–E versus E \flat –G). What is then the difference between the two versions regarding pitch organisation? Although both of them are tonal, the character of the tonality is different. As already observed, harmonic progression in the Sonatina does not follow the rules of functional tonality but is dominated by a central interval – still, it contains traditional chords within clearly definable tonal

27. '[...] ich schrieb die Stücke einzeln, und beendete jedes für sich, wobei etwa die ersten 2–3 Stücke 1951 komponiert wurden, die beiden letzten 1953 (das letzte als Orgelstück zuerst), und die restliche [sic!] Mittel-Stücke 1952.' Letter from Ligeti to Ove Nordwall, 2 January 1975, quoted in Sallis, *Introduction*, 103. The final piece of *Musica ricercata* was originally written for the organ (*Omaggio a G. Frescobaldi*, 1953).

EXAMPLE 1 Sonatina, movement I, bb. 1–5
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areas.²⁸ On the contrary, no. III of *Musica ricercata* is only built on two chords (C major and minor), which, in turn, become gradually fused. Thus tonal tension and resolution cease to exist: there evolves non-functional tonality and static harmony.

Having rejected an opportunity for harmonic variety and modulation, Ligeti had to look for other compositional means if he wanted to preserve the interest of the musical material and the dynamism of the form. It may be attributed to this endeavour that the phrase structure of the new version became more exciting. The five-bar-long first phrase of the original version is elongated by one bar, which arouses suspense (Ex. 2). Ligeti plays with the listener's expectations, too, as he starts the second subject unexpectedly on the fourth quaver of the bar (*Musica ricercata*, no. III, bar 16) – in the Sonatina, it starts more 'regularly' on the second quaver (movement I, bar 12). In the new version musical space (that is, registers) is also better exploited, and begins to function as a means of form-building. This can well be observed at the beginning of the movement where C minor and C major sections are separated also by their respective registers (see Ex. 2). Similarly, rhythm also becomes a means of form-building. In the rhythmically rather mechanical piece, there is a point where quavers 'run away', which very well prepares an effective recapitulation. In the Sonatina, on the other hand, this moment is much less characteristic. Contrasts of dynamics and timbre are also better exploited in the rewritten version (*ff-pp* changes, unexpected *sff-s*, *tre corde-una corda* contrasts). These compositional features of the new version, however, do not simply 'compensate' for static harmony but they make it more individual, more interesting, and even more eccentric than the original version.

28. The harmonic progression of the first five bars, for example, can be analysed in B \flat major as degrees I–vi–I–iii–I– \flat VII–ii–IV–I.

EXAMPLE 2 *Musica ricercata*, no. III, bb. 1–8
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Allegro con spirito ♩ = 176

f tre corde

pp una corda

8^{va} staccatissimo, leggero

The same can be said when no. VII of *Musica ricercata* is compared to its original version, the second movement of the Sonatina. In both of them, the music consists of two layers: one of the melody and one of an ostinato. The difference is that while in the Sonatina they are connected motivically, harmonically, and rhythmically, in *Musica ricercata* these layers are not synchronized: in the latter, the quasi-folk melody unfolds against the background ostinato of rapid *pp* septuplets (Ex. 3). The independence of the layers has two important consequences. Firstly, the melody loses its stiffness and becomes rhythmically freer and declamatory, furthermore, it sounds also more evocative of a folk-like idiom. Secondly, the ostinato stiffens as a murmuring, yet static background. Thus harmonic *progression* is substituted by a *static* sound, an F–G–B \flat –C–E \flat chord. This has an effect also on the form of the piece. Whereas in the Sonatina, similarly to some folk song arrangements, the melody accompanied by parallel chords is played only once, in *Musica ricercata* it develops into a series of variations. For the first time it is played monophonically, then a parallel lower voice is added, which becomes imitative in the third variation, and finally a third voice is also added. Meanwhile, the dynamic level is raised and the *una corda* pedal is also released. In the coda-like last quarter of the piece, the sound becomes thicker again, and finally only the murmuring ostinato background remains. No. VII of *Musica ricercata* thus presents stillness, motionlessness, and (in the form of the rise and fall of intensity) also dynamism at the same time. Compared to the original version, the music has become more complex.

EXAMPLE 3 *Musica ricercata*, no. VII, bb. 1–12
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The musical score consists of two systems. The first system shows a piano part in the bass clef with a tremolo of eighth notes, marked *pp sempre molto leggero quasi senza ped.* and *con moto, giusto*. Above it, a vocal line in the treble clef is marked *Cantabile, molto legato* and *p*, with a tempo of *c. 116*. A metronome mark *c. 88* is shown above the piano part. The second system continues the vocal line, marked *simile sin al fine*, and the piano part, marked *pochiss. ped. sin al fine*.

Taken all in all, when recomposing the first two movements of the *Sonatina*, Ligeti in fact reinforces a characteristic trait of the original material. The intervallic structure of the first movement seems to provide the idea of reducing the pitch content of no. III to two-third intervals, while the ostinato of the second movement serves as a starting-point towards an independent, static musical layer in no. VII. Nonetheless, the recomposition of both movements results in something essentially new. Nos. III and VII indisputably surpass the first two movements of the *Sonatina* both in originality and quality.

3. Problems of pitch organisation

The central problem of *Musica ricercata*, as the structure of the cycle makes obvious, is that of pitch organisation: the relationship of diatonicism and chromaticism, tonality and twelve-note composition. Theoretically, Ligeti's starting-point is the twelve-tone system – in practice, however, he takes the opposite direction, because he builds this system note by note, reaching the complete chromatic space in the last piece only. This rather didactic method reveals an analytical, almost 'scientific' attitude. Ligeti makes experiments with single notes and groups of notes. He examines how they react on each other, the cases where they attract or repel each other, and how they form a system. It is this 'scientific' examination of the twelve-tone system, not the structural features or the sound of his music, that relates Ligeti's endeavours to the work of the dodecaphonists and serialists in Western Europe.

Regarding the construction of the tone material of *Musica ricercata*, two different tendencies can be observed. In certain pieces, Ligeti uses the chromatic scale, or a segment of it, whereas in other pieces his starting-point is the diatonic tonal system to which some extra notes can be added. However, on the basis of these criteria alone, not all of the pieces can be put into one of these groups, as some of them show both tendencies. The unquestionably diatonic pieces are nos. I, VI, VII and VIII, whereas the last three are obviously chromatic. The pitch contents of pieces II and IV can either be interpreted as chromatic or as sections of a diatonic scale with an extra pitch added. In the former piece, one would tend to interpret the minor second $F\sharp-E\sharp$ as a Phrygian cadence – especially because of the folksong-like ABA_vB structure of the 4-bar long theme. In this case, note G, which appears strongly accentuated in the second half of the piece, can be interpreted as an extra pitch. Note $G\sharp$, in a very similar way, unexpectedly enters in the fourth piece. It does not eliminate the feeling of the melodic G minor mode, but only colours it. (In the table below, these extra pitches that appear accentuated are italicized.) Pieces III and V can be seen as being rather diatonic, although neither of them can be interpreted within a single tonality. The pitch content of no. III is the superimposition of a C major and a C minor chord, while that of no. V is the superimposition of the descending $D-C\sharp-B$ trichord and its transposition by a tritone (A_b-G-F). The pitch content of each piece of *Musica ricercata* is summarized in Table 1.

Each piece of *Musica ricercata* has a definite tonality. (In Table 1 the tonal centre or centres of the respective pieces are in bold face.) Within these chromatic, diatonic, or at the same time chromatic and diatonic pitch class sets, Ligeti examines the relationships between pitches. In so doing, he strives for non-traditional tonal systems different from the major/minor system. Thus for Ligeti, using all twelve pitches is not equal to atonality. Instead of abandoning the hierarchy of pitches, he rather tries to reconsider it, so to say, to recreate it ‘in his own likeness’. It can be said in *Musica ricercata* Ligeti tries to reconcile the twelve-note system and tonal thinking. However, this endeavour, as Ligeti well knew, was not a novelty at all – Hindemith had already striven for the same in his *Unterweisung im Tonsatz*.²⁹ Still, for Ligeti, it was exemplified most importantly by Bartók’s music again, which he saw as a synthesis of twelve-note composition and tonality:

Bartók’s chromatic technique [...] illustrates that the twelve-tone tempered system can also have other means of manipulation [than Schoenberg’s dodecaphony]. Whereas Schönberg comes to the twelve-tone system through the requirements of atonality, Bartók starts from the twelve-note system – as from a given tone system rather than from an atonal row – and he comes to an entirely new formation of tonality. (The expression “tonality” is to be understood in a

29. Ligeti, being then a student in Kolozsvár, bought this book when he was once staying in Budapest, and did all of its exercises. See Steinitz, *Ligeti*, 18.

TABLE 1 Pitch content of the pieces of *Musica ricercata*
(Tonal centre(s) of each piece are in **bold face**, and accentuated
added pitches are *italicized*.)

Piece no.	Pitch content	Interpretation
I	A D	
II	E# F# G	section of chromatic scale (section of E# Phrygian + G)
III	C E <i>b</i> E G	C major and C minor triads
IV	F# G G# A B <i>b</i>	section of chromatic scale (section of melodic G minor + G#)
V	F G A <i>b</i> B C# D	two trichords in tritone transposition
VI	E F# G A B C# D	E Dorian
VII	F G A <i>b</i> A B <i>b</i> C D E <i>b</i>	F Mixolydian + A <i>b</i>
VIII	B C C# D E F# G G# A	B Dorian + G and C
IX	C# D D# F F# G# A A# B C	chromatic scale without E and G
X	D D# E F F# G G# A A# B C#	chromatic scale without C
XI	A B <i>b</i> B C D <i>b</i> D E <i>b</i> E F F# G G#	complete chromatic scale

very wide sense, naturally the matter in question is not major/minor tonality but rather a new system of relations within the twelve-tone system.) Thus Bartók unites, in a higher synthesis, two contradictory systems: the overtone-principled, functional system and the distance-principled, tempered twelve-tone system.³⁰

Thus Ligeti's endeavour to reconcile the twelve-tone system and tonality derives from his idol. No wonder that again and again we run up against elements of Bartók's style when listening to this pioneering, style-searching composition. At the same time, however, Ligeti openly admits its adherence to his idol by giving the title 'Béla Bartók in memoriam' to no. IX of *Musica ricercata*. The dirge in C# recalls the memory of the late master by means of accentuated Lombardic rhythms, melodic lines made up of minor thirds, and Bartókian 'model scales'.³¹

30. 'Bartók kromatikus technikája [...] azt példázza, hogy a tizenkéthangú temperált rendszernek más [a schoenbergi dodekafóniától eltérő] kezelési módjai is lehetnek. Míg Schönberg az atonalitás követelményéből jut el a tizenkéthangúsághoz, addig Bartók a tizenkéthangúságból indul ki – mint adott hangrendszerből és nem mint atonális sorból – és eljut egy egészen új megfogalmazású tonális renchez (a "tonális" kifejezést tágra értve; természetesen nem dúr-moll tonalitásról van szó, hanem egy új vonatkozási rendszerrel a tizenkéthangúságon belül). Így egyesíti Bartók magasabb szintézisben a két ellentmondásos rendszert: a felhang-elvű funkciót és a distancia-elvű temperált tizenkéthangút.' György Ligeti, 'Megjegyzések a bartóki kromatika kialakulásának egyes feltételeiről' [Remarks on Several Conditions for the Development of Bartók's Chromaticism], *Új Zenei Szemle* (September 1955), 44. English translation in Sallis, *Introduction*, 256–261.

31. In 1948, in one of his first analytical essays, Ligeti wrote: 'The role of the minor third in Bartók's melodies is already a familiar commonplace.' (A kisterc szerepe Bartók melodikájában már közhelyként ismeretes.) György Ligeti, 'Bartók: Medvetánc (1908) – elemzés' [Bartók's Bear Dance (1908): An Analysis], *Zenei Szemle* 5/1948, 254; English translation of the article in Sallis, *Introduction*, 228–233. Although the expression 'model scale' was first applied by Ernő Lendvai in his 1955 book on Bartók's music – *Bartók stílusa a 'Szónata két zongorára és ütőhangszerekre' és a 'Zene húros-, ütőhangszerekre és celestára' tükrében* (Budapest: Zene-műkiadó, 1955), English translation: *Bartók's Style as Reflected in Sonata for two Pianos and Percussion and*

Yet it does this in such a penetrating way that it results in a kind of music which is almost more Bartókian than Bartók's own – and it is precisely because of the quotation-like character of the piece that Ligeti cannot be charged with plagiarism. Still, it is obvious that 'Béla Bartók in memoriam' is not simply an imitation of Bartók's style but also the setting of a compositional problem in which Ligeti was engaged at that time. This can be seen exactly from *how* Ligeti works with the inherited minor thirds and model scales. The composition starts with minor thirds in the distance of major third (model 3:1, bars 1–9). In the following section (*Allegro maestoso*) the minor thirds are linked together more tightly (model 2:1), while in *Più mosso, agitato* they are intertwined in such a way that they result in the complete chromatic scale (model 1:1) – excepting, naturally, the two 'forbidden' pitches of the movement, E and G (Ex. 4). In the course of the piece, Ligeti arrives at the almost completely chromatic sound-field by using Bartókian material (minor thirds) and Bartókian means (model scales) – on the other hand, this sound-field in the closing section is coloured by mysterious, blurred trills foreshadowing already *Apparitions* and *Atmosphères* (see Ex. 14).³²

Still, we should focus on problems of pitch relations, tonality, and twelve-tone composition in *Musica ricercata*. The diatonic pieces of the set have, to some extent, their starting-points in Bartókian tonality and modality, too. Ligeti, like Bartók, had a predilection for different modes, which had much to do with his studies of folk music – just as it did in Bartók's case.³³ However, the most characteristically Bartókian means of reconciling modality and the twelve-tone system, 'polymodal chromaticism', is not clearly to be found in *Musica ricercata*.³⁴ No. V is the only piece of the series whose pitch content (two trichords a tritone apart) shows some resemblance to this principle. Still, it might also have been inspired by a characteristic of Romanian folk music observed by Ligeti, namely, that some melodies have two tonal centres.³⁵ The movement is based on a pseudo-folk song, whose first part is in C#, whereas the second part of it has its final cadence on G. The tonal structure of the whole piece shows the same characteristics: there

Music for Strings, Percussion and Celesta, transl. Paul Merrick and Judit Pokoly (Budapest: Akkord, 1999) – Ligeti must have known Lendvai's analyses as early as 1948 when they both attended Bence Szabolcsi's Bartók seminar at the Music Academy in Budapest. After Lendvai's book had been published, Ligeti was the first to review it and he defended Lendvai's much debated views.

32. It is surely not by chance that Ligeti makes his reference to Bartók in a piece which in some respects already moves beyond Bartók's style by employing its constitutive elements very consciously. Pieces V and VIII, for example, actually show a more naive absorption of Bartók's style than 'Béla Bartók in memoriam'.

33. After having finished his studies at the Academy and before being appointed professor there, that is between October 1949 and August 1950, Ligeti studied folk music in Romania. He summarized his experience in two articles: 'Népzene kutatás Romániában' [Folk Music Research in Romania], *Új Zenei Szemle* 3/1950, 18–22 and 'Egy aradmegyei román együttes' [A Romanian Folk Ensemble from the Arad District], in *Emlékkönyv Kodály Zoltán 70. születésnapjára: Zenetudományi tanulmányok I* (Budapest: Akadémiai Kiadó, 1953), 399–404. English translations of both articles in Sallis, *Introduction*, 239–252.

34. The term 'polymodal chromaticism' was used by Bartók in 1943, in his second Harvard lecture. See *Béla Bartók Essays*, ed. Benjamin Suchoff (London: Faber & Faber, 1976), 361–375.

35. See Ligeti, *Egy aradmegyei*, 401; Sallis, *Introduction*, 248.

EXAMPLE 4 Bartókian model scales
in *Musica ricercata*, no. IX, bb. 1–17

are two tonal levels (C# and G) although the music itself is not bitonal. The same can be observed in the ‘fake folk song’ of the seventh piece. The first part circles around C, whereas the final cadence is, as it is usual in South Slavic folklore, on the second degree, G.³⁶ (Nevertheless, the left hand ostinato makes it clear that the tonality of the piece is F Mixolydian.)

That the *composer* Ligeti was fascinated and influenced by Romanian folk music is not only reflected in his arrangements of folk songs or folk-like material³⁷ but rather by certain harmonic and voice-leading phenomena of *Musica ricercata* – a work in which Ligeti strives to find his *own* voice. When treating the Bartókian aspects of this series, Ligeti’s relationship to folklore should not be left unmentioned. Like Bartók in the 1910s, Ligeti in the 1950s was strongly influenced by Romanian folk music which gave impetus to both composers in developing their own respective styles and compositional techniques. At the end of his study on *A Romanian Folk Ensemble from the Arad District*, Ligeti felt it necessary to remark:

The research of folk harmonization is, nevertheless, not merely of folkloristic interest, but is also useful for the composer.³⁸

Ligeti seems to have been especially fascinated by the odd dissonances of this kind of harmonization. He summarized his observations of the employment of dissonances in the music performed by a folk band in Covăsiņ:

1. Clashes resulting from ostinati.
2. Clashes of the melody and the accompaniment as a consequence of approximate harmonization and of the consolidation of some gestures.
3. Clashes resulting from the fact that the accompanying instruments do not change the harmony at the same time in their improvised playing.

36. Cf. Burde, *Ligeti*, 100.

37. Such as *Baladă și joc* [Ballad and Dance] for two violins (1950), later arranged for school orchestra, and *Concert Românesc*.

38. Sallis, *Introduction*, 252. (‘A népi harmonizálás kutatása azonban nem csupán folklorisztikus érdekű, hanem hasznos a komponista számára is.’ Ligeti, *Egy aradmegyei*, 404.)

EXAMPLE 5 *Musica ricercata*, no. VI, bb. 11–13
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EXAMPLE 6 *Musica ricercata*, no. VIII, bb. 14–17
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4. Clashes resulting from the simultaneous occurrence of differing interpretations of harmonic content.
5. Clashes resulting from heterophony.³⁹

One tends to suspect that the odd dissonances in the sixth piece show the influence of heterophony in folk music – as well as that of Stravinsky (Ex. 5).⁴⁰ At a later point in this piece, the two voices run parallel a second (ninth) apart for as long as a whole bar – a technique which would later become a hallmark of Ligeti's chromatic pieces such as the last two movements of *Musica ricercata* and the First String Quartet. In no. VIII, sustained perfect fifths that accompany the folk-style melody written in *giusto syllabique* rhythm openly refer to folk harmonization, since they exactly coincide with the open strings of the cello and the violin (C, G, d, a, e², see Ex. 6).⁴¹ One of the examples in Ligeti's study on Romanian folk music shows a similar phenomenon: a dissonance results from the collision

39. Sallis, *Introduction*, 252. ('1. Ostinato-ból eredő ütközések. 2. Dallam és kíséret ütközése a hozzávetőleges harmonizálás és egyes fordulatok rögződése folytán. 3. Ütközések, melyek abból erednek, hogy a játék improvizált lévén a kísérőhangszerek nem váltják egyidőben a harmóniát. 4. A dallam harmóniai tartalmának egyidőben történő különböző értelmezéséből eredő ütközések. 5. Heterofóniából eredő ütközések.' Ligeti, *Egy aradmegyei*, 404.)

40. Ligeti had already used heterophony in 1947, in his third *Weöres Song*, 'Gyümölcs-fürt'.

41. László, *Ligeti a hídon*, 369. The term *giusto syllabique* was first applied by Constantin Brăiloiu for a metric characteristic of Romanian folk music.

EXAMPLE 7 Transcription of Romanian folk music (Învârtita)⁴²

EXAMPLE 8 *Musica ricercata*, no. VIII, bb. 14–17

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of two perfect fifths built on each other (Ex. 7). This kind of technique was to be taken to extremes in a section of String Quartet no. 1 which is rhythmically identical with the eighth piece of *Musica ricercata*. Here four perfect fifths are built on each other under a chromatic melody moving in parallel tritones and major sevenths (Ex. 8).

A non-functional, or static harmonization⁴³ already observed in pieces III and VII are characteristic of some other movements of *Musica ricercata* as well.

42. Ligeti, *Egy aradmegyei*, 401; Sallis, *Introduction*, 249.

43. Ligeti could observe this kind of harmonization, too, in Romanian folk music, where 'most connections among chords are non-functional' and 'the harmonization is static. Long sustained chords are frequent. There are also pieces which are built entirely on static harmony.' Sallis, *Introduction*, 247. ('[...] a hangzatkötések legtöbbször nem-funkciós. A harmonizálás sztatikus: gyakoriak a hosszantartott, álló hangzatok. Vannak egyetlen álló harmóniára épült darabok is.' Ligeti, *Egy aradmegyei*, 400.)

Most radically of the opening movement, of course, which contains only one single pitch class (A), not counting the final note. Here Ligeti plays with the tradition, more precisely, with our way of hearing defined by tradition: Do we hear the final two notes as a cadence, as a dominant–tonic progression? Is it possible that (from bar 19 onwards) we differentiate between the ‘tonal’ functions of the A notes according to their respective octave ranges? It is also the harmonic and melodic constancy, as well as the contrast between the illusion of progress and the reality of a helpless turning around that characterizes (and also alienates) the waltz in the fourth piece. The two harmonies of the accompaniment alternate completely mechanically, independently of the melody, which also repeats some stereotyped formulae.⁴⁴ Thus the harmonies lose their tonal functions, and the music becomes static (which is again a characteristically Stravinskian feature). The only contrasting moment of the piece is the appearance of the note G \sharp .

From a technical point of view, the last two pieces of *Musica ricercata* are the ones to show most clearly the direction which Ligeti was to take during the next three years. It is as if Ligeti’s new style were taking shape gradually, as the pitch content increases within the set, before our very eyes. Ligeti’s interest became captivated by the problem of chromaticism. Neither twelve-tone composition in general, nor *Reihentechnik* in particular is what concerns Ligeti. One could rather say, the chromatic scale, or, more precisely, the chromatic sound-field (*Klangfeld*) is becoming the ‘theme’ of his compositions. It is well illustrated by the theme of the tenth piece of *Musica ricercata* which is constructed almost exclusively of semitone steps (Ex. 9, see bars 1–17). The final movement of the series, ‘Omaggio a Girolamo Frescobaldi’, shows the same tendency.⁴⁵ Its twelve-note fugue subject is constructed symmetrically, expanding from the first note into an octave like a fan (Ex. 10).⁴⁶ Although this subject could be regarded as a *Reihe* (for all twelve pitches appear only once in it), it is in fact more a chromatic filling out of an octave (a–a¹). This interpretation is supported by the fact that the non-thematic parts always move downwards chromatically – that is, the counter-subject of the fugue is nothing else than the descending chromatic scale itself.

Similarly, all motivic and thematic materials of Ligeti’s most important work following *Musica ricercata*, the First String Quartet (*Métamorphoses nocturnes*), derive from the chromatic scale and chromatic sound-field, too. The subject of the ‘metamorphoses’, the twelve-note theme of the first violin, is not a *Reihe* either, but, like the fugue subject of *Musica ricercata*, is a chromatic filling out of the

44. The waltz melody refers to the famous ‘Minute’ Waltz by Chopin (op. 64, no. 1). Two other possible models for this piece are ‘Waltz’ from Stravinsky’s *Three Easy Pieces* for piano four hands (cf. Burde, *Ligeti*, 96) and Ravel’s *La Valse*.

45. The title of this large-scale fugue, originally written for the organ, refers to the fact that it was modelled on the ‘Recercar cromático’ of Frescobaldi’s *Messa delli Apostoli*. See Burde, *Ligeti*, 94.

46. Ligeti used a chromatic, fan-shaped theme as early as 1948, in *Invenció*. One of the classical examples of using such a theme as a fugue subject is the B minor fugue of the first volume of Bach’s *Wohltemperiertes Klavier*.

EXAMPLE 9 *Musica ricercata*, no. X, bb. 1–21
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Vivace. Capriccioso ♩ = 200

sf
tre corde, secco
pp
sf
pp
p
p
p
sf
pp
sf
pp
sf
pp
pp
sf
pp
p grazioso
sf
f

EXAMPLE 10 *Musica ricercata*, no. XI, bb. 1–6
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Andante misurato e tranquillo ♩ = 76

sempre p, sempre legato (sehr gleichmäßig / very evenly)
p
pp

$f\sharp^2$ – $f\sharp^3$ octave. In the background, like in ‘Omaggio’, one hears the chromatic scale, this time moving upwards in parallel major seconds (Ex. 11). In a later passage, all four instruments play chromatic scales – and each of them at different speeds (the adjacent notes of the first violin are in different octaves, Ex. 12).

During the ‘nocturnal metamorphoses’, the intervals of the first violin’s theme are also changed: they are extended. Ligeti uses the Bartókian technique of interval extension already in the tenth piece of *Musica ricercata*, where the extended form of the theme serves as a contrasting second subject (Ex. 9, from

EXAMPLE 11 String Quartet no. 1, bb. 7–19
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bar 18 on). In both compositions, semitone steps are transformed into a mechanical alternation of major and minor thirds. (In the piano piece, this principle cannot be followed with complete consistency because one pitch, C, is missing.) Consequently, one hears simple major, minor, and seventh chords which are, from a tonal, as well as a functional point of view, wholly neutral. We find ourselves in a circular chain comprising major and minor thirds, which contains all of the twelve notes and which one can enter or leave at any point: C–E–G–B–D–F#–A–C#–E–G#–B–D#–F#–Bb–Db–F–Ab–C–Eb–G–Bb–D–F–A–(C).⁴⁷ Typically, Ligeti, while borrowing the Bartókian technique of interval extension, employs it in another way and gives it a totally different dramatic function from his predecessor's. In Bartók's poetics, the compressed (chromatic) and the extended (diatonic) forms of a theme are usually opposed as 'distorted' (unnatural) and 'ideal' (natural), the appearance of the latter at the end of the work being an effective means of resolution.⁴⁸ In Ligeti's music, the extended version gives the impression of being just as little natural as the chromatic one – because of its 'enlarged mechanicalness' the former might seem even more rigid or grotesque than the latter.

It is perhaps because chromatic music loses its most characteristic feature (that is, its chromaticism) when extended, that these chains of thirds are doubled in both compositions: they appear simultaneously in two voices moving strictly in parallel minor seconds. Thus chromaticism is transferred from the horizontal to the vertical dimension of music, which makes the relationships between notes

47. See String Quartet no. 1, bb. 239–365.

48. See, for example, *Music for Strings, Percussion, and Celesta*, or the last movement of the Sonata for Solo Violin.

EXAMPLE 12 String Quartet no. 1, bb. 711–716
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uncertain and drives the music further away from tonality. In the First String Quartet, two or more voices rather frequently move in parallel minor seconds. This is already the case in the *Vivace, capriccioso* and *Presto* sections (bars 69–209 and 239–367, respectively), but in the second half of the composition the cluster-sound becomes even more dominating.⁴⁹ Clusters in the String Quartet do not result merely from parallel minor seconds, but also from the superimposition of diatonic voices that frequently cross each other. It was this latter technique that Ligeti himself emphasized in an interview in 1979, stating that it had served him as a point of departure for his micropolyphonic pieces after 1956. He also added that chromaticism built up from diatonic voices ‘is an idea characteristic of Bartók’.⁵⁰ The ‘madly’ repeated ten-note chromatic chord at the end of the tenth piece of *Musica ricercata* also derives from two diatonic chords (Ex. 13).

49. Ligeti used three-note clusters as early as 1947, in the second *Capriccio*.

50. ‘György Ligeti talking to Péter Várnai’, in *Ligeti in Conversation* (London: Eulenburg, 1983), 15.

EXAMPLE 13 *Musica ricercata*, no. X, bb. 109–112
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insistierend, trotzig / insistent, spiteful

wie verrückt / as if mad

sf sf cresc. sff sff sfff sfff

(oft wiederholen / repeat often)

Finally, clusters can result from superimpositions of voices or sound-fields that are chromatic themselves – a technique especially characteristic of the String Quartet no. 1. In this case, chromaticism can be observed horizontally and vertically at the same time. Ligeti already attempts to use chromatic sound-fields polyphonically here and there in *Musica ricercata* (for example, in no. X, bars 94–100). Moreover, at the end of ‘Omaggio’ he even produces a densely layered chromatic structure (see no. XI, bars 53–57).

4. Other aspects of the compositional technique

From a technical point of view, Ligeti undoubtedly took the most decisive and radical steps in *Musica ricercata* in the field of pitch organisation. The work, however, bears witness to a considerable progress and renewal of many other features of Ligeti’s music, such as rhythm, time, polyphony, as well as the use of dynamics, timbre, and registers. The latter is, of course, connected with the former: restrictions on the pitch content direct the composer’s attention to other parameters of music.

On the whole, *Musica ricercata* is characterized by still conventional metrical patterns and periodic phrase structure. However, there are also to be found certain compositional procedures, with the help of which Ligeti seems to attempt to dissolve metrical frames. One is that in piece no. VII the two hands play, as already mentioned, in different tempi. Another way of dispensing with conceiving music within the framework of time measurement can be seen at the end of ‘Béla Bartók in memoriam’. Despite the $\frac{4}{4}$ time signature, it is not the rhythmic figures that are important here but the colours of trills accelerating and slowing down (Ex. 14).

In the first two pieces, too, there are sections which, despite being notated in bars, are independent of metrical relationship. From bar 18 on in the second piece, a new pitch (G) appears and begins to be repeated faster and faster. The rhyth-

Another technique concerning the problem of rhythm and metre is the ostinato, which is frequently applied in both *Musica ricercata* and the String Quartet. In connection with the former, Ligeti speaks about the influence of Stravinsky,⁵¹ which is perhaps the most apparent in the different ostinato passages. Ligeti, like Stravinsky, has a predilection for ostinati in which the recurring section is shorter or longer than one bar, or collides some other way with the non-ostinato layers. The left-hand ostinato in the third piece comprising $\frac{3}{4}$ -time sections is a good example (bars 6–11, see Ex. 2). (Note that this ostinato is already present in the early form of this piece, the first movement of the Sonatina.) Another typical case is that ostinato layers of different lengths or speeds are superimposed (see Ex. 12) – a technique already applied by Ligeti in his *Polifon etűd* [Polyphonic Study] for four hands (1943). Rhythmic ostinati, i.e. a longer section built upon a single rhythmic pattern, are also frequent. This is the case in both *Musica ricercata* and the String Quartet, in their sections written in *giusto syllabique* rhythm. Ostinati often go with static harmonization, as pieces IV and VIII of *Musica ricercata* show.

As observed in the recomposition of the first movement of the Sonatina, musical space was becoming an important factor of form-building. The eighth and eleventh pieces of *Musica ricercata* show especially clearly that Ligeti consciously strives to exploit the compass of the piano. In both movements, the variety of the music is mostly due to contrasts of different registers. In ‘Omaggio a Girolamo Frescobaldi’, the employment of registers parallels the fan-shape of the fugue subject: the compass gradually broadens out from a^1 to A^2 downwards and a^4 upwards. By the time the limits of the compass have been reached at the end of the piece, every single pitch within this 7-octave range had already appeared – similarly to the fugue subject that had filled out *one* octave chromatically. In pieces in which only a few pitches are used (such as nos. I and II) the systematic exploitation of registers naturally plays an important role, too.

The same is true of contrasts of dynamics and timbre. The lamento melody of the second piece consisting of only two pitch classes, for example, is played for the first time in the c^1 – c^2 octave, *f*, *senza pedal*, and then, for the second time, at both ends of the keyboard, in four octaves, *pp*, *una corda*, *con pedal*. Such extraordinary dynamic contrasts are typical of *Musica ricercata*, as well as for Ligeti’s whole oeuvre. A special timbre-effect in the piano set is the employment of harmonics (by pressing keys silently, see nos. I and V). Genuine sound-effects, however, are much more characteristic of String Quartet no. 1 than of *Musica ricercata*. In the former, percussion-like *pizzicato*-effects and the frequent use of *sul ponticello*, *sul tasto* and *con sordino* sounds show the influence of Bartók’s writing for strings. A unique dazzling effect of the *Prestissimo* section (bars 781–1030), already mentioned, is partly due to the quick changes of these different special effects in *pp*, *ppp*. Especially impressive is the triple echo-effect at the end of the *Presto* section: Two

51. Griffiths, *Ligeti*, 18.

EXAMPLE 15 String Quartet no. 1, bb. 505–511
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The musical score consists of four staves. The first staff (Violin I) starts with a *ff* dynamic and an accent (>). The second staff (Violin II) has a *[con sord.]* marking and a *p* dynamic. The third staff (Viola) has a *p* dynamic and a *sul pont.* marking. The fourth staff (Cello/Double Bass) starts with a *ff* dynamic and an accent (>), followed by a *pp* dynamic and a *sul pont.* marking. The score includes various articulations like accents and breath marks (>). A *riten.* marking is present above the first staff. The score includes various articulations like accents and breath marks (>).

accented *ff* notes are echoed by muted *p* notes for the first time, then by muted *pp*, *sul pont.* ones, and finally by *ppp* harmonics – this time in augmentation (Ex. 15).

Many of Ligeti's compositions written during his years of study make it obvious that polyphony had always played an important part in his musical thinking.⁵² However, Ligeti's interest in contrapuntal techniques even increased during the fifties, when he taught counterpoint at the Academy of Music. This is well exemplified by *Musica ricercata* which not merely contains several pieces with imitational structure (like nos. III, V, and VII) but culminates in a large-scale fugue. One could still ask: How could conventional imitation techniques play a part in Ligeti's renewal of his musical style? The curious thing is that Ligeti dispenses with traditional counterpoint precisely in a *ricercar* which demonstrates almost all possible contrapuntal procedures in a rather pedantic manner.⁵³ It is in 'Omaggio a Girolamo Frescobaldi' that he starts to recognize a compositional problem in which he would be engaged throughout his whole life: that of complex, densely woven polyphony (see bb. 53–57).

My counterpoint studies under Veress and Farkas certainly played an important role in working out impenetrable textures of sound, as did studying Jeppesen, which Kodály made *de rigueur* for would-be composers. My keen interest in the Flemish composers, in Ockeghem in particular, was also a contributing factor. To this day, I am more interested in Ockeghem than in Palestrina, because his

52. See, for example, no. 1 of *Two Canons* ('Ha folyóvíz volnék', 1947), or *Invenció* (1948).

53. The ironical character of the piece, which is, as Ligeti says, a 'caricature of fugue', is due to this pedantry. Cf. Burde, *Ligeti*, 96.

music does not tend towards culminating points. Just as one voice approaches a climax another voice comes to counteract it, like waves in the sea. The unceasing continuity of Ockeghem's music, a progress without development, was one point of departure for me to think in terms of impenetrable textures of sound.⁵⁴

The way to 'impenetrable textures of sound', that is to the *micropolyphony* of *Apparitions* and *Atmosphères* goes from *Musica ricercata* via String Quartet no. 1 and the two choral pieces *Éjszaka* [Night] and *Reggel* [Morning] (1955). In the Quartet, there are often very dense imitations. Sometimes the polyphonic web is so dense that it cannot be perceived as a superimposition of different lines but as a single, impenetrable sound-field. In most cases not only the imitational texture is dense but the compass of the music, as well. Thus voices merge into one also because they move in the same register and rhythm. In this way dense polyphony (since it is not perceived as polyphony any longer) dissolves.

5. *Musica ricercata* in Ligeti's early career

When the strong oppression, the Zhdanovian–Stalinist oppression began, that is, in 1948 and 1949, one tried at first to find a free zone in it. About 1950, there was the worst phase of the dictatorship, in 1950 and 1951, when people disappeared and tens of thousands of people were deported from Budapest, then began this: We have no free zone, we must work quite clearly against [the system].⁵⁵

Ligeti's words (to 'work quite clearly against' the system) seem to describe properly the context of *Musica ricercata*. Between the years 1948 and 1950/51, Ligeti was eager to meet at least some of the requirements of the official musical circles by composing pieces 'that could yet be performed'. However, several of his compositions fell short of these requirements: even *Kantáta az iffúság ünnepe* was criticized for the 'clerical reactionism' of its Handelian fugue.⁵⁶ As already mentioned, from 1949 onwards Ligeti could appear on the Hungarian musical scene almost exclusively as a composer of folk song arrangements – not an ideal situation for an extraordinarily gifted young composer having just finished his studies. Besides being disappointed regarding his rather marginal position in public musical life, he might well have felt dissatisfaction with his own artistic output, as well. His new works might well have seemed weak to him com-

54. Ligeti to Péter Várnai, in *Ligeti in Conversation*, 26.

55. 'Als die große Unterdrückung, die Schdanow-Stalinsche Unterdrückung angefangen hat, also 1948, 1949, versuchte man erst einen Freiraum darin zu finden. Ungefähr 1950, das war die schlimmste Diktatur-Zeit, 1950, 1951, in der die Leute verschwanden und Zehntausende aus Budapest deportiert wurden, da fing es an: Wir haben keinen Freiraum, wir müssen ganz deutlich dagegen arbeiten.' Oehlschlägel, *Ja, ich war*, 94.

56. Burde, *Ligeti*, 40; Steinitz, *Ligeti*, 47.

pared to those written during his first years at the Academy, for example the Weöres Songs and *Capricci*. All these, together with his disappointment regarding the political situation, could easily have brought the response that he 'must have worked against the system'. Having composed *Musica ricercata* Ligeti decided to take part in official musical life with only a limited number of compositions (mainly with folk song arrangements) while reserving his 'real', more adventurous works 'for the desk drawer'.⁵⁷ In a sense, Ligeti chose an 'internal emigration', which made himself and his workshop free of any external control and stylistic dictates. About *Musica ricercata* Ligeti wrote in a letter to Nordwall in 1975: 'it was an attempt amidst the worst dictatorship to reach a musical clarity for myself'.⁵⁸ Giving up composing for the public, Ligeti made a boundary, within which he could be free. Free to experiment upon his musical material and even to play with it.⁵⁹

A later remark of the composer allows us to conclude that Ligeti's opposition to the political system and socialist realism exerted a decisive influence on the musical character of the results of these experiments:

In communist Hungary, dissonances were forbidden and minor seconds were not allowed because they were anti-socialist. I knew very little Schönberg, Berg or Webern and practically nothing of Cowell and Ives, but I had heard about clusters. They were forbidden, of course, as was 12-tone music. As a reaction to this I very naively decided to write music which was built on the forbidden minor seconds. I was an anti-harmonist because harmony, tonal harmony was permitted in communist Hungary and chose dissonances and clusters because these were forbidden.⁶⁰

Thus the importance of the 'madly' hammering *sfff* clusters at the end of piece X (Ex. 13), as well as the twelve-note structure of 'Omaggio' can hardly be overestimated. They can be seen as acts of defiance and provocation, and even as the means of Ligeti's self-liberation.

At this point we have to deal with the rather meaningful title of the series. On the one hand it refers to the genre *ricercar* in general and to Frescobaldi's 'Recercar cromaticho' in particular, as well as to the final piece of *Musica ricercata*, which is a *ricercar*. (In this latter case, the term is used for a severe, archaic kind

57. 'Writing for the desk drawer' does not have to be taken literally. The official list of Ligeti's works (1942–56) at the Association of Hungarian Musicians (Magyar Zeneművészek Szövetsége) included his 'secret' compositions as well, among them *Musica ricercata* and String Quartet no. 1. See Sallis, *Introduction*, 21–22.

58. '[...] es war ein Versuch, in der Zeit der schlimmsten Diktatur, musikalisch eine Klarheit – für mich selbst – zu erreichen'. Letter from Ligeti to Nordwall, dated 2 January 1975, quoted in Sallis, *Introduction*, 104.

59. Sallis draws a telling parallel between the 'light-hearted, flippant tone' of *Musica ricercata* and Ligeti's first writings published in 1948. This tone disappears from Ligeti's writings in 1949 as well as from his major compositions. Thus the re-establishment of this character in *Musica ricercata* may be a reason why 'he ascribed an almost therapeutic value to the composition' of the series. Sallis, *Introduction*, 103–104.

60. György Ligeti, 'Interview. György Ligeti in conversation with Toru Takemitsu', *Ligeti Letter*, Ligeti Collection Paul Sacher Foundation, 1 (1991), 8, quoted in Sallis, *Introduction*, 104.

of fugue.) On the other hand, as Sallis demonstrates, the concept of *ricercar*, in a broader sense, can be applied to the whole series. A parallel can be drawn between Ligeti's limiting of his compositional means (especially that of the pitch content) and the *con obbligo* writing of seventeenth-century composition, which was practised also by Frescobaldi. A chosen *obbligo* – for example, canon – by limiting the composer's possibilities, stimulated him to discover new compositional possibilities – just like Ligeti's own self-imposed obligation did for the whole series.⁶¹ But the title of *Musica ricercata*, besides its historical connotations, also refers to the act of searching. In these pieces Ligeti is searching his own compositional means and musical language – that is, to put it in another way, searching *himself* as a composer. In an era when 'music is created by the people', when no personal style can be accepted and only a common musical style, then this is actually an act of resistance in itself.

Now we can see clearer what Ligeti could have meant when writing about *Musica ricercata*: 'to build up a "new music" from nothing'. Rejection of everything that is given, ready-made, or stereotyped – in order to be free.⁶² It does not mean, of course, that Ligeti's music would not have any stylistical connections any more – *Musica ricercata* undoubtedly shows the influences of Bartók, Stravinsky, and Romanian folk music, to mention only a few. It is rather the freedom to choose – which could be called, in other words, artistic responsibility.

61. Sallis, *Introduction*, 108–109.

62. Cf. *Ligeti in Conversation*, 13, and László, *Ligeti a hidon*, 374.