

Georg Hajdu

From Mövenstraße to the Ligeti Center My career in the mirror of a great composer

The parental record collection

I come from an assimilated Hungarian-Jewish family who fled Hungary in 1956 and built a new life for themselves in Germany. My father is an emeritus professor of theoretical physics, my mother a teacher who discovered her love of painting in her later years. Her own mother was a pianist and lecturer at the Franz Liszt Academy in Budapest. A yearbook from 1954 lists her name, as well as those of Ligeti and Kurtág. I was born in Göttingen in 1960. My father wanted to study at the university where Werner Heisenberg worked and stayed there when the latter went to Munich.

I grew up in Cologne, where I lived until I was 30. My childhood and youth, also shaped by the music of Bartók, which my grandmother brought back on records on her annual visits from Hungary, has some astonishing parallels to what Ligeti describes in his essay *Between Science, Music and Politics*: For example, the fact that my brother, who was born when I was five years old, was allowed to have music lessons first, which I then had to fight for myself (only the instruments were different). Like Ligeti, I was also very interested in inorganic and organic chemistry (or biochemistry and genetics) in my youth and dreamed of a life between science and music. Fortunately, I was spared Ligeti's traumatic war and post-war experiences, but the suffering of my parents, whose fathers were murdered by soldiers of the Wehrmacht on long marches in Eastern Europe, lay (and to some extent still lie) like a veil on my soul, shaping my human interaction.

I gradually discovered music as a fixed point in my life, especially when I started learning classical guitar at the age of 14. But I had already had decisive experiences before that. When I heard the *Sacre du Printemps* for the first time in music lessons at the age of 12, I was stunned by this music for weeks. But the music of Beethoven, Chopin and Liszt, often performed by my grandmother, also made a great impression on me. Later, Messiaen, Schönberg, Berg and Scriabin were added to the list. A momentous moment occurred when I was 17 years old. I started composing at the age of 15 and gradually became interested in the music of the 20th century. In music lessons at the Kreuzgasse grammar school in Cologne, the names of the masters of New Music were mentioned here and there, and of course I was particularly familiar with the name Stockhausen, whom I had met in 1975 through his daughter Majella. My parents were also in contact with the Kagel family for a while. However, I had little interest in the music of these composers. But when, in the course of 1977, my hunger for the "offbeat" developed in the course of 1977, I found two LPs in my father's record collection that I wanted to listen to. One LP contained *Lontano*, the *Requiem* and *Continuum* by György Ligeti, the other *Match for 3 Players* and *Music for Renaissance Instruments* by Mauricio Kagel. When I heard *Lontano*, I was immediately blown away. I had never heard anything like it: the amoeba-like gliding of cluster sounds, which mutated into an octave and later into the beguiling tritone, were like a revelation to me. I listened spellbound to the end of the piece and enjoyed every moment, unlike with *Match*, which

sounded very convincing in the first few minutes, but then had lengths, as if Kagel had followed a formal idea that imposed its dramaturgy on the music. After this experience, I added Ligeti to my list of musical heroes and was also very proud of myself when, a year later, I pointed out the parallels between Ligeti's micropolyphony and the narrative technique in Nathalie Sarraute's *Tropismes* during a presentation in my French class.¹



Figure 1: Cover of the LP that started my love for Ligeti's music.

Mövenstrasse 3

It gradually became clear that my father was familiar with Ligeti, but for me, who had spent my youth playing guitar and field hockey and had even made it to goalkeeper of the national B-youth team, this was of secondary importance. But in the course of my biology studies, which followed graduating high-school in 1979, my desire to study with Ligeti in Hamburg grew ever stronger (I took my first composition lessons privately from 1977 with Pousseur's student Susan Krebs, who lived in Cologne, and later with Georg Kröll at the Cologne Conservatory parallel to my studies at university). At the beginning of 1984, I passed my oral exams and then only had to write a dissertation, which should not take longer than a year. So my father offered to write Ligeti a postcard and ask him to take a look at my works.

A few weeks later I received the answer: I was to meet at Mövenstraße 3 in Hamburg-Winterhude. I was delighted and nervous about my rather small number of pieces when I got on the train with my leather bag and traveled the 400 km from Cologne to Hamburg. Once there, Ligeti invited me into his apartment and immediately asked me to show him my things and, if necessary, to play them. I showed him the piano piece I had written in 1983

¹ Nathalie Sarraute: *Tropismes*, Les Éditions de Minuit, Paris 1957

LogaRhythms, which also contains a Ligeti-esque passage with chords spiraling ever upwards, as well as my sonata for violin and piano entitled *Verzweigungen*. And although he praised me and described me as talented, I could also hear reticence in what followed. He asked me about my motivation for leaving such a fascinating (and, in his opinion, safe) field as biology and suspected a romantic quest for the blue flower or gypsy life. He also thought I was already too old (at 24!) for a successful career as an instrumental composer and warned me against becoming a dime-a-dozen composers, but at the same time interjected that there were still many opportunities in the field of computer music that should be exploited, especially with a background in science like me. He then asked about my knowledge of music theory. Based on his assessment, he suggested that I should first study music theory with Diether de la Motte in Hanover for two years after my diploma and then apply for admission to Hamburg. On that occasion, we also exchanged a few words about my father's cousin, the Israeli composer André Hajdu, who had been friends with Ligeti since the 1950s. I left the apartment, but had to ring the doorbell again to collect my bag, which I had left lying around. Deep in thought, but still with the firm intention of becoming a composer, I took the train back to Cologne that same day.

Clarity Barlow

Ligeti's reference to computer music opened a barn door for me, as I had already met the Calcutta-born composer Klarenz Barlow, who had a lectureship in computer music at the Cologne University of Music, at a party in the early 1980s. It later turned out that Ligeti spoke very highly of him. Barlow loved to talk about his works, compositional techniques and algorithms and found me to be the ideal listener. I visited him regularly at his home at Merheimer Strasse 214 and on these occasions I learned some very private things, which were in good hands with me. However, my encounter with Barlow put me in a real dilemma. Should I continue my training in music theory with de la Motte and take the entrance exam in Hanover for this purpose, or instead learn more about computer music and enroll in the class of a composition professor teaching at the Cologne University of Music in order to gain access to Barlow's lessons?

I opted for the latter, knowing full well that I would be putting Ligeti's goodwill to the test, and began my composition studies with Johannes Fritsch in the fall of 1985.

The image displays a musical score excerpt from György Ligeti's *LogaRhythms* (1983). The score is written for piano and is organized into four systems of music. The first system, starting at measure 73, features a complex rhythmic pattern with eighth notes and rests, marked *8va*. The second system, starting at measure 79, continues the rhythmic complexity with various accidentals and rests. The third system, starting at measure 85, includes a *15ma* marking and a *fff* dynamic marking. The fourth system, starting at measure 91, shows a bass clef with a 16/16 time signature and a complex rhythmic pattern.

Figure 2: Excerpt from *LogaRhythms* (1983), the piano piece I showed Ligeti on my first visit to Hamburg.

The Ligeti class

The following year, the Darmstadt Summer Course took place. Feldman and Lachenmann, as well as numerous other greats of the avant-garde, were to be there. So I applied for a scholarship and went to Darmstadt in July 1986. Among the participants were Hans Peter Reutter and Sidney Corbett, both of whom had recently been accepted into the Ligeti class. Hans Peter was bubbling over with enthusiasm and told me so many details about studying in Hamburg that I felt as if I had been there myself. He also frequently referred to Manfred Stahnke, a former student of Ligeti's who

still kept in close contact with him and his class and continued to attend lessons regularly. Both Sid and Hans Peter visited me after the vacation courses in Cologne and in return invited me to Hamburg to attend Ligeti's main subject lessons. These always took place on Tuesdays at his home and often lasted from 3 p.m. until midnight. The students, alongside Sid and Hans Peter, Mari Takano, Hubertus Dreyer, Kiyoshi Furukawa, Xiaoyong Chen (who had come to Hamburg from Beijing) and later Altuğ Ünlü, as well as the guests, usually sat around the couch table and showed their works or talked about their recent experiences. There was also frequent talk about non-primary musical topics, such as bold architecture in Singapore or Hong Kong, or books like Douglas Hofstadter's book *Gödel, Escher, Bach*, which at the time was causing a furor.² I was a little tense, as I was supposed to be in Hanover with de la Motte, but Ligeti looked on benevolently. So I was also allowed to show a piece and played excerpts from my saxophone quintet *Voices of the Sirens*. When asked about the 18-minute length of the piece, Ligeti said, "then you must be a really good composer". I sensed his irony and later tried to shorten the piece substantially in a version for quartet. My string quartet *Notorisch-Motorisch*, whose "frozen" fourth movement seemed to please Ligeti, came off better. However, he criticized the fifth perpetuum mobile movement and played a passage from the second movement of Dmitri Shostakovich's Eighth Symphony, whose music the Polish composer Krzysztof Meyer had introduced him to, as a suggestion. On one of these occasions, I asked Ligeti to sign a copy of the first volume of the Piano Etudes.

Hajdu György
Szécsény
Ligeti György
Hamburg,
1989. június 4-én

Figure 3: Ligeti's signature on a copy of the first volume of his piano etudes with a personal dedication to the author.

Alongside Hans Peter Reutter and Sidney Corbett, Denys Bouliane, the French-Canadian composer and conductor living in Cologne at the time, acted as a kind of extended arm of Ligeti, with whom he had studied from 1980-85. I liked Denys, whose supposed arrogance and know-it-all attitude had turned almost all the new music creators in Cologne against him, for his quick-wittedness, his knowledge, his courage and his uncompromising attitude.

2 Douglas R. Hofstadter: *Gödel, Escher, Bach. An Eternal Golden Braid*, Basic Books, New York 1979

In 1987, unfortunately I can no longer remember the month, the almost unbelievable happened to me, for whom Ligeti had demigod status: He called me out of the blue and asked where I was staying; we had agreed that I would join his class after two years with Diether de la Motte. Now came the moment of truth: I had to confess to him that I had already invested a lot in my studies in Cologne and that my efforts to apply for a year's leave had been fruitless. I asked him if it would be okay if I continued to come to him as a guest student instead. He said yes, but his disappointment was clear to see. I later learned from Manfred that he found it increasingly difficult to fill his class in the last few years of his work in Hamburg.

As I had become more and more dissatisfied with Fritsch's lessons, which mainly consisted of chatting about something for three hours on Tuesday mornings, and very little about music, I switched to the class of Krzysztof Meyer, who was a musical prodigy. He had studied with Nadja Boulanger in Paris and got to know Shostakovich personally (as well as wrote two books about him). Meyer initiated an exchange concert with the Hamburg University of Music in 1988 and invited Ligeti to the concert. My piece *Sleeplessness* was to be performed in a version for trumpet and live electronics in the orchestra studio. Unfortunately, the jazz trumpet player I had in mind was unable to make it, so I had to call on a classical trumpet student who only arrived shortly before the concert without us being able to rehearse the piece - allegedly because his car broke down on the way. The electronics didn't work either, as the amplification was far too quiet. It was a total disaster for me, and I didn't dare meet Ligeti in the restaurant afterwards, which Meyer didn't understand, as I had always claimed to be acquainted with him. He then said to me in passing: "You need to revise your piece a little". It ended up in the waste bin.

However, I reworked the original version for flute, dedicated to Carin Levine, in the 1990s, and it became quite a decent piece, which was also played by other flutists and included by Carin in her book on flute techniques as an example of notation for live electronics.³

3 Carin Levine: *The Techniques of Flute Playing I*, Bärenreiter, Kassel 2019

8

port

w.t.

pp

37

38

Fl.

FX

mf

OFF

sfz

3

5

3

3

5

5

pp

39

40

Fl.

FX

$\text{♩} = 150$

16

p

mp

fp

sfz

OFF

41

42

Fl.

Smp

FX

$\text{♩} = 135$

f

meno f

mp cresc.

sim

3

3

3

5

43

44

Fl.

FX

$\text{♩} = 135$

p

ff

mf

poco rit.

OFF

SREV

Figure 4: Excerpt from *Sleeplessness*, a "fractal" composition for solo flute and electronics.

I went to Hamburg a few more times in the years leading up to Ligeti's retirement in 1989, but not as regularly as I would have liked. The ticket was at

around 200 DM very expensive for a student and there was no BahnCard or regular bus service. So I must have gone there a total of five times and always came home full of inspiration. It was on one of these return journeys that the idea for my computer music piece *Heptadecatonic Drops* in 17-tone temperament was born. This piece, which I generated algorithmically on my Atari ST 1024, came about in connection with my research into microtonal scales. Barlow had developed his theory of musiquants as part of his piano piece *Çoğluotobüsişletmesi*, which served me as a theoretical basis. So I called Ligeti's assistant Louise Duchesneau and asked if I could bring my computer to the next lesson. She then informed me by return of post that Ligeti would not want me to, since "as composers we write pieces, not papers". A statement with a double bottom, which I will not go into here. However, I must have taken a printout of my Harmonic Energy Curves with me, which I showed in the lesson, because I remember well that Ligeti referred to the significance of the octave and fifth, which he described as universal, *hard-wired* qualities in perception that played a role across cultures, while all other intervals were supposed to be learned qualities (a fact that could be derived from the 22 Shrutis, for example, where all 12 intervals except the fifth and octave existed in two tuning alternatives). Nevertheless, I objected that *moments of stability* also arise in the interval space for intervals other than the octave and fifth, a fact which cannot be ignored. An assertion that seems to be confirmed by the research of Carol Krumhansl and Richard Sethares. At a late hour, in conversation with Manfred, we returned to the question of universalisms. I was (and still am) of the opinion that the use of pentatonic tuning in numerous cultures, some of which have little contact with each other, is a consequence of the *emergent* property of musical, i.e. harmonic sound, and that its occurrence in different cultures is therefore almost inevitable. Manfred and Ligeti took the opposite position and accused me of underestimating the importance of cultural exchange (incidentally, a fundamental examination of constitutional anthropology and historical specificity can be found in the work of the trained chemist Erich Moritz von Hornbostel, who is regarded as one of the main representatives of ethnomusicology). I, on the other hand, gave myself air by using an analogy to point out the importance of ecological niches and, in particular, the convergent evolution of the thylacine and the wolf, which are only distantly related. My forceful objection was effective, but it led to me slipping out of the door as I was leaving, not sure whether I had crossed a red line, whereupon Ligeti stopped me and told me not to take the whole thing so seriously.

Handwritten musical score for two pianos, excerpt from *Heptadecatonic Drops* in 17-tone tuning. The score is written on three systems of staves. The first system includes measures 85 and 65. The second system includes measures 85 and 65. The third system includes measures 75 and 65. The score features complex rhythmic patterns, including triplets and sixteenth notes, and dynamic markings such as "piano ppp" and "subito ppp". The notation includes various accidentals and articulation marks.

Figure 5: Excerpt from *Heptadecatonic Drops* in 17-tone tuning. This score is for two pianos, each playing an excerpt from the 17 notes of the octave. The black keys of the upper piano (sharps) are tuned higher than those of the lower piano (flats).

Music and machine

In October 1988, the highly acclaimed festival Musik und Maschine with Nancarrow and Ligeti took place in Cologne's Philharmonie. In a program co-designed by Jürgen Hocker, it juxtaposed the two composers, who had worked on similar concepts of polymetrics and polytempo for many years without knowing about each other. And indeed, many of the *Studies* for Player Pianos, which Conlon Nancarrow had meticulously punched onto paper rolls, were fascinating and not only because they anticipated computer music in an enchanting way. At the evening concert, there was also a round table discussion with the two composers, in which Ligeti clearly showed more presence and verbally helped the shy Nancarrow out of a jam a few times. We (i.e. students from the Cologne University of Music) were all impressed by the event; Louise Duchesneau sat in the front row and clapped with a rapturous intensity. Nancarrow also became one of my heroes and my pieces *Two Cartoons* for Disklavier and *Riots* (an anagram of Trios) for saxophone, electric guitar and double bass, which used and developed the motifs of the cartoons, clearly refer to him. I saw Nancarrow again in November 1993 at the Other Minds Festival in San Francisco. The moderator Charles Amirkhanian pushed the microphone away from him during the round table discussion in order to protect him from himself, as he had fallen into a lament about how little justice had been done to his work. Even his late fame, to which Amirkhanian and Ligeti contributed greatly, did not help.

NeXT

One of the regular guests in the Ligeti class in the late 1980s was the English composer Benedict Mason. Ligeti was almost enchanted by this eccentric composer with the exuberant scores, whom I met again and again in various contexts until the early aughts. During one of his visits, the conversation turned to Steve Jobs, his new NeXT computer and the fact that the American cognitive scientist and computer musician David Wessel, whom Ligeti knew from the IRCAM context, had been appointed to the University of California at Berkeley to head a new computer music center (which would also use this new type of computer). In contrast to CCRMA at Stanford University, which had already been founded in the 1970s, the center called CNMAT was to focus on musical applications in real time: musical structures that are generated and/or processed at the moment they are heard. I pricked up my ears, because I had already decided to continue my education in computer music in the USA and was just looking for a suitable place. The fact that the name David Wessel was repeatedly mentioned in the Cologne context was further confirmation, and so in the academic year 1989/90 I applied to both the University of California, Berkeley and Stanford University for admission to their graduate programs.

This musical score excerpt, from the fifth movement of *Riots* (1993) by György Ligeti, is dedicated to György Ligeti. It consists of five systems of music, each with three staves (treble, middle, and bass clefs). The first system (measures 30-32) features a complex rhythmic structure with a 5/4 time signature and a 30/16 time signature. The second system (measures 33-35) includes dynamic markings such as *fp*, *f*, *ff*, and *f*, and tempo markings of $\text{♩} = 72$ and $\text{♩} = 128$. The third system (measures 36-38) continues the complex rhythmic patterns. The fourth system (measures 39-41) features a 3/2 time signature and a *mp* dynamic marking. The score is characterized by Ligeti's signature style of complex, layered rhythmic patterns and a rich harmonic palette.

Figure 6: Excerpt from the fifth movement of *Riots* (1993), dedicated to György Ligeti.

The Ligeti Symposium

The CCRMA was then directed by John Chowning, who had founded the center together with the pioneer of computer-assisted notation, Leland Smith. Chowning and numerous other people (including Jean-Claude Risset, Simha Arom, Gerhard Kubik, Peter H. Richter and Albrecht Schneider) were among the guests invited to the 1989 Ligeti Symposium at the Forum of the HfMT Hamburg, which was organized by Manfred Stahnke on the occasion of Ligeti's retirement.⁴ I went with the American guitarist Seth Josel, who was living in Cologne at the time and had studied at Yale University like Sidney Corbett, without arranging accommodation and was delighted that Louise Duchesneau offered to put us up in her office at Beim Schlump. I still remember the lectures by Chowning on the spatialization of sounds, by Risset on musical illusions (in addition to the Risset portamento I was already familiar with, also the illusion of an eternally accelerating pulse sequence), by Kubik on the music of the kingdom of Buganda (I successfully applied the knowledge I acquired there in my written aptitude test for Berkeley), by Arom on the music of the Pygmies, by Schneider on sensory consonance and by Richter on Mandelbrot and Julia sets. There was excitement the next day when the young Greek musicologist Ioannis Zannos presented his ethnomusicological research and Arom then mocked the fact that Zannos had relied too much on computer analysis in his transcriptions. Arom immediately had the younger generation against him, who naturally saw computers as the holy grail. I also took the microphone and said something meaningless. From today's perspective, I would say they were both right. Computer analyses are useful, but for a long time they lacked the ability to categorize the source material. It remains to be seen what artificial intelligence will one day be able to achieve in the case of musical transcriptions. However, we already suspect that this will not be as easy as some apologists are already proclaiming, which brings us back to the issue of (musical) universalism when it comes to AI training.

On the first evening, there was a wonderful concert with pieces by Ligeti and others. Denys Bouliane, who was happy to "help out" with the moderation of the symposium without being asked, announced *Das Affenlied*, sung by his partner Ingrid Schmithüsen, as a surprise (also for the organizers). Ligeti was so overwhelmed that he thanked them with a short piano improvisation in the style of Schubert. In the evening, we went to the Blockhaus, a steakhouse in the immediate vicinity of the university. We all sat at a long table and, in addition to Reinhard Flender and Krzysztof Meyer's first wife, a mathematician who was married to Richter, I also made the acquaintance of Lukas, the son of György and Vera Ligeti, with whom I am still in contact today. I made a somewhat unfortunate start to our conversation when I asked him if he was Ligeti's son, to which he replied: "No, I'm Ligeti too". He was right, and you can find out what it's like to be both Ligeti and a son in this article from the New York Times: <https://www.nytimes.com/2009/04/26/arts/music/26schw.html>.

California

1990 was to be a year full of new experiences for me. I had received a DAAD scholarship to study in the USA and was accepted at both American universities.

⁴ Peter Petersen (ed.): *For György Ligeti. The papers of the Ligeti Congress Hamburg 1988: "Pictures of a Music" from November 12 to 14, 1988*, Laaber-Verlag, Laaber 1991

I was admitted, not least thanks to a letter of recommendation I had received from Ligeti. Years later, I was allowed to look at my file at Berkeley and read the letter of recommendation. It consisted of two handwritten lines: "Georg Hajdu was never my student. I recommend him for studies at your university". Fortunately, I had never claimed to have studied with Ligeti, although he had of course been a great influence and had given me more than some of my "official" teachers.

In the same year, I won first prize in the Ensemble Modern composition competition sponsored by IBM and took part in a week-long workshop at the end of June together with Manfred Stahnke, Heiner Goebbels, Tod Machover and Jonathan Harvey, where my piece *Klangmoraste* was played. I had unconsciously taken the title from Ligeti, who spoke of "boggy" sounds in a CD booklet. However, I only realized this connection years later. I began my studies at Berkeley in August 1990. David Wessel and also my teacher and friend, the Jewish-Argentinean composition professor Jorge Liderman, who took his own life in 2008 after years of struggling with depression, were very curious about my experiences with Ligeti. The others, who had always stayed in the USA, were not. I also kept in touch with Chowning, as I was able to take classes at CCRMA through the Stanford-Berkeley exchange program.

I chose the second semester of Chowning's course in Common Lisp Music. Chowning was completely stunned that my primary desire was to experience him as a teacher. I had found a brilliant mentor in David Wessel, whose almost infinite knowledge was the perfect complement to what I had learned from Klarenz Barlow. As the two were also friends, our conversations sometimes touched on the more salacious side of Barlow's stay at IRCAM in the 1980s. CNMAT, where Benedict Mason had also taken up residence for a few weeks in early 1991, was housed in a Spanish villa that was much smaller than I had imagined. Nevertheless, it was a new hub for the computer music elite. I can hardly name an authoritative person who didn't visit it once in the five years I was in California, such as Lev Termen, who came by at the age of 96 with his daughter-in-law and impressed with his still-present intellectual acuity.

It must have been in the fall of 1992 when Chowning called me and told me that Ligeti was coming to California with Volker Banfield and that we wanted to organize something for him at UC Berkeley. I contacted Jorge Liderman, who set up a deal with Cal Performances, who were immediately willing to cover Banfield's concert fee. The events surrounding Ligeti unfolded for about a week between Palo Alto and Berkeley. He also came to CNMAT with a huge entourage, where we had prepared demonstrations of our technologies for him. I showed him a Max patch that I had programmed using a neural network. It was based on David Huron's theory of musical texture space and involved playing a melody that was transformed into a texture by the network. The user interface consisted of a square whose corners were defined by the textures homophony, monody, polyphony and heterophony. Movements within this square can be made with the mouse, which then become recognizable as corresponding changes to the texture. Ligeti also stopped at my station and I handed him the mouse of the Macintosh computer on which my demo was running. He looked at me in utter bewilderment and asked me what this thing was. It was only at that moment that I realized what a computer illiterate he was and that his dream of a computer music center in Hamburg (which I only found out about later, see below) did not necessarily express his personal affinity for these devices.

The image shows a page of a musical score for an ensemble, titled "Klangmoraste". The score is for measures 75 through 78. The instruments listed on the left are: Piccolo fl., Große Fl., Oboe, E. Horn, Es-Klar., Sopfklar. in B, Fagott, Kontrab., Trompete in B, Posaune, HBT, Klavier, VI, VII, Vla, and Vcl. The score is written in 4/4 time and features complex rhythmic patterns, including triplets and sixteenth notes. Dynamics range from piano (p) to fortissimo (ff). The score is written in a key signature of one sharp (F#).

Figure 7: Excerpt from *Klangmoraste*, a composition for ensemble, which can also be played in a 17-note version.

At the concert in the Hertz Hall, Volker Banfield played some of Ligeti's piano etudes from the first two volumes. He had expressly suggested Banfield, as the latter had suffered considerable injuries in a car accident and needed cheering up. However, Ligeti already preferred Pierre-Laurent Aimard at this point, which saddened Banfield greatly. A few days later there was a party at Stanford University in honor of Ligeti, to which I was also invited. I went with my girlfriend Jennifer, Jorge Liderman and David

Blumberg, a Germanist friend who wrote his dissertation on Hölderlin settings. It was celebrated in the CCRMA Ballroom in The Knoll. While I was talking to Jorge, I saw Ligeti approach my girlfriend and engage her in conversation. I was pleased that we had taken a liking to the same woman!

Michael McNabb published a report on Ligeti's visit to Stanford and Berkeley in the *Computer Music Journal* in 1994, which can be read here:

<https://web.archive.org/web/20151108152224/https://www.mcnabb.com/music/pubs/ligeti.html>

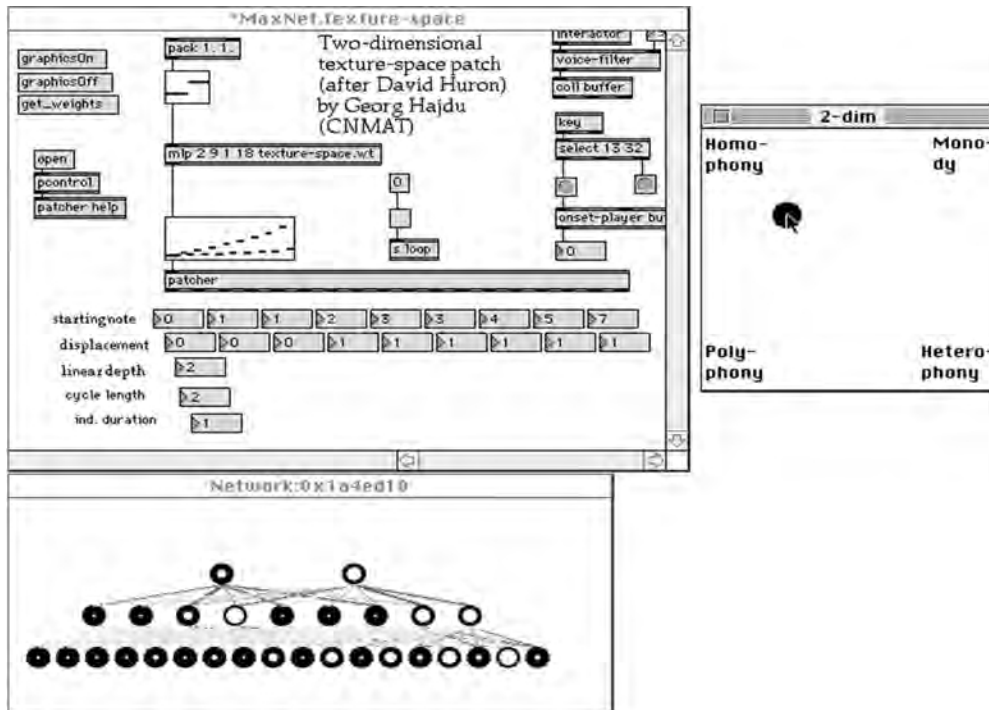


Figure 8: User interface of the Max patch that I showed Ligeti at CNMAT in 1993.

After graduating in 1994 with the first act of my opera *Der Sprung*, I returned to Germany the following year with the aforementioned partner (whom I had married in the meantime). After a five-year absence, it was time to reconnect with old contacts. I spent the first month in Cologne and also attended a concert with Pierre-Laurent Aimard at the Musikhochschule. There I met Ligeti, who was sitting one row above me and talking animatedly in French with a beautiful Vietnamese musicologist. He pointed down to me and said: "Son nom est aussi Georges". I felt flattered. We exchanged a few more words. That was the last time I saw him in person. My path led me to Münster in 1996, where I would teach music theory and aural training at a department of the Detmold University of Music and premiere my opera in 1999.

Final

Manfred, with whom I was now in regular contact, called me, it must have been in 2001, and said that Ligeti, who was still living in Hamburg, was not well and that I would like to give him a call. So I did. Unfortunately, our conversation broke off several times due to a loose connection, which unintentionally led to irritation. Perhaps it was also metaphorical for a relationship that couldn't develop the way I would have liked due to

various factors. Ligeti, who socialized with Nobel Prize winners and looked back on an exceptional career as a composer, needed people on an equal footing with him; people who were either mature musicians or who could satisfy his hunger for knowledge. At the time, I felt I was neither.

But there is another aspect that separated me from Ligeti, namely the **computer** - networked by the Internet - the Pandora's box that calls into question everything that Ligeti's generation stood for and what he affirms in the closing words addressed to young composers in his essay *Between Science, Music and Politics*:

"Try to get the best possible training in traditional subjects such as harmony and counterpoint, because they are the foundation of the craft of composition."⁵

But Ligeti would not be Ligeti if he had not also reflected on this dilemma, for elsewhere, in the 1991 essay entitled *Rhapsodic Thoughts on Music, especially on my own compositions*, he writes: "As soon as real artistic personalities have mastered the necessary technology, a valid 'artificial art' will also emerge - whether computer music or 'artificial music' will then still have something in common with the valid formations according to previous compositional norms remains to be seen."⁶

Hardly anyone has captured this paradigm shift in literature better than the American literature professor and novelist Richard Powers. In his novel *Orfeo*⁷ he portrays the life of the fictional Peter Els, who, after a career change from chemist to composer (sic!), begins to experiment with bacteria into which he injects his scores translated into DNA. The bacteria as copying machines are paradigmatic of the artistic process in the post-digital age, which is based on sharing, copy-and-pasting and the dissolution of individual authorship. Is it ironic that the very medium that Ligeti championed in the early 1970s ultimately turns the traditional self-image of a composer on its head, even dissolving it? Did I intuitively sense this when I turned down Ligeti's generous offer to study historical music theory with de la Motte and then become his student?

Or was it just the fear of losing myself in my great role model (either through symbiosis or rebellion) and not maturing artistically? Looking back, my affinity with Ligeti had a lot to do with self-searching. He seemed to me like a mirror of what I myself wanted to become: a great composer, an entertainer who could speak about his music to an audience in numerous languages, and a respected figure who had produced a number of illustrious students. The fact that, like me, he was of Hungarian-Jewish descent, was interested in the natural sciences and had even studied mathematics for a short time naturally contributed to this identification, as did the fact that, like my family, he had fled Hungary for the West in 1956.

We have a common basic experience: assimilated Hungarian Jews, persecuted twice, first by the Nazis and Arrow Crossers, who robbed us of our friends, family members and property, and then, after 1945, by the Hungarian Communists, who blacklisted us as anti-system bourgeois. Then came the West, which seemed to us to be the only way out, but which we were skeptical of because of its double standards and

5 György Ligeti: *Gesammelte Schriften*, (ed.) Monika Lichtenfeld, vol. 2, Schott, Mainz 2007, 50

6 György Ligeti: *Writings*, op. cit., 132

7 Richard Powers: *Orfeo*, W. W. Norton & Company, New York 2014

short-sightedness. In a conversation with Vera Ligeti in August 2022, I talked about Jewish identity and the fact that our families had kept their distance from the Jewish communities. The fear that stemmed from an experience of extermination was too great for us to actively approach Judaism. We replaced spirituality with intellectual rigor and artistry. Nevertheless, especially for the second generation of Holocaust survivors, who did not experience the persecution themselves and were only taught about it by their parents and those around them, the question arises as to who we actually are and where we belong. I have formulated a few personal ideas on this in my article "Composition as Construction of Cultural Identity" (<http://georghajdu.de/wp-content/uploads/CompositionAsConstructionOfCulturalIdentity.pdf>) and also referred to Ligeti.

Hamburg - the path to the LIGETI center

It was not only since my first visit to Ligeti in 1984 that I had felt the desire to combine science and composition. My encounters with Barlow as well as my still rather incomplete knowledge of the work of Iannis Xenakis and my work at IRCAM, founded by Pierre Boulez, showed me that there was a path that others had already taken before me. When I was appointed Professor of Multimedia Composition at the Hochschule für Musik und Theater in 2002, Ligeti had already moved away from Hamburg and his legacy was being cultivated by Manfred Stahnke and others. Peter Michael Hamel, C4 Professor of Composition until 2012, saw himself as his successor and also adopted some of his concerns. In April 2002, when I found a windowless room in the ELA wing of the HfMT to pursue my activities, Hamel came by one morning and told me about the "eyesore" of the university, which had not fulfilled two of the wishes that Ligeti had formulated during his appointment negotiations: First, for an ensemble for contemporary music under the direction of Ligeti's friend Friedrich Cerha, and second, for the founding of a computer music center, the planning of which John Chowning, John Grey and James (Andy) Moorer pushed very far in the wake of Ligeti's appointment before it was finally canceled. The aim was to right the wrongs that had been done. Although it was not as if there had been no computer music activities at the HfMT - Manfred Stahnke, Kiyoshi Furukawa and others ran the Institute for Microtonal, Electronic and Computer Music (IMEC) quite successfully for a while - after Furukawa's appointment to the *Tokyo National University of Fine Arts and Music*, there was a lack of someone who could program computers and was not just a user. I filled the gap and founded the first German master's program for multimedia composition in 2004, from which some very successful graduates have emerged, as well as the Center for Microtonal Music and Multimedia (ZM4) in 2010, which is committed to promoting music in the Bohlen-Pierce tuning, among other things. Together with my colleague, the musicologist Beatrix Borchard, I was also able to realize my vision of a doctoral course in artistic research; incidentally, the first of its kind at a German music and theater university. The history of the IMEC and the ZM4 can be found in the volume *13 Years of the Master's Program in Multimedia Composition*⁸ which I published in 2017 and which can be viewed at this link: <https://tinyurl.com/3b7w2zyt>

I kept in touch with John Chowning and met him at the funeral service in honor of David Wessels, who died suddenly of a massive heart attack on October 13, 2014. He expressed the wish to come to Hamburg again. So I invited him as

⁸ Georg Hajdu (ed.): 13 years of the Master's program in Multimedia Composition, HfMT

(ZM4), Hamburg 2017

keynote speaker to the Sound and Music Computing Conference, which we organized in late summer 2016. At the same time, we took the opportunity to award him an honorary doctorate from the HfMT for his work in general and for his efforts in Hamburg at the time. His keynote speech was entitled *The Early Years of Computer Music and Ligeti's Dream - Stanford, Paris, CCRMA, Hamburg*, in which he also discussed the details of the plans for the Hamburg Computer Music Center.

After the conference, he offered to write me a letter of support should the need arise. I finally accepted his offer when it came to applying for the Ligeti center.

Figure 9: Copy of the letter from John Chowning on the occasion of the application for the Ligeti Center

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JOHN M. CHOWNING
OSGOOD HOOKER PROFESSOR IN FINE ARTS EMERITUS
CENTER FOR COMPUTER RESEARCH IN MUSIC AND ACOUSTICS

DEPARTMENT OF MUSIC

June 21, 2021

STATEMENT OF SUPPORT

In the late 1970s, György Ligeti asked James (Andy) Moorer and me to join him in his effort to build an interdisciplinary research center at the Hochschule für Musik supported by the Computer Science Department at the University of Hamburg. Much has changed, of course, in the subsequent decades, with powerful, inexpensive computer systems and, every bit as important, the education of composers/scientists. Therefore, I very much welcome Prof. Georg Hajdu's initiative to establish the Ligeti Center at the Hamburg University of Music and Drama. With his model background in music, science, and technology, Hajdu seems to be the ideal person to start and successfully realize such an undertaking in the name of this outstanding composer and friend whose artistic contributions epitomize the notion of research in and for art.

We at Stanford University wish him good fortune in this endeavor. We pledge to offer our expertise and experience in supporting this project, which will be a boon to the HfMT, the city of Hamburg, and the German cultural landscape.

John M. Chowning
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Center for Computer Research in Music and Acoustics



As certain areas at the HfMT are chronically underfunded, I am always looking for third-party funding. In 2007, we were part of a multi-year European Culture 2007 project on networked and telematic music, and in 2017 we were able to raise a considerable amount of funding for the Stage_2.0 project as part of the Innovative University initiative of the federal and state governments. As we were unable to consolidate our activities, we had to try our luck with the Innovative University a second time and successfully applied for funding together with the University of Applied Sciences, the Technical University and the University Hospital to establish a center for research, transfer and further education in the Harburg district.

In the search for a suitable name that would also work as an acronym, we came across Ligeti, who would have turned 100 in 2023, the year the center was founded, and who made the establishment of a center for computer music in Hamburg a condition of his appointment negotiations 50 years prior. His name also forms an acronym standing for Laboratories for Innovation and General-audience Edification through the Transfer of Ideas.

In his *Rhapsodic Thoughts*, Ligeti also talks about the niche of "serious" (one might add contemporary or experimental) music and thus also of multimedia composition. He compares it to a soap bubble, infinitely thin, but also infinitely expanded. To stay with the image, this bubble in the 21st century needs proximity to cognitive research and digital technologies in addition to the human sciences in order to legitimize itself socially and not be cut off from funding and thus burst.

Christine Preuschl, coordinator of the ligeti center, and I wrote an article in the HfMT's newspaper ZWOELF, which I would like to insert here in abbreviated form in order to provide more details about the center's work:

The ligeti center

A new place for the arts, science and technology

On May 5, 2022, the HfMT received the good news that its application to establish a ligeti center was successful in the second round of the federal-state Innovative University Initiative. Not only do we now belong to the illustrious circle of universities that will receive funding for a second time, but together with HAW, TUHH and UKE, we can finally realize the long-cherished wish of one of our most famous former professors, the composer György Ligeti (1923-2006). As luck would have it, the ligeti center will begin its work on his 100th birthday in 2023, and it will also be the 50th anniversary of the appointment negotiations that Ligeti conducted with the HfMT in 1973, during which he was promised the establishment of a center. So the stars are aligned, but then as now we are living in turbulent times. We suspect analogous reasons that led to the abandonment of the plans at the time: Back in the early 1970s, György Ligeti, who was very impressed by Chowning's research work, wanted to join forces with him to found a large research center for computer music in Hamburg. This center could have been established before IRCAM, but a political change abruptly ended the project, which was already well advanced. This was probably largely caused by the oil crisis in 1973, which forced politicians in Germany to put important cultural and scientific projects on ice or to abandon them altogether. This time, however, we have succeeded in overcoming this shortcoming with a contemporary concept.

Essential for Ligeti was the idea of transdisciplinarity, the networking of disciplines across the boundaries of music, fine arts, humanities and natural sciences, medicine and technology in a social context. As part of the funding as an innovative university, the Ligeti center will support twelve cross-university sub-projects for a period of five years from 2023 to 2027, which will form two clusters: the Cluster for Music and Health and the Cluster for the Transfer of Ideas, Knowledge and Technology. Especially against the backdrop of the Covid-19 pandemic, the first cluster's field of work appears to be of particular social relevance and we would also like to make our contribution to countering the challenges of our time with the health-promoting effects of music and sound. The second cluster for the transfer of ideas, knowledge and technology brings together various laboratories in which cross-university and transdisciplinary collaboration takes place in working groups. The Artistic Research Lab, the XR Lab, the Innovation Lab, the Haptic Lab and the Sustainable Theater Lab focus on a wide range of topics. The central core element of the Ligeti center will be a flexible production studio, the Production Lab, where members of both clusters as well as guest artists and scientists will experiment with future technologies and enter into dialogue with the public.

A meeting in Hamburg in 1984 or one that took place in the gray post-war years in Hungary took a perhaps (not entirely) surprising turn: As little as one is born to found transdisciplinary centers, the various influences that I have been exposed to over the last 40 years, which have always pointed in the same direction, acted as an amplifier, which in the end almost suggested this step; ultimately with the aim of paying homage to the life, work and vision of an extraordinary person: György Ligeti.⁹

9 On the subject of the "Ligeti Institute":

Hajo Hinrichs (ed.): *Daten, Fakten, Möglichkeiten, Probleme, vorgelegt von der Hochschule für Musik und Darstellende Kunst Hamburg aus Anlass der Eröffnung des ersten Bauabschnitts der neuen Hochschule am 22. November 1973*, Veröff. der Hochschule für Musik und Darstellende Kunst Hamburg, Hamburg 1973 (with contributions by Hajo Hinrichs, Karl Grebe, György Ligeti etc.).

See also the interview with Werner Krützfeldt, composer of electronic music and professor of music theory at the HfMT, who was instrumental in initiating Ligeti's call to Hamburg:

György Ligeti on the possibilities and opportunities of computer music. Conversation with Werner Krützfeldt on August 15, 1986 in Hamburg, in: *Intersections, Signals, Perspectives*. Commemorative publication for the opening of the new building of the Hamburg University of Music and Performing Arts, November 1986, 60-61

On the subject of Ligeti and computer music, see also the excerpts from Ligeti's letters to the stage designer (e.g. for *Le Grand Macabre* Ligeti's) and painter Aliutė Mečys, written in Stanford in 1972, where his plans for Hamburg are also mentioned, published in 2022 in:

Wolfgang Marx (ed.): *"I Don't Belong Anywhere". György Ligeti at 100*, Brepols, Turnhout 2022 therein: Vita Gruodyté: Letters from Stanford: György Ligeti to Aliutė Mečys, 222