

**Music at MIT Oral History Project**

**Karl Kornacker**

*Interviewed*

*by*

**Forrest Larson**

**July 11, 2002**

**Interview no. 1**

**Massachusetts Institute of Technology  
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# Table of Contents

1.	CURRENT SCIENTIFIC WORK [00:00:36] .....	1
	<i>Ohio State University, division of Sensory Biophysics—functional genomics—sensory biophysics—Leo E. Lipetz—Zenon Pylyshyn—mind-body problem—cognitive physiology—non-monotonic reasoning</i>	
2.	CHILDHOOD FORMATIVE MUSICAL EXPERIENCES [00:11:21] .....	3
	<i>Growing up in Chicago—clarinet and cello lessons—Hungarian father’s musical influence—cimbalom—Béla Babai, gypsy violinist—“passionate virtuosity”—cello lessons with János Starker—technique vs. musicianship—studies with Harry Wagman—brother Nicholas Kornacker—Philip Farkas (Chicago Symphony)—hierarchy of musical expression &amp; relationships</i>	
3.	PRE-COLLEGE INTERESTS IN MUSIC & SCIENCE [00:26:10] .....	7
	<i>Local orchestral, chamber music groups, string quartets—choosing to attend MIT—University of Chicago—career counseling &amp; beginnings of biophysics—childhood interest in theory, consciousness, and natural laws</i>	
4.	ACADEMIC STUDIES AND MUSICAL EXPERIENCES AT MIT [00:35:23] .....	9
	<i>Double-majoring in physics and biology—chamber music at MIT: Donald L. Smith, Harry C. Gatos, Roy Sun, Dennis E. Johnson, Jerome [Gerry] Weingart—playing a chamber music recital at Kresge Auditorium</i>	
5.	MUSICAL HIGHLIGHTS PRIOR TO MIT [00:41:51] .....	11
	<i>University of Illinois summer music camp—Robert Lam—Roosevelt College [University] in Chicago—Schubert B-flat Trio—János Starker—Zoltán Kodály—Dvořák Cello Concerto—Eccles’ Sonata—mastering technique and fundamentals</i>	
6.	THOMAS KORNACKER, VIOLINIST [00:54:11] .....	15
	<i>University of Indiana—Maki Itoi—Josef Gingold—St. Paul Chamber Orchestra—Orlando Symphony—New York Ballet pit orchestra—Mostly Mozart Festival—Dennis Russell Davies</i>	
7.	DEVELOPING LOVE FOR CHAMBER MUSIC [00:58:51] .....	16
	<i>Chamber music vs. Orchestra playing—cello’s role in the string quartet—playing chamber music with brother Thomas and members from St. Paul Chamber Orchestra—professional focus for amateur playing—George Wolfe—Interlochen Center for the Arts—Janáček String Quartet—Brahms String Quartet</i>	
8.	ARTISTIC & MUSICAL CLIMATE AT MIT [01:08:01] .....	18
	<i>John Corley—MIT Symphony Orchestra—János Starker compliment—playing Third Bach Brandenburg Concerto for John Corley—Klaus Liepmann as conductor—cultural activity in Boston area—playing for Samuel H. Mayes—Mihaly Virizlay and techniques for expressing musical thoughts</i>	
9.	FURTHER MUSICAL EXPERIENCES AT MIT [01:23:26] .....	24
	<i>Klaus Liepmann as teacher and conductor—Gregory Tucker; Francis E. Low—Brahms Clarinet Trio—Ernst Levy—Albert Wray—Gerald Litton—Dennis Johnson—Roy Sun—Andrew Kazdin</i>	

## Table of Contents, cont.

10. MIT SYMPHONY ORCHESTRA CONDUCTORS KLAUS LIEPMANN AND JOHN CORLEY [01:30:35].....	28
<i>Liepmann's approach to conducting—Liepmann's expectations for MIT Orchestra—Aaron Copland's "Canticle of Freedom" —Kresge Auditorium dedication—Liepmann on musicianship—MIT Choral Society—performing Boccherini's Cello Concerto—John Corley as conductor—Gerald Litton—Carlos Prieto</i>	

## Contributors

**Karl Kornacker** (b. 1937) received two degrees from MIT, S.B. in physics, 1958 and a PhD in biology, 1962. He studied with noted cellist Janos Starker. While at MIT, he played in the Orchestra under conductors Klaus Liepmann and John Corley, appearing twice as concerto soloist, and was very active in chamber music. During his years at Ohio State University, Division of Biophysics, he continued playing chamber music and also had played with the Columbus Pro Music Chamber Orchestra. His scientific interests span biophysics, cognitive physiology, statistics and computer science.

**Forrest Larson**, Library Assistant at the Lewis Music Library, has received training workshops in oral history methodology and practice at Simmons College and by the Society of American Archivists, and is a member of the Oral History Association. He is also an active composer and violist.

Interview conducted by Forrest Larson on July 11, 2002, in the MIT Lewis Music Library. Duration of the audio recording is 1:55:32. First of two interviews. Other interview: July 11, 2002.

## Music at MIT Oral History Project

The Lewis Music Library's *Music at MIT Oral History Project* was established in 1999 to document the history of music at MIT. For over 100 years, music has been a vibrant part of the culture at the Massachusetts Institute of Technology. This history covers a wide variety of genres, including orchestral, chamber, and choral musical groups, as well as jazz, musical theater, popular and world music. Establishment of a formal music program in 1947 met the growing needs for professional leadership in many of the performing groups. Shortly thereafter, an academic course curriculum within the Division of Humanities was created. Over the years, the music faculty and alumni have included many distinguished performers, composers, and scholars.

Through in-depth recorded audio interviews with current and retired MIT music faculty, staff, former students, and visiting artists, the *Music at MIT Oral History Project* is preserving this valuable legacy for the historical record. These individuals provide a wealth of information about MIT. Furthermore, their professional lives and activities are often historically important to the world at large. Audio recordings of all interviews are available in the MIT Lewis Music Library.



## 1. Current Work [00:00:36]

FORREST LARSON: It's an honor to be with Karl Kornacker this afternoon. It's July 11, 2002 at his home in Columbus, Ohio. He's a graduate of MIT with a Bachelor of Science in physics in 1958. And in 1962, he received his PhD in biology from MIT.

Thank you very much for your time today. Currently, you're a professor at Ohio State University in a division of Sensory Biophysics. Can you briefly describe your work there?

KARL KORNACKER: Uh. [LAUGHS]

FL: I know. It's an unfair question. There can be a lot of broad questions that, uh—

KK: My work, currently, is mainly in the area of functional genomics, working with researchers in the Comprehensive Cancer Center making use of data analysis methods that I've developed over the past few years. The methods were inspired by problems that I was working on in sensory biophysics but have taken on a life of their own and are now being applied to gene expression data.

Also, I happen to be teaching a course in Introductory Statistics through the Department of Molecular Genetics. So my current work has very little to do with sensory biophysics directly. Um, and in fact, my division through the history at OSU is now really just an alias for me. I'm the only one in the division.

There used to be a Department of Biophysics at Ohio State. That's what I originally came to with Leo [E.] Lipetz. And that department gradually got reduced through various political processes and became a division. Then it became the Division of Sensory Biophysics, instead of just biophysics in general.

Various people transferred to other departments. But I was non-transferable, because my work was too individualistic, let's say. So I have remained. And I'm it. And basically what I do is what the division does. And we are now putting all of our resources onto the functional genomics problem.

FL: And you've also been involved with some innovative computer science and research apart from your work from OSU. But it's obviously tied in integrally. Can you just talk a little bit about that?

KK: The final project that I was working on in sensory biophysics had to do with the way in which perception interfaces between sensation where sensation is understood as a physiological process involving cause and effect explanations. And the perceptual interface then connects from sensation to cognition where cognition is understood as symbol processing according to rules. Clearly, when we do mental arithmetic, we are processing symbols according to rules. When we feel light touch on our fingertips, that's sensation.

Somehow, perception is able to interface between the world of cause and effect and sensation and the world of symbol manipulation and cognition. I got interested in the problem of just how that works in fact in the brain. And what would we be looking for in the brain, if we were

tracking in from sensation and getting to that interface region where then we're going to cross over into cognition? What happens? What goes on?

I was very impressed by what I read by Zenon Pylyshyn on this problem. He emphasized that this is a great unsolved problem. And it's really another way of talking about the mind-brain problem. I'm sorry, the mind-body problem.

Pylyshyn emphasized that causal explanations are self-contained and don't make reference to pure symbol manipulating rules. And similarly, like mathematical theorems in pure mathematics, are explained in the world of symbol processing and don't make reference to physical causality. So he emphasized that, if you're going to understand how you connect from one of these worlds to the other of these worlds, you're going to have a hard time coming up with an explanatory framework, because it's going to have to connect these two different unconnected worlds of explanation. How do you do that?

Well, I got really interested in that problem. So I started working in what I called cognitive physiology. And I started looking for a problem in cognitive physiology that would bring all these issues together and present something, you know, for a solution.

And I started looking at language acquisition in children where, clearly, there is a physiological development aspect to it and there's clearly a cognitive aspect to it. And I started looking for a focal point. And I gradually started reading about learning grammatical rules and how children tend to over-generalize to begin with and then, somehow, mysteriously, start learning about exceptions.

And I found out that this is dealt with in artificial intelligence through a subject called non-monotonic reasoning where the reasoning involves rules that have exceptions. So since I was interested in bringing that understanding of non-monotonic reasoning to bear on this issue of children acquiring language, I decided I'd look up the answer to non-monotonic reasoning in a book on artificial intelligence.

And I discovered that this was a great unsolved problem in artificial intelligence. And I thought, "Okay, that's mine. I'm going to solve that one." And what I had in mind by solving it was reduce it to a computer algorithm.

What I saw immediately was that, if it's not understood how that works, then you can't program it. If you can't program it, you can't have computers learning to deal with real world information. So I saw a practical importance to reducing non-monotonic reasoning to an algorithm. And I just took off with that one.

And early on in my work on it, I felt like I saw a way to crack the problem. And years later now—I've been at this for a decade—I believe that I saw correctly how to crack the problem, because I have software that works. It learns from a database and it reasons based on what it's learned. And it gets it right.

So it turns out that the approach that I developed is directly applicable to the analysis of gene expression data where one of the things people want to find out about is what's called co-expression groups of genes where gene activity in certain groups will rise and fall together, due to co-regulation.



And these co-expression groups are really the functional units of your genome. Many, many discoveries are awaiting us using the currently available technology for tracking the expression of thousands of genes simultaneously. So but the problem then is to automatically, with a computer, extract the core expression patterns.

The technology that I developed over the past decade for non-monotonic reasoning turns out to be directly applicable to this problem. Uh, so now with the opportunity to work with data being produced in the Comprehensive Cancer Center, I've been able to make some progress and developing useful results.

FL: Wish we had more time to go into that. And maybe, at some other point we can. But obviously, we're here mostly to talk about music at MIT and your work even subsequent to MIT in music.

So, with this distinguished background in science, you've had some notable accomplishments while at MIT and professionally afterwards playing the cello, including when you were—when you came to Columbus playing in the chamber orchestra called [Columbus] ProMusica.

## 2. Childhood formative musical experiences [00:11:21]

FL: So, going back a few years, can you tell me when where you grew up and, if you don't mind, what year you were born?

[LAUGHTER]

KK: I was born in 1937 in Chicago and grew up in Chicago. Most of the time in Chicago, I was on the North side near the lake. And I started playing cello when I was 10. And it was, more or less, imposed on me. I wasn't consulted with this.

And prior to playing cello, I was playing clarinet. Again, that was imposed on me. It was, like, the thing to do. I was a child who was given music lessons. But the clarinet what driving my mother crazy. So she, uh—

[LAUGHTER]

KK: —decided to change me over to the mellow cello. So I started playing cello.

FL: So how long did you play clarinet?

KK: I can't remember. About a year and a half maybe.

FL: Were your parents musicians at all?

KK: My parents both loved music in a very extended way. My father was born in Budapest. His mother played cimbalom, which is a very distinctive Hungarian instrument. She played the cimbalom in the cafes, which was a typical kind of activity. And she also taught cimbalom.

And my father's father was, I believe, Austrian or German. That's where the Kornacker name comes from. And my father developed a deep love—no doubt through his mother—of Hungarian

music, which he knew thoroughly. And I could see that he also loved gypsy performance of Hungarian music.

And when he would take me to a gypsy restaurant in Chicago, The Blue Danube where Béla Babai played, who's a phenomenal gypsy violinist, he could sing a few bars, you know, to them. And they would play, you know, Hungarian folk songs that he knew and loved you know, in gypsy style and things. He was just delighted with that.

So I heard a lot of gypsy violin... played by Béla Babai. Uh, I've been told that Jascha Heifetz came to [LAUGHS] witness Babai's flying staccato. It was just phenomenal.

But you know, the gypsy violin approach is a, you know, it tears your heart out. And it's—I think of it as manic-depressive music. It will go from the absolute deepest depths of depression to the absolute highest extremes of mania.

And they really pull it off. They really do it. And they do it over and over and over again. The typical sequence of pieces in the violin, gypsy violin presentation would be something very, very slow and depressed and then a little faster, you know, sort of coming out of it, and then a little faster, and then, maybe, something that you'd regard as neutral, and then a lot faster, and then a little faster, and then off to the frenzied you know.

And then you'd go that whole range from one extreme to the other. And then you'd do it again. And then you'd do it again. And it's a kind of cathartic.

Well, that became, to me, the way you play a stringed instrument. I mean, and the sound, the intensity, that whole passionate virtuosity that was expressed by the gypsy violinist was, to me, what music was all about.

Well, my mother had a very similar taste for passionate virtuosity, like Maria Callas, she would love to listen to. But if it was a singer who was not out there, like Callas, you know, with real passionate virtuosity, she had absolutely no interest, you know. And she could tell the difference. And so I grew up in that environment of these really extreme musical tastes and was exposed to a lot of spectacular music.

FL: So your parents were listeners, but not players, right?

KK: My father played cimbalom.

FL: Uh-huh.

KK: And one thing that I recall him doing is trying to figure out how to play Bach on the cimbalom.

FL: [LAUGHS]

KK: No doubt, he was sort of putting together the German background, maybe, from his father. Although, he never explained that to me, but I suspect. I mean, he loved sort of, Western music, as well as the Hungarian folk music. And this was a kind of putting things together that he was trying to do.

He wasn't a great cimbalom player, but he had a cimbalom in his home in our home. And you know, and he showed me the wrist action and the playing. And he knew about it. Of course, his mother taught cimbalom.

But he was a structural engineer. He was not a musician. And he didn't really try to develop it to any great extent. I do remember—

FL: Was he a Hungarian speaker?

KK: He retained his ability to speak Hungarian. He was twelve when he came to this country. Of course, Hungarian is not spoken. He, I think, was in training to be a priest when he was in Hungary and went to the [Budapest-Fasori Evangelikus] Gimnazium. And when he came to this country, he said—he told me that he mainly communicated in Latin to begin with.

He was a truly brilliant person. He worked in Chicago as a structural engineer as a consulting structural engineer with some of the great architects of the time, [Ludwig] Mies van der Rohe, and was involved with some of the great buildings in Chicago.

So my early musical experience had this extreme capability associated with it. Then, after starting on the cello when I was ten, my father arranged that I would study, in my final year in high school, with János Starker, who came to the Chicago Symphony Orchestra with Fritz Reiner.

And my father was Hungarian. And Starker was Hungarian. And he sort of arranged for me to get an audition. And then I played. And Starker took me on, even though the understanding was that I had no interest in becoming a professional cellist. That wasn't the reason. It was to just learn.

And my father had that idea of the amateur, the skilled amateur, who has professional-level capability, but is not doing it for money. He's doing it for his soul or whatever. It was an interesting experience studying with Starker very influential experience. I don't know if now is the time to go into that.

FL: Certainly.

KK: But it certainly was not about passionate virtuosity. It was about, mainly, technique—playing in tune, but ferociously in tune. So it was like the passionate virtuosity there was really in tune, [LAUGHS] really, really consistently.

That wasn't really my thing. It wasn't that I was really interested in that naturally or by experience, but it had an impact on me to come in touch with just the challenge of picking your finger up and putting it back down again in the same place, and then picking it up and then putting it back down again in exactly the same place.

The way my mind worked was mostly abstract thought. And this very physical problem just wasn't something I thought about. And I tended to think of it as trivial. But I learned it was not trivial at all. And playing in tune, you know.

So I got intrigued with it, you know. And Starker was like a master of playing in tune, more of a master of everything on the instrument. So I developed a technique for playing the instrument.

He didn't talk to me about musicianship. And I didn't know anything about musicianship, other than that I was impressed out of my mind with the way the gypsies played. But I was no gypsy musician myself.

So there was a kind of a disconnect there. I played in a kind of a cold, unmusical, technical way. And I loved the passionate virtuosity, you know? And so I was really split at that time.

FL: So what was your prior cello teacher like?

KK: Well, I studied with Harry Wagman, who was, I think, a pit orchestra player and a wonderful guy. He did as much with me as he could. But it was like I didn't get it.

I didn't get it technically. And I didn't get it musically. And I have to say that I am not a natural talent for playing an instrument. I really don't have it.

Now I had two brothers at the time. One has since died, Nick. Nick was not just a natural talent, he was a phenomenal talent.

FL: And what was his instrument?

KK: He played several instruments. He was started on the piano, in the same way that I was started on the clarinet and then switched to cello. You know, sort of by fiat: You will play piano.

But then he just took over his musical life. And—and then he went to flute. And then he went to, I think, [viola da] gamba. And then he went to French horn.

And—and then he actually played professional French horn for a while. He studied with [Philip] Farkas in the Chicago Symphony. I think, after year and a half, Farkas said, "You've learned everything that I can teach you. Now it's just a matter of going out and learning from experience."

Nick's just seemed to be a universal talent. I mean, he understood—I mean, his mind just understood. He pretended to have a college degree and got a job programming computers at Kemper Insurance [Chicago, IL], and then quickly became a supervisor of programmers. And in his aptitude test there, he got a higher score than they thought was humanly possible on their, uh—

So anyway, he was the talent. And I ground away. I just sort of plugged away at it.

However, I was fascinated with what goes on in musical expression. And to jump the gun a bit when I was at MIT, I was wandering around in the [Harvard/MIT] Coop [Cooperative Society Store] And I saw this book on the shelf called, *Rhythmic Structure of Music*, by [Leonard B.] Meyer and [Grosvenor] Cooper.

FL: Yeah.

KK: And I looked at it. And I—and it's like it opened the door to me. It—and it gave this simple example of "Twinkle, Twinkle, Little Star," where we all think of it as, "Twinkle." "Twinkle." "Little." "Star."

And the groupings go with the words. And so it's *da da, da da, da da, da*. But it pointed out that you could just as well perform it as, *da da, dum ta, dum ta, da*, and impose a different grouping by performance.

And I thought, "Oh! Oh! There's a whole hierarchy of these relationships." How do you make it audible? Well, that's a performance task.

What is a good performance? Well, at the very least, get all the structure that's there out in a way that is not only perceptible, but like, maybe, even dramatically perceived. And tha—that—with that clue, I started working my way into musical expression and even passionate musical expression. Although, certainly, rhythmic structure doesn't talk about passion. But I began to learn where that comes in, too.

### **3. Pre-college interests in music and science [00:26:10]**

FL: So going back just a little bit, tell me more about some of your musical experiences prior to college some pieces you played, and groups.

KK: Well, Chicago had, you know, of course, a rich cultural life. And I played in an orchestra locally. I can't, for the life of me, remember much about what the name of the orchestra was or what it was, but it was one of the things that I did. I played in the orchestra.

I didn't much like it, but it was—it went along with—you know, I didn't much like practicing. I didn't much like playing in the orchestra. So that was one of the things I did.

Then we had a neighbor who played chamber music. And I gradually got into a bit of chamber music. Then I actually got connected up, as I developed my abilities and, particularly, after I started setting with Starker, I then got into a string quartet. And I started learning about string quartets.

Although, we had a first violinist in the string quartet who was a real taskmaster. I mean, and he was practicing leading the group. And I began to find out that I could not just decide to play when I felt like playing. I had to follow him.

And so I started learning, sort of, the ropes of being in a small musical group where what I did mattered, you know, and mattered in great detail. While we'd play in the orchestra there, particularly this amateur orchestra, this low-level amateur orchestra, what I did didn't really make a lot of difference. High school orchestra, I played in. Nothing much made any difference.

FL: So what inspires you to keep going with music? There's obviously a passion there.

KK: Well, after I studied with [János ] Starker, I was, sort of, pretty far down the path towards—you know, I had an ability now to play cello. And I was enjoying certain aspects of it.

So I took my cello with me to MIT. And I joined the MIT [Symphony] Orchestra. And I also found there are a lot of musicians at MIT. So I found people to play chamber music there.

FL: Did you know much about music at MIT before you came?

KK: Nothing. I knew nothing about MIT. I sort of decided between the University of Chicago and MIT. And I thought to myself, without really knowing, just from what I'd heard about the University of Chicago that, if I went there, I would just float away on my own thoughts and have no grounding of any kind. And whereas, I thought, if I go to MIT, I will be grounded in reality somehow you know, science and engineering and discipline, you know?

FL: Mm-hm.

KK: And so I thought I needed that. I wanted that. And so I got it.

I might add that, at that point, when I was choosing where I would go, I had already decided that—well, let me tell a little story: I had a career counseling opportunity. A bunch of us seniors were in a room with a bunch of career counselors. [CLEARS THROAT] And one gentleman walked up to me and looked at me and said, "What do you want to do?"

And, you know, I—so I sort of stopped for a moment, because I hadn't really thought about how I was going to answer that question. But then what came out of me as an answer was, "I want to reformulate the laws of physics so they will apply in a direct and powerful way to the fundamental questions in biology." And he just turned away. [LAUGHS] And that was my career counseling.

FL: Tell me about your developing interest in science prior to MIT. And what were some of those experiences like? Tell me about that.

KK: Well, see, I have a really far out background, as far as what led me into science. If I, sort of, jump in not at the very beginning, but like at near the beginning when I was around six years old, I became interested in three questions, which I saw as fundamental and important: Why does anything exist? Why are there natural laws? And what is consciousness?

And I decided that nobody was going to teach me anything about that. So I decided if I was going to work on these questions with my life, I could start. So I started. I just mention this to give you an idea that I started early. And I was way out there, as far as what kinds of questions I was concerned about. [CLEARS THROAT]

And for me to bring it down to connecting physics to biology in a fundamental way, I mean, that's like getting very specific from—[CHUCKLES] from something that was far broader. I had the feeling early on, you know, before I went to school—I mean, you know, like already, when I was in first grade, I had the feeling that the greatest difficulty in becoming, let's say, the best scientist that I could become would be in avoiding common misconceptions, things that everybody agrees on, but are just wrong.

FL: Mm-hm.

KK: How do you deal with that? How you avoid getting pulled in? So when I went to first grade, I was on guard, fully on guard. It's like, "Watch out! [LAUGHS] It ain't necessarily so."

So when the teacher would tell us something, I was listening very carefully. And I remember feeling very disappointed that I could not find anything wrong with arithmetic. It just seemed [LAUGHING] so solid, so convincing that there's no way. You know, I thought, well—

[LAUGHTER]

KK: —I'm going to have to.... Well, one thing that I did deliberately to the extreme that I could was avoid memorizing, because I'd had the feeling that anything I would memorize would become a part of me. And then I would be hooked on it. And I wouldn't be able to get rid of it. So I would hold things at a distance by not memorizing them, but working, as much as possible, by understanding.

Well, this combination of understanding and listening carefully made me a spectacularly good student. I would get everything the first time. And then I would think about other things that I was working on.

FL: Yeah.

[LAUGHTER]

KK: So I had things to do, see, as a theoretician. [LAUGHS] So I wasn't a disruption in class. I sort of sat quietly. But I was thinking about other things.

Um, but I—but I got the material. I sort of did what I had to do to, you know, do perfectly. I did perfectly.

FL: Mm-hm.

#### **4. Academic studies and musical experiences at MIT [00:35:23]**

KK: It's easy to do perfectly. I mean, that's—that's— Now, one thing that I've found out at MIT was that they—the whole approach to teaching and learning, when I was there in the early '50s, was to emphasize innovation and to regard mere rote learning or mere memorization or mere, you know, following the rules as trivial and uninteresting, unimportant, you know, take it for granted. So that fit perfectly with my approach. And I just had fun.

I did well enough in the first two years. That was a lot of fun. Third year, it started getting messier in physics as a physics major. That's when the beauty started changing into this is for real. I mean, this is, you know, you're going to have to do some difficult stuff now.

Then in the fourth year, I was very active musically. I was doing a double major in physics and biology at the time, to get ready to invent biophysics. You know even though I only got a degree in physics, I was going for a double degree.

FL: Mm-hm.

KK: I couldn't quite pull it off. And I was taking graduate math courses. And I was—you know, and I was—I had all this musical activity. And I was really doing too much at the time.

And so my grades suffered. But I really could[n't] care less. I mean, that wasn't, you know, what—what I was after.

So chamber music became more and more important to me as I got to MIT, as I started picking up chamber players. I've developed some regular groups. [Donald L.] Don Smith [MIT 1962] out in Lexington [MA] played violin. I went out there. And he would pull together groups. Harry [C.] Gatos [MIT PhD 1950] had music parties at his home.

FL: I know him. Yeah.

KK: So I was part of that crowd. Other musicians, Boston Symphony players, you know, would play chamber music. So I was getting more and more into the musical scene.

FL: Did you do any official chamber music at MIT, as far as being coached by faculty or anything like that? And any performing of chamber music there?

KK: It was amazing. I was playing regularly with a group of MIT students. Roy Sun [name spelling unverified] was in the group. I think Dennis [E.] Johnson [MIT 1962] and [Jerome] Gerry Weingart [MIT 1961].

FL: And what were their instruments, for the record?

KK: Roy was our first violinist. Dennis was also violinist. And Gerry Weingart was viola. And we decided to give a Sunday chamber music concert at Kresge Auditorium, a free concert. I don't know how all of this was set up, but we got total support for this free concert. The hall was made available to us and all of the logistics of advertising it and handling the people who came and lighting and all the rest of that, was handled.

FL: And this was during your senior year?

KK: I don't remember what year we did this. I may have been a graduate student at the time.

FL: Uh-huh.

KK: And so it was a Sunday afternoon chamber music concert by four student amateurs. And as I remember, we played the "Lark Quartet" [op. 64, No.5, by Haydn] to open with. Oh no, "The Sunrise" [op. 76, No. 4, by Hadyn].]

FL: Oh, yes. With the—

KK: "Sunrise."

FL: Opus 76, number...

KK: Yeah.



FL: Uh, yeah. Yeah. Yeah.

KK: I think "Sunrise," that we opened with. And then I think we did Beethoven, "Rasumovsky," [String Quartet, op. 59, no. 1] uh, the—I think the 1st. *Da-da, de-de, dum.*

FL: Mm-hm.

KK: *Ya-ta-ta, ya-ta-ta, de-dum.* Well, the place was packed. We were in a small auditorium.

FL: Yeah.

KK: Of course, not the main auditorium.

FL: Right. "Little Kresge," as they it. Yeah.

KK: I was astonished. I mean, the place was packed. I mean, I really hadn't thought ahead of what was actually going to happen when we did this. But the place was packed. The people were very, very enthusiastic. So for me, it was a very rich musical experience being at MIT.

FL: Now were you coached at all by—by faculty for that in any way?

KK: No. We didn't seek it out. And we didn't get it. I mean, we weren't particularly good, by professional standards.

FL: Yeah.

KK: Because we just loved to do it. And we did it. And, you know, we were pretty good players. And we, pretty well—

FL: Right.

KK: --played together. But it—but it—you know, it was four pretty good players, [LAUGHING] playing pretty well together. You know, it was—you know, but we gave it our best shot. And I—and I think our zeal came through. And—and the audience, certainly, enjoyed the experience.

FL: So you had the—the Haydn, the Beethoven. Was there a third piece? Or was there just two?

KK: Those are the only two that come to my mind.

## **5. Musical highlights prior to MIT [00:41:51]**

FL: So were there some musical highlights prior to coming to MIT for you? You went to a play, you know, or things that you did as a player?

KK: A couple of summers, I went down to the University of Illinois summer music camp. And there I was first cellist. And as first cellist, I got to play some solos.

FL: What were some of those?

KK: And the one that I remember is the Malaguena [likely Op. 165, No. 3, by Isaac Albeniz] Well, it was—I think it was just Malaguena, as an orchestra piece.

FL: Mm-hm.

KK: And the cello, you know, as a solo there. And actually, they asked me to perform a major solo down there with the orchestra. It was totally unexpected. I mean, they just said, "How about doing it?" And I had nothing with me. So when I got—I—I sent home for my copy of the [Georg] Goltermann [Cello] Concerto [likely No. 4, op. 65], which is, you know, a student sort of exercise-y kind of thing.

FL: Yeah.

KK: And I performed that with piano. Not very good.

FL: Mm-hm.

KK: And I think, probably, the audience was suffering through it. But I did it.

The pianist down there, I think, was [Robert] Bob Lam. And I later encountered him at Roosevelt College [University] in Chicago in a chamber music class that my high school orchestra conductor got me into. He was, ah—his name is escaping me right now. And the name of the person giving the class at Roosevelt College is escaping right now [Morris Gomberg].

But he thought that I could use some coaching, you know. And get me out of the orchestra environment into a chamber music environment. And so I went down to that class.

And Bob Lam was the pianist. But there was a violinist. And we were going to play a trio.

And they gave me the music. And then my assignment was to learn the Schubert B-flat Trio [No. 1, D.471]. And it absolutely wiped me out. I mean, it just killed me. I could not play it.

*Da-da-da, de-da-da, da-day-da de-dum.* I couldn't do it. I mean, you have to really be able to transcend the technical difficulties to play that.

And I—and then the slow movement, the music that I got was written in treble clef, instead of tenor clef. And I didn't read treble clef. I'd never seen that.

So even though it opens with a long, slow, beautiful cello solo, I couldn't play the damn thing, because I couldn't read the notes. So I totally crashed. And I sort of learned to hate the Schubert B-flat [LAUGHS] Trio.

I never did sort of master that work. I mean, I never went at it to try to get on top of it. So never did it right. So that was like a low point of my musical career. It didn't drive me away from the cello, but it certainly drove me out of that class. [LAUGHS]

FL: Mm-hm.

KK: They got rid of me.

FL: Were there cellists that you heard as a youngster that particularly inspired you?

KK: Well, we had—before I studied with [János ] Starker, we had his recording of the [Zoltán] Kodály [Sonata for] Unaccompanied [Cello, op. 8], his original period, you know, a long-play record recording. We had a good Hi-Fi system in the house.

And when that record would start, you know—*tai-yung! tai-ya! te-de, da-da, de-ya*—I would get weak in the knees. I mean, it just absolutely wiped me out, you know. Just incredible.

I think that there was nothing, of course, like that. Well, there was a moment sort of like that studying with Starker. I was studying the [Antonin] Dvořák [Cello Concerto in B minor, op. 104, B. 191] with him.

And I came for a lesson. And he was still in bed. So I went into his bedroom. And he's in his T-shirt. And he's sitting on the side of the bed.

And I'm playing. And I'm scrubbing away on the Dvořák . And I get to this technical passage in the first movement in double stops, you know: *da-da-da-da-da-da, de-da da-da da-da-da-da da-da-da-da-da-da de-da-da-da de-da-da-da da-da-de*, you know. And it's going higher and higher and higher. Whoa, and then coming down in double-stop runs.

I couldn't play the damn thing. [LAUGHING] And he looks at me. And he's shaking his head.

And he takes my cello, sitting on the side of the bed, the mattress sort of collapsing down. And he sort of holds the cello in a, what looked to me like an awkward way, and proceeds to play that passage. And it just absolutely knocked me out. I mean, just because it had everything.

I mean it—it—not just technically correct and, you know, and everything, but it built. It had the sound, you know. It went someplace, you know. And it got up there and then it came down. You know, as if to say “That's how you do it.” [LAUGHS]

And I had absolutely no idea what had happened, you know. It's like I couldn't imagine doing something like that. I still can't imagine doing something like that.

Anyway, that was just a spectacular sound experience. I had two other spectacular sound experiences with Starker, you know, later on. Once, when he gave a recital in Boston at the, um—I forget what hall he was in. But anyway, he played the [Henry] Eccles Sonata [in G minor], which is often thought of as a student sonata.

FL: Yeah.

KK: But he opened with the Eccles Sonata. And the first movement that he played, you know, *da-de, da-da-da-dah*, well, anyway, it absolutely wiped me out. It was so incredibly beautiful and expressive in ways that I just couldn't comprehend, I didn't know what was going on.

And then years later, I heard him in a recital. And he finished off, he said, "Excuse me. I need to practice. I just got a hold of this. Got it from [cellist George] Bekefi's [personal] library after he died."

And it was a cello version of—I think it's Mozart, but it—*da-da-da-da, da-da-da-da, da-da-da-da, di-du-da-da, da-da-da-da di-di-di-di da-da-da-da di-di-da-da.*

FL: Wow, yeah.

KK: It's usually played on violin.

FL: Yeah.

KK: And again, he played it so phenomenally beautifully and effortlessly. And I mean, I've never heard a violinist play it that, you know, project it that clearly and effectively.

Also, I once went to visit him in Indiana years later. I sort of maintained something of a friendship, not a lot of contact. And I went to visit him.

And so one thing he did was, sort of, check me out, you know. It was like, play a little for me, you know. And he gave me his cello to play on. His I think it was a [Mateo] Goffriller [Venetian luthier] that he had at the time. And I played a little bit.

And then he, sort of in exasperation, he took the cello. And he said, "This is the way you play." And he played what I was playing. And it was me.

And it didn't seem exaggerated in any way. It was just me. I mean, it sounded like me. It looked like me. It was me. So I was totally convinced.

And then he said, "And this is the way I play." And everything changed a little bit. And then it was him.

And then—and he says, "This is the way you play. This is the way I play. You play, I play." And he just went back and forth, you know, sort of trying to show me. But I just—first of all, I couldn't perceive it in any way that I could convert into what I'm going to do, you know, to change.

And then I couldn't imagine how anybody can do that. It was like have total mastery over all movements, all patterns like that, and just sort of do whatever you want, you know. So for me, it was a very intense experience, just to have the—you know, be in his presence and interact with him a bit.

FL: So it sounds like some of what you learned from him had a long-term effect, but not something you directly learned from him in a practical way.

KK: He gave me some advice once, when I was telling him what I was interested in doing, you know, my high ambitions and, you know, "I'm going to—" he said, "Be sure you can do what everybody else does, before you do something new."

FL: Mm-hm.

KK: And at the time, that seemed very conservative to me. And I didn't really respond immediately—positively—to that. But years later, I'm older and wiser. And I can see that it has a lot to do with paying your dues, you know.

You've got to build your foundation in a way that connects to what people do, really, you know. You've got to be present in the current real world of capabilities, and then connect your whatever is new that you have to offer to that.

## 6. Thomas Kornacker, violinist [00:54:11]

FL: Backtracking just a little bit. You have a brother who's a violinist. Can you just briefly tell me about him and what he's—he's doing?

KK: Well, that's [Thomas] Tom [Kornacker]. Tom and I were hardworking. Uh, Nick was the phenomenal talent.

When Tom started learning to play violin, when Tom was six and Nick was I guess, nine, you know, for a couple of years, you know, Tom would be practicing, practicing, practicing. And Nick would take the violin and say, "Why don't you do it like this," You know? And he would just do it. It was very [LAUGHS] annoying. [LAUGHS]

But actually, Tom was Illinois State [University] Fencing Champion. And he had tremendous—um, I wouldn't say all-around athletic ability, but certainly for fencing. And he sort of looked like [Comte] d'Artagnan [Louis XIV's captain of the Musketeers of the Guard], you know, blonde and sort of looked the part but he performed.

And he told me the story of when he went to the University of Indiana in music. Um, he checked out the fencing there. And they gave him a real hard time verbally, you know, sort of running down Illinois. I mean, this is Indiana, you know. And it's like—

So they did some fencing. And Tom worked his way up from the novices to the intermediates to the advanced, and then took on the fencing coach and beat him. Then they invited him to join the team. And he said, "No thanks." [LAUGHS]

So he certainly had, you know, great physical capability. And, for me, he is a very, very fine violinist. And I love his playing. I love the sound of his playing.

He studied with [Maki] Itoi in Chicago, then studied with [Josef] Gingold in Indiana [University]. And Gingold said that he just wasn't going to touch his bowing, you know. His—his sound was beautiful. It's like, "Keep it," you know.

And then Tom became a professional violinist. He is now with the St. Paul Chamber Orchestra. He's been there for years.

He started, I think, in the Orlando Symphony, then was, for a while, at the New York City Ballet pit orchestra. Then went off to ponder his life sold his violin, bought a sailboat, went off to the Virgin Islands, sailed around in the Virgin Islands, then came back, played Mostly Mozart [Festival], and got several job offers.

And [conductor] Dennis Russell Davies brought him to St. Paul Chamber Orchestra where he became principal second. And Tom was just a phenomenal principal second violinist. That's like Grand Central Station. You're not just following the conductor, but you're following the concertmaster. And then you're leading the inner voices—the violas and cellos.

And that was his thing. I mean, he was like the captain of the ship, you know, in there. And just phenomenally good at it.

FL: Did you play much with him when you were kids?

KK: We played a little bit. We actually had a piano trio for a while, because Nick was playing piano and Tommy, violin. And I was on cello. So we did a bit of that.

Our family physician, Bill Becker, was a violinist. And he would come over. And we would play chamber music.

And I think that was probably my earliest, most consistent chamber music experience, with Bill Becker. This was many years ago. And I don't have a clear recollection, you know, at the moment of that.

## **7. Developing love for chamber music [00:58:51]**

FL: So it seems like chamber music appealed to you more than orchestral playing? Is—is that an accurate statement?

KK: Absolutely. In an orchestra, I felt like I was following orders. And there was no positive feedback. I couldn't sense the impact of what I was doing.

So it was giving my contribution under orders from the conductor, and not receiving back anything. And I just didn't enjoy it. I mean, you know, like why—why do it?

Whereas, in chamber music, there is a sense of shared creation of something where we here, definitely, what we're doing as individuals and also hear what the others are doing. And where—so there's a togetherness that we create together.

So there's a sound to it. There's a—a sense of personal responsibility of contributing, and then also getting back the results of the sound. And then there is a social aspect—we are together.

Now for me, my—you know, I was an ultra nerd. [CHUCKLES] This was my kind of social life.

FL: Uh-huh.

KK: Chamber music. And in a way, I became addicted to chamber music as a way of relating to people. I didn't have a lot of other ways. And that's probably what, more than anything else, hooked me onto the cello, because the cello is a chamber music instrument.

FL: Mm-hm.

KK: It's also, to some extent, the glue and the foundation in a string quartet. And so playing cello in a string—you know, first violinists can just sort of take off and play the first violin part and say, "Follow me." And you could be off in your own world.

Whereas, a cellist can't do that. You've got to relate to the other players as they are and also support them as they are most of the time. Occasionally, you take off and say, "Follow me."

One extremely intense chamber music experience that I had was when I visited my brother in Minneapolis [MN]. He set up chamber music for me with a couple of other St. Paul chamber orchestra players. And that was like a revelation to me of playing with people who were totally aware of what I was doing all the time and were supporting me, not just asking me to support them.

So everything fit in a way that I could not possibly make happen with an ordinary group of amateurs, I mean, because it didn't fit. There was no way to fit perfectly with them, because they didn't fit with each other, you know. Whereas, these guys fit with each other. And they fit with me. And I fit with them.

And it wasn't up to me to be right. It's like whatever I did, we fit. I mean, they weren't going to let me get away. [LAUGHS] So there was just this incredible experience of musical togetherness.

FL: So prior to your coming to MIT, although you weren't thinking of music as a professional occupation, there was a professional kind of focus that you had, as far as the development. But it seemed like it was for the music. You weren't thinking of it all as a profession.

KK: There's a thing about professional playing, which is to be professional.

FL: Right.

KK: That involves a lot more than just being able to play the instrument. I never was professional about how I approached playing cello. I was strictly an amateur.

FL: Mm-hm.

KK: I was a good amateur. I had a wonderful, wonderful chamber music experience when I went to Interlochen [Music Camp] for the first time. That was after I had been at MIT. But just to continue on the chamber music side.

George Wolfe here in Columbus [OH] went to Interlochen [Center for the Arts, MI] like every year for many, many years. And everybody knew him there. He was part of the culture of Interlochen.

And he was a salesman. Well, he sold everybody at Interlochen on me. I played chamber music with George here in Columbus. He loved my playing.

He loved musically expressive playing. And by that time, I was playing rather well. I had sort of worked things out over the years, gotten myself straightened out more and had something musical to say and said it.

Well, he talked me up. He did the advanced PR at Interlochen so that they were sort of waiting for me to show up. And then I actually got called on to perform in a quartet, one of the [Leoš] Janáček quartets, because the cellist had gotten sick or something like that.

And I was sent the part to practice. And I looked at it. And it looked easy, like from a distance.

I mean, it was like bass clef and, you know. And it's not very fast, you know. And it's—you know.

And so I didn't really start practicing it way in advance. And I'd never heard it. So I didn't know what I was in for.

And then, when I finally started practicing it, I thought, "Oh my God. I can't play this. I don't know what the hell is going on." It's not music the way I usually think of it. It's not structured in the way I expect, you know.

And then, when I started rehearsing with the guys, then I really knew I didn't know what was going on. I mean, it's like I just could not get it. So it was very, very challenging.

But I managed to get it in time, you know. And we performed it. And I guess it was an impressive performance.

And so I started playing all day, every day, with string quartets. Well, I played with a family—mother and son on violin, father on viola. And I came in as cello. And I practically felt like f—and we played Brahms, the Brahms [String Quartet in] A-minor [No. 2, Op. 51].

You know, there are a lot of sort of passionate duos for violins. There's the two violins. They were the mother and son started playing those sections. And I'm providing support with the cello. I mean, it was a deeply moving experience for me.

## **8. Artistic and musical climate at MIT [01:08:01]**

FL: So getting back to MIT, when you went, did you have any idea about what you wanted to do with music in the future?

KK: No. It was just something that I did. And as I say, it was like a way of socializing.

FL: When you first got to MIT, do you have any recollections as to what the musical or artistic climate was? Is there a way you can talk about that?

KK: Well, my earliest recollection is auditioning for the orchestra. And John Corley [conductor of MIT Symphony Orchestra, 1956–1966] auditioned me.

FL: Mm-hm.

KK: And that was a memorable experience for me, because, when I studied with [János ] Starker the previous year, my senior year in high school, one of the works we focused on was the third Bach [Orchestral] Suite [No. 3 in D major, BWV 1068]. And one of my favorite movements in that suite was the first Bourée. And that movement I got.



Just about the only time Starker paid me a compliment and said, "Good" [LAUGHS] was when I was playing that movement. Well, it's—it's a very repetitive kind of pattern. The rhythmic pattern for a Bourrée is *da-da-dum, da-da-dum, da-da-dum*. So it was, *de-de-de, da-da-dum, pum-pum, de-de-dum*.

And I got it. And I loved it. And I was really good at it. I mean, I liked studying with Starker and getting the bowing, you know, and all that.

Well, the first piece that John Corley put in front of me to sight read was the Third Bach Brandenburg [Concerto No. 3 in C major, BWV 1048]. And I take a look at it. And there I see, *da-da-dum, da-da-dum, de-de-de, da-da-dum, de-de-de, ba-ba-bum, bum, bum*.

So I started playing it like unaccompanied Bach. And I just give it my best shot, you know. And I make it that.

[LAUGHING] And John Corley was just astonished at what was coming out of me. [LAUGHS] And he said that he just wanted to sit there and listen to me play this, you know. [CLEARS THROAT] He really—you know, he was a trumpeter, but he really appreciated string music.

FL: Yeah.

KK: Really, really. And I think we were in the dining hall of Walker Memorial. I think that's where the orchestra rehearsals were.

FL: So was he assisting Klaus Liepmann [first MIT Professor of Music] as far as—

KK: Yeah, he was assisting.

FL: Okay, yeah.

KK: Yeah. So I saw him for that audition. And then I don't remember seeing him much, or maybe at all, in relation to orchestra rehearsals, when Klaus was conducting.

FL: Mm-hm.

KK: And then eventually, John Corley took over. And, you know, and eventually, we moved over into Kresge Auditorium, when it was built.

FL: Right. So we were getting to the question of the artistic and musical climate of MIT at the time when you came.

KK: Well, see there—it had an orchestra. And it had support for the orchestra behind the scenes. And we all got together and played.

FL: Mm-hm.

KK: See? And for me, it was mainly a social activity. I mean, not like I was a social butterfly or, you know, socializing. But it was a way to be in contact with other people, relating to other people in

a shared endeavor. But apart from when the rehearsal's over and back to MIT, it's not like I was aware of any musical environment. It was just that these activities were available and supported.

FL: Mm-hm. So you weren't paying much attention to other concerts by professional groups or anything like that going on? There was the thing called The Humanities Series Concerts. And things like that.

KK: I certainly went to the concerts. I mean, one of the—it was a stunning concert there that I remember, the Juilliard Quartet in Kresge that was—oh, they had a wonderful concert series there.

FL: Yeah.

KK: Yeah. I didn't particularly associate that with MIT. It was like it was close by.

FL: Okay.

KK: I mean, it's because there's so much cultural activity in the Boston area.

FL: Right.

KK: And this was like right there in walking distance. But I guess, in my mind, I didn't think of it as MIT, per se. Although, of course, it was.

FL: Yeah.

KK: They brought that to us.

FL: Did you have a sense of about kind of, other students' attitudes towards the arts and stuff like that and any kind of artistic climate at all?

KK: Only those who were—well, when I first arrived, when I was a freshman, early on, for some reason, a—and he was probably an upperclassmen at MIT—asked if he could record me.

FL: Mm-hm.

KK: And he had superb recording equipment, you know. And I think he was gathering sounds, you know. And he was doing it as well as he possibly could.

And he just asked me to play for him. So I sort of went through all the things I knew how to play. And he recorded them.

And he was just delighted, you know, because he got the real sound very well captured. And I was kind of delighted, because everything came out just about as well as I could do, you know. It was—and that was—it was almost like I could do anything. It was like, no retakes or anything, just belt it out, you know. Out it came.

So I knew there were people at MIT who were into music and into sound. But I only knew that through these, sort of, one-on-one or shared chamber music or orchestral experiences. And

then, outside of that, I mean, if I'd be in a math class or a physics class or biology class, I had absolutely no [CHUCKLES] idea about anybody's interest in music, whatsoever.

FL: Mm-hm. So you weren't aware of any kind of issue—if people thought it was odd that music was at MIT? You were just there doing, kind of, what was available? And you didn't think of it in any kind of sense like that, as far as how it fit into—?

KK: Well, you see, you used the word, "odd." My sense of MIT was that anybody could do anything. And there was no such thing as "odd." And if you could really do it, you know, way to go. And of course, they pull off outrageous pranks. The more outrageous, the more applause, you know. It's like, way to go.

FL: Yeah.

KK: So, you know, music, in a way, is like an outrageous—[LAUGHING] you know, like, why bother, you know? But like, wow, if you can do it, do it.

FL: So you were in the MIT Symphony all four years of your bachelor's degree?

KK: Yeah. And then I was there all the time as a graduate student. I didn't leave until '68. So I was there fourteen years. And I think I was in the orchestra fourteen years.

FL: Wow. Did you study cello privately at all when you were at MIT?

KK: I called up [Samuel H.] Sammy Mayes, who was, at the time, first cellist with the Boston Symphony. And I said, "I was studying with Starker when I was in high school. And I would like to take some lessons. Could I come in and audition for it with you?"

And so I went down to Symphony Hall [Boston, MA]. And I ran through some of my stuff. And then it's just amazing. He offered to give me lessons for free. And he came to my apartment to give me lessons.

FL: [CHUCKLES]

KK: However, it fell through, because I couldn't get it. He had passionate virtuosity. He really had it, okay? I didn't. At the time, I was emotionally closed down. And although I could appreciate it and hear it when somebody else did it, I was nowhere near doing it myself. And he was trying to get it out of me. And we knew he would have had to be a great psychotherapist to get it out of me at that time. And just nothing was coming out.

And he tried everything he could think of to try to get something going. And it didn't work. So we were both very frustrated. And that fell through, unfortunately.

What did finally start opening me up was [Mihaly] Virizlay followed Starker at the Chicago Symphony for one year. He took over as first cellist when Starker left to go to Indiana. Virizlay was this phenomenal talent who went to study with Starker when Virizlay was six years old, as a child prodigy. And at the time, Starker was the established virtuoso, who was twelve years old at the time. And they, you know, formed a friendship from way back.

Virizlay was, in a way, the opposite extreme from Starker in that for Virizlay, everything was musical expression. From the heart musical expression. That's all there was. And he had phenomenal technique, but it was all in the service of this.

So when the Chicago Symphony came to Boston on tour and Virizlay was there, we got together. And I played for him. And I played a bit.

And then he said, "You're a scientist. You have a career. Why do you waste your time playing cello? You have absolutely no musical talent."

FL: [SIGHS]

KK: So I thought, "Aha. This person knows something." And I sort of got intrigued, you know? You know, and I could recognize this as a tactic. And it was kind of working, you know.

It's like looking for a fight, you know. And like, am I going to fight back? Or—you know. So—so I—I was willing to give it a try.

So he gave me a thought to hold in my mind. He said, "Play that again. And while you're playing, think this thought."

I don't remember what the thought was, but it was a thought to hold in my mind. It was like a stunt. It was like walking and chewing gum at the same time. He says, "Think about this and play."

So I started doing it. I started playing, and I was thinking it. I'm going, going, going.

And then I remember thinking, "Gee, this is kind of difficult to keep thinking this. But I'll keep at it." Then I kept playing.

And then the thought went out of my mind. And he said, "There! You lost it." Well, that impressed me.

But, in a way, it infuriated me, because I had absolutely no idea what was going on. It's like it mattered what was secretly going on inside my head. And he proved it to me.

But that really got my attention. Oh! It matters. It does matter.

So I started on the path towards—instead of putting his thought that he assigned me, I said, "Okay, well, let's have my thoughts and feelings, my musical thoughts and feelings in mind when I play, available to be expressed in my playing." It was hard for me to get going on that path. But over the years I did. So he was the one that started me out.

## **9. Further musical experiences at MIT [01:23:26]**

FL: My. When you were at MIT, did you take any music courses, you know, classroom courses?

KK: No.

FL: There was a course on the string quartet that Klaus Liepmann taught that seems to have been kind of famous. Did you know people who took it or anything about—?

KK: No.

FL: Do you know anything about his reputation as a classroom teacher?

KK: No. Had no idea. I didn't even know that he taught.

FL: Yeah. Yeah.

KK: But, you know, thinking about it now, I realize he must have done something other than come back to the orchestra.

FL: Right. There was also a Professor of Music Gregory Tucker, who was a pianist and composer. Do you have any recollections of him? Did you hear him play?

KK: I believe I heard him play. But I can't bring back the experience of it.

FL: Mm-hm. Mm-hm. Gregory Tucker and Klaus often played sonatas together. At least, that's what I've been able to gather. Did you ever hear them play together?

KK: Klaus once invited me to play trios with him. And probably, Gregory Tucker was playing piano. And I remember I did very poorly. I mean, they presented me with some challenging works that I was not familiar with and I couldn't do it.

Francis [E.] Low [MIT Professor of Physics 1957-2007] played clarinet. And I did some chamber music playing with Francis Low. He had an interesting attitude towards—no, no, no, no. I'm sorry. Francis played piano. And we played the Brahms Clarinet Trio [in A minor, Op. 114].

FL: Mm-hm.

KK: But then he told me that he wanted his son to play clarinet. And he wanted his son to be able to improvise, not just follow the notes. Now that's why clarinet was my first recollection.

FL: I had some more questions later on about Klaus Liepmann, as a violinist. But there was another pianist-composer at MIT, Ernst Levy. Did you ever hear him? He was there from 1954 through '59. He was an artist in the residence.

KK: I don't have any distinct recollections of—

FL: Mm-hm. Mm-hm. Who were some of the outstanding fellow student musicians that you recall from—from MIT?

KK: Well, [Albert M.] Al Wray [MIT 1958] was a violinist. He performed the [Jean] Sibelius [Violin Concerto] with the orchestra. And he went for passionate virtuosity for sure with the performance and, you know, was a very passionate guy.

[Gerald] Gerry Litton [MIT 1960] performed the [George] Gershwin [Piano] Concerto [in F] with the orchestra and also played violin in the orchestra. Excellent pianist, really. Again, passionate virtuosity. And I would say that, you know, passionate virtuosity was the thing about MIT musicians. They really went for it. And that's what you go for. And don't just play the notes, you know? But it was like the spirit of the place.

FL: Right.

KK: Dennis Johnson was the concertmaster before Roy Sun [name spelling unverified] came. I remember we auditioned Roy when he first arrived, Dennis and I. And we tried throwing difficult things at Roy. And Roy just sailed through everything like it was just trivial. I mean, he would absolutely play anything. Yep.

FL: My. There was a student at the time Andrew [F.] Kazdin [MIT 1963]. Do you remember him?

KK: Andy Kazdin.

FL: [LAUGHS] Oh.

KK: Tympani.

FL: Uh-huh. Yeah.

KK: Yeah, a great character. And I guess he went on to—

FL: To be a record producer.

KK: Yeah.

FL: He also wrote an orchestra piece called, "Rumpelstiltskin Overture."

KK: Yeah.

FL: Did you play that?

KK: Yeah.

FL: That was 1959 that—

KK: Yeah. Yeah.

FL: Do you recall that piece? Because there's no recordings of it.

KK: I can't bring it back to mind. But we did. I was there. And we did it. Yeah.

FL: Yeah. He seemed like he was a capable composer.

KK: Oh, yeah. Oh, yeah. And he had real character. He was a great guy. He had put together a little quiz, you know, "Name the Piece" and from the opening, like, two bars. And he threw a couple of

these at me. You know, the first one you hear, *bong, bong, bong, bong, bong*. And so I immediately recognized *Danse Macabre*, [op. 40, by Camille Saint-Saens] because we had played it in my high school orchestra, you know. So that was like a give-away.

And then the next one he played was "The Sneeze" from the *Háry János* suite [by Zoltán Kodály], you know, the opening—

FL: Yes.

KK: *Háry János*. And I knew that.

FL: [LAUGHS]

KK: So he said, "Hey, you're good at this." So then he [LAUGHING] gave me a bunch more. [LAUGHS] And I wasn't so good at it. But he was an interesting fellow.

FL: Yeah. He seems to still leave kind of a wonderful shadow at MIT. His name comes up quite a bit.

## 10. Klaus Liepmann as a conductor [01:30:30]

FL: So, on the subject of the MIT Symphony under Klaus Liepmann: You came to MIT in what year?

KK: '54.

FL: Yeah. So you would have had him. So Klaus relinquished the orchestra in 1956. So what can you say—I know these are some broad questions and it can be hard to answer in some kind of brief way. But what can you say about him as a conductor? I have some more specific questions. But do you have any general comments about him as a conductor?

KK: Well, passionate is a word that comes to mind to describe his approach. That's not necessarily good in a conductor. But he was certainly passionate and caring, you know, in trying to convey musical concepts to us through like a passionate articulation of them. And what I remember of his conducting movements, you know, like his conductor's stick, is that it was shaking. And it's like shaking for emphasis, you know? So it's like affect. It's like speaking loud. And so, if the stick, instead of just holding it motionless, you shake it, you know, it's like, "Pay attention!" You know?

FL: Mm-hm.

KK: It's like not necessarily a good thing [LAUGHS] in a conductor. I mean, the excess motion wasn't—he didn't take the Fritz Reiner approach to conducting at all.

But see, basically, I did not like orchestra playing for reasons I've already said.

FL: Mm-hm.

KK: So it's not like he could do anything to—well, he didn't make my orchestra experience more positive, because I didn't like orchestra playing. And he didn't change that. It wasn't his fault. I just didn't like it. And so, because I didn't like it, basically, I didn't really look to him for anything. So in a way, I was kind of out of it. I wasn't attuned to any subtle musical issues or anything.

FL: What was his personal demeanor in rehearsal like?

KK: Well, I felt like he was trying to offer, you know, to help us play well, as an orchestra. And he was offering what he could, you know, as much as possible. As I say, there was a passion behind the offering.

As far as how well he was doing, I really can't say, because I don't think I ever had a really positive orchestra experience where, let's say, a proper conductor could possibly have turned me around and woken me up to what it is to play in an orchestra. Like my brother knows what it is to play in a fine orchestra with a good conductor. And he knows that it makes a big difference, whether it's a good conductor or not a good conductor. I haven't had that learning experience. So I—I really can't comment.

FL: Can you describe the kinds of expectations that Klaus had with the orchestra when you were working on a particular piece?

KK: No. Like, for example, as far as an expectation conveyed by a conductor, when Aaron Copland conducted us on his *Fanfare for the Common Man* [Correction: *Canticle of Freedom*, May 8, 1955] to initiate [dedication of] Kresge Auditorium, there was passionate virtuosity. And when he would give a down—when he would, sort of, make a forward gesture with his conducting arm, it was like God is calling on you to play.

And I remember one point where the triangle player—maybe it was the percussion player—was not able to come to rehearsal. And somebody else was sort of commandeered and brought over to play percussion. And he was trying to play the triangle. Wasn't a triangle player at all. And there was a place in the work where everything stops. And there's this loud sustained triangle ring.

FL: Mm-hm.

KK: [LAUGHING] And when we got to that point and Aaron Copland heard what was coming up, he stopped the orchestra. And he said something very dramatic like, "I want *this*," you know, maybe shaking his fist. "And what I'm hearing is *piddle, diddle, diddle, diddle*," you know, and started dressing down this player and thinking that he was talking to a percussionist or triangle player. And the poor guy was really upset, you know, because he had been, in a way, set up for this failure. And—

But anyway, there was a conductor who knew what he wanted and was going to demand it, you know? And if he felt like he had to put pressure on an individual to get it, he did that. So I remember that.

FL: Mm-hm.

KK: I have no recollection of anything like that happening with Klaus Liepmann.



FL: Mm-hm.

KK: It may have, but I don't remember it.

FL: Mm-hm. Mm-hm. I want to get back to that in some later questions. Were there certain central musical and technical issues that informed, as a conductor, or things that he tried to teach the orchestra, kind of, in general about musicianship that you remember?

KK: Well, he was—you know, he was a violinist.

FL: Right.

KK: And he was string-oriented. And I think he focused on the strings. And often, he would instruct on bowing or fingering.

FL: Mm-hm.

KK: Or yeah, bowing or fingering. And so often he'd be illustrating bowing motions or fingering motions or suggesting things of that nature.

FL: Mm-hm.

KK: Generally, the violins, though. I don't remember it coming at me.

FL: Mm-hm.

KK: I can't remember one instance of where it was one-on-one between me and him on some issue.

FL: Mm-hm. Do you recall any kind of standard that he had for the orchestra, any kind of expectation?

KK: I'm sure he had, in his mind, standards and expectations.

FL: But you didn't have a sense of that.

KK: But I didn't have a sense of it. But I'm probably a poor reporter on this, because, as I say, I didn't—

FL: Right.

KK: And when you don't enjoy an experience, you tend to tune out, you know?

FL: Did you have a sense that the orchestra was challenged?

KK: [LAUGHS] That could be taken in a couple of different ways. I think the repertoire that was chosen was challenging. So the challenge was there. And, you know, these are MIT students who take on challenges and rise to the occasion. So each individual, I'm sure, was doing what they could. You know, it's all volunteer. You don't have to do it. So you do it because you want to. And so, in MIT, students tend to be inner-directed and motivated. So there was a challenge. And

the challenge was being met. But it's hard for me to say what his role was in like, raising the bar or getting more out of the group leaders, individuals, or—I think sometimes he would ask people to do more practicing and more preparation before they came to rehearsal.

FL: In Klaus's memoirs, he talks about staying away from certain kinds of repertoire because of what he describes as, "extremely technical demands for the strings." And he cited a lot of the big nineteenth century repertoire and much twentieth century repertoire. And the repertoire listings that I've seen of what he conducted tended to be baroque and classical repertoire. But, from what you're saying, it sounds like you had some challenging orchestral parts. What were some of the repertoire that you remember?

KK: I have very little recollection of the repertoire with Klaus.

FL: Mm-hm.

KK: I remember [Nikolai Rimsky-Korsakov's Op. 35] *Shahrazade*. I believe we played that.

FL: Mm-hm.

KK: But, you know, my recollections of orchestra playing are very muted and, like, unreliable.

FL: Right.

KK: Sometimes we would play with other orchestras, you know, and get together. And I remember one women's college—I forget which one but—sent their orchestration in. And we played together.

FL: Was it Smith, possibly? Because that—

KK: It could have been. And—and we were side by side. And I remember the Smith—or the—the woman cellist that was sitting with me. I felt she was a far better cellist than I was. I mean, she was the real thing, you know? She really played. And I was, you know, really felt like the amateur that I was [LAUGHING] next to her.

FL: Did that happen a lot, that you collaborated with other orchestras?

KK: I remember that one instance very much, because of that. And that's the only one I remember, actually.

FL: Do you remember if at least the orchestra, when you were in it with Klaus, collaborating with MIT Choral Society?

KK: On what?

FL: You know in a big, you know, choral works that required orchestra? I'm finding it when Klaus mentions when all the recordings of the MIT Choral Society with Klaus are with a professional orchestra. I'm just wondering if you recall ever doing any performances with the MIT Symphony with Klaus conducting with the chorus?

KK: Nothing comes to mind.

FL: Well, that seems to confirm what I've been able to find. And I just have wondered why that is. It's also interesting in Klaus's memoirs, he goes on at great length about the Choral Society, of the European tours they did. And he doesn't talk much about the orchestra.

KK: Well, I think the orchestra was not very good.

FL: Mm-hm.

KK: It just wasn't. And I don't think he had much hope for it to be much better.

FL: So maybe he felt that the orchestra was too unreliable to play with the chorus?

KK: Could be. Could be. Like if it's not in tune and not together, then it's a liability, a real liability.

FL: Is it possible that he had different expectations from the Choral Society than from the orchestra?

KK: He may have been more optimistic that he could get good results from singers. He may have had the feeling that it's easier to sing than it is to play violin, you know? And so there was hope and get people to sing relatively well together, relatively in tune.

FL: Mm-hm.

KK: Also, it's voice. I mean, it's a single instrument. And there's only four ranges that you're deal with.

FL: Mm-hm. Right.

KK: So it's a much, much simpler challenge than an orchestra, you know, with all these diverse instruments and students coming and going and changing from year to year. And from '54 to '56, the academic challenge at MIT was extremely severe. There was absolutely no safety net or forgiveness there. And if your grade point average fell below a certain level, you were out, you know. And students would—a lot of students would flunk out at that time.

FL: Mm-hm.

KK: Because the challenges were extreme in the courses. I mean, you really had to be innovative. It would seem to a student like the homework had nothing to do with the lectures, and the exams had nothing to do with either the lectures or the homework, you know? And you just have to come up with a way of dealing with the challenge on the spot—something you'd never thought about or seen before and do it.

FL: Mm-hm.

KK: And a lot of students just couldn't handle that. They'd study, study, study, study. And then the exam would hit them, like blind side them.

FL: Mm-hm.

KK: So it was a common pattern where students would flunk out. And then, of course, if they happened to be orchestra players, they're gone, you know. And I heard about many cases where a student would flunk out, go to another place, make straight A's, and then come back to MIT and flunk out again, you know? It's like it was that different from ordinary educational processes. The level of challenge in the courses was so extreme. And the—and it was brutal. I mean, you just can't hack it. Out you go. That changed. But in the early '50s, I mean, it was that extreme.

FL: So then it had a big impact on the whole music program.

KK: Yeah. And so, in an orchestra, you know, the winds are soloists.

FL: Mm-hm.

KK: So you lose—you know, you finally get an oboist who can play in tune. And then, if he's out, then now what do you do? You know?

FL: Mm-hm.

KK: Anyways, in a chorus, it's not that fragile, I think.

FL: Do you think that choral conducting, maybe, played to Klaus's strengths as a conductor?

KK: I'm just saying it's a simpler challenge. Less diverse.

FL: Right.

KK: Less volatile, you know, based on a few individuals. Putting together a good orchestra, I mean, like—

FL: Yeah.

KK: How are you going to do it? I mean, unless you recruit good first chair people deliberately and with some backups in the admissions, where is your orchestra going to come from, you know?

FL: Right. Did Klaus ever take the orchestra on any kind of tour, even if it was a local tour, like he did the chorus? Did you ever go to other colleges and play concerts?

KK: Well, I think I have a recollection of being at a women's college with the orchestra.

FL: Mm-hm.

KK: It might have been Mount Holyoke.

FL: Mm-hm.

KK: But it wasn't a lot.

FL: Did you play any music by Gregory Tucker or Ernst Levy—composers who were there at the time?

KK: That's possible. I mean, those names are familiar to me. But I was not paying attention particularly.

FL: Right. So I was also wondering about some of the other Boston area composers, Walter Piston or Randall Thompson.

KK: We did play Randall Thompson. I think he wrote the "Louisiana Suite" [Correction: by Virgil Thomson]. This is what's popping into my mind. But I'm not sure that I'm getting it right.

FL: Okay.

KK: And Walter Piston, we played the, uh...

FL: *The Incredible Flutist* [ballet by Walter Piston]?

KK: *The Incredible Flutist*, yeah.

FL: Was there much contemporary music under Klaus? I know that John Corley did *The Incredible Flutist* with the dancers from the Boston Conservatory. But I'm wondering about with Klaus as far as much contemporary music.

KK: Well, again, you know, that's a long time ago. And I wasn't paying attention.

FL: Well, Klaus was known not to like Richard Wagner. Did that extend to other composers, like Richard Strauss or [Gustav] Mahler?

KK: I don't remember him expressing negative opinions about other composers or that. So I don't know about that.

FL: That might have been something that he shared with other professional colleagues, but not the orchestra.

KK: Yeah. I mean, there's no reason for that to come up in a rehearsal. If you're not playing Wagner, why talk about Wagner?

FL: Right. Right. Did you play any concertos under Klaus?

KK: The first concerto I played was [Luigi] Boccherini [Cello Concerto in B flat, arr. by F. Grutzmacher]. And I think that was with Klaus.... Was it?

FL: Let's see. I have the—

KK: Or maybe not.

FL: No, that was with—with John Corley.

KK: Corley. Well, then I didn't play any concertos with Klaus. Yeah. The Boccherini, we played it twice. We actually went on tour with that.

FL: Uh-huh.

KK: Played it at, I think, an old people's home or something like that. And that performance went better than the one that was recorded at MIT.

FL: So there is a recording of that? I have been looking for that.

KK: Yeah. That was recorded. And the [Antonin] Dvořák [Cello Concerto in B minor, op. 104] was recorded. And the Brahms Double [Concerto, op. 102] was recorded.

FL: I've been looking for those. And we've—a lot of the orchestra—hundreds of the orchestra tapes at the library—we finally got this last year. It might be that they're just not properly marked. I haven't gone through everything, but—

KK: I was wearing a wrist watch on my left wrist with a leather band that was too tight. And it blocked the blood flow in my hand. And my left hand just, sort of, cramped up. I couldn't move the fingers independently. And I was in pain.

And I still had the third movement to play of the Boccherini. I was thinking, "Should I stop and stand up and apologize, you know, that I can't go on?" But I—I sort of struggled along. I remember Gerry Litton, after the concert, said to me, "That really stank." [LAUGHS] Oh, so that was not so hot.

FL: Were there student soloists under Klaus, do you remember? Were there any outside professor solos?

KK: I don't remember any. See? But John Corley kind of bend over backwards to support me, you know, with—

FL: Right.

KK: And he, you know, he even said, "What are we going to do next?" But then Carlos Prieto [MIT 1958, 1959] came in.

FL: Yeah. My.

KK: And he was a real cellist, you know? And he had a real cello. I mean, I think he had a Strad[ivarius] even.

FL: So he was a student at the time when you were there?

KK: Yeah. Maybe at the end, when I was leaving. And he played the Haydn [Cello Concerto in D Major]. He was a real cellist. I mean, I can't touch the Haydn, you know?

FL: Yeah. Right. Yeah. He's gone on to quite a distinguished career. And he did engineering for a while. And then he's a full-time cellist.

KK: Oh, yeah. And John Corley just basically—when Carlos came in and became first cellist, then deposed me, and John just basically said, "Don't fight it."

[LAUGHTER]

KK: Just step aside.

[LAUGHTER]

FL: While we have a chance here we can take a break. And I can change tapes. We're within five minutes of running out of time. So when you—

KK: Well, do you have a quick question?

FL: Let's see. Well the next thing was about Aaron Copland coming in 1955 for the dedication of Kresge Auditorium. And I had a few questions about that.

KK: Okay. So let's change the tape.

FL: Yeah. Okay.

[End of Interview]