

# Frank J. Oteri visits the Workshop of Bart Hopkin

Tuesday, June 17, 2003, Nicosia, CA

Videotaped by Miloh Alexander

Transcribed by Randy Nordschow and Frank J. Oteri

1. Becoming an Instrument Builder
2. Standardized Instruments vs. One-Of-A-Kinds
3. Tone Quality Considerations
4. Intonation
5. Playability and Musicianship
6. A Community for Iconoclasts
7. Outreach, Education and Promotion

## **Instrument Demonstrations**

(QuickTime Video Only):

8. The Branching Corrugaphone
9. Savart's Wheel
10. The Open Siren
11. The Cat's Face
12. The Bentwood Chalumeau and Mag Strip
13. The Disorderly Tumbling Forth
14. Scraper Flutes
15. Marble Jars
16. Bass Guitar

## 1. Becoming an Instrument Builder

FRANK J. OTERI: When did you first become interested in building instruments?

BART HOPKIN: It's hard to answer that question because when I was a kid, I did things like this all the time without really thinking about it. Most kids do the business with glasses and different amounts of water and spoon. I also remember standing by a fence post with barbed wire. If you strike the barbed wire with a stick, each length has a different tension on it so it's going to have a different frequency. They're subsonic frequencies so you're going to hear a lot of rattle. If I think back, I think that I was always messing around with things like that. I still have instruments around that I made when I was pretty young. When I was in junior high, for some reason I made this thing that was a pie tin with a way-too-thick soundboard on it, which had a neck. It was a lute-like thing and, instead of frets, it had great big pieces of copper pipe and that means you could press the strings and bend between the frets.

FRANK J. OTERI: To get microtonal intervals?

BART HOPKIN: I was a very microtonal kid! [laughs]

FRANK J. OTERI: Were you trained in music formally? On old-fashioned instruments?

BART HOPKIN: In the long run, yes. I have a degree in the Folklore and Mythology Department of Harvard University specializing in Ethnomusicology, and later I got another bachelor's degree in music education at San Francisco State. I was a school teacher for a long time.

FRANK J. OTERI: Did you grow up on the East Coast or the West Coast?

BART HOPKIN: West Coast. I grew up in Berkeley.

FRANK J. OTERI: What was the musical background of your parents?

BART HOPKIN: They had a record of *South Pacific* and that's about it!

FRANK J. OTERI: So what did they think of this kid of theirs building all these crazy instruments?

BART HOPKIN: I don't think they thought about it too much.

FRANK J. OTERI: So in your early years, when you were playing around with barbed-wire fences, were you studying music? Were you also playing the piano or the violin or the guitar?

BART HOPKIN: I always played classical guitar, and I still do on weekends. I play pop and other stuff on the classical guitar. So I did do that.

FRANK J. OTERI: So the guitar came first?

BART HOPKIN: I guess. I've always been very uncomfortable with guitarist as identity, so I sort of would rather say that what came first was me being a kid playing on my bike rather than

saying I was a guitarist, or I was a serious guitarist, or I loved Jimi Hendrix, or anything like that. I'd rather say I played guitar in between playing baseball with the kids down the block.

FRANK J. OTERI: Did you study composition?

BART HOPKIN: No. I've never studied composition, and I don't call myself a composer. But when I was in college I met a Jamaican Jesuit priest who was a composer of sorts. He was a songwriter, but was not musically literate. I ended up being his arranger. He was in the Boston area. I ended up living in Kingston, Jamaica, for several years, teaching school, just to be working, and being his arranger. That was interesting because it was something I was completely unqualified to do. He was writing liturgical music and there was a place for it to be performed. We were talking about symphony orchestras... I was arranging for a full choir when there were composers who studied and who were doing their homework who should have been doing that writing. And they were big works. He would have these grand conceptions but all he could do was hum the melody and put the words to it. I got to the point where I could almost write it as fast as he could sing it and then the rest would be for me to do. So I got a real serious education—without knowing what I was doing—in orchestration and composing, or at least in arranging. It was great. But I made a lot of mistakes. I wrote some stuff that was hard to sing. You can imagine what that would be like.

FRANK J. OTERI: What was his name?

BART HOPKIN: His name is Father Richard Ho Lung, and he's still in Jamaica. He also does a lot of social work. He's very committed to working with poor people. As I mentioned, he started out as a Jesuit. Jesuits make a serious investment in their people. He did something outrageous: At one point, he decided he wanted to start his own order, which is a radical thing to do. It's a bit like saying, "I'm going to start my own country." But he did it, and it involved a lot of going through the church hierarchy and jumping through a lot of hoops and meeting a lot of challenges. It's actually been extraordinarily successful in several respects. One has been that he's gotten a lot of young men interested in religious life and aspiring to the priesthood, which is a big deal because the Catholic Church has hardly anybody. So that makes him much appreciated by the Vatican. He's now got missions in Uganda and the Philippines and Haiti. He has vocations coming from all over the world. It's a big thing in that world. It's also a big thing in the world of street people. There'd be nobody taking care of them if he wasn't taking care of them, if his group wasn't doing this kind of work. And also, all this time he's continued to compose. He's got somebody else doing what I used to do who's doing a great job of it.

FRANK J. OTERI: To bring this back to music, I see him as a role model for you in two areas. First, you were doing his arranging which made you pay closer attention to timbre, which might have led you to an aesthetic of building your own instruments. And, also, he had an influence on you by being someone who founded his own order. Being an instrument builder is, in a way, about creating a new order, creating a new set of things.

BART HOPKIN: But as an instrument builder, I don't get vocations!

FRANK J. OTERI: Ideally, these instruments would attract other players, though.

BART HOPKIN: That's actually a very interesting question, whether instruments attract other players. That gets to the heart of some very important questions about instrument making.

## 2. Standardized Instruments vs. One-Of-A-Kinds

BART HOPKIN: With conventional instruments, there's a way of thinking about them. You get standardized instruments. You have many individual objects, which are called violins, and all of them are very close physically in their construction. Because of that, you can develop a history of the instrument, a pool of skilled players, a repertoire for the instrument, and something that's a little subtle, but very important. You can develop a sense in people's ears of what the instrument should sound like and what the possibilities are. If you're creating new instruments—which is mostly what the work I've done has been about, not only for myself but with other people doing the same kind of work—you make this instrument, you think of a name for it, it's the only one in existence, there's not a pool of skilled players, there's no standard repertoire, and, most importantly, there's no pre-existing expectations. That, as you can see, is very limiting in some ways because when you write for it no one can play it. On the other hand, it's extraordinarily liberating because you don't come to it with a whole bunch of inherited ideas about how it's supposed to be used.

FRANK J. OTERI: So, to play devil's advocate a bit, what are the qualities of the conventional instruments out there that are not satisfactory to you?

BART HOPKIN: I find conventional instruments very satisfactory. I love them.

FRANK J. OTERI: So why build new instruments?

BART HOPKIN: Because it's so much fun. Because you can come up with sounds you wouldn't have come up with otherwise, either by deliberation or by stumbling upon them. Either way of arriving at new sounds can be great. Another thing that's very important about creating new instruments is that an existing instrument, which has a set of associations—any individual instrument, whether it's new or not—has things it wants to play. People say that piano music is "pianistic." This is a phrase that people use. That means something about the piano. It wants to play certain kinds of patterns of notes. I think that's what "pianistic" means. So if you come up with another instrument, it will be "something else-istic." This touches upon another very important facet of all this. All these years I spent messing with musical instruments, building them myself, and more importantly, being very aware of what other people are building. One of the things that has most grown in my mind is the idea of gesture, the way the player interacts with the instrument, and how much that determines the character of the instrument. One of the reasons a piano is "pianistic" is because there are particular kinds of motions that go with it. So if you invented the Casio keyboard, in one respect you wouldn't have come up with that much because people are going to be inclined to play very much the same kind of music on it that people play on a piano. If you come up with that has very different gestural qualities, you'll set something else.

FRANK J. OTERI: This reminds me of a conversation I had with Tod Machover for *NewMusicBox* almost four years ago. We were primarily talking about electronic instruments, but so many of the new instruments that were being built were based on the same models as older instruments and he was more interested in developing new kinds of interfaces for making sounds, like wearing a jacket instead of bowing a string or striking a key on a keyboard or blowing into a mouthpiece since those interfaces have so many preconceived associations with them already, so much baggage from the past.

BART HOPKIN: Exactly. If he was saying that a few years ago, good for him! This is an idea that more electronic instrument makers are coming to understand, but it's taken a bit of time. Don Buchla was one of the first to articulate this.

FRANK J. OTERI: With the Lightning...

BART HOPKIN: Yes. And nowadays when you talk to him, he really doesn't talk about electronics at all. He just talks about whether he can make something which will have both depth and flexibility in terms of the interface. He's not even saying, "I'm going to create a new interface. I'm going to try to create a system which will allow people to be extremely imaginative about interfaces and see how that feeds into different kinds of music." But I shouldn't speak for him. I complain about Casios, but a lot of people are having some very good ideas in electronics.

FRANK J. OTERI: What are some of the qualities that conventional instruments have that are *de facto* models for qualities that all instruments should have? What works?

BART HOPKIN: We're talking about two different things here. Conventional instruments have these very important things that go with them which are the fact that they have a pool of skilled players, they have existing repertoire, and an existing sense of what they can do. They're also mechanically very effective. They're made to work with well-known scales. All those things are extremely valuable. Thank God. If it weren't for the fact that these things work really well, we wouldn't have most of the music we all enjoy. There's really a lot to be said for that. The centuries of development have given us really fine artifacts of what human beings can do. When you're dealing with experimental instruments, very rarely do you reach the level of refinement of instruments that have been around so long; that's worth a lot. It's the opposite side of the same coin.

FRANK J. OTERI: What are some of the qualities of conventional instruments that you carry over into the instruments that you build? Instruments of any culture, not just the West.

BART HOPKIN: That's a good question because it makes me think that I'll answer it by saying I don't! For instance, I love the clarinet more than anything in the world. I wouldn't try to take qualities of the clarinet and put them into something new that I make because I could never do it as well as a clarinet. So when I make something new, what will make me happiest, for whatever it's worth, is if it's not at all like something else. So I've done this thing here [*holds up a Branching Corrugaphone*] which doesn't do what a clarinet does; it can't come near. But it does what it does, and hopefully the world is a little bit richer because there's also this in addition to the clarinet, and it's quite different.

FRANK J. OTERI: One could imagine making an instrument like this that is triggered by a reed...

BART HOPKIN: Yeah. There'd be some technical challenges, but... And I do make some clarinet-like instruments...

### 3. Tone Quality Considerations

FRANK J. OTERI: What are the sort of things you want in tone quality?

BART HOPKIN: You're getting at something. You're forcing me to say something that is great because I haven't really thought it through fully. I do like to make pretty sounding instruments, but once again, I know I'm never going to make anything that sounds as lovely as a shakuhachi, so the tone quality questions that I get into a lot of the time are about making something that is very different. The standard Western instruments have the market cornered on beautiful tone quality, emphasizing the lower frequencies of the harmonic series, like the clarinet, since it's the example we've been using. But, really, this is true of all the orchestral instruments; they tend to have a very lovely balance of the first six or eight overtones of the harmonic series—a very strong fundamental and clearly harmonic pitches above that in the timbre. That's not true of instruments from other places. It's very hard to generalize, but you know just by consulting your ear memory, a lot of instruments in other cultures emphasize higher harmonics.

FRANK J. OTERI: But then there are all these instruments in India with sympathetic strings that really bring out overtones...

BART HOPKIN: In general, Western instruments tend to emphasize the lower overtones, Eastern instruments are harmonic but emphasize higher overtones, and then you can point to several very prominent African instruments which have very widely spaced non-harmonic overtones—that's true of kalimbas and marimba-like instruments, and drums. Somebody's going to say you're generalizing too much and find counter examples.

FRANK J. OTERI: Well, good. That's what our Forum is for!

BART HOPKIN: Every one of them is a wonderful sound world. So, what do I look for timbre-wise when I make my own instruments? I look for things that are not going to sound like something else because I want to do something that sounds different. Somebody's already built a beautiful clarinet. So that tends to lead me to slightly outrageous tone qualities for some of these instruments. One of the things that has interested me a lot lately is vibrational patterns that are forced. What makes musical instruments go (we're talking about acoustic instruments now) is something with a springy quality—that might be air or a string or a vibrating prong of some kind or a bar or a membrane—which is somehow displaced. It has a natural disposition, it's displaced, it's released, it wants to spring back but it overshoots and goes back and forth, and you tend to get a nice smooth vibration pattern and in most cases you get something pretty close to a sine wave. That's a gross simplification. I'm interested in things which aren't nice and springy like that, but something where you're somehow forcing something to go back and forth at some frequency hearing range, but because it's forced is not likely to make a nice sounding sine wave. And I just happen to have in this very room a musical instrument which illustrates this...

#### 4. Intonation

FRANK J. OTERI: For you, it seems that precise intonation isn't really an issue.

BART HOPKIN: Somebody said to me the other day, "How precise do you think I should be? Do you think it's good enough to tune it within a tenth of a cent?" My reaction was, "God, get a life." Nobody can hear it. I read some place in one of these acoustic studies that somebody had gotten some highly reputed flute player to play, somebody famous that we all would have heard of, and it turned out that they were only accurate within five cents.

FRANK J. OTERI: Well, five cents is the human threshold...

BART HOPKIN: Well, I'm completely relaxed about it. And, at the risk of making enemies, people talk about these tuning questions and talk about them and talk about them and get out their calculators and where's the music? I really like the way music feels. And I don't feel the difference between these very fine differentiated tunings that much. I like the impact of music. I love to think and talk about intonation systems, but in the end I say life is too short, give me Motown when it comes down to that kind of question.

FRANK J. OTERI: But, after seeing you play and talk about some of these instruments that can bend pitches, it seems fair to assume that you're not content just to have the pitches of twelve equal.

BART HOPKIN: Bent notes are really cool, not because I know how many cents I'm bending. I think I'm not quite as unpleasant a person as I just sounded! I actually have heard some really wonderful just music, and you really can hear the difference. But as far as what I'm doing with my own 24 hours a day, I put the emphasis elsewhere.

FRANK J. OTERI: But, obviously, one of the mentors of the whole experimental instrument movement was a microtonalist, Harry Partch, who built all his own instruments in order to play music in his own scale.

BART HOPKIN: I was just on the Mavericks Web site...

FRANK J. OTERI: Where you can play web-based versions of the Partch instruments online!

BART HOPKIN: Preston Wright did a wonderful job on that thing and I really enjoyed playing around with it. But one of the things that struck me, and I actually commented about this in an exchange I had with him, is—it's the strangest thing—you play these instruments where they've sampled the Partch instruments' tone qualities and pitches, so you get to hear the instruments in this kind of strange disembodied content. It's funny—Mr. Corporeality reduced to a computer screen. But one of the striking things about it is you hear these tone qualities that are wildly inharmonic and you can hardly tell; the fundamental is almost completely dominated by some of these inharmonic overtones on some of Partch's instruments and somehow Partch decided this is what the fundamental is and this is what the pitch is. But when I listen to them, I hear a whole mess of confusing overtones that are no way just. When you listen to the music, you don't hear just intonation, you hear this mess of overtones. It's a wonderful gestalt, and it's what makes Partch's music fantastic—or at least part of what makes his music so powerful when you hear it—this mix of overtones. But the overtones are totally

inharmonic, and for him to be saying, "I'm tuning precisely to this 11-limit pitch," is a little funny to me. You're getting this whole mess of inharmonic overtones, but it's all in the service of this tuning concept which is contrary.

FRANK J. OTERI: Well, this strikes to the heart of the science versus art question. The building of musical instruments requires a little bit of science and a little bit of art. How far do you go with the science and how far do you go with the art?

BART HOPKIN: Well, the two feed each other. It's a symbiotic relationship. The science is its own reward. Sometimes people act as though the science validates the art and that's not true. But that doesn't mean don't do science.

## 5. Playability and Musicianship

FRANK J. OTERI: Some experimental instruments have really complicated designs. Should playability always be a factor?

BART HOPKIN: That gets back to what I was saying earlier about gesture. Some instruments are easy to play and some instruments are difficult to play. When an instrument is easy to play and is polyphonic and you can get a lot of notes out of it, that's extremely useful and that's a good thing. Some instruments that are difficult to play, it becomes part of their personalities and can mean something, perhaps to the audience, perhaps even more to the person who's playing it. It's very good to be very playable but I also think that it can be worth something to somebody to have a totally recalcitrant instrument.

FRANK J. OTERI: So, are there instruments you've built that you can't play?

BART HOPKIN: Well, sure. I've made some instruments where I don't have the chops. I made this big long alphorn once just for the fun of it and I thought, well, I guess I did a good job... Then when I gave it to a trumpeter who can play way up in the overtone series, it was great; I was thrilled.

FRANK J. OTERI: That leads to another question. The question of proficiency and, eventually, virtuosity. How do you get other people interested in playing these instruments? And once they're playing them, how do you get them to develop their technique?

BART HOPKIN: Again, that comes back to one-of-a-kinds versus standard types. Another way of saying one-of-a-kind, which is a way of giving it some sort of proper sounding name, is to call it sound sculpture. Sculpture implies one-of-a-kind and implies value, so just by saying sound sculpture you can have a whole way of looking at one-of-a-kinds and say that's good.

FRANK J. OTERI: Sound sculpture also leads to a different issue. The standardized instruments that have evolved not only sound good, they also look good. But it's more important that they sound good. Sound sculpture almost implies that they look extraordinary, like something out of a Dr. Seuss book, and that's part of the whole aesthetic of experimental musical instruments. No one wants to make an instrument that looks exactly like a violin but makes entirely different sounds.

BART HOPKIN: The appearance usually flows from the acoustic requirements.

FRANK J. OTERI: But to get back to the question of other players, you get someone else interested in playing one of these one-of-a-kind instruments, then you have to give the instrument away. You can't get five different musicians interested, because there aren't five instruments.

BART HOPKIN: That's why I say think in terms of sound sculpture. Partch had this big problem. He used to say something like, "Don't let my memory be trapped by my legacy." Well, the fact is he did develop a legacy and now there's this big problem about the Partch instruments. Are we supposed to make many sets of the Partch instruments which some people are trying to do? How do you deal with this? One way to deal with it is you don't think that there are composers and composers have legacies or that there are performers who

devoted their lives to learning certain instruments. You just think, I made this thing. I like the way it sounds. I'm going to go sit in the sand by the beach and play it for a while. You don't have to think anything more than that.

FRANK J. OTERI: But that's a limitation. There's only so far that you can go with that. Maybe it's not the only goal, but you can't create a late Beethoven string quartet that way, or a recent orchestral piece by John Adams...

BART HOPKIN: And thank God John Adams is doing that because the music is so great. Meanwhile I like sitting by the beach on a sand dune playing an instrument I just made.

FRANK J. OTERI: You also can't create John Coltrane's *A Love Supreme* that way!

BART HOPKIN: Well, I'm less sure of that because John Coltrane was so idiosyncratic. And, in that way, I think you can do something that has a similar kind of idiosyncrasy to it, and if you had as much depth as John Coltrane, you might create something comparable.

FRANK J. OTERI: But part of that requires interacting with others. That record is so great because four people came together and made it happen. I guess you could do something like that by getting together and playing with other instrument builders. Do you collaborate?

BART HOPKIN: The right answer to what you've just said is: You should go to one of these jam sessions! What happens is—and this is the same thing that happens with a lot of jazz—you get long periods of time when it's not clicking, but when it does click you go somewhere really special and it's not a place you could have gone under any other circumstances. The kind of thing that happens when you have instrument makers having a jam session is you have three or four or five people coming together (hopefully not too many more than that); each of them shows up with a trunk full of their instruments. The first thing that happens is everybody oohs and aahs over each other's instruments and tries out each other's instruments, and then you start playing. And the way you start playing is generally—these things are sort of an organic thing that happens, there's not some kind of rule—somebody starts making sounds on one of their instruments, and somebody else goes to an almost instinctive process of what's going to work well with this with one of their own instruments, or one of their neighbor's instruments, and starts trying to find ways that work well with that. A lot of times, many of the instruments have definite pitch but many of them weren't tuned to particular scales with each other, so you get tonal chaos sometimes, but when you arrive at a place where they work together tonally, it's usually some place you never would have imagined. So, it really can be a very unique experience and one of some *Love Supreme*-like depth, at least if you're one of the people who is part of it, if you have a certain patience about the fact that it's not always going to click.

## 6. A Community for Iconoclasts

FRANK J. OTERI: This leads to the whole question of community. Many years ago you founded the *Experimental Musical Instruments Journal*. I remember buying a copy of it at a magazine shop that sold the most popular glossy magazines but also sold you're totally unglossy publication! And I thought, 'Wow, this is the only magazine I'm interested in this shop,' and I bought it... But this was an attempt at building a community of people who were, by-and-large, sitting on the beach playing their own instruments in isolation. So what are some of things that you've been able to do as a community of instrument builders that you couldn't do as individuals?

BART HOPKIN: Getting together and playing some music is the most important, I suppose. Another very important one is the exchange of ideas.

FRANK J. OTERI: When was the journal started?

BART HOPKIN: It was 1985.

FRANK J. OTERI: What made you decide to do it?

BART HOPKIN: Part of it was that I was enjoying doing this thing—building instruments, one-of-a-kinds—and I was thinking other people must be doing this but I don't know who. And somehow that led me to the idea of doing something like an organ that would make a link between these people that I didn't know existed yet. Something came on the radio about the newsletter of interestingly obscure subject of the autoharp. There was an autoharp journal for a while called *The Autoharpoholic*, and somehow Becky Blackley, the woman who put the whole thing together, was on KPFA talking about it. It was sometime after that that I thought I could do something like that.

FRANK J. OTERI: In developing this community of people, I could see that there might be problems in bringing together some folks who might be iconoclastic fanatics.

BART HOPKIN: I think Partch was an example of that; he was in some ways a prickly person and yet he really needed to work with other people for what he was trying to do. What can I say, it happens!

FRANK J. OTERI: But for the most part, people in the community are not that way?

BART HOPKIN: This is one of the things I learned about people: most of them are pretty nice!

FRANK J. OTERI: The journal no longer exists in print form but it continues as a website.

BART HOPKIN: Right. I sort of don't want *Experimental Musical Instruments* as an organization to fall off the map. But doing the journal was extremely demanding as you very well would understand. And also other projects had come my way that I really enjoyed doing in connection with *Experimental Musical Instruments* but it was hard to do it. And so I stopped the journal. And in a way, the bottom really did fall out of things because there was such a feeling of connection involved. Here this thing showed up in people's mailboxes four times a year and it made sure there was always a connection. Anyway, that happened. Since then, what I try to

do is make sure that Experimental Musical Instruments, as an organization, comes out with something new often enough that we don't completely fall off the map. So, here's my opportunity to say we've just come out with this really cool thing, I think. We have two things we came out with recently which are nicely opposite each other. One was a book on how to put a pick-up on your instrument, whatever your instrument might be, just useful information. And the other is *Funny Noises for the Connoisseur*, a book and a CD which is full of every kind of hopefully funny sound that you can imagine and the book talks about how to make them.

## 7. Outreach, Education and Promotion

FRANK J. OTERI: At some point you had a major success with a book and CD combo *Gravikords, Whirligigs and Pyrophones*. That was something that put this whole movement on the map in a big way to the general public. How did that come about?

BART HOPKIN: It was a matter of having a publisher who was really good.

FRANK J. OTERI: Ellipsis Arts...

BART HOPKIN: They're outside of New York, and their thing at that time, they've changed a little bit, was taking things that were a little fringe that had the potential of being more popular and presenting them in a way that hopefully worked with a lot of people. They did that thing and gave it a lot of promotion and so it did well.

FRANK J. OTERI: Did you approach them?

BART HOPKIN: They approached me. I had had in the back of my mind that it would be great to do a coffee table book with a CD of all these people building these beautiful instruments and then they came along, so it worked nicely.

FRANK J. OTERI: To take this into the realm of education, there's so much talk these days about the lack of musical education being the chief culprit in the decline of serious music appreciation. Our musical standards are eroding because nobody knows how to read music anymore and nobody cares about serious listening, nobody has an attention span past two minutes in our society—two minutes is probably an eternity at this point—it's more like 15 seconds... The thing that comes to my mind being in the San Francisco Bay Area is that the first time I was here I visited the Exploratorium and there were so many wonderful things there that involved music and the connection between science and music. Maybe a way to get young people interested in music is not just playing it, but the actual making of things that make sound as well. Have you worked in schools?

BART HOPKIN: I've done a little bit, but a lot of other people have done a lot more. The Exploratorium is a very good example. The people at the Exploratorium are a great bunch of people, and part of their mission is the connection between science and the arts. And it is a fact that musical instruments and musical instrument making and the kind of questions you address when you are making new musical instruments do work very well pedagogically. So a lot of people have worked on this, kindergarten teachers as well as teachers of older people have worked with this idea of instrument making as a classroom exercise.

FRANK J. OTERI: I want to go back to something you said at the beginning. You said you don't define yourself as a composer but you've certainly created your own music for the instruments you've built and there's a statement you made in the notes for your CD that I thought was very interesting. You said that you hoped people would come away hearing the CD and be thinking about the music and not thinking of it as just a documentation of the sounds of these instruments. And I thought it was. It was a very fulfilling listening experience.

BART HOPKIN: Thank you. I actually have felt disappointed because people who know a lot about this area or who know about what I have been doing have said that it really succeeds in

doing this thing of showing off the quality of the instruments while at the same time sounding musical and compositional. I really like the way that music hits people, and that's why I like pop music so much. I think it's harder to do good pop music than to do any other kind of music because hitting people just right, nobody knows how to do it. I could never do pop music, but I did want to do something that—for people who had no special intellectual interest in the kinds of questions that this CD brings up by having all the unusual instruments—would still hit them as nice music. In the end I felt like it didn't really succeed. I base that on a couple of reviews that it got where it's clear that it just didn't hit the reviewer and the main thing they could say is, "This guy makes interesting instruments." I felt disappointed in that.

FRANK J. OTERI: They're wrong!

BART HOPKIN: Well, thank you!

FRANK J. OTERI: I was delighted to discover this disc existed. Your own music making is a very well kept secret to some extent.

BART HOPKIN: There's a reason for that. It's because I'm a person of such deep humility [laughs], but also because with *Experimental Musical Instruments* I thought it was important not to be promoting myself. Charles Amirkhanian was on KPFA and for years and years ran the new music department at KPFA. I'm probably getting this story all wrong, so Charles if you see this...

FRANK J. OTERI: He will!

BART HOPKIN: ...I just have this memory, and it's probably an incorrect memory, but it illustrates my point. He was running the program and he was doing a terrific job of bringing music from all kinds of people forward. And then one day, he decided to play a couple of his own pieces because he's also a very fine composer himself, and a bunch of people wrote in and complained. "How dare you play your own music on your own show; that's a conflict of interest!" So, with that kind of thinking in mind, I tried not to put myself forward. I didn't mind putting myself forward in *Experimental Musical Instruments* in connection with talking about instrument building techniques. If I thought I'd learned some shop trick that would be useful I'd talk about that. But I didn't want to say, "I do real good music, and I hope you like it!" I didn't want to be another ego in connection with that, so that's one of the reasons I've been very reluctant to jump forward with this stuff.

FRANK J. OTERI: I want to talk about the aspects of the music on there because it speaks to what we were talking about at the very beginning of this conversation about developing repertoire. The disc is almost entirely your own music, composed and improvised. I would imagine that a lot of it is improvised because, as you described earlier, the instruments play you as much as you play them. But you also cover pop songs on there, and that leads to another about new instruments. Are new instruments at their most perceptible to the general public playing new repertoire written for them, or doing arrangements of already existing music?

BART HOPKIN: You know, I don't think I can answer that except to say that I guess I favor the idea of them doing their own music because of the reason I described before: to bring out the character of the instrument, especially if you have an instrument with a very special character

it's better to let them come forth with what they want to come forth with. I'm a great believer in—although probably not very successful at it—not letting precepts determine what the music should be. Hopefully, you get lucky and come out with something that feels good to people. That's my main intellectual precept. I'm like everyone else and tend to get some idea, and then the idea dominates. I get off track because I was following the idea too much instead of just going where the music wanted to go. My main feeling is that if you're really lucky—it's a wonderful thing if you can do this—you just somehow stumble on something feels good to people. That's all you can try to do.

FRANK J. OTERI: In terms of writing for these instruments, do you write ideas down? Do you use music notation to write?

BART HOPKIN: In many cases I do end up writing them down. They end up looking totally scribbly.

FRANK J. OTERI: Standard music notation or...

BART HOPKIN: Yes.

FRANK J. OTERI: Do any of these instruments demand their own notation?

BART HOPKIN: For the instruments that really don't play a standard scale for instance, I'm more inclined to just blow. Many of them are written in 12 equal. That's sort of a decision I've made for practical reasons. Either that or have my tuning be so sloppy that it doesn't matter where I'm going.

FRANK J. OTERI: And you shied away from electronics except for purposes of running motors and amplifying things. Is there a reason? Is that an aesthetic?

BART HOPKIN: I've just never gotten into it. I'm not a guy who is good at the stuff. I'm not drawn that way, especially when it comes to computer stuff. My goal in life is to spend less time in front of a computer.

FRANK J. OTERI: The future of instrument building, both the future of your own instruments and the future of other people doing it, where is this going?

BART HOPKIN: I don't know. I think it's a little bit of a daydream for people to think that these really unusual instruments will be used in mainstream composition. Nobody is going to invent some new instrument that will become something like the saxophone, which we can pinpoint the time when it was invented, although the guy who invented it actually stood on the shoulders of everyone else that had ever built instruments. I think that that kind of thinking is usually a dead end. That leads us back to the question of whether people can develop an aesthetic that allows for more of individual instruments making their individual sounds, and whether that aesthetic can continue to grow or whether it's always destined to be a fringe kind of thing. I sort of think it's destined to be a fringe thing. But what a nice fringe thing, I hope it keeps going.