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Part of a conversation between Nic Collins and David Behrman, August 2004

NC: My first question is... knowing your past work as being primarily non-lyric based, non-text based, without human voice, I'd want to ask you how is human voice and the text aspect of human voice different from, and similar to, working with other instruments. For example, if you take the body of work that you've produced since, say, 1980 — its tonality, structures, sound palette — and you move from working with an instrumentalist like Ben Neill, on trumpet, and you place a human narrator, speaking an intelligible linear narrative text, in that context. What happens to your work?

DB: Then it becomes an amalgam of the two things, the music and the spoken text. It's a wider dispersion of the idea of music. If you think of sound art as encompassing anything that comes into the ears, it can include spoken or whispered or sung language as well as noise, pitched or environmental sound.

I've been a great admirer of Robert Ashley's use of linear narrative text in his music since the Nineteen-Sixties. Of course our styles are very different, and he is an author as well as a composer. But in a sense his work served as a model for the *Siegfried* piece.

Also, I've gotten very interested recently in enhancing and transforming the voice with the help of newly-available techniques, both in live performance and recording.

NC: So possibly instrumental music could be thought of as

a subset of a larger art form, a larger phenomenon, which would be "sound art" (for want of a better term), and under that umbrella, language and speech become a much bigger thing than music, because language and speech encompass music, and then add something. But this doesn't actually answer the question: if you create a body of work that's based on certain mechanistic interaction between instruments and computers (to focus on that for a moment), the computer is not very clever, and it has to be programmed to pay attention to certain things and ignore other things; you have to tell it what are the distinctive differences; and the distinctive differences of tonality — of, say, functional harmony — are very different from those of English grammar.

DB: I'm getting away from devoting myself exclusively to pieces based on interaction between humans and computers.

Everyone Sang is a score in conventional notation (with some ambient sound mixed into the acoustic recording.)

In *Grocery Store* the main interaction is between Tom, the narrator, and the person operating two laptops which are used in performance. The software on the laptops is controlled with faders and switches (real physical ones) and the performance for this person is something like piloting a pair of little airplanes. The slow rhythmically cycling chords on the two laptops are almost identical, but the "pilot" can make adjustments in how the two programs proceed, bringing them in and out of sync, and can also sometimes throw destabilizing wrenches into the situation, so that the regularity of the rhythmic figures on one or another of the laptops is interrupted. (I like the image

here of throwing pebbles into a calm pond.)

In the two 1939 letters there are extra, partly dehumanized voices, with gravelly whispering timbres, accompanying the narrators. Those voices are built up with the help of computer music techniques. In performance of the Sassoon letter the narrator has a monitor screen with cues showing when the gravelly voice is about to speak the next phrase. The idea is that the narrator should roughly speak in parallel with that voice, sometimes preceding it and sometimes following.

In the Statement against the War there are several different layers of computer processing. Some are sensing the pitch and loudness of the voice and inflecting virtual vocoders and comb filters as they process the voice. Then there's another layer in post-production. Tom Hamilton found ways to use a combination of new plug-ins to radically alter the vocal sound, to give it almost the character of an angry deity rather than a life-sized human...

NC:... and in that sense it occupies that fuzzy region which I think was very much a part of some of the work done in downtown New York in the late Eighties and the Nineties: of bridging the gap between studio production as the producer's domain, as something essentially appropriate to the record, and the notion that these technologies could become part of a performance practice: that you could be an instrumentalist and your instrument could be a reverb, or a delay, or a harmonizer.

DB: And you've done a lot of that in your work with the instrument you designed, the retro-fit trombone, and with your "backwards" electric guitars —

NC: Right. And I think, for someone of my generation, I think it has a slightly Talmudic property of the commentary — you know, the commentary on the text. I'm fifty, and even the most snobbish and erudite of composers of my generation probably spent a childhood (in the West, at least) immersed in the sound of pop music. And pop music in my lifetime evolved from a relatively crude representation of live performance on tape, to becoming a studio-based art form. And perhaps it's appropriate that we would take that palette of sounds, and remove it from the studio and put it back on the stage. It's a cyclical thing.

DB: Well, mostly over the years I've been working on live performance situations, but I've tended to think of a recording as a different art form than a live performance. This CD has the character of both; some of it could be done live the way you hear it on the recording, it could be done in a performance, and other parts of it took extensive post-production processing.

NC: How do the instruments in the text-based pieces work — how are their parts determined? To what extent are they instructed to play in a certain way? Are they following the electronic sound or the vocal performance? Are they working against each other when it's just the two players (the shakuhachi and the trombone), or behaving purely spontaneously?

DB: In *Grocery Store*, Ralph and Peter (on shakuhachi and trombone) are playing freely, listening to the text and the computer music and adjusting their performances in whatever way they like. Peter's roles in *Statement against*

the War and the 1939 Sam Behrman letter are similarly free.

In Watercress Well the instruments and the voice are both sensed as pitch-producing acoustic instruments. The computer can switch back and forth between two kinds of sensing: one way (like in the old pieces from the Eighties) is that it reacts when particular pitches are sung or played; the second way is that minute changes of pitch and loudness cause reactions. The software is continually recomputing where it thinks the tonal center is, and it gives signals when that center is deviated away from. I worked out that kind of sensing with the speaking voice in mind but then found that it works well with the instruments too. This second kind of sensing is used during the first part of the piece, when Tom is delivering Sassoon's text in a style that's closer to speech than to song, and it's also used from time to time with the instruments.

NC: Turning to your early electronic work, one thing that characterized it — and it came back to me in listening to the *Pools of Phase Locked Loops* — was this notion of fades. There's this quality in the sliding pitches stuff from the early Seventies of these long fades, and as I recall, in the early days you would have to retune your oscillators by hand and then they would fade in. That's a very nice electronic idea: the fade, the voltage-controlled fade, allows something that musicians have difficulty doing over an extended period of time. The notion of ramps, in the domains of volume and pitch, became a signature of your work. Later on, when you worked in a MIDI domain, where ramps are a little more difficult (in MIDI, that things go on and off or make steps — there is no true glide), you

retained that; you carried an idea from one technology, for which it was natural, to a technology for which it was unnatural.

DB: Yes, with some difficulty, but it was possible, right. The 1998 recording on the 2nd CD of Jon Gibson playing QSRL is an example of that, the MIDI synthesizer voices were tailored in an effort to take away their off-the-shelf sound and they were programmed to do smooth ramps, although these aren't so slow in this piece which is pretty far from the earlier minimalism...

NC: When you look back at the history of your interaction with electronic technology can you point to times and say, "when I learned that you could do this, it made me change the way I was doing my music" — that certain technological idiosyncrasies became a signature elements, for want of a more elegant term?

DB: Well I think of that time — you've been researching the 566 chip which a number of us simultaneously discovered in the early Seventies — of that moment when armed with an oscilloscope and a few analog circuit boards you could make these things happen for the first time. It was the technology of the early synthesizer — voltage control — it was brand new in those days — very slow, or varyingly slow, smooth changes of pitch or volume just seemed like material that I wanted to work with. And it also seemed like a new discovery — which it was in those days (it's hard to believe now). Very slow smooth automated glissandos were not something that existed before the transistor, before electronics anyway. I think also my

interest in very slowly-changing sound came in those days from hearing the work of other artists who were my friends: particularly Eliane Radigue, Maryanne Amacher and Phill Niblock.

NC: I think of it as a very electronic idea, and a relatively late one — you don't hear it much in Stockhausen, for example, or early tape music. I think it was really a "voltage-controlled idea."

DB: True.

NC: You mention the fact that early homemade electronics were totally personable, because you made them yourself. Then early MIDI was the least personable, because there were fewer variations possible. And now we come to a point where the off-the-shelf technology is much more configurable, just by virtue of the open-ended power of the machine; so that you could make it sound as impersonal as the early MIDI, but that's not a necessity any more, right?

DB: It's not a necessity but it's a resource. For instance, I've found it isn't hard to re-create the homemade synthesizers from the early Seventies or the late Sixties, using 21st Century software and it sounds just as good. (I learned that first from Mark Trayle, who revived a Sixties piece of mine a while back with his students at Cal Arts.) And in fact you can do much more with it. You can start by reproducing the homemade synthesizers and then you can build on top of that.

NC: It's ironic, it's exactly the situation I found myself in recently. Two of my older pieces — one of the very first

pieces I ever did, this feedback piece called *Pea Soup*, from 1974, and another work from the mid-Eighties, a live radio sampling piece called *Devil's Music* — I ended up replicating, initially quite faithfully, in software. I could do this because software had reached the point that it was configurable enough to approximate the personal nature of the earlier technology — today you can emulate the personal. But, as you say, that's just a starting point, from which you can extend. I was able to emulate what the original pieces did, decide what was critical to the original, and then recast it as a "rev 2.0" — you could still identify its source and yet push it further, make it a new piece.

DB: Yes, I heard you perform *Pea Soup* and I was amazed that it has an analog sound; you would never know that there was a computer program running. It sounds analog in a wonderful way, and that's true also of Ron Kuivila's piece, *Electric Wind*. They're both beautiful examples of what can be done with technology today.

That version of *Pea Soup* that I heard, you couldn't have done it five years ago, could you?

NC: No.