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A Tool Is a Tool

Pamela Z

I am often asked how recent changes in technology have effected my art. It is difficult for anyone to be alive today in this culture and not be in some way touched by the sudden upsurge of computers and digital technology, and in this regard I am no exception. Not only has this technology had a major effect on my work as composer and performer, but it has infiltrated practically every aspect of my life. I compose music on the computer. I use digital sound processors and MIDI (musical instrument digital interface) equipment in live performance. I record, edit, and construct sound works using digital sound editing software and hardware in the computer and then use peripheral devices with my computer to burn CDs of those works so they can be heard by others. I use musical notation software to create scores when I compose works intended to be performed by other musicians. When I'm not working directly on my art, I'm using the computer to communicate with others through e-mail and to make others aware of my work through maintaining a Web site. And I use the computer to teach others to use digital audio and other software. I use the computer to do my books, manage my promotional materials, and keep track of colleagues, venues, services, and members of the press. The list of computer-centered activity in my life seems endless. I haven't yet found a way to cook in the computer, but if left to my own devices, I'm afraid that I might!

I am aware of the ironies around the effects of the use of computers on productivity. For every task that is made more efficient by them, there is at least as much new busy work around crashes, upgrades, incompatibilities, et cetera to counterbalance that new efficiency with a new brand of inefficiency. Even so, I chose to succumb to all of that and continue to work in the way that I do. In fact, I have to admit that I have been thoroughly seduced by computers ever since my introduction to the Macintosh 128k machine that I started on in the mid-1980s and that I enjoy the actual using of the computer beyond the practicality of what I'm able to accomplish with it. The computer is a tool, and I have a very strong relationship with my tools.

I have made some of my greatest strides and artistic discoveries whenever I have begun to employ a new tool to make my work. I have learned over the years that one of the best ways to stimulate growth or new direction in my work is to introduce a new instrument into my arsenal. I can, in fact, chart major changes in my work throughout my life as coinciding with the introduction of these instruments.

Growing up, I certainly saw a steady stream of new tools for making sound. My first instrument was my voice, and, as children, my sister and I used pods from a tree that grew in our Denver neighborhood as found percussion. As an elementary school student, I began to play the viola in orchestra and in private lessons. While still in elementary school, I was given a classical guitar, and my family shared a set of German block flutes (recorders). An old upright piano entered our home when I was beginning junior high school, and of course I eventually "prepared" this instrument by placing thumbtacks in the felts of its hammers. Also, around the same time, my father sent us one of those newfangled Craig cassette tape recorders, which was followed soon after by a second one. This prompted me to start creating imaginary radio programs—bouncing back and forth between the two recorders to make multiple layers of my voice and other sounds. The introduction of each of these new sound-making tools had definite effects on my development as an artist—shifting my way of listening to and creating music and audio works.

As an adult, perhaps the most profound shift in my work that I can recall occurred when I acquired my first digital sound processor. I bought an Ibanez DM1000 Digital Delay in the early 1980s. Right around that time, I had become dissatisfied with the comparatively conventional music I was playing professionally and began looking for ways to start creating more experimental types of work. My previous influences had largely been rock music of the 1960s, singer-songwriters of the 1970s, and classical opera from the 1800s. But now I was finding myself far more interested in punk and new-wave artists, minimalist composers, and a whole slew of experimental electronic composers ranging from John Cage, Pauline Oliveros, and Alvin Lucier to Laurie Anderson and Brian Eno. All my attempts to jump-start a new direction in my compositional style had been relatively fruitless, and I think this had a lot to do with the tools I was using at the time. For the work I was performing live, I was mainly using my voice and a hollow-body electric guitar. I was working in a kind of standard singer-songwriter way and trying to integrate my classically trained voice into the picture somehow. My recorded work (for which I was using a Fostex portable cassette four-track) started evolving much more quickly than my live work. I was working with layers of sustained vocal sounds combined with sounds from another new tool—a cheesy little Casio synthesizer.

But I was unable to translate any of that growth to my live performance until I brought home the Ibanez Delay. For me, this was a perfect perfor-

mance instrument! It allowed me to make layers of sound in real time so that I could create fairly complex and dense pieces using just that processor and my voice. Literally, the moment I began working with it, my whole compositional style began to transform. I began to listen to sound differently. Because of the looping (infinite hold) feature on the delay, I became very interested in repetition and gained a keen awareness of the kinds of things that happen to our perception of small pieces of sound when we hear them repeated at length. And because my voice was constantly coming back at me in the delay loops, I began to play a lot more with timbre and texture. These were to become key elements in my work, equaling and surpassing my previous emphasis on melody and harmony. I was so effected by this new instrument (this device that most musicians were more likely to refer to as an effect than as an instrument), that it wasn't long before I went out and purchased a second and then a third digital delay. Digital delays remain at the core of my performance set-up to this day (although I now create them using an Apple Powerbook with MAX MSP software rather than my original outboard processor units).

With the dramatic changes that came about in my music due to the use of this new tool, my hands and my body were freed up for gesture and movement, and I became more focused on the performance aspect of my work. I came to see the sound I was making and my physical behavior while making it as an integrated whole. I learned during this period of time (the mid-1980s) that performance itself was a discipline and that I was as much a performer as I was a musician. Found objects and toys that were both sonically and visually interesting augmented my complement of instruments. I used things like a Slinky ("the wonderful wonderful toy"), a pair of hammer handles, an empty five-gallon plastic water bottle, and some strips of Plexiglas as performance tools. The effect that the addition of these objects had on my work was, in some ways, as profound as that of the introduction of digital processing. I have a piece called *Bone Music* in which I use an Alhambra water bottle (of the type usually found inverted on water coolers). Although I only physically make a sound with this object three times at the opening of the piece, the bottle is so important to the structure that I cannot do the piece without it. (This poses a small problem when touring outside the United States where water coolers are not common!) The three, quick sounds that I make (by slapping the bottle) linger in digital delay loops for the duration of the piece and form its rhythmic base. And the visual impact of this large

object remains as I continue to physically manipulate the object silently while singing.

My lack of skill with or understanding of a new tool has often worked in my favor. One example of this would be a discovery I made after I got my second delay. Through efforts to make the two delays synch up with each other, I inadvertently created my first set of "out-of-phase" loops. At that time, there was no MIDI clock to slave one device to the other, so I was trying to adjust the delay lengths and get the two of them in synch. Obviously, I couldn't make them precisely the same length manually, so the loops would start together and then gradually begin drifting apart. When I heard this sound, I was immediately in love with it, and I wondered whatever possessed me to try to get them in synch in the first place. I began writing pieces that deliberately incorporated out-of-phase loops. I was delighted with my discovery. Ignorant of such things as of Steve Reich's early works, I thought I had invented the idea!

"Mistakes" of this kind have long been an enriching force on my work and continue to be. Brian Eno refers to these unexpected results as "happy accidents." Many composers have deliberately imposed external forces on their work as a way of cultivating unpredicted results. Perhaps most notably, there is John Cage with his chance operations. Numerous others have employed mathematical algorithms or other systems to create the structure of their pieces. For me, the introduction of new tools continues to be a great catalyst, and the accidents that happen because of the learning curve are often far more interesting to me than anything I might have thought up on my own.

Once I begin to develop some facility with a particular tool—regardless of whether it is an acoustic instrument, a piece of electronic hardware or a new version of some software—my work is then effected by my newly found proficiency on the instrument. In the past several years, I have been creating recorded works using digital editing software on my Mac. As I gained skill with nondestructive editing programs such as Digidesign's SoundDesigner and ProTools, I began working in new ways. I began making sculpted sound collages with small bits of layered text and found sounds. My first hard disc recording works were informed by the live work I do with digital delay loops, but I quickly started making more complex and varied structures, working with smaller bits of sound, and altering the samples.

As a composer and performer, my choice of tools (instrumentation) is often determined by my own capabilities as a solo performer. I began using the BodySynth several years ago when I wanted to introduce pre-

sampled sounds into my live works (figure 24.1). Up until that point, I had used only samples that I created in real time in my digital delays as I performed. I wanted to be able to use sounds I could not sample on the fly, but I didn't want to use a sequencer to play them. I wanted to trigger them myself but wasn't interested in adding a keyboard or some kind of drum triggers to my set-up. I needed to keep my hands free and not do anything that would limit my ability to gesture. I learned about the BodySynth, which was created by Ed Severinghaus and Chris Van Raalte, when they loaned me one to perform a piece called *Dream Encoding* with Zakros New Music Theatre. This instrument, which uses electrode sensors to measure the electrical impulses generated by the performer's muscles, allowed me to use physical gestures to trigger samples and manipulate various sound parameters, so of course I had to buy one. Once I did, I began creating a lot of work that used a variety of sampled sounds. I was able to introduce traffic noises, text samples, and sounds literally from my kitchen sink into my live performance works. The introduction of the instrument changed the way I was composing (figure 24.2).

Of course, tools alone do not make great art. I like to think that the advances I described above stem from the combination of the effects of using the new tool and my strengths as an artist. An important part of an artist's process is selection, and it takes an intelligent, open, and inventive ear to recognize and select good ingredients and then build them into something viable. In the end, the instrument is really just a tool—like my digital processors and my found percussion objects and like my voice. And, as an artist, it is always important for me to be concerned about what work I am actually making with this tool. It frustrates me to see a world so seduced by new technologies that many have forgotten to be concerned about the output. We suddenly see a superabundance of works being created by people who are clearly more interested in what software they have mastered than they are in the value of what they are making with it. One hears endless jokes about content as sort of an afterthought in a project. (And, worse yet, sometimes they're *not* jokes!) The "multimedia" industry (with terminology pirated from the fine-art world) blurs the line between art making and commercialism, thus attracting many people who are seduced by the combination of becoming professionals in a big-money industry and the cachet of being able to call themselves artists. There have always been people who believe that having a great tool will make them great artists or magically result in the creation of great art,

Figure 24.1
Pamela Z wearing the BodySynth. The MIDI controller uses electrosensors to translate a physical movement into sound information. Photo by Lori Eanes.

Figure 24.2
Pamela Z manipulating "tools" she used in the 1995 San Francisco Contemporary Music Players' performance of a Louis Andriessen piece. Photo by Marion Gray.

but buying the finest violin or tennis racket does not a great musician or athlete make. However, having a new tool can certainly inspire great work from someone who has the potential to make it. Hopefully, a good side effect of this rush to embrace new technology is the opening up of some new artists who perhaps never realized they had that potential.

In the meantime, it has awakened in me a sort of curiosity about artists' choices of instruments or tools. I find that I am fascinated with artists who work with relatively low-tech tools. and I am also drawn to work by artists who have developed very technically complex tools for making their work. Some of the most exciting work I've seen lately combines very different types of tools—acoustic instruments with electronic ones, mechanical devices with digital devices, machines with flesh and blood instruments. And it is interesting that, in a field that historically has seemed very male-dominated, many of the artists doing this are women.

There have always been a lot of women composers, yet music history books (with a few notable exceptions such as Kyle Gann's *American Music* in the twentieth century) don't tend to reflect that. And since historians of the past generally neglected to acknowledge the contributions of women, I suppose it shouldn't surprise me that in the history of electronic music, few women have been given much notice either. I am aware that there is a disproportionate number of male artists in this field anyway, but there are quite a few more women in the field than one might think from reading most of the books and journals on the subject. I have a feeling that, along with all the other reasons, tools may have something to do with that. It seems that people's expectations of the kinds of tools an artist would use are somewhat separated along gender lines. In fact, when I have remarked about the absence of women's names in various histories or collections of electronic music, I often get responses like, "Well, you know, women aren't as interested in holing themselves up in a lab with a bunch of electronic gear." To which I am inclined to reply, "Actually, I can name for you quite a few who are."

The tool that women seem to be expected to excel in using is the human voice. And when we do excel in that, we do get recognition for it. Cathy Berberian, Diamanda Galas, Joan LaBarbara, Meredith Monk—all these women are very respected and well known for their work with this very technically complex instrument. They are much more celebrated than are any of the men who use extended voice as a main component of their work. But Pauline Oliveros, Laetitia Sonami, Annea Lockwood, Laurie Spiegel, Maryanne Amacher, and the many other women who have

done great work in both the designing and using of systems for electronic music are much less likely to be mentioned than their male counterparts. The message seems to be "If you want recognition for what you do, you need to stick with the tools you are expected to use."

At a certain point in time, I became very interested in the male voice. I wanted to hear more men doing modern music that required them to extend their voices. Several years ago when I was doing a regular *Morning Concert* slot on KPFA F.M. (Berkeley), I tried to do a radio program on men doing extended vocal work. I had a hard time finding enough recordings to fill out the program. I saw John Cage at a new music festival (*Composer to Composer* in Telluride, Colorado), and I asked him if he could suggest any recordings of extended vocal pieces for men. After a lengthy pause, he laughed and replied, "I'm afraid there aren't any." I had had such little success in my search that I was inclined to believe him at first, but as I did more searching, I slowly began to discover several (David Moss, Roy Hart, Dimitrio Stratos, and Jaap Blonk to name a few). But it still is easier to find female artists working in challenging ways with the voice, just as it is easier to find male artists doing nonvocal experimental music. And, again, although I don't claim that the actual numbers are balanced, there are quite a few of these artists in existence, and many of them are exceptional in their field. Yet they don't get the amount of recognition that their opposite-gender counterparts seem to get. They are not being rewarded for breaking the norm in their choice of tools. This goes a long way in explaining, at least in part, why it might be that there aren't more women who choose to work with nonvocal electronic music and why there are so few male experimental artists selecting the voice as their chief instrument.

Whether it is because of natural tendencies or because of deeply rooted socialization, men and women can often be very different in their approaches to making art, and these differences are magnified when the art is experimental or avant-garde in nature. I have observed, when teaching performance workshops, that women are often much more comfortable using their voices (and bodies) in untested ways. Sometimes even men who are great improvisers and who feel quite at home making loud, bizarre, even shocking sounds in public when using some kind of external tool (a saxophone, a percussion instrument, a piece of sheet metal) become shy and uncomfortable when asked to experiment with their voices. Perhaps the external instrument is like armor or a shield between them and the audience, so that using it to produce strange or unusual sounds may

feel less awkward than making a sound that comes directly out of one's face. When an artist uses his or her own body as an instrument, it is like being naked. Making wild sounds with an external instrument may seem like exerting control over something, while making those sounds with the voice might seem like losing control (i.e., madness, hysteria?). I don't mean to overgeneralize. There are many men who are quite happy using their voices and bodies in performance, and there are many women who are not. But in a general way, women in our culture are not only socialized to feel more comfortable baring themselves in that way, but people are socialized to feel more comfortable accepting it from women.

Likewise, our culture has always socialized women to feel less confident working with mechanical or electronic devices, and people in general continue to have less confidence in women's abilities with them. This perhaps seems like an overly obvious or perhaps archaic observation. But as a female artist working with technology, I get little reminders from time to time (in the first decade of the 21st century!) that this is still so. For example, although it doesn't happen as often as it used to, I still get asked questions like, "Who set this up for you?" or "Who taught you how to do that?" —questions I don't imagine I would be asked if I were a man. The funniest part about it is that, compared to most people I know working with live electronics in performance, my set-up is relatively simple. I tend to use all the devices I have in fairly straightforward ways. I am encouraged that these questions are slowly being replaced with questions like, "Did you design that system yourself, or did you work with a collaborator on it?" I've even been asked that about the BodySynth (an instrument that I use but did not create).

It's interesting that I find myself thinking so much about these issues now. In the past, I have never really been very focused on sociopolitical issues around gender and making art. I always went about tinkering with whatever was needed in order to do the things I wanted to do. I never remember personally having had any concerns about the ability to do something technical having any connection to gender, and I don't remember feeling self-conscious about being the only woman among people doing the kinds of things I was interested in. But then, of course, I was the same person who had to have it pointed out to me by others that I was the only black person at a function or in an organization. I never really thought about these kinds of things much. Naïve as that may have been, I didn't even tend to notice.

A few years back, I was trying to design a program in which I would teach audio workshops at The LAB Gallery in San Francisco. I was applying for a California Arts Council artist residency grant and needed to come up with a strong concept that would be useful to some kind of underserved local community. Laura Brun, the LAB's artistic director, suggested that I do a program for women or girls. I was very hesitant to offer a program that would exclude anyone on the basis of gender. At the time, I was thinking of working with at-risk youth, and I didn't want to go into schools and say, "Sorry, only girls can do this workshop."

The first workshop I offered through that program was open to all high school students. We distributed applications to several San Francisco high schools where I did live performance presentations. Then I met with LAB staff, and we selected applicants who seemed to be most in need of such a program and seemed serious about wanting to do it. Although many girls would approach me after the presentations, in the end I got more boy applicants than girls. In the first meeting of the class, I went around and had people introduce themselves and say why they signed up for the workshop. I was rather taken aback when most of the small number of female participants gave reasons like, "I decided to take this workshop because my boyfriend has a recording studio, and I feel so stupid around him because I don't know how anything works." I began talking to women artists I knew about this, and I began to discover that many of them, as adults, still felt this way. I spoke with a surprising number of women who said that they had taken audio engineering courses and had felt intimidated by the men in the class and even had felt pushed out of the way in situations where many were vying for hands-on time on the equipment. It seemed like a lot of their problems stemmed from a combination of unequal treatment by instructors, classmates, fellow musicians, et cetera, and their own lack of confidence in their own abilities to tackle the tasks at hand. This experience caused me to slowly become convinced that I needed to offer a workshop for women.

For the next two years, I taught several eight-week workshops for low-income women. The workshops focused on both sound and performance. I taught the women about the physics of sound, digital and analog audio techniques, audio art and performance. In groups, we worked on sound performances using found objects, scores, voice, and gesture, and I worked with them one-on-one with digital sound editing on the Mac and how to use devices like a digital sampler, an analog mixing board, and a digital audio tape (DAT) machine. I found this to be a very rewarding experience,

and I am delighted that many of my students have gone on to become very deeply involved with sound art.

I don't think that one can really divide tools into categories of feminine and masculine. Throughout history, in various cultures, both men and women have always played a variety of instruments, though some cultures have placed limitations on who could do what (and who could even perform publicly for that matter). But if there is anything to the yin and yang of using the voice versus using an external instrument, then the type of electroacoustic music that combines vocal practice with electronics might be viewed as a way of exerting both feminine and masculine qualities in the performer. This type of work, which was pioneered mainly by women and continues to be female-dominated, could be seen as a modern-day extension of the age-old practice of singing while accompanying oneself on an acoustic instrument (a practice that has historically been done by both males and females). All the various women and men who do this probably arrived at this way of working from a variety of different paths. In my case, the practice of combining my voice with live processing and sampled sounds was a direct descendant of singing while playing a guitar. As I began to develop more facility with using digital processors to create layers of sound in live performance, songs on which I used the guitar began to disappear from my repertoire.

Back in my singer-songwriter days, I always thought of my voice and the guitar as being separate instruments. One was in the role of soloist and the other as accompanist. When I switched over to using processors and found objects combined with the voice, I began to see all of those things as being more integrated. I began seeing the combination of my voice and all my electronic gear as one instrument. One was not there to augment or accompany the other. For me, the digital processors were not "effects"; rather, they were components of a more complex instrument, which included my voice and my physical presence as well. And once again, the choice of tools effects the mode in which I work. I tend to compose works with this entire set of tools in mind. I don't make vocal pieces and then think to myself, "How can I add to this texture using electronics?" All of those components tend to be in there from the start as I create the work. I developed my way of using these tools together throughout the twenty or so years I've been working this way, and the combination feels very natural to me.

In the past, I've had to defend the voice as an instrument. People would speak of vocalists and musicians separately, as if a vocalist was not a musician. For a short while, I was a member of the Musicians' Union when I was living in the Denver/Boulder area. I had to list myself as a guitarist because voice was not included as one of the instruments. I felt that my level of skill and my strength as a musician was much stronger in voice, but I was told that I would have to join an actors' union if I wanted to list voice as my main instrument. I couldn't believe it, but I noticed that there were a lot of musicians listed on the rolls who named things like "tambourine" as their main instrument! A colleague told me that those musicians were probably professional singers who, unlike me, did not also play the guitar. They had to choose an acceptable instrument in order to access of any of the advantages of being a member of the same union to which their bandmates belonged. (I eventually questioned what those advantages might be to the extent that I resigned from that union.)

I also encountered many people in the past who did not consider electronic devices to be instruments. They would say things like, "I don't like those synthesizers. I prefer music that's played on real instruments." "Real instruments" apparently referred to instruments made from wood or brass or silver. These days, I sometimes find myself defending the use of such things as computers, objects not originally created for music making, or samples of text or noises as musical instruments. My definition of *instrument* is a broad one. It basically includes any tool used for making one's work. (For many musicians today, a vinyl disk is a musical instrument!)

There are as many ways of working with tools and as many attitudes toward the tools as there are artists using them. In the end, I think these approaches are more about the artist as an individual than they are about factors such as gender or cultural background. But an artist's relationship with tools, the effects of changes in the tools themselves, and the development of skill and comfort level with those tools have a great impact on the work. What is really required to make good art is a good artist. And a good artist knows how to coax great work out of his or her tools of choice, whether by using lack of familiarity with the tool as an advantage or by perfecting virtuosity with the tool through years of diligent practice. After all, whether the instrument is acoustic, electronic, analog, digital, flesh and blood, or some combination, a tool is a tool is a tool.