

Interview with Pamela Z, Vocalist, Composer, Performer, San Francisco

Pamela Z is an American composer, performer and media artist best known for her solo works for voice with electronic processing. Her performances combine various vocal sounds, including bel canto opera, extended experimental techniques and spoken word, with samples and sounds created by manipulating found objects. Z's musical aesthetic is one of sound accumulation. She usually manipulates her voice in real-time using the software Max on a MacBook Pro to overlay, loop and alter her live vocal sound. Her performances include a wireless sensor instrument attached to her hand and a standalone sensor instrument.

<http://www.pamelaz.com/>

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Figure 1: Pamela Z & Franziska Baumann in online conversation on Zoom
© source: Franziska Baumann

Vocal Realm

Franziska Baumann: You are one of the pioneers in Vocal Performance Art. Your way of composing and playing with your voice is unique. In the context of musical instruments, the voice itself is a special case. It provides us with our most physical and embodied instrument without an external interface, while musical instruments are used as a mediated extension of the body. Each human voice speaks of an individual personality: no two voices sound the same. What is the voice for you?

Can you generally describe your vocal realm?

Large Variety of Styles

Pamela Z: Well, I would say that the voice is my first instrument. It's actually everybody's first instrument (laughs). From a very early age, I was using my voice to make music and to make sounds. At an early age, as a child and a young person, I functioned vocally more in a sort of singer-songwriter kind of realm. But then, starting in high school, I began to get training in classical vocal music. Belcanto singing style entered my realm, which started with some casual training from my choral director at high school. And then, I went on to become a vocal major at the University of Colorado College of music at Boulder. I studied voice with a Belcanto teacher and learned opera arias and art songs and so on.

While I was doing that, I was actually at night working at clubs and coffee houses. I played a singer-songwriter kind of music with the influences on that side coming from American Folk Rock and British Rock from the Sixties and Seventies.

Repetitions and Patterns

So that was a kind of realm that I was working vocally. And then, in the eighties, I found my way to a sort of experimental and contemporary music world. I began to find influences that inspired me to stretch the vocal technique into different and broader sonic worlds that people sometimes refer to as extended vocal techniques and speech sound as musical components. The most significant influence on finding my voice as an artist was when I started using electronics and playing with processing my voice with digital delay and reverb. And when I started doing that, I began to completely start listening differently and organising sound and music in a new way. I became very interested in repetition and pattern, which greatly impacted how I composed music and listened. That was a kind of the path, but the voice was always at the centre of that.

Representational and Abstract Listening Modes

FB: I like the way you describe how electronic processes change our listening. All the influences in your music, the folk and rock music, the opera singing, the extended techniques and the speaking voice, and how they influence each other in your compositions, also affect our awareness of a specific colour or psychological aspect in a vocal expression. How do you deal with the psychological aspects of the voice in your compositions? For example, if we start a piece with a lot of air and then record it, it changes our listening, from a psychological listening to something more musical. You might hear it first as if someone is moaning, sighing or dreaming, and with the repetitions and electronic changes it turns into something more musical.



*Figure 2: Pamela Z & Franziska Baumann in online conversation on Zoom
© source: Franziska Baumann*

PZ: I think of all of that as musical. But I think a big difference is the type of processing I am using on my voice. Most frequently, I involve digital delay, which gives me multiple layers of my own voice. And it allows me to do things that, without it, I would need a choir or an ensemble to perform the same things because I am creating a sound, then I am bringing that back, and I am building on top of that layer. So I am making work out of multiple layers. It can introduce a very metric rhythmic quality. The delays can be used with either much longer or much shorter delays, which, instead of resulting in a metric feeling, results in a more ambient or layered non-metered way of working. I feel like, in a way, that was sort of development in my learning and maturation of using these things.

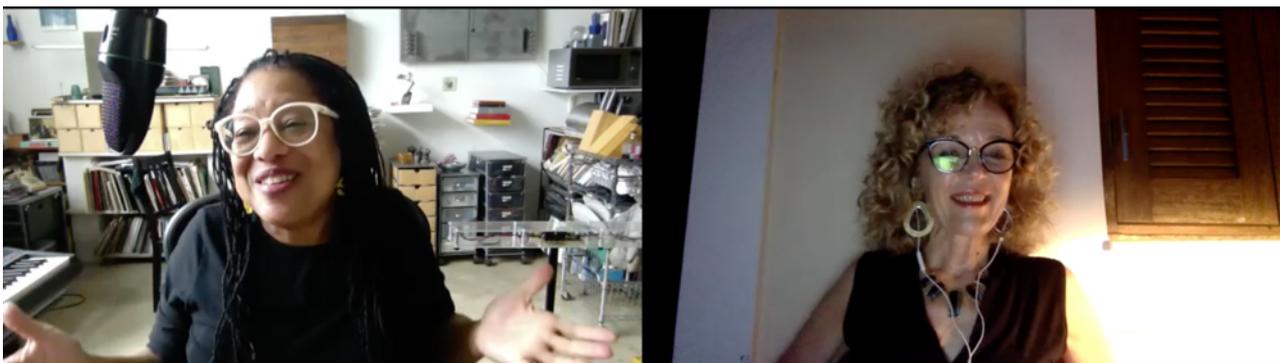
When I first started using them, I used them in a very obvious kind of echoing way where you would get something where it repeats rhythmically, and it builds structures from that. The longer I worked with it, the more I discovered a number of things. One was that when I made very long loops, they were not recognisable as loops because people didn't remember that it has come back around, and the layers could become more saturated and complex. And then also I began using multiple delays at different tempi so that they would either superimpose multiple meters on top of each other or create a somewhat layered environment that doesn't feel metered.

Each one of those discoveries I made was a big advance in my way of listening and composing. But to me, all are musical and can't be conceptualised as a difference between psychological and musical listening. Maybe you are talking about a kind of literal or representational?

FB: It means, for example, in your piece "Breathing", you start breathing. And with such breathing, people could experience this sound as tired, excited or exhausted. Because everybody has a voice, and as listeners, we make a connection to content quickly. And suppose you start looping this breathing expression and loop it in different layers as you described, whether it is metric or nonmetric or polyrhythmic. In that case, the perception of this psychological expression changes into something musical.

PZ: It seems like the difference between representational or figurative works and purely abstract work is almost like in visual art. Somebody is drawing or painting and is making a picture of someone or something or a situation versus making an image that is just a sort of layered form and abstract shapes that don't call to mind any specific object. That sounds like what you are referring to when you say if you start a piece with breathing, a person might think about someone being out of breath, or being excited or tired. That's what the sound or action of breathing could represent, instead of thinking of the sound of breathing as something that sounds like white noise or a texture that gets a little thicker. Interestingly, you bring that up because that has always been not a struggle but a little bit of an interplay in my work. In my work, there is even a fight for dominance between representational or literal-like work that expresses an idea or a description of something versus work that is more abstract. I feel that part of me has always wanted to make very abstract work. But there's also another part that's easy to fall for. In works that are more literal or representational, that express something conceptually and are not just abstract, it's easier to find some handles to hold on to. So I always feel that there is a balance between these opposite poles.

FB: I ask you because this has always been a theme for me in my compositions. At which point do I start to musicalise a representational vocal element? How can I invite the listener to follow me into the imaginative and abstract? When do I start to switch into the structural aspects with a vocal expression, not only in the compositional work but also in improvising. The same happens with words. You also create a lot of compositions where you use words.



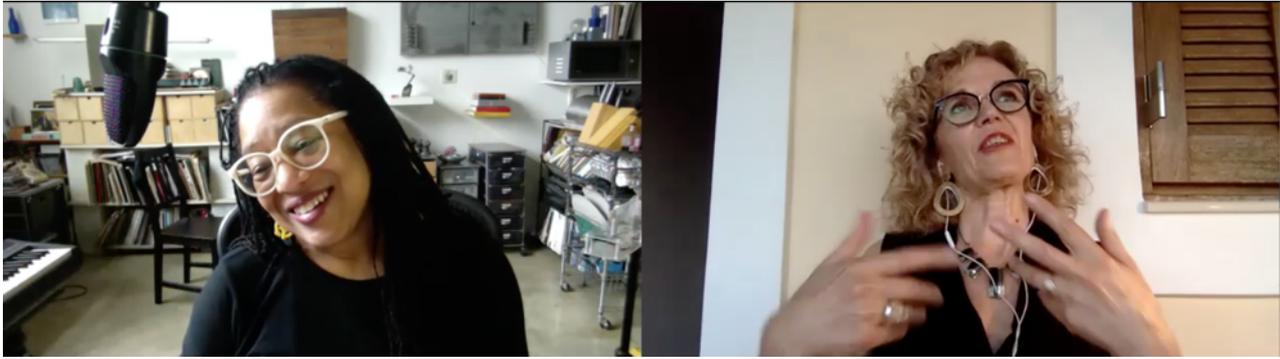
*Figure 3: Pamela Z & Franziska Baumann in online conversation on Zoom
© source: Franziska Baumann*

PZ: I do, yes. I am often having a push and pull between the idea of using language for its sound versus using it as a communicator of a specific and literal idea. I am drawn to taking these pieces of language away from their original context and moving them somewhere where they lose their original meaning and maybe start to take on new meanings or become meaningless. I find that interesting. There's also some irony that comes from taking something out of its original context and putting it into the context of becoming purely music. Things that happen with language when

you repeat it couldn't happen if you just spoke that phrase once in the context of the whole paragraph, rather than making it stand out and become a motif through repetition.

How to Musicalise Language

FB: Your structural way of composing with words usually consists of repetition, rhythmization, and creating patterns so that the meaning changes direction or dissolves. Do you also cut words into syllables, vowels and consonants? Do you pulverise language to move it into the abstract?



*Figure 4: Pamela Z & Franziska Baumann in online conversation on Zoom
©source: Franziska Baumann*

PZ: I make a lot of works that involve recordings, especially interviews with people. The recorded sound of their voices, then I cut up into little bits. Sometimes it is an entire sentence, and sometimes it is just a phrase. Often it is just a single word, or even only syllables or phonemes. Then I build music out of those little building blocks. In those cases, I am taking it down to these components that begin to not mean anything specifically by themselves anymore.

I have one composition that you may have heard me perform that is called "Declaritives"¹. It is taken a sentence, and it's cut down into tiny fragments, I stretched and fragmented them, and expanded them in time and compressed them. And then I am triggering those little fragments of sound with one of my gesture controllers and doing all sorts of singing and vocalising along with it. And sometimes picking up just the fragments and doing those live vocally and sometimes saying complete words. I don't know if you've seen that piece. Often in my live performance, I perform that piece following the piece called "Typewriter". On SoundCloud, I have "Timepiece Triptych"². That has three segments. It is a fixed media work, and the first segment is called "Declaritives in the First Person". It is also a piece I perform a live version of. These are three little works that all involve extreme time compression and expansion of vocal sound.

Clips, Tracks and Live Processing

FB: In one of your interviews, you said that the processing of your voice, the layering, the looping, the granulating is going through a patch that you have written in MAX MSP. I was reading in another interview that you are not playing tracks with pre-recorded material. You did with the other piece, but maybe not in your solo performances?

PZ: Exactly. I mean, in my solo performance in some of the pieces, there are banks of samples. And I may be using my gesture controllers to trigger those samples the way you would play a keyboard as I am also singing and processing my voice live. So those sounds are played live, but some of them are in pre-created sample banks. But in my solo performances, I don't tend to have a

¹ <https://soundcloud.com/pamela-z>

² <https://soundcloud.com/pamela-z/sets/timepiece-triptych/> time expansion and expression of vocal sound.

track to play. When I write works for chamber ensembles I often have, it might be for a string quartet plus a track. I don't tend to write for a string player and play a track that is also string sounds. If it were string sounds, I would rather that it be live processing on the strings. But the track is usually material that comes from non-string sounds like, for example, speech sounds. As a matter of fact, the most common sound source for the sampled sounds I make is speech sound which I have sculpted very carefully in a kind of text collage.

The Whole Apparatus is a Unity and an Instrument

FB: How do you experience the mediatisation of your voice?

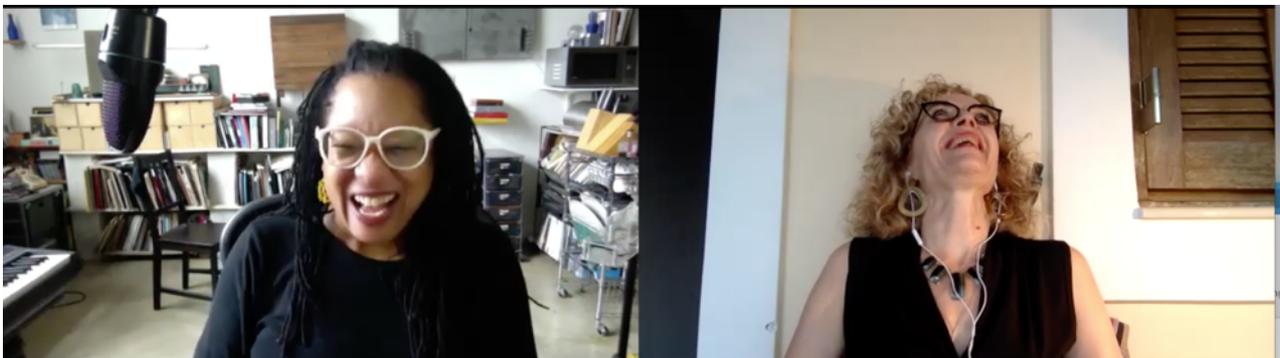
Is it an electrified space of your vocal expression? Or do the disembodied voices become reflections and distortions from your original voice? Or how do you experience in a more metaphorical sense your body-double out there?

PZ: I consider the entire apparatus that is the combination of my voice and the processing of my voice as my instrument. When I am singing and processing my voice in real-time, it is very organic to me. It is not like something where I feel it is artificial. And also, it does not feel like it is external or outside of me. It feels like it is all one unified part of what I am doing. Often when I compose works for my voice and electronics, I do not just start by just singing and then saying, "now what processing can I add to this?" It happens simultaneously. I turn everything on, and my voice is immediately going into the MAX patch. Then I have set up that patch to apply various types of processing which might be delays where I can create loops or might be just granulation or might be lots of reverberation or sometimes pitch shifting. But all of that is happening in real-time. It is not like I create this layer that is just voice and then go back and apply this stuff to it. I wouldn't be able to compose that way. It needs to happen simultaneously because that's how I hear what I am making.

Effects or Musical Layers

FB: Is it an orchestral or choral vision to compose live with many layers of voices and play with them without engaging a choir or an orchestra? Or is it playing with live electronic effects?

PZ: People often refer to delay or reverb or pitch shifting as effects. I never refer to them as effects because they are part of the music. They are layers of the music. To me that would be the same when somebody writes a piece of choral music that the soprano is the music and all the other three voices are just effects being put on that (laughing). You know what I am saying.



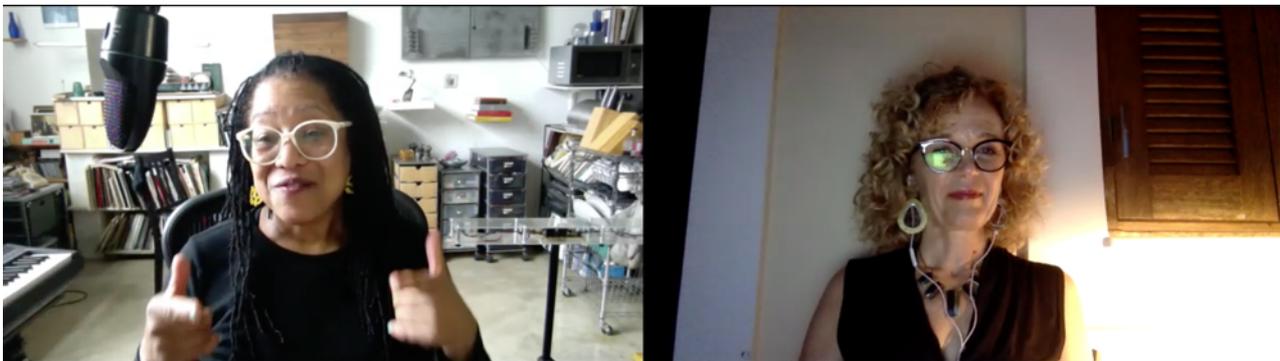
*Figure 5: Pamela Z & Franziska Baumann in online conversation on Zoom
©source: Franziska Baumann*

FB: That's a very good answer. I will keep that in my mind.

Audiovisual Unity on Stage

PZ: I also create pieces that combine my live performance with a video projection. It's essential to me, and it's in my technical rider if I'm going to perform somewhere, how the video is projected in the space. In other words, if I find out that the venue is set up so that the video is only projected as a rectangle above my head on the wall, then I just assume that I'm not going to use video. I always want the video to be projected as large as possible to cover the entire back wall behind me and extend to the floor. I want it set up to be either rear-projection, projection from behind me, or projection from above, so that I don't cast a shadow on the image.

The purpose is that for the audience, I want my physical self and the video behind me to be in one visual plane, as one image that they are watching and not the impression of here is a performer, and over her head, there is a video. And I don't want to be my audience sitting there and saying, shall I be watching her or shall I be watching the video, or feeling like performing with a TV? I want them to see it as the environment I am immersed in and that it is all one picture. The same thing is with the music. I don't want people to hear it as "Oh, she is singing, and there is this lovely voice and then also there are these processed sounds or sample s". It is more like: all of it is the music. I don't really draw sharp lines between even different disciplines. I think that all of the work should be able to function as one complex whole.



*Figure 6: Pamela Z & Franziska Baumann in online conversation on Zoom
©source: Franziska Baumann*

I'm Thinking About a Bed of Sound

FB: You mentioned earlier that the live processing of your voice and the processed voice also inspired your physical, acoustic voice. Can you say something about how the processed voice conversely inspires you in the development of your compositions?

PZ: The work just becomes more complex, more layered. When I write songs that just have the voice and accompaniment like the guitar, there's this melody and this accompaniment. But when I write pieces where I'm singing, and while I'm singing, at the same time, you hear all these other layers that are building up, and they all become the texture of the composition itself. So I'm not just writing a melody and orchestrating it. I'm creating a multi-layered piece, and I'm listening and thinking that way. Sometimes the structure is much more built around these layers, patterns, or repetitions. The actual essence of the piece then revolves around more than a piece with melodic material. I think that influences my compositional process because I'm thinking about a bed of sound that can be the opening of the piece from the beginning. For example, the piece starts with loops of my voice and that on one syllable in a stereo image, the vocal fragments jump back and forth in different places in space. That's the substance of what I might think of as the opening of a piece. It's not window dressing or added later. It's the essence of the piece.

The Desire to Make a Gesture

FB: As a composer-performer for voice and live electronics, you use gesture-controlled instruments to manipulate sounds and sometimes also images. As a composer-performer, you play with sensors: ultrasonic, infrared, gyro, accelerometer and magnetometer. With gestural interfaces, the mapping of gestures to sound processes is completely free. The gesture of bowing, for example, no longer necessarily result in bowed sounds. You can connect any gesture and to any sound or sound process.

I experience the gestural interplay between the electronics and your voice very organically.

For example, at the end of your piece "Breathing", I experience your gestures with the right hand as if you were tenderly caressing someone when lowering your hand and manipulating that sound. In "Quatre Couches", your hand gestures have something between explaining, manifesting, and performing a ritual.

In "Badagada", you play with your fingers and arms, but the gestures do not control electronics.

In "Typewriter", the gestures have an obvious object-related meaning like writing a letter.

I wonder about the composition of your mappings? Because there is a kind of no end to what you could control with Midi signals. When you create a new piece with your patch, you can assign gestures to any musical parameter you want to play with.

PZ: Ok, There are several layers to this. The first layer is as soon as I started using just my voice and electronics as an instrument for performing, as soon as I put down my guitar or some other instrument, my hands were free, and gestures immediately came into the picture. This was long before I had any gesture controller. I started to do work with my voice and live electronics in the early nineteen-eighties. I did not have a gesture controller until the early nineteen-nineties. For almost a decade, I did works for voice and electronics without a gesture controller. But as my hands were free, gestures were happening. And I think, for me and for a lot of vocalists, that gesture is very connected to tone production. I feel like when I am making sounds, there is a desire also to make certain gestures.

Gestures as a Sculpture of Performative Elements

But also, I felt like the gestures were sculptural, performative elements of the work. And in many of my pieces, I actually feel that the gestures were part of the composition. For example, there is a piece that I used to do called "Bone Music". It starts with using a plastic five-gallon empty water bottle as a percussive instrument. I am grabbing samples of it as I hit it that becomes a sort of rhythmic sound bed underneath my singing. Then I put that bottle down, and from that point on, I just make physical gestures. If you ever saw me perform that piece and then saw me performing again, you would notice that the series of gestures that I do are the same because they become part of the composition. It's to the point that if I ever made a written notated score for that work, I probably would include staff for gestures because I think of them as a part of the music.

Gesture Choreography: Abstract Gestures and Mimicking Physical World Things

Most of the time, they are abstract gestures. They are not gestures that are mimicking a real physical world thing. There are a few exceptions. One of them is "Typewriter". In that piece, I am mimicking the action of typing and moving the carriage return. There is another piece I made called "The MUNI Section". It is one of my very early gesture-controlled pieces, and it is about the public transit system. I was triggering samples like the turn signals from the busses, and the cable car bell, and when I would trigger the cable car bell, I would do the same physical gestures that the conductors do on the cable car when they ring that bell. This piece and the "Typewriter" piece are super literal in a sense we talked about before about the difference between abstract and representational or figurative gestures. But I would say ninety-five percent of the gestures I make are much more abstract. They're almost like a dancer doing a combination and putting together a lot of physical movements. And these physical movements as a rule don't represent anything.

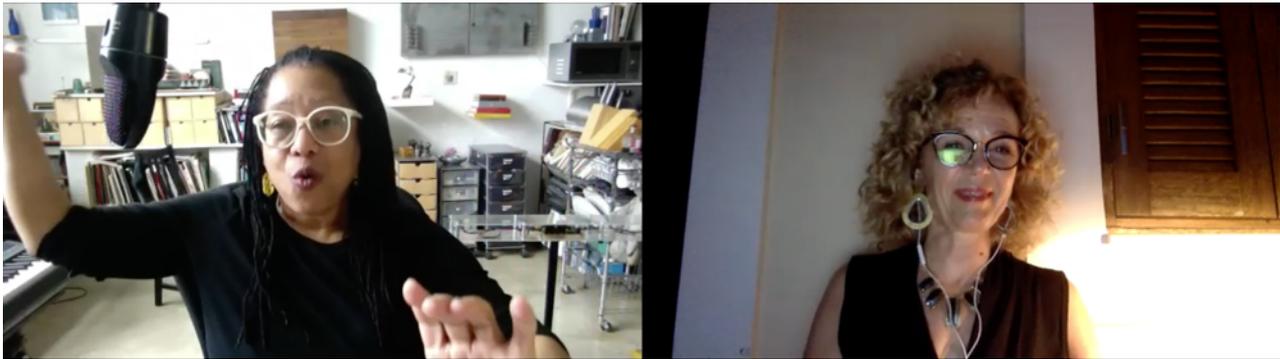


Figure 7: Pamela Z & Franziska Baumann in online conversation on Zoom
© source: Franziska Baumann

FB: Is it more about a sound dance or choreography?

PZ: In a way, it is choreography. I feel like it is a gestural movement in its own realm, which is just one of the many layers of the work itself. It is a visual layer. That gestural movement has been there since before I started using those gestural instruments.

However, once I did start using these instruments, I feel that was a migration from gestures that are there for the visual impact of the gesture to gestures that are there for the virtuoso performance on an instrument. If you think about a concert pianist, their entire performance is a series of gestures that draw sounds out of their instrument. The gestures that they do are the gestures required to get the sound from that instrument that they need. If you watch a flamboyant virtuosic pianist, you see a lot of gestures that one may argue: Oh, they do not need to put that hand that high up to get that sound. But, to play with nuance, they need to do these gestures. When their finger hits that key, it hits with the kind of impact needed to get the velocity they need to form that sound. There are a lot of physical gestures that they do that make that instrument do what it does.

When I am playing my instrument, there are a lot of gestures that I do that are exactly what is required to get the sound that I want or affect the sounds. Sometimes my gestures are making a note or triggering a sample, or one hand might be triggering a sample and the other hand is bending the pitch on that sample. Sometimes the gestures are just manipulating the processing of my voice.

So the thing that you talked about in "Breathing" that looks like a caressing gesture is a gesture that I need to manipulate the processing on my voice. So I am singing, and I am wearing these little controllers on my hands. For each piece, I have to do programming on my computer to decide what numbers are coming from these and what the numbers are controlling. In this piece, "Breathing", the numbers that I am making with my hands control the processing of my voice. There are exact adjustments to manipulate samples and voice processing. These are the gestures that look to you like caressing. In a way, I am caressing the sound, but what I am doing is manipulating the sound. And I am rocking through the sample, or I am making it longer or shorter and doing combinations of those things.

So all of those gestures are required to get the sound that I need, to control the sound, or generate the sound.

Decision-making in Mapping Processes

FB: You could also assign gestures in variations with the gyroscope so that the same sound manipulation would be transferred to another gesture.

PZ: There are decisions made in each piece about how will I do it. If I did it differently, I would have had to learn a different set of gestures to make those things happen. I think the decisions

come partially from what feels more natural so that it is easier to learn to do. And so often, when I am making these things, I am thinking about the easiest way to assign gestures to sound and modulation. For example, I put the opening and closing of the loop in this hand because I wanted to be perfectly accurate. In that case, it is the easiest if I gave this hand only one job, and that is to do this one thing so that I know that I can count on that happening precisely when I want it to happen. There are other pieces where I am controlling, not the granulation of my voice or not the level of my sound, but I am making notes or triggering samples. With each piece, I have to make a decision on which gestures control which sound manipulation. Often, I have to think about the easiest and the most comfortable way and what feels the most natural to produce a specific sound. In learning to perform, I avoid working against myself, for example, avoid using the opposite gesture from what I would expect to get a certain result, because I have to learn and internalize all of these things.

I think a lot of times when I'm finding things if a gesture feels easy, that's the gesture I am going to use. If, for example, I have a set of samples that I want to play with, I use ultrasound which is looking for mass. It looks at how thick my hand is and how far away it is. So when I am working with this in one piece, it might be that I am triggering some samples. So the closer I get, it triggers higher samples, and the bigger the distance, it gets lower and lower, and with the other hand, it continues to get higher and higher on the other side of the instrument. That's one idea. If I had a chromatic scale on the right-hand side and there were about thirty note possibilities in the range of my gesture, it would be difficult to be very accurate with what I get. If I need to get particular sounds precisely, I might make a smaller scale with only three or four notes. If I am in the very close range, I get one of them. If I am a little further away, I get another one, and if I am further away, I get another one. Then I know that I get those three samples pretty accurately, and then I might get three other ones on the other side with the second ultrasound.

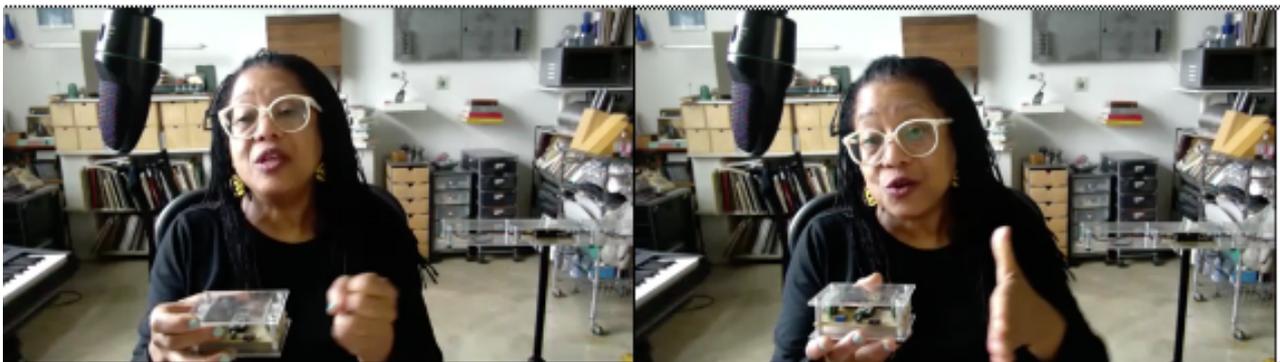


Figure 8: Pamela Z explaining the mass sensor
© source: Franziska Baumann

So it depends on what I am doing. Still, on the other hand, if all I am doing is trying to create a shape like for example, I have pitched sounds, and I don't care if it is a particular pitch, but I do care about the contours, then I could put lots of pitches and then I could play within all of that. So for every piece I do, I have to decide what task to give the controller. And what is the easiest way for me to accurately do that? So that's where many of the decisions come from and what gestures feel natural to me. But the other thing I am going to say is about the quality of the movement. It may be that you have read this in some other interview.

Quality of Movements

When I used to do gestures in my pieces before I was using gesture controllers, sometimes I look at some of these old videos of myself. I laugh because the gestures look kind of stiff or robotic, with a lot of flat hands, and then I look at videos of myself from just a few years later after I had started using gesture controllers. Suddenly the gestures are subtle and a kind of graceful, elegant

and more fluid. When people see me perform, they came up to me afterwards: "Oh, your gestures are so beautiful. Did you study Indian dance?" I have to tell them: "No, what I studied was playing these instruments".

You need to have some subtlety in your movement to draw more subtle things out of the instruments. Playing them just trained me to have this more fluent kind of subtle movement. This changed the quality of my gestures. That's because if you want to get subtle changes, you need to make subtle changes in your hand. For example, the first gesture instrument I used was initially called the "BodySynth". I always told people that it was not a very well named instrument because it was not a synthesiser. It was a gestural MIDI controller. But the instrument involved elastic bands around my arms. That instrument involved electrode sensors like the ones you have in the hospital measuring your EKG or your EEG. It is a metal contact that goes against your skin, and it measures the amount of electricity from your muscle.

To play that instrument, you need to do more or less effort. I used to wear one on each arm, one on my shoulder, one on my leg, and more or less effort from the muscles to produce the numbers that you then are having to interpret as if you were making a note or bending a pitch or whatever you decide to do with it. When I first started to learn to play that instrument in my studio and practice with it, I thought: "I have to get good at this". And I was triggering sounds with one hand and using the other hand to whip them around within a quadrophonic system. They whipped around people's heads. And I thought: "Ah, I am good at this now."

But, when I got in front of an audience, it started triggering like mad and going off in ways I didn't predict. I thought: "What's wrong? Why isn't it working?" And what turns out is that all these instruments are really like biofeedback devices. When you get in front of an audience, your adrenalin level bumps up and then the numbers are all jumbled. So what I had to learn is to be still in my body and say I am going to reach up here and ring this imaginary bell. And I want my arm to move all the way up without triggering the bell and then triggering the bell when I decide it consciously. That meant that I had to keep the forearm muscle perfectly still until the arm reached the imaginary bell's height. So just that little element changed the quality of my movement. If you look at this forearm muscle and then make a fist, you'll see the muscle getting thick. If you move just your fingers, you see the same muscle, but it just does little movements.

And that's why when I am playing with the ultrasound instrument, which is looking for mass, I play the distance between my hand and the sensor with my fingers, not just with my flat hand. With the flat hand, that's a pretty coarse movement and challenging to do accurately. But if I play softly with my fingers, I can make much more subtle changes. It is experiencing slight changes in the mass without me having to find the changes with the flat hand. So, when I play this ultrasound instrument, it is much more subtle if I am using not just the entire hand or arm but also small finger movements. The ultrasound sensor is the same as in the hospital looking for your tumor or whatever it is looking for. It is looking for mass. It has a sender and a receiver beside each other. One spits out the ultrasound, and the other listens to it. The position and distance change the electrical voltage, and the thicker the mass, the bigger the signal. The other instrument I have is equipped with infrared sensors. This one is looking for light. Again it amounts to the distance for the hand, but it is about how much light comes back to this.



Figure 9: Pamela Z talking about infrared sensor
 © source: Franziska Baumann

So each one of these instruments uses a different kind of sensor. The ones that I wear on my hand include three sensors. One is called an accelerometer, one is called a gyro, and one is called an electro-magnetometer. All three of those sensors are sensitive to movements on three different axes. The different sensor instruments all have a sensitivity to them asking for subtle movements. It is the same when you learn to play the piano. A person who studies piano for years knows that a softer touch will give them a different dynamic. The more subtlety you hit these keys, the more broad the type of sound you can get out of that instrument. And the same thing is true with these gesture controllers.



Figure 10: Pamela Z demonstrating her wireless sensors
 © source: Franziska Baumann

In this way, I am involved in the development of the instrument so that I can customise it in the way I want to work with it. The instrument I either have hanging or on a stand, a lot of people compare it to a Theremin because you relate to the instrument without touching it. The BodySynth was a wearable instrument. After playing this Theremin-like instrument for years, I was missing a wearable instrument that allows me to play without having to relate to something located in a fixed position. I was looking for a wireless controller on my body to wander where I want to.

FB: The sensor interfaces have a visual appearance, they communicate visually and create a specific expectation. When you developed your instruments, was there the visual factor playing a role?

PZ: It was a process of discovery. I think it was like when people choose from the existing set of musical instruments. If, for example, they want to play in an orchestra, they choose the clarinet, the viola or whatever. Or they start with the flute, and later they realise this is not my instrument, and they move to another one and say: "This is it." With these gesture controllers, it is sort of similar.

I found some of them because they were existing things, like the BodySynth invented by these other guys (Ed Severinghaus and Chris Van Raalte) that I bought it from. They built my first

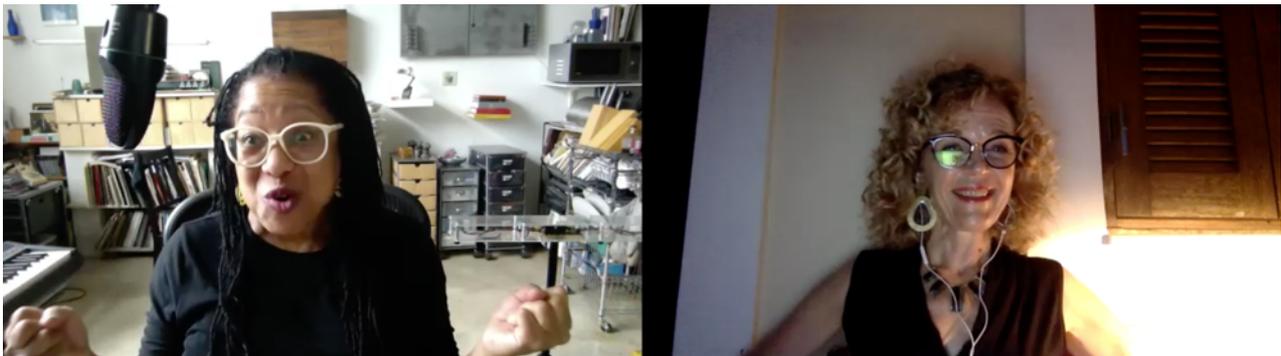
gesture controller. The ones I use now were all built for me by a very dear friend and collaborator (Donald Swearingen). I'm working with him in his studio on how they could be worn and how to build the software so I can control them the way I want to.

I had another instrument which was using visible light as a controller. But then, you always had to recalibrate the instrument on stage depending on the light situation. Therefore we changed it to infrared light, which is not in the visible light spectrum. Consequently, it doesn't create interferences with the visible light. So it is a trial and error, trying different things. It is a combination of what's available and what's there and what's possible to design.

Rapid Changes in Digital Technology

FB: We are currently in the midst of a radical technological revolution with highly intelligent, autonomous computer systems that learn and adapt to our behaviour. How do you see future developments? Are they affecting the role of the body in gesture composition?

PZ: I prefer that we each can choose if we want our technical setup to move and change. I actually have one computer that I use for performing, and I do not have updated the OS on that computer because I am using an older version of MAX. I am afraid that if I update the OS that that version of MAX will no longer run. Then I have to update the old MAX to the new MAX. Half the stuff in my patches will break, and I will not be able to perform until I fix it. I find that whole sort of frequent and rapid upgrade culture to be frustrating.



*Figure 11: Pamela Z & Franziska Baumann in online conversation on Zoom
© source: Franziska Baumann*

What if you were a cellist and you had a two-hundred-year-old instrument, and you were playing that instrument for a long time, and you have become virtuosic on that instrument. And what if every six months somebody comes to your house saying to you: I am sorry, but we don't support this cello anymore. You are going to need to play this cello 1.03. We are sorry we changed the bridge's height now, and we have added a second bow, and you have to learn to play this one because we are going to take you the old one away. It would be so frustrating.

Upgrade for The Sake of Upgrade

With digital technology, we are faced with that is always time for an upgrade even if it is working fine. I have a love-hate relationship with those rapid changes because I realise that they are inventing new and wonderful things. New things are possible that were not possible before, like for example, these completely wireless instruments. But what I am frustrated about is the sort of upgrade for the sake of upgrade. Then you spend all your time remaking and reworking the technical things. But you want is to compose new pieces instead of just keeping up with the software.

FB: Thank you very much! It is very interesting for me to discuss all these questions and issues because there are only a few vocalists on this planet who work with live gesture electronics.

PZ: It is interesting for me, too. When I first started discovering this in the late eighties, I kept thinking: "Oh, next time I turn around, everybody in the world will have discovered it and will be doing this." I kept being surprised that that didn't happen. Finally, a decade or fifteen years later, all these other instrumentalists and vocalists started playing with loopers. I think it is because companies started coming out with loopers. Before, there were only a handful of people. There was Laurie Anderson, Diamanda Galas, Joan La Barbara. And Joan was working a lot without processing and working the vocal instrument itself. And for example, Meredith Monk never worked with electronics. She used an ensemble to accomplish those layers. Some people did experimental vocal sound but not necessarily with live electronics. There are a few people who do more complex processing than looping.

FB: There are not a lot of vocalists playing with live electronics. Some musicians use gestural electronics to control synthesised sounds, although it would be suitable for vocalists since most play gestures in their performances anyway.

PZ: Yes, I am doing these gestures, and I am going to use them for something (laughing).

Links to Music from Pamela Z

Breathing

"I was breathing" begins with a rhythmic motif on two pitches. Then Pamela Z fragments and granulates syllables into particles with intrinsic sound character in terms of pitch, colour and frequency. The piece oscillates between comprehensible words of the embodied voice and pulverised, granulated, repeated and stretched letters of the mediated voice. Words become sound and conjure up a vocal sonic atmosphere, which can produce new vocal imaginative bodies. The two poles of speech and sound modulation balance each other out.

Declaratives

In Declaratives, a single sentence is the starting point for an entire piece. "I would like to think that the art is enough of a statement of itself" is stretched into syllables employing electronics, provided with delays or fragmented and superimposed.

Latest album

[A Secret Code](#) (on Neuma Records)

<https://neumarecords.org/ols/products/pamela-z-a-secret-code>

Solo voice, electronics & video:

Excerpts from *Acqua*

<https://vimeo.com/106552646>

Excerpts from *Memory Trace*

<https://vimeo.com/142168546>

Sul Ponte dell'Accademia (from Span) (amidst interactive video installation by Carole Kim)
<https://vimeo.com/197703016>

Fixed Media pieces:

Timepiece Triptych
<https://soundcloud.com/pamela-z/sets/timepiece-triptych>

Strange
<https://soundcloud.com/pamela-z/life-is-so-strange>

A piece of π
<https://soundcloud.com/pamela-z/a-piece-of>

<https://soundcloud.com/pamela-z/a-piece-of>
Chamber works

Attention
<https://vimeo.com/200529032>

And the Movement of the Tongue
<https://soundcloud.com/pamela-z/sets/and-the-movement-of-the-tongue>