

Peter Wicke (Humboldt University, Berlin, Germany)

From Schizophrenia to Paraphonia: On the Epistemological and Cultural Matrix of Digitally Generated Pop-Sounds

Samples, loops, and streams, the indicators of digitally produced pop sound, are the signatures of a musical world that not only functions in accordance with rules different from those that underlay the playing of music until now. Even much more fundamentally, they have changed the cultural and epistemological matrix in which tone functions as music. To take up an expression of the Canadian composer R. Murray Schafer, who diagnosed a similarly fundamental change after the introduction of phonographic technology at the turn of the 19th to the 20th century as “schizophrenia” – the technological split between the production and the perception of tones – the binary simulation of tone events marks the transition to “paraphonia”, the coexistence of a primary sound event and its restoration (or better: simulation) in the process of analog-digital-analog transformation. This casts a glance on the culturally produced characteristics of ‘tone’ that, still below the level of music’s communicative claims to validity, make it a medium of playing music.

The way a tone is organized as music and transformed into music is always connected with the dominant modes of its production, i.e., the predominating technologies of producing sound. Percussing the body and vocal forms of tone production, which are found as the basis of playing music in almost all primitive peoples, form the basis of a musical universe different from that of the complex mechanical tone machines that we call “musical instruments”. This applies all the more to digitally generated sequences of tones, which, as calculated real-time simulations of tone events, differ in principle from conventional forms of playing music. The difference is not at all limited to the respective patterns of interaction that are embedded in the technologies of tone production and that create a framework for playing music as “rules of interplay”. The interaction in an African percussion ensemble, both among the players and between them and their listeners, is organized differently from the interaction in a European string quartet or a hip-hop performance.

Much more important is another aspect: the cultural molding that tone must go through to be receptive for the attributions and inscriptions upon which playing music in the framework of a given culture are respectively based, i.e., the particular way that human societies turn tone into a medium of playing music. Underlying this is the basic distinction between sound, as the physical-acoustic bearer of tone, and tone, as the material medium of music. The rules according to which sound is produced and perceived as tone and tone as music are crucially subject to a shaping determined by the technologies of tone production. It is, so to speak, the level of the “cultural formatting” of tone – an analogy that goes beyond metaphor. Just as digital storage media require formatting to be inscribable, so too tone is culturally formatted to take on and “store” that special form of human interaction that we call music. What thereby comes into play are the operators, the technologies of articulation, and their discursive parameters, i.e., those that are tied to conceptual and processing patterns of perception. Phonograph technology, which makes auditory sensory perception storable and transferable, has already intervened deeply in the process of the cultural formatting of tone by separating tone production from the act of its perception as music – precisely the circumstance that Schafer sought to characterize with the term “schizophrenia”. This is all the

Murray Schafer, *The Tuning of the World*, (McClelland & Stewart) Toronto 1977, p. 124

more true if the prevailing mode of tone production is one of the binary calculation of auditory perceptual realities from arbitrarily generated streams of data. The level of cultural molding of tone and its formatting as a medium of the music in question here can be surveyed if one turns one's focus to a singular element found in a prominent position in all musically organized worlds of tone: the production of tone by the human voice. From the songs of primitive peoples in the tropical rainforest to the vocal manipulations of techno avant-garde, from opera to hip-hop, from folk music to pop music, from classical modernism to rock – the voice is always present as the most universal instrument of tone production. As the most natural form of this process, it has experienced its probably most incisive changes through coupling with the machines of tone storage and tone manipulation – to the point where it mostly disappears in the techno tracks of the current dance and club culture. Thus, it is the most direct in its display of the aforementioned modes of cultural formatting. Phonographic and microphone technology have thereby left the deepest traces, placing the tone of the human voice, independent of and prior to any sung realization, within a novel cultural frame of reference, which henceforth became the precondition for using the voice in music.

The microphone and the electric amplification technology associated with it made it possible to render the softest vocal sounds audible, quite apart from any particular singing technique. Initially this meant the intimacy of the voices of the American “crooners” (Bing Crosby, Frank Sinatra), but it didn't take long before Elvis Presley, Jerry Lee Lewis, and all the other heroes of American rock'n'roll in the 1950s brought the entire spectrum of guttural noises into music. These are voices that sound recording has separated from their bearers and disrobed them of all their visibility, reducing them to their purely acoustic presence in the context of radio and record music, giving them shape as pure tone. More lies behind this than a mere shift in spatio-temporal coordinates, as the American pop star Buddy Holly spectacularly revealed in 1957 when, while recording his “Words of Love”, he sang a duet with himself by accompanying an earlier tape recording. Musical interaction with the technical reproduction of one's own voice not only allows the singer to be doubly audible. In addition, the doubled voice becomes a demonstration of the technological ability to separate voices from their bearers and to have them interact with each other in purity, as mere tone tracks.

The voice has thereby become a technologically produced construct, a result of the synthesis of human sound production and machine mutations. The “natural” voice of Elvis Presley, as of every other pop star, may be capable of unusual sound formation, but the technologically unamplified and unprocessed use of voice doesn't “sound good” in the media context. Only technology can give sensual presence to such voice tone images. Without a microphone and amplification technology, such voices do not exist; as technical products, they have no bearer anymore; they separate from their singing producers and, with their particular tone characteristics, begin to settle somewhere between the human and the machine. The singing stars only provide raw material for it. The microphone becomes an instrument for the now bodiless tone of the media age.

It wasn't long before the voice and the body separated in reality, and not only technologically / virtually. In 1975, when the German music producer Frank Farian landed a surprise hit with “Baby Do You Wanna Dance”, he not only had a commercial success, but also a big problem. The recording was the result of a studio experiment in which he himself had taken the singing part. But because of his extreme stage fright, he did not feel able to adhere to the customs of the pop industry and present his song live to an audience. So, for the indispensable live performance, it seemed only natural to hire a session singer: Bobby Farrell, who quite literally “embodied” Farian's singing voice by lip-synching on stage. The

performance was so convincing that to this day hardly anyone knows who actually was the singer of this recording sold under the name Boney M.

It was also Farian who, in 1988, took a decisive step further by tying together the vocal recordings of the three studio musicians Charles Shaw, John Davis, and Brad Howe with the bodies of the two dancers Robert Pilatus and Fabrice Morvan under the name Milli Vanilli. The process became a scandal in 1989, when Milli Vanilli, i.e., Pilatus and Morvan, received one of the coveted Grammys from the American National Academy of Recording Arts and Sciences for their supposed vocal achievement. They had to return it, of course, when the background story leaked. This is one of the curiosities of pop music history, but the technological synthesis of voice and body – here turned into reality for the first time and concealed on stage with corresponding technical means – marks a turning point: even in the most primal field of music, singing, something reached perfection that had long characterized instrumental playing in the studio, namely the drifting apart of tone and tone production, tone and body. Since the 1960s, in the studio, the musician with his or her instrument has provided nothing more than a triggering impulse that steers a chain of apparatus kept in motion by sound engineers, sound technicians, and music producers. Whether the result captured on tape sounds as “natural” as possible, i.e., as close to the unprocessed sound of instruments, or is notably “synthetic” is a purely aesthetic and arbitrary decision – a decision often not even made by the musician, but by the recording technician at the sound board in collaboration with the producer.

What has happened here is the gradual dissolution of connection between tone and the human subject who creates it, which was not only valid for centuries in the occidental musical tradition, but also and above all a visible connection that had its starting point in the singing voice, i.e., in the nature-constrained unity of the person playing music and the producer of tone. Tone turned into music encodes for us – an “interior” that becomes an “exterior” through the musically expressing subjective individual and that takes a shape and is thereby communicable in a unique way. The dissolution of this connection is a process whose implications can hardly be overestimated. On the level of the tone signal, the difference between the human vocal apparatus as a biological-mechanical producer of vibrations, on the one hand, and a tone generator providing sinus waves, on the other, shrinks to insignificance. As tone signals, both are inscribed with the same parameters.

The digitalization of the medium of tone was another decisive step in this process. In binary representation, tone has completely cut its connection with the modalities of its production. It has become the calculated, real-time simulation of itself, whereby the process of simulation, i.e., the process of making the digitally-acquired numerical values audible again by means of digital / analog converters, has not only made the difference between corporeal, mechanical, and signal-based, electrical forms of tone production meaningless; it has eliminated that difference. The rhythm patterns and tone streams of techno tracks, for example, can be machine-generated or hand-played, using a MIDI keyboard or a mixture of both, for example a technically created endless loop of a played or sampled musical figure. Today, not even experts can accurately use the aural result of the instruments and technological effect devices to identify the modalities of sound processing and transformation or the methods used to technically synthesize tone. And this has consequences.

Tone has thereby experienced a far-reaching de-referentialization. Once it was the symbolic medium par excellence – every audible tone, as a kind of vector of meaning, always pointed more or less unambiguously to its production and producer and was thus inextricably tied to a dimension of meaning. But in digitalized form, it stands suspended in space, completely free, unattached, without origin, traceless, and thereby also initially meaningless.

The digitalized tone, made audible, then represents nothing more than binary numbers, even if its values are extracted from the sampling of a natural sound. Here, tone has become a pure inherent state of perception; the unity of material, medium, and perception has broken apart forever.

The self-evidence with which tone could be heard as a sign of emotionality, expression, subjectivity, interiority, and symbolic representation of narratively constructed patterns of meaning corresponds with the self-evidence with which sound can be taken as a medium whose origin – whether played, technologically manipulated, or technologically generated – is unimportant, because sense and meaning result from the connections and transformations that can be literally “docked” onto sound shapes. Access to a universe understood in accordance with the principle of the databank and thus as relational and abstractly addressable and the linking of elements to create networks without even slightly affecting the identities of the elements are the key technologies of a form of making music that avoids even the term “music” and that emblematically carries the technical quality of the production of sound – techno – in its designation. Central to this is the concept of repetition, not in the sense of repeated action, but in the form of technologically generated chains of events: loops or synthesizer sequences that replace the former narratively composed structure of sound sequences in music.

This means that the singing voice has lost its privileged position in the universe of music. Here it is nothing more, not more significant, no more meaningful, no more emotion-laden, and certainly not more “natural” than any technologically generated noise welling up from the sound canons of the media age: loudspeakers at home or used collectively. Behind this stands a machine-generated code of rules of combination, a network structure turned into sound for mobile (dancing) bodies to “log on to” – a term whose frequent use in this connection is telling.

To make this development clear, let us take up a symptomatic case: the productions of the Icelandic singer Björk Guðmundsdóttir, known as Björk. The mere fact of her career as a pop star is already deeply owed to the aforementioned changes. The singer, who was born in 1965 in Reykjavik and still lives there, comes from a place that is as “un-pop” as possible. It is no coincidence that, into the 1990s, artists were mostly excluded from access to the global pop market if they could not present the pop-specific authenticity of the site of their origin, which had to be either urban, “hip”, and in one way or another “far out”, or else had to fit the ideas of the “exotic” as propagated by the tourism industry. For the latter, the supermarket of sounds offered and still offers the genre of “World Music”.

But Björk corresponds to none of that, or to all of it at once, which in turn is possible only if the authenticity of the site no longer plays any role in playing music. Like many music-obsessed people of her generation all over the world, she began making music in a punk band. The pleasure in experimenting took her from punk rock to post punk, which had turned commercial marginalization into the seal of quality of a street avant-garde. But she did not gain the status of an international pop star until she collaborated with the meanwhile legendary techno artist Mark Bell, who from 1988 on joined Gez Varley in the immensely influential Sheffield techno duo Low Frequency Oscillator (LFO). Here, in the dance and techno area, the consequences of the digitalization of music, not least in the consistent anonymization of the productions and their connection to frequently changing, identity-free fantasy names, had long since been felt. Now Björk was to become one of the first pop stars outside of the narrower techno field whose productions audibly exhibited the aesthetic consequences of the comprehensive digitalization of sound.

Against the backdrop of his techno-club experience with an audience shaped by the high-tech media world, Bell transformed Björk's singing voice into a diversely-processed digitally generated or digitally reprocessed world of sound. What was produced in what way is neither relevant nor retraceable here, even if the singer surrounds herself in the studio with a select circle of musicians from the most various parts of the world to recording freestyle sessions (i.e., without any score or directives at all), in order to find the spirituality that enables her to generate suitable sound material. On the computer, producer Mark Bell and the singer, who shares responsibility with him for the production, use software synthesizers, sequencer programs, sound-morphing, and sound editing to create sound architectures that have caused a sensation since the mid-1990s, because they let the reformatted medium of making music develop into an aesthetic re-dimensionalization of music itself. Instead of using digital real-time simulations of sound to mimic supposedly "genuine" sound, i.e., instead of structuring the musical action as if the sound world it clings to had been produced in the conventional way and unfolded within the traditional spatio-temporal parameters, the productions of Björk and Mark Bell relinquish this illusion.

A very characteristic example of this is the album *Homogenic*, released in 1997, whose cover design already points to such technological synthesis forms, a computer-generated artificial figure of multiple cultural identities in which at most the facial features encode a recollection of the singer. The album's music peculiarly fulfills the paradox of sensual abstraction. The voice, for example, Björk's trademark, is not really technologically distorted, but the exhibited character of digital simulation processes makes it not really human, either. It is a unique sound form of icy beauty, but nonetheless it has not been made "alien" as an unambiguously technological product and thereby placed at a distance to the listener. This ambiguity is what manifests the digital reformatting of sound as a medium of making music. In digitalized form, the sequentially processing sound form becomes a "link" in the mediatized world.

The development sketched here points to an overarching aspect that has fundamental importance: the epistemological parameters with which music is theoretically to be viewed are always already given in the respective culturally formed epistemological matrix underlying sound as the material medium of playing music.