On performing a listener: what is missing, Paganini?

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Abstract
With an emergence of new medium(s) there are new articulations of ways of addressing listeners. This paper focuses on how technology might change a way we address listeners and how we address them might influence their way of performing listening. Our discussion includes a brief historical look on listeners in the presence of different technologies, with respect to the commonly understood or commonly misunderstood function of listeners as addressees of computer music presentations. The paper will introduce the practice of constructing an imaginary audience, performing a listener, and a performing-listener.

1. Introduction
Helmholtz in The Sensations of Tone differentiates noise from musical tones (Helmholtz, H.):

"The nature of the difference between musical tones and noises, can generally be determined by attentive ear observation without artificial assistance, ... the irregularly alternating sensation of the ear in the case of noises leads us to conclude that for these the vibration of the air must also change irregularly. For musical tones on the other hand we anticipate a regular motion of the air, continuing uniformly."

It is apparent in this quote that the difference between the two classes of signals is based upon psychoacoustical evaluation by an observer. This is emphasized by describing the observer speculating about the physical characteristics of the observed signal by reflecting upon her perceptual experience. Helmholtz also accounts for an observer's ability to anticipate certain characteristics of acoustic signals, based upon the classification attributed by an observer herself or at least upon the awareness of the classification that is attributed by convention. These discussions allow us to describe a listener as an active observer divorced from the concept of subject whose role is implicated in stimulus/response models derived from behaviorism. We can glimpse the behaviorist model of listeners in the following two pictures:

Figure la.

Figure 1b.

Figure la suggests listeners who are behaving in a way they think they are to behave according to unspoken social assumptions. Figure 1b captures listeners' automatic defense against an offensive sound source. These two classes of particular behaviors are supposedly quite different in purpose. However, their appearances are remarkably similar in terms of the uniformity of listeners' display of their own behaviors. Looking at such appearances one wonders what kind of social conditions, music or sounds prescribe such behaviors, and what kind of descriptions listeners generate of themselves such that their behavior meets their own descriptions.
2. Historical look on constructing an imaginary audience

Listeners imply no listeners. My mind can wander off from the music. At times I can be caught off guard in the game of composer's catching an unknown audience in concert hall. When music generates an ensemble of audience I have more freedom to say, "Oh, I heard that."

The birth of virtuoso

The secret of Mozart's Magic Flute is achieved by bringing folk technology into the scene delivered by a medium called an opera; the composer places Papageno's whistle as the instrument to reach the magic flute. Audiences can identify with Papageno playing bird calls with a whistle, a calming note entraining violence into the mode of dance (soothing the soul of beast) with bells, an expression of love and feurs. In the presence of various musics listeners imagine birds, beasts, and other listeners in the opera by making explicit internal descriptions of various audiences, an ensemble of audience et cetera. For Mozart's aristocratic listeners, the social status of characters portrayed in the opera pretexts the safe distance for them from other imaginary classes of listeners. This comfortable identification attributed to aristocratic listeners becomes ambiguous when Tamino becomes a "true" listener of himself playing the magic flute, a virtuoso. The construction of the ambiguity is to create the moment of pivoting the nature of one distance to another. This moment of pivot is physically represented on stage with the length of a chamber and the time passing through the chamber. A virtuoso is being born as the audience observes the magic flute guiding innocence through ignorance turning it into institutionalized innocence.

When Mozart rewards the audience with the description of a listener as "socially qualified" to be an audience of virtuoso, he establishes a Paganini principle; the virtuoso defines the locus of technology (seat of musical power). This principle sets a marketing strategy to gain a necessary distance for generating consumers and admirers. Mozart achieves this distance by secretly leaving the aristocratic audience behind with Papageno. A virtuoso is empowered and his foundation is an idealization of music technology in the presence of the politics of an idealized social class. The description of the listeners in the context of Magic Flute is a construct driven by the political motivation or desire under the social condition the composer lived in.

Mahler: the paradigm of master listener

Mahler replaces theater with an orchestra technology, as if the rest of the instruments climbed up to the stage with the magic flute. Various musics invented and imbedded into Mahler's music also invite listeners to generate imaginary listeners for these musics. Mahler's music affords variety of references such as peasant melodies and love songs fluttering with listener's memory. The implication of the presence of conductors on stage is that he is a master listener and virtuoso stand-in for the audience. He externalizes his listening into the kinetic movements controlling the giant technology, an orchestra. The magic that is sold for many audiences in this paradigm is the perceptual economy, an access to the orchestra and interface to the music of their listening through the conductor's fingertips. The more they seek exclusively for this economy, the more they let the conductor conduct their listening. The fact that often charismatic appearances of conductor's movements appeal to plausibility situates in the description of listeners themselves.

Electronic Media: Technology as virtuoso

The premise of the relationship between broadcasting media and its audience is an access to information; information comes to us. We do not have to go to a concert hall in order to hear Paganini. A virtuoso is compressed into a one-dimensional waveform and delivered into our living room. In order to convince its audience on the desirability of this delivery, this technology first has to sell itself, i.e. it has to become a virtuoso itself. So we will call it meta-virtuoso. This meta-virtuoso assumes existing technology; we see through one-eyes of Cyclops (TV and cinema) and we hear through the ears of microphones.

Sound production media for producing electro-acoustic music also assumes existing technology under the premise for an alternative use of the technology thus generating alternative audiences. This premise functions as a criterion when producing a work of art for those who regard their integrity as artists. Sounds can be sampled and reassembled and manipulated into any resulting sounds. Electronic and digital modules are not bound to the inertia of physical instruments though these modules present different classes of inertia. The sense of continuity and discontinuity can be induced into virtually any perceptual consequences.
that are artificial and overwhelming, thus increasing the demand for more alertness to audience to be responsible for their own conscious observation.

3. Listeners and Medium

There was indeed an era when people went to see Paganini, to hear the performance of virtuosi. It was a delightful and marvelous experience to go an evening concert and there was Paganini! What was sold was the performance.

Tape music played by loud speaker requires no performer on stage. In the face of such technology we have to change our behavior rather than submitting ourselves to the existing pimp (commercialism of a music nobody is willing to pay for).

In this section we orient ourselves to the notion of performing a listener and a performing listener. We call attention to two medium(s) to provide the cases where these notions can be applied.

3.1 Performing a listener
The characteristics of works of art are reflected in various ways based upon the media that are used as carriers to deliver presentations. The choice of medium influences the way the presentations are delivered as well as the way they are perceived. The presentation of music induces observers' cognitive processes that invite the perception of changes in time. To be able to perceive the changes in time requires the ability to remember. The perception of time when observing a painting is quite different from when listening to a piece of music. Music manifests its own temporal constructs. It does not wait for a listener's attention. Either it succeeds or fails to draw a listener's attention. At times we can also say the listener succeeds or fails to be attentive in the presence of the music. A listener is responsible for delivery of her or his performance of listening.

Tape Music Performance
Tape music is played through loud speakers. The quality of reproduction systems, the placement of loudspeakers in relation to room acoustics and other peculiar conditions effect to the performance of tape music in concert hall. In the absence of performers one wonders why we are sitting in the concert hall facing loud speakers often in the dark. Some of us "missed" a performance aspect in this contemporary technology so we generated compositions for live instruments and tape, dancers on stage, acrobats or whatever which can provide something to look at, something that appears to be performance. In order to overcome our own dissatisfaction, we apologize for the handicapped technology. So we have invented a seemingly new genre, "multi-media" which many of us including myself still don't know what it means. The word, media is already plural, and preceded by the word, multi. Is an opera multi-media? What did we miss in the performance of tape music? One may contemplate the possible answer with the following statement: "Yesterday I listened to your tape piece and I was a virtuoso." Why in a concert hall? Consider the following statement: "I have heard this piece last September in my living room. Today listening to this piece here with you gives me a different impression."

3.2 A performing listener
Performers of traditional instruments are familiar examples of performing listeners. They are the experts who have learned their physical movements with respect to the instruments. The extension of body to a technology including musical instruments is realized by interactivity and guided by the acoustic feedback. The current technology involving computers present certain degrees of interactivity. However we treat this technology differently from musical instruments due to two major aspects: the incompatibilities of interfaces to users' physical orientation and the significant latency between users' activity and the feedback.

This latency however, is not always undesirable. The affordance to design various formalized logic paths and to experience different lag times offers opportunities to study various boomerang effects, the articulations leave from the body to the external path in virtual space and generate long consequences, thus demanding different attitudes of our mental exercise and neurotics.

VR
This contemporary medium is specified by the hardware capability which affords immersion, interactivity and scalable units of representation. In spite of all the promises and the flourishing enterprises of theories
and literatures on virtual reality (VR) systems, this medium is in its infant stage and presents problems to be soberly addressed. Unlike most other medium(s) the definition of an audience in a VR environment is an “inside” player, thrown into VR, and demanded to explicitly activate the notion of a performing listener with the clumsy interfaces.

A. An active observer

Orpheus, by looking back failed the test for fulfilling the satisfaction of an eternal world where no life or death exist. Nowadays we do not have to inject white noise into our memory to meet such a test. We volunteer our deafness and silence and become as passive as those “musics” want us to be and as the media describe us. We will soon be able to pass the test easily, we will become transparent and we will not reflect upon ourselves. Everyday Orpheus in the chamber as he sees his memory go by with successful ignorance, we pretend as if he cannot catch up the moment of looking back

The previous section was focused on performance as a listener’s activity. In this section we discuss some explanatory models to recall tools for listeners.

cognition

Listening is observing. When a listener describes acoustic signals as simple or complex, she is referring to her or his cognitive response to the acoustic stimuli. A listener as a beholder of her or his memory plays a significant role in determining the life span of information exchange in the modes of observation between the work of art and its audience. Memory and the ability to address our own memory is ‘self-reflection.’ We are constantly reflecting upon ourselves by reflecting upon our memory when listening to a piece of music. Unlike the bit-patterns storage that we call “memory” in computer our memory changes all the time. Once, we called the computer storage capacity “memory” as a metaphor in analogy to human memory, now it is standard practice to refer to human memory in analogy to computer memory. The function of metaphor is forgotten, the name remains. One has to be cautious of this semantic confusion and its consequences in the use of language. The ability to reflect upon our own memory is what keeps us going as a living organism, an autopoietic system (Maturana, H.) of which maintenance involves the duality, the necessity for drawing a boundary as a closed system and the necessity for interacting with the environment in order to exchange the energy. When we reflect upon our own memory we change our own state as we open up what has been temporarily closed in the past. This act of looking (reflecting) occurs in the chain of presents. Memory as a function of the living organism can be understood in terms of circularity. The circularity is explained in the method of circulus vitus (Von Foerster, H.):

1. The interpretations of an organism’s sensations determine its activity.
2. An organism’s activity determines the interpretations of its sensations.

Translating this proposition involving the subject of our interest:

1. The interpretation of our sensations of music determine our self-reflection.
2. Our self-reflection determines the interpretation of our sensation of music.

semiotic practice

Semiotic practice is an extension of cognitive process (Choi, L.). The responsibility of an active observer extends from internal cognition to external articulation. The term, semiotic practice, is coined by Julia Kristeva (Kristeva, J.) in order to distinguish the signification processes which cannot be satisfied by the description of symbolic processes. The practice of music listening often escapes from the model of symbolic processes in which tokens and icons of experiences are well defined.

Figures 2a and 2b show the elements and their relationship in semiosis (a chain of process) of signification. Note in Figure 2a by “tree” we refer to the invariants of all imaginable trees: root, a trunk, branches, and leaves, the invariants that we agree upon for the sake of the economy of linguistic communication.

This is different when we refer to composition. In the presence of new works, no such things exist as invariants that we can name since the work has not enough history to gather consensus from its listeners. The semiotic practice for listeners starts from the stipulation: there is a composition, thus creating a mental space. This mental space listeners make available is not same as the object in Peirce’s model which is based
on phenomenology that assumes the transcendental object. The creation of the material space is voluntary and we attribute the address to the space often with a title of the work. Listeners who are mature players of semiosis further stipulate a hypothesis (not an object), there is a composition with order and structure inherent to itself which is protected from our recognition and not tamed in our linguistic descriptions. This hypothesis attributes the plasticity and mutability to the composition so that the mutability returns to our own descriptions of the work. As long as we keep this circularity by our action the semiosis keeps going. Listeners are responsible for generating descriptions, not a conviction, which contribute to the umbrance in which a composition can extend its existence. By this listeners extend their performance from cognition to semiotic practice and realize listening as a generative process as much as composing.

The compositional realized with contemporary technology demand more attentive and responsible performance of listeners in order to bring these tasks into visualization. It is also a composer’s task to generate the descriptions of an imaginary audience with respect to the technology so that her or his piece contributes to transcend the seal of virtuoso to listeners.

5. Epilogue

Orpheus is a listener, a living consciousness. He is asked not to look back, not to reconsider his own experience of where he has passed together with his lover, his listening memory following behind. After passing through the long chamber of time under the condition not to look back, he can not hear the footsteps (acoustic feedback) anymore. The absence of inquiry by head movement to generate perception results in a loss of sensation. With the loss of feedback, the moment of doubt arises, the reflex is drawn. He looks back and this movement of self-reflection is an ultimate defense for his own life.

Acknowledgments

Dedicated to Tom Turino.
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References