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# Notes: Music Beyond Sound

BRANDON AVERY JOYCE

*The Universal Research Group*  
*Email: research@universalresearch.group*

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Does music have any delimiting features or *sine qua non*? Is it fundamentally “about” sound? John Cage offered to swap the word “music” for “the organization of sound” in case fans of music were too clingy to 18th or 19th century preconceptions, and most other theorists seem pretty happy with this definition. And true enough, music is *predominantly* about sound and hearing. However, it’s not *exclusively* about sound and hearing. Plenty of elements or relationships that are external to sound and hearing are not external or incidental to music, especially when it comes to the aestheticization of sound into what we recognize as music. Sight, touch, kinesthetics, and proprioception are all integral to how we make, understand, and musicalize sound. Our questions are then: what are the relationships between music and non-sound? To what extent is music *not* an exclusively sound-based medium? And finally and most curiously, what are the possibilities for entirely soundless musics?

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## 1. DEAF RAP

Consider a genre like ASL rap, American Sign Language rap. Peruse Youtube and you’ll find a slew of videos with rappers and audiences— Waka Flocka, Killer Mike, Chance the Rapper, Snoop Dogg, Eminem, Wu Tang— getting psyched on the ASL interpreters signing at the foot of their stage. In one [widely-circulated video](#), Waka Flocka dismounts the stage to fake-sign along in rhythm with his interpreter, Holly Maniatty (who’s now a celebrity in her own right for her interpretations). The commentariat seems split on whether Waka Flocka thought she was signing or just dancing. Whatever the case, he’s clearly intrigued — as was [Killer Mike](#) and Eminem and the hundreds of others who posted her performances on Youtube and elsewhere, and as were the millions of others who viewed them. Something *interesting* is happening, giving off a cultural heat, and they sense it. Maniatty isn’t merely a transcribing or approximating; she’s widening the range of rap, perhaps even pointing us towards a kind of shadow genre.

Many of the defining elements of rap— the rhythms, the lexical or lyrical content, the linguistic stylization— can all be musically accomplished without sound. Little to nothing is lost. Rhythm, even in its traditional forms, relates action to time and is no more grounded in hearing than any other sense. Rhythm is as easily conveyed through sight, touch, kinesthetics, or proprioception. Flashing lights, bodily movement, or electric shocks fit into rhythms as easily as plucks, snare hits, and samples. Lexical or lyrical aspects are no lossier in ASL than in English. Both denote, connote, and communicate. And though I can’t say for sure myself, as someone largely ignorant

of sign language, I would imagine that linguistic stylization, integrated as it is with bodily movement and facial affect, is easily as pronounced and complex as traditional rap, in which the bodily movement of dance serves more as a compliment than an indistinguishable component. We could go so far as to say that rap is more *integrated* in ASL than in English or any other hearing language, its elements more snugly unified. This leads me to wonder what it would be like to interpret rap from ASL into English, in a world where soundless rap held primacy? I noticed one assumption running through comments and articles that the aesthetic content of music is forever sealed and centered in the world of sound, only to be vaguely or charitably described to the deaf, the way we might lip-read our friends through a restaurant window. *ConfusedGamer21* ignorantly compares concert interpreters to “*bringing blind people to a magic show.*” A bit more softly, *me24546* wonders “*why would you go to a concert if youre [sic] deaf?*.”

However, these people have got it completely twisted. The question isn’t why the deaf would go see a concert. The deaf *have* to watch, or feel, or be surrounded by, the music. The question is why the hearing would go *see* music. If music is such a sound-exclusive medium, the hearing could cozily listen at home, but they chose instead to shell out serious income in order to watch, feel, and be surrounded by music. And why? Jacques Attali, in his work on the political economy of music, *Noise*, would likely peg the concert as a 19th musical paradigm of *representation* exerting itself in the midst of the 20th century paradigm of *repetition* comprising Napster, Spotify and vinyl. And much of the answer surely

involves the top-down existential strategies of the music industry itself. However, as far as their real and intimate relation to the music itself—and don't listen to the cynics, the relation is still largely real and intimate—concert-goers go because music is *not* a sound-exclusive medium and because they've come to absorb those non-audible aspects and relationships that help encode the sounds as music.

Those puzzled by deaf concert attendees are presuming—asserting even—that the meaning or meaningfulness of music has its *source* in sound. However, this is a funny musical metaphysics since sound is itself the effect of a non-sound, usually a sensible movement (until the invention of recorded and synthesized sound, it was always the effect of a sensible movement). The source has yet a source. Thus to understand a sound is, in part, to grasp or imagine its production, however darkly or metaphorically, even with baffling, acousmatic sounds. A loud bang means something different depending on whether we believe it's from a gun, a fallen object, thunder, fireworks, or a plastic bag, and this is as true of music as it is sound in general. Musical meaning is bound up with how we understand the power and production of its sounds, bodily, technically, and socially. For most of human history (though this is rapidly changing), the most visible and intensive source of musical sound has been the human body or some analogous and prosthetic extension. The appreciation of rhythms is not simply the appreciation of a temporal pattern, as we might gawk at wallpaper patterns or the interlocking tiles of a bathroom floor. We're imagining the events or actions that produced them—again, by and large actions of the human body, if even through some strange power or prosthesis. Dance is more than a response to music, more than the decoration of sound with movement. Dance is, in some percentage, the kinesthetic understanding of the sounds as music, a mimetic reproduction however loose or metaphorical. Likewise, when we hear a melody, by voice or instrument, we understand it partly through mimesis, kinesthetics, and proprioception, as if we ourselves were singing it. This had always been mere hunch for me, until bolstered by my discovery of the studies of Smith, Wilson and Reisberg, "[The Role of Subvocalization in Auditory Imagery](#)," (1992, 1995). Smith, Wilson, and Reisberg demonstrated that whenever we listen to melodies—any melody—whether produced by the human voice (1992) or an instrument (1995), our voicebox subtly vibrates or subvocalizes. We ever so inaudibly *sing*, or reproduce the melody mimetically and proprioceptively, as an intuited awareness of our own efforts. I'm not sure if corresponding studies exist on rhythm but, being even more obviously proprioceptive and kinesthetic, I'm willing to take any bets.

Thus, if our interpretation of music is deeply connected to the origin or locus of production, the deaf attending a concert are, in effect, participating in much the same interpretative process as the hearing. Both have come to see the strain or affect on the faces, to correspond movements with events in the song, to visually gauge intensities, and to understand through co-presence how, as Adorno writes, "*even out of so-called individual works it is a We that speaks and not an I.*" Concerts and performances offer so much meaningful non-sound that we could even imagine training hearing publics, with some patience and acculturation, to appreciate events for soundless music like ASL rap. Maybe with some nice supertitles and special effects, the hearing could come to grasp the unity of its form. However, before getting ahead of ourselves, we should ask: does ASL rap—or any autonomous [soundless music](#)—already truly exist as a genre?

By mandate of her profession, [Holly Maniatty](#) always emphasizes her fidelity to the musician's original. She studies lyrics, linguistics, biography—anything to offer a more faithful translation, not an autonomous form. In interviews, she's quick to promote musicians whose music is produced primarily for and by the deaf. However, from what I saw, a lot of larger-name deaf rappers like [Sean Forbes](#) or [Signmark](#) still produced deaf rap that was, in its fundamentals, based on sound music and possibly even geared for hearing audiences. Its production and backing tracks were basically the same as hearing rap (though Signmark seemed a bit tweaked for speaker tactility). The signed rap was not only paired with spoken rap, but constrained by its conditions, such as its speed and rhyming. In other words, however valiant or talented the rappers may have been (and I'm of course no judge of this), it still seemed premised on a *making-accessible* of a sound-based medium rather than producing a stridently independent deaf form.

A little deeper into Youtube, though, I stumbled upon [PoloBoy](#), [Codedred](#), and a few [other](#) musicians producing a more forcefully self-grounded deaf-rap. The audible production was generally rawer, pared down, and evidently for the deaf—generally composed of tactilely perceptible high clicks cleanly separated from grumbling deep bass, or overlaid with nonsense genres that would, if heard, anti-aesthetically clash with the deaf-musical content. The rap itself was more [self-assured](#), nearly rhymeless, and even subtitled closer to the elliptical grammar of sign language. The final products aren't nearly as final as those of better known rappers. The videos are janky and the songs unpolished—but this is what you'd expect from any excitingly *emerging* form, as spoken rap once was in the boroughs of 1970s New York. It's a genre on the

brink of its first masters.

## 2. HAPTIC MUSIC

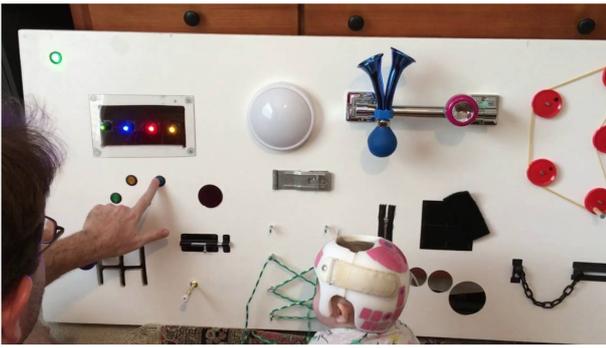
This foothold we've made for soundless music with ASL rap would likely do little for some grouchy Nebraskan Baby Boomers who'd object that rap—deaf or spoken— isn't actually music in the first place. That being said, this super-restricted, conservative sensibility is really only a stauncher version of the most popular conception of music: music as “beautiful” quasi-mathematical relationships in the pitch or frequency of sounds, diachronically as melody and synchronically as harmony. This conception— or preconception rather— is what prompts the *charitable* response to deaf musical appreciation that they can at least “feel” some sounds, and enjoy the latest-greatest vibrotactile inventions that grant “accessibility” to music like the *SubPac* and the *Vibeat*. These inventions are well and great, but using them purely to translate audible tones and rhythms into haptic sensation reduces them to glorified stethoscopes. Instead, just as Stravinsky rightly and presciently quipped that gramophones would one day themselves become instruments, we'll confidently wager the same for SubPacs and Vibeats, on which we could make or compose music that was meant to be *felt* rather than *heard*. The SubPac and Vibeat would nevertheless make for fairly crude instruments, not because they are vibrotactile but because they are static in their vibrotactility. Therefore, to widen our horizons, let's imagine a new rather complex genre of musical production: *music made on and for massage chairs*.



FIGURE 1. Massage Chair Musician with Music Feeler

Though ordinary storebought massage chairs could establish proof of concept, to really demonstrate their new musical purposes, massage chairs would have to get tweaked or well-tempered to meet certain specs. They'd be outfitted with vibrotactile nodes that could vibrate at *any* given frequency at as many possible points all along the body— feet, ankles, calves, knees, thighs, glutes, vertebrae, shoulders, elbows, arms, hands, fingers, neck, cranium, temples, and wherever else. Higher-end models could also offer a coverplate shell for the front of the body or distinguish the left from the right side of the body, like clefts. Already, with these modifications, massage chair music match the complexity of traditional Western composition in its harmonic and melodic dimensions, the complexity captured by traditional notation. Massage chair music extends along several dimensions: frequency, time, locations on the body and their proximity, possibly pressure as analogy to volume, and— if we get carried away— other motions of the chair itself such as recline, rotation, and pitching and heaving like the pseudo-coasters at Universal Studios. Defenders of the “naturalness” of song— that it emerges from some innate conveyance of emotion in the voice— should easily accept that massage chair music emerges just as naturally and pleasurably from the innate conveyances of touch. If comparing touch to sound, massage is the perfect parallel of song, massage chair music would at least be something like a mid-80s Casiotone.

Complex figures in the sense of touch— sensation more intricate than rumbles, bass booms, and staccato clicks— can't really be projected like sounds and images. This means that higher-order haptic musics, like our massage chair melodies, will most often be more intimate or less public than sound or visual music. In fact, it might be so intimate that it's really only fully appreciated by those playing the music themselves. The notion of a “private music” is nothing strange in practice. Musicians take the highest pleasure in playing for themselves and most music originates in privacy. However, there's a lingering sense that, as Pierre Schaeffer once said, music is “made to be heard.” The audience is not absent, just in waiting. But isn't there as well, as my brother Tyree Joyce propounds, a place for truly *private* music, music whose only appreciation comes in the immediate joy of its production? This seems like it would be the case for some genres of haptic music, whose subtlest masterpieces would most often be private, genres made on other haptic musical instruments that were less technologically intensive and more comparable to children's “sensory boards” or “busy boards,” as shown below.



**FIGURE 2.** Sensory boards or "busy boards"

Even at their crudest, these busyboards are more or less *haptic samplers*. They're instruments for *haptic musique concrete* rather than the "harmonic" compositions of massage chair music. In other words, the tactile and kinesthetic qualities of the boards come bundled like Pierre Schaeffer's *objets sonores* or musical objects. Latches. Locks. Timers. Cords. Doorknobs. Springs. Buttons. Switches. Swatches of

different materials, textures, frictions. Rubber handles. Zippers. Casters. Gears. Many of them happen to make a sound, but the power these boards exude is through touch, through their candystore display of actionable *objets haptiques*. We— that is, you and me and everyone else you know— could play these busyboards with the same musical joy and intensity that we might put into the piano or drums or any other musical instrument alone on an open Sunday afternoon. Even though by-standers could get their mirror neurons firing, it would largely remain a private music, its richness reserved for the singular player. Parts of our busyboards might even be inaudible, made of textures for running our fingers along or of widgets to squeeze or soundlessly manipulate, all played in a homologously musical form.

In a sense, these already exist (both the instruments and the musical objects they generate). It's just that sound usually eclipses the haptic, even when the haptic aspects are jutting out front and center. Consider the Mainard noise musician [Id M Theft Able](#), who plays through widget-dense set-up not unlike a busyboard and who produces his musical objects in a coursing audio-visual-haptic stream. He bends a doorspring; lets go. He rubs a rubber mallet along a wooden surface. He shakes a wire cage. He swooshes his tongue around his mouth. The actions are audible, some amplified. But all of them are equally felt, and most intensely by Mr. Theft Able himself— meaning that, from his perspective, the performance is *as felt as heard*, and as much a haptic as acoustic practice. In fact, I'd bet that, to the degree that he anticipates or plans the musical actions as affordances of the musical instrument, he conceives of them first and foremost in their haptic form, a solfege of what Giacomo Rizzolatti calls a "[motor vocabulary](#)," with vaguer ideas about the resulting sounds. Likewise, were it not for the demands of an audience, to make the musical objects public and projectable, I'd also bet he'd derive nearly as much satisfaction from inaudible textures as audible sounds in the creation of a private music, maybe hidden away some snowy Sunday afternoon, in a garage, warmed by a single space-heater. Then again, I could be wrong.

In any event, this private music wouldn't have to be solipsistic. It could be scored or choreographed to be repeated by others, as it has been by "whimsical" composer Mark Applebaum with his *mouseketier*. Or, we could even modify busyboards to signal when an action should be performed, like an advanced form of the *Bop-It* toys from Hasbro (pictured below), that dictates us to *flick*, *twist*, *pull*, and *spin* its widgets in a certain temporal figure at which we can fail or succeed. No coincidence that so many of these instruments are foreshadowed in toys, some of the few mass-produced objects with a "purposiveness without

a purpose.” A stroll down the Target toy aisle at Target could easily extrapolate into countless cultural forms.



FIGURE 3. Bop-It! from Hasbro.

### 3. THE MUSICAL CAPILLARIES OF SIGHT AND SOUND

In the Post-Edisonian age of recordable, replayable sound, performance is no longer necessary for listening to music. In the age of synthetic sound and digital sound manipulation, performance is not even necessary for *making* music. However, though unnecessary, it still has its role, since even in the most traditional music such as rock, sound and non-sound structure one another. They give form and meaning to each other. Performance is one of the spaces where this mutual structuration takes place. Normally, it's tacit. Some performers, however, do make the capillaries between sight and sound the explicit substance of their performance.

Very often, this is done synesthetically, pairing image to sound, as in the “visual music” of abstract revolutionary filmmakers like Viking Eggling or Oskar Fischinger. Eggling and Neuwirth's 1924 *Symphonic Diagonale* or Fischinger's 1938 *An Optical Poem* visualize music through loose abstract evocations rather than any exact homology or causal link between image and sound. Fischinger prefaces his optical poem with: “*To most of us music suggests definite mental*

*images of form and color. The picture you are about to see is a novel scientific experiment— its object is to convey these mental images in visual form.*” In these visualizations, music retains primacy. Norman McLaren's 1971 *Synchromy* establishes a tighter homology between sight and sound. Shapes and tones share rhythms and, from what I can tell, a rigorous rule transforms one to the other. This homology shakes the primacy of the sound, since we can map and understand the relationships in either sight or sound, with near indifference. Taking a page from David Hume, it also helps create, as far as we perceivers are concerned, the *feeling* of a causal link through constant conjunction.

Causal links work better than loose evocation or equivalency. Causality generates willfulness and musical power, whether sound causes image or vice versa— or both, as in the case of MSHR, the two-headed visual-musical collective comprising Birch Cooper and Brenna Murphy. Instead of creating equivalencies between sight and sound— Kadinskian intuitions like “low grumbles signify large trembling rectangles”— MSHR wire up alternating causal links in the form of feedback loops weaving between sight and sound. Brenna and Birch explain: “*we build analogue synthesizers that are controlled by light sensors. We've sort of developed the flow over the years as we've worked together. The main thing that we've been using is a light-audio feedback system in which a synthesizer is totally controlled by light. Different groups of lights are turned on from different frequencies produced by the synthesizers. Sound is controlling the light and the light is controlling sound. These kind of sonic and visual patterns emerge as we change where the shapes are and where the lights are in relation to each other. Because it's an analog system and we use incandescent light bulbs there's a lot of gradation and organic flutter to the system. We kind of prefer it that way.*”

MSHR is not soundless music, but half of the musical meaning lies beyond sound, in space and color. Maybe you could call it an “intermedium,” following Dick Higgins, but it would be an intermedium without any division of labor between previously distinct media. Light and sound are both performing the same indistinguishable musical task. In conventional music, we develop a sense of how certain movements cause certain sounds. MSHR offers the chance to develop a sense of how certain sound cause certain colors and intensities. Once this causal hunch was in place, after a point, after a certain amount of acculturation, even during the length of a performance, MSHR could slowly remove the sound and leave much of the musical meaning in tact. It wouldn't be much more necessary to hear the originary sounds in MSHR than it is to see the movements and efforts of a rock

musician to intuit it as musical form. This is the trick or method we have in mind; that through causal links or homology, music can be shifted through patient, piecemeal acculturation onto the domain of other senses, even though begun in sound.

#### 4. MUSIC AS A DYNAMIC CONCEPT

In conclusion, non-sound is integral to music, both sounded and soundless, and music easily extends beyond the realm of sound. Does this mean that we need to rewrite those earlier, faultier, fogier definitions of music? Not in the slightest, because music, like culture, like philosophy, is what we might think of as a highly *dynamic*— or if you like, *dialectical*— concept. It unfolds in an aesthetic progression which continually sieges and surpasses its own features and limits. "The organization of sound" works perfectly fine as a rough indicator of generic features within a given historical understanding, as a form of study. However, like Adorno tells us, "the actual object of aesthetics escapes study." Taking note of the original, empirical, and historical soundedness of music, does nothing for near-future cultural production. Or if it does, it's more likely to tempt us in the opposite direction: to negate rather than obey these defining features. Aesthetic progression demands the violation of origins and *sine qua non*; the limits are the most living parts.

There's a hobby, brought to my attention by Sebastien Demian, called "[dB drag racing](#)," in which teams compete to produce the loudest sound on car stereo systems. The vehicles aren't usually street legal, but they are required to drive some twenty feet prior to testing. The sound-systems have recently exceeded 180 dB, which is fatal at close range and described by one [hearing scientist](#) as being "about the volume of the Mount St. Helen's eruption." Consequently, the vehicles are sealed up and pressurized tight like submarines, and the sound for those outside, is reduced to a momentary buzz and a read-out on a screen. The full sound, then, is only *experienced* by the materials. In other words, this is the aestheticized "organization of sound" for *none* of the human senses, a song made to be heard only by the machines its played on.