### **Eight Theses on Sound and Transcendence Brian Kane**

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#### I. Listening can only be localized in the ear by force of reduction.

"Imagine a room (call it the 'music room'), in which sounds are heard; any normal person entering the room is presented with sounds which are audible only there, but which can be traced to no specific source...A specific sound—middle C at such and such a volume, and with such and such a timbre—can be heard in the room. Yet there are, let us suppose, no physical vibrations in the room: no instrument is sounding, and nothing else happens there, besides this persistent tone."

The 'music room' is a hypothetical. To function, it requires the force of reduction. This is most apparent in the claim that, "let us suppose," these sounds are correlated to no physical vibration. That moment authorizes the philosopher to distinguish the sonic from the musical: one vibrational, with everything that comes in tow, such as the acoustic, the resonant, the spatial, and the causal; the other, a pure event bathed in divine ontological indifference.

#### II. To split the senses one needs techné.

"[The acousmatic situation] symbolically precludes any relation with what is visible, touchable, measurable. Moreover, between the experience of Pythagoras and our experiences of radio and recordings, the differences separating direct listening (through a curtain) and indirect listening (through a speaker) in the end become negligible."<sup>2</sup>

Don't be fooled by this dubious negligibility. Even if one were to doggedly maintain the historical difference that distinguishes the Pythagorean curtain from the loudspeaker, the conceptual difference would be subsumed, for the modern-day *akousmatikoi*, by the end to which the technology is applied. Even the 'music room' would require some hidden technology to remove the vibration from sound; otherwise it would be a supernatural experience. For everything else, techné is required to isolate a single sense modality.

A philosopher's rule of thumb: veiling the visual unveils the auditory—and veiling is a technique.

<sup>&</sup>lt;sup>1</sup> Scruton, Aesthetics of Music, 3.

<sup>&</sup>lt;sup>2</sup> Schaeffer, Traité des objets musicaux, 93.

## III. *Techné* is to be understood as both technique and technology, no matter how rudimentary.

Cognitive scientists and German romantics agree: the closed eyelid and averted glance are the most rudimentary acousmatic techniques!

"Closing one's eyes while listening to sound...evokes shifts in style of processing by modifying focus of attention, while keeping targeted stimuli the same. The main outcome of such a shift could enhance the perceived intensity of emotional stimulus, making positive attributes more positive and negative ones more negative...Closing the eyes indeed characterizes a specific brain state that can be affected by the individual's mental set. Accordingly...eyes closed position represents a well defined mental set by which perceived emotionality can be modulated, thus probing its neural respect."

"Whenever Joseph [Berglinger] was at a big concert, he seated himself in a corner, without looking at the brilliant gathering of auditors, and listened with the very same reverence as if he were in church, —— just as quietly and motionlessly and with his eyes fixed upon the ground before him..."4

The eyelid can be projected outward, onto screens, veils and coverings:

"To explain the plan of the festival-theater now in course of erection at Bayreuth I believe I cannot do better than to begin with the need I felt the first, that of rendering invisible the mechanical source of its music, to wit the orchestra..."<sup>5</sup>

"The prevailing doctrine of nineteenth-century music aesthetics—the idea of 'absolute' music, divorced from purposes and causes, subjects and clear-cut emotions—gave rise...to the demand for an 'invisible orchestra' concealing the mundane origins of transcendental music. What Wagner was able to institute in Bayreuth was also, around 1900, attempted in the concert hall. Admittedly, when the screen hiding the musicians is covered with paintings...[as in] the Copenhagen Concert Palais, the goal of a purely abstract conception of music is thwarted by the means."

Or permanently sealed in its sublimation by sound recording:

"At the time when music critic Paul Bekker was trying his hand as opera house director, he may have been the first to have spoken of opera as a museum...The form of the LP makes it possible for more than a few musically engaged people to build up such a museum for themselves. Nor need they fear that the recorded works will be neutralized in the process, as they are in the opera houses...these recordings awaken to a second life

<sup>&</sup>lt;sup>3</sup> "Eyes Wide Shut: Amygdala Mediates Eyes-Closed Effect on Emotional Experience with Music," <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2705682/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2705682/</a>.

<sup>&</sup>lt;sup>4</sup> Wackenroder, "The strange musical life of the Musical Artist Joseph Berglinger", in *Confessions and Fantasies*, ed. Mary Hurst Schubert, 149. Italics mine.

<sup>&</sup>lt;sup>5</sup> Wagner, "The festival-playhouse at Bayreuth," in *Actors and Singers*, tr. Ellis, 333.

<sup>&</sup>lt;sup>6</sup> Dahlhaus, Nineteenth-Century Music, 394.

in the wondrous dialog with the lonely and perceptive listeners, hibernating for unknown purposes."<sup>7</sup>

#### IV. Sound has often been understood as the revelation of transcendence.

*Άρμονία*. Q. E. D.

## V. The divided sensorium is applied to support the production of transcendence.

In 18th century aesthetics, the experience of music often prefigured the angelic choir.

"Every Saturday evening at the hour of Compine one sings the Salve Regina...thus, at the appointed hour therein one finds music, the organist and the sacerdotes...the music begins and the organ responds, and then the organ and the music [sound] together, with such sweetness and such beautiful harmonies, which, because they seem an angelic choir, generate in the hearts of the listeners a whole-hearted composure and a holy devotion to the Mother of God."

In Milan, Federigo Borromeo, employed the trope of the angelic voice in his discourses on music. In his Assumption Day sermon, Borromeo began with the topos of the angelic song, "surely no accident considering that the prelate's audience was probably composed of musical nuns" and returned to the trope as a musical model to be imitated by the nuns' own performances. This model went hand in hand with a prohibition on vanity during the nun's performances, which had begun to veer, for Church officials, uncomfortably close to the kinds of spectacular musical performances taking place outside the cloister.

In the period following the Council of Trent, when the practice of *clausura* was instituted, it was declared that nuns "should, without exception, be confined within convent walls." Many of the convents were walled in, with only grilles to allow for the passage of sound.

"[The Tridentine Reforms are] so esteemed not only in Rome but through al Italy that thou shalt never see Nonne out of her Cloister, and being in the Churche thou shalt only here their voices singing their service most melodiously, and the Father him self, that is, their Ghostly father heareth their confession through a grate in a wall, where only voice and no sight goeth between: and I have seen the blessed Cardinal of Milan Borromaeo say Masse in their Chapel at Millan before them, when I could not possibly see any of

<sup>&</sup>lt;sup>7</sup> Adorno, "Opera and the Long Playing Record," in *Adorno on Music*, ed. Leppert, 285.

<sup>8</sup> Morigia, Paolo, La nobilita' di Milano, 306.

<sup>&</sup>lt;sup>9</sup> Kendrick, Robert, *Celestial Sirens*, 158-9.

<sup>&</sup>lt;sup>10</sup> Monson, Craig, "Putting Bolognese Nun Musicians in their Place", in *Women's Voices Across Musical Worlds*, ed. Jane Bernstein, 119.

them...and in Bononie [Bologna] and Rome having been many times at their service in the Chappels and hearing the goodly singing, never did I yet see one of them."11

Sound, which penetrates and pierces enclosures, became an important mechanism by which the nuns could still be present to the world beyond the convent wall. Although, the voice of the nun can resemble the voice of the angel even without any kind of visual reduction, *clausura* can be understood as a technology that, despite its obviously repressive aspects, splits the senses in order to make the transcendent audition of the angelic voice all the more sensuous. The Convent of Santi Domenico e Sisto in Rome, in addition to containing a extraordinarily high altar with grated windows above it, to the left and the right, the interior was punctured by a series of grated openings, placed high up near the vaults that circled the church. The voices emanating from these high grates were juxtaposed against the frescoed ceilings, depicting images of the heavenly host. The architectural space reinforced the fantasy: the listeners were encouraged to identify the vocalic body, imagined in the nuns' voices, with the celestial figures floating above their heads.<sup>12</sup>

But the trope was never completely secured. The vocalic body heard in the nun's voice could just as easily be associated with an angelic source as with the actual mundane, and potentially erotic, body from where it emerged. For Rousseau, the dialectics of the angelic voice fascinated and maddened him on his trip to Venice in 1743.

"Every Sunday, in the church...motets are sung during vespers, for full choir and orchestra, composed and conducted by the greatest masters in Italy and sung in the grilled galleries by these girls, the oldest of whom is under twenty. I cannot conceive of anything so pleasurable or so moving as that music...Never did Carrio or I miss those vespers in the Mendicanti, and we were not the only ones. The church was full of music-lovers; even singers from the opera came here to have a real lesson in tasteful singing from these excellent models. What distressed me were the accursed grilles, which only let the sound through but concealed those angels of beauty—for the singing was worthy of angels—from my sight."

Rousseau's erotic drive to peer behind the grilles and behold the (real) heavenly body fantasized in the nun's voice, leads to a cruel and misogynist joke. After begging, Rousseau is taken to meet the girls.

"As we entered the room where sat these beauties I had so desired, I felt such an amorous trembling as I had never known. M. Le Blond introduced me to one of these famous singers after another, whose names and voices were all I knew of them. 'Come Sophie'...She was hideous. 'Come, Cattina'...She had only one eye. 'Come, Bettina'...She was disfigured by small pox...Two or three, however, seemed passable to me; *they* only sang in the chorus."

<sup>13</sup> Rousseau, *Confessions*, Book 7.

<sup>&</sup>lt;sup>11</sup> Martin, Gregory, *Roma Sancta* (1580-1), 141-2.

<sup>&</sup>lt;sup>12</sup> Monson, 122.

In the musical art-religion of  $19^{th}$  century Germany, the grilles of the convents were reinstalled, now as injunctions to obscure and erase the traces of musical performance.

"The sonorous element in music...[is] the ultimate consideration. The visual element of the performance does not belong to the work's essence...It is for this reason that orchestral musicians rightly appear in the simplest clothes; it would be best if they were not visible at all." 14

According to Lydia Goehr, the ideal of invisibility in musical performance entails two demands: first, that visual aspects of performance are inessential given music's purely sonorous essence; second, that what is heard in the performance is subordinated to the transcendent meaning of the work. Given that transcendence can never be materialized without loss of fidelity, the performer must produce a performance that "undermines their own presence as necessarily flawed mediators." The sounds must never be listened to as such, because they must be the bearer of a content whose transcendence is *heard in* the sounds, and whose very status as transcendent undermines their material clothing. The signifier cannot sully the signified.

## VI. The fantasy of transcendence produced without technical mediation is divine listening.

Wackenroder articulates the fantasy of unsullied musical transcendence through the guise of Joseph Berglinger:

"I venture to express from the depths of my being the true meaning of the musical art and say: Whenever all the inner vibrations of our heartstrings...burst apart with *one* outcry the language of words, as the *grave* of the inner frenzy of the heart—then they go forth under a strange sky, amidst the vibrations of blessed harpstrings, in transfigured beauty as if in another life beyond this one, and celebrate as angelic figures their resurrection." <sup>16</sup>

The signifier is the grave in which the musical soul lies; yet the outcry, which shatters the tomb of language and resurrects the musical soul, departs from the subject in its transfiguration. Wackenroder's image depends on the transformation of the heartstring (*Herzenfibern*) into a harpstring (*Harfensaiten*)—a metamorphosis that musicalizes the language in which it is written, to cause a

<sup>&</sup>lt;sup>14</sup> Robert Zimmerman, *Allgeimein Aesthetik als Formwissenschaft*, excerpted in Bujić (ed), *Music in European Thought*, 46-49.

<sup>&</sup>lt;sup>15</sup> Goehr, Lydia, *The Quest for Voice*, p. 142-3.

<sup>&</sup>lt;sup>16</sup> Wackenroder, Confessions and Fantasies, 190-1.

rupture in the order of the signifier. Musical sublimity overtakes the subject, carrying the listener away to "another life beyond this one." <sup>17</sup>

The iconic listener who gladly leaves this world for another life, different in kind, is St. Cecilia. In Raphael's depiction, which circulated widely amongst the early German Romantics, Cecilia stands above a pile of discarded and broken instruments, eyes turned upward, listening to the sounds of the angelic choir who sing above. The angels are positioned in the *intermundia*: visible to the viewer, invisible to the depicted figures, audible only to Cecilia. Raphael's junk heap guarantees that the viewer will not mistake the sounds in Cecilia's ears with any sort of *musica mundana*. By drawing an ontological line between the earthly and the divine, Raphael also grants the viewer an image of listening without seeing, which lacks technical mediation. Neither Pythagorean veil nor grilled interior separates the figures.

But Raphael's image is itself a form of *techné* that indicates the conceptual content of divine listening, but never fills our ears with its sound. For Nietzsche, Raphael's necessary failings deserve mention.

"Populate the air with the imagination of a Raphael and contemplate, as he did, how St. Cecilia is listening, enraptured, to the harmonies of angelic choirs: no sound issues from this world though it seems to be lost in music."

An image or word stands to music as a schema to a general concept; the schema can only act as an illustration for the general concept but can never be adequately substituted for it. It sacrifices generality for phenomenality. If the power of the general were to manifest itself directly, all schematism and individuation would be burst as quickly as Wackenroder's grave.

"But if we imagined that this harmony did actually acquire sound by virtue of a miracle, where would St. Cecilia, Paul and Magdalen and the singing angels suddenly disappear? We would immediately cease to be Raphael, and even as the instruments of this world lie broken on the ground in this painting, our painter's vision, conquered by something higher, would pale and vanish like shadows." <sup>18</sup>

VII. Diving listening can only be taken on faith. It is solipsistic in nature and cannot be shared. It leaves no artifact. It can only be simulated through artificial means.

 $<sup>^{17}</sup>$  I am indebted to John Hamilton's reading of Wackenroder in his *Music, Madness and the Unworking of Language*, 121ff.

<sup>&</sup>lt;sup>18</sup> Nietzsche, "Fragment on Words and Music," reprinted in Dahlhaus, *Between Romanticism and Modernism*, 109-10.

If divine listening ruptures the order of the signifier and lies beyond all acts of individuation, then there can be no artifact of divine listening. It can only be taken on faith.

In Kleist's story, "Holy Cecilia or the Power of Music," there is no sonic account of the transformation, effected by the Corpus Christi Festival music, which sublimes the four iconoclastic brothers. Just after the moment when the music begins, the narrator leaps ahead six years, only to retrospectively relate the events from the perspective of an eyewitness. The lacuna is necessary; even a description of the music would not be able to bridge the gap, because the question of divine listening is not an objective question concerning the music played—for Kleist offers precisely such a description in the guise of the witness—but a solipsistic question concerning what is being *heard in* the music *by the brothers*.

Although moved by music to the point of self-annihilation, Wackenroder's Joseph does not experience divine listening, as do Kleist's brothers. Wackenroder positions Joseph between the immediacy of divine listening and an anxiety directed at musical *techné*. In the first half of the tale, Cecilia remains an icon to whom Joseph begs assistance,

So that I, through music's power, Master of their souls might be; That my soul the world infinite Sympathetically penetrate, Intoxicate in Fantasy!<sup>19</sup>

In the second half of the tale, after Joseph has become a conductor and composer, he grows disillusioned and despondent with his new life.

"It is a wretched life that I am leading...I thought that I wanted to dream on ceaselessly and pour out my full heart it works of art—but how strange and austere the very first years of apprenticeship seemed to me. How I felt when I stepped behind the curtain! That all the melodies...were based upon a single compelling mathematical law! That, instead of flying freely, I first had to learn to climb about it the awkward scaffolding and cage of the grammar of art! How I had to torment myself in order to first produce a correct work with the ordinary, scientific, mechanical understanding...It was a tedious mechanical effort."<sup>20</sup>

Joseph's despondency registers his intermediate status: poised between the ideal of the transcendent listener and the charlatan who has "stepped behind the curtain" to learn the mechanical tricks that produce such transcendence, Joseph becomes an icon unlike that of St. Cecilia. By acquiring <code>techné</code>, he can no longer experience the transcendence for which it is employed.

<sup>20</sup> Wackenroder, 155.

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<sup>&</sup>lt;sup>19</sup> Wackenroder, 153.

Despite the modern distaste for Wackenroder's style of "outpourings," one could do worse than to recall Joseph's state of disillusionment. For "sound" is easily carried by ahistorical and ideological fantasies that misrecognize their reflection in the past. Only rarely are such fantasies held in check.

"The immersiveness of sound, its three-dimensionality, set a precedent then for the evacuation of the technological apparatus in the production of audio, supporting the belief that three-dimensionality overrides the fact of mediation, and thereby creates a space that is beyond technology and culture. Like the speaking tube of deific transmission, it has been necessary to construct and then deny a mechanism that channels, delimits, transduces and sanitizes the materiality it transports. These interfaces are both technical and conceptual--consisting of wires, circuits, relays, etc. and transcendent spaces, such as the ether, the cosmos, or the irreducible vibration, to which the technical infrastructures are conceptually attached, and through which the presence of technology is masked."<sup>21</sup>

# VIII. In the production of transcendence, technology must be hidden. It cannot appear as the real cause, but must hide its own role by becoming invisible or remaining a black box.

"We know, now, the supernatural wonders wherewith a priesthood once deluded childlike men into believing that some good god was manifesting himself to them: it was nothing but Mechanism, that ever worked these cheating wonders. Thus to-day again the *super*-natural, just because it is the *un*-natural, can only be brought before a gaping public by the wonders of mechanics; and such a wonder is the secret of the *Berliozian Orchestra*."<sup>22</sup>

Wagner's critical words also betray the lesson he learned—hide the machinery.

But a tension runs through Wagner's thinking. On the one hand, the dreamlike state "into which we thus are plunged through sympathetic hearing" produces an experience where "our eyesight is paralyzed" to the point that "we no longer intensively see." This experience of musical blindsight is produced anytime the music "really touches us" despite the fact that, "the most hideous and distracting things are passing before our eye," such as "the highly trivial aspect of the audience itself, the mechanical movements of the band, [and] the whole peculiar working apparatus of an orchestral production." Wagner argues from the fact that we are ordinarily inattentive to such a spectacle, and that absorbed listening puts us into "a state essentially akin to that of hypnotic clairvoyance". 23

(McLuhan could have cited Wagner to support his claim: "Psychologists define hypnosis as the filling of the field of attention by one sense only."<sup>24</sup>)

<sup>&</sup>lt;sup>21</sup> Frances Dyson, *Sounding New Media*, 47.

<sup>&</sup>lt;sup>22</sup> Wagner, *Opera and Drama*, trans. Ellis, part I, sec. V.

<sup>&</sup>lt;sup>23</sup> Wagner, "Beethoven" in *Actors and Singers*, tr. Ellis, 74-5.

<sup>&</sup>lt;sup>24</sup> Marshall McLuhan, *The Gutenberg Galaxy*, p. 17.

On the other hand, the subversion of vision by hearing is compromised in the opera house, where musical blindsight is unacceptable. Here the mechanism of the orchestra must be literally concealed, so as to regulate and discipline the attention of the audience in the correct manner.

The reader of my previous essays already knows my views about the concealment of the orchestra and...[my condemnation of] the constant visibility of the mechanism for tone-production as an aggressive nuisance...I explained how fine performances of ideal works of music may make this evil imperceptible at last, through our eyesight being neutralized, as it were, by the rapt subversion of the whole sensorium. With a dramatic representation, on the contrary, it is a matter of focusing the eye itself upon a picture and that can only be done by leading it away from the sight of any bodies lying in between such as the technical apparatus for projecting the picture."25

But even this might not be enough. In September of 1878, Cosima transcribed this statement:

"I cannot stand all this costume and grease-paint business! And when I consider how these figures such as Kundry will have to be masqueraded—I immediately think of these repulsive artists' carnivals, and, after having invented the invisible orchestra I would like to create the invisible theater." <sup>26</sup>

Wagner just missed the mark. The Gramophone had been invented the year before.

Even *musique concrète,* predicated on the use of recorded sound, is also premised on concealing the machinery involved in its production, in order to produce an acousmatic situation where the ear can begin its act of *écouter réduite*. This condition persists from its very moment of discovery.

"19th *April*. By having one of the bells hit I got the sound *after* the attack. Without its percussion the bell becomes an oboe-sound. I prick up my ears. Has a breach appeared in the enemy ranks? Has the advantage changed sides?" (Schaeffer, First Journal, 15)

Experimenting in the studio, Schaeffer discovered that if the transient attack was removed from a recording of a bell its source became unrecognizable. Rather than conceptualize this feature as an affordance of recorded sound, Schaeffer interpreted his discovery as disclosing an entryway into the phenomenology of listening.

"A number of historical circumstances have led to the notion of the sound object. First, the initial discoveries of 'musique concrète' with its two inaugural experiments: the *closed groove* and the *cut bell*; then, the awareness of a listening situation, not new but whose originality had never been identified or given a specific name; the acousmatic situation."<sup>27</sup>

<sup>&</sup>lt;sup>25</sup> Wagner, "The festival-playhouse at Bayreuth," in *Actors and Singers*, 333.

<sup>&</sup>lt;sup>26</sup> Cosima Wagner's Diaries: Volume 2, 1878-1883, entry of September 23, 1878.

<sup>&</sup>lt;sup>27</sup> Schaeffer, from the *Traité*, quoted in Chion, *Guide des Objets Sonores*, 18.

Like the Gestalt figures that littered the pages of Merleau-Ponty's *Phenomenology of Perception*, Schaeffer understood this little *cloche coupé* as emblematic of a much larger field—namely a field of listening, constituted not simply as a response to an auditory stimulus, but as a field of sound objects intentionally constituted *by* the listener's acts and modes of attentiveness. What this *cloche coupé* revealed was the way in which the listener's intentionality *preceded* the auditory signal.

"One forgets that it is the sound object, given in perception, which designates the signal to be studied, and that, therefore, it should never be a question of reconstructing it on the basis of the signal."<sup>28</sup>

Wrap that up with the phenomenological reduction and you've got a situation where the essence of listening is now understood as being utterly indifferent to its mode of presentation, that is, whether the sound was real or imagined. Only the content matters, and the content is understood as indifferent to its ontological status. Schaeffer's manipulations become theorized as sonic attempts at "eidetic reduction" via Husserl's method of imaginative free variation. For example,

"Starting from this table-perception...we vary the perceptual object, table, with a completely free optionalness, yet in such a manner that we keep perception fixed as perception of something, no matter what. Perhaps we begin by fictionally changing the shape or color of the object quite arbitrarily...In other words: Abstaining from acceptance of its being, we change the fact of this perception into a pure possibility, one among other quite "optional" pure possibilities—but possibilities that are possible perceptions. We so to speak, shift the actual perception into the realm of non-actualities, the realm of the as-if."<sup>29</sup>

Change the example from a table to a tape loop and you're well on your way to an orthodox musical phenomenology.

But like the "music room," this too only succeeds by force of reduction. For this kind of phenomenology refuses to recognize the remainder produced in its drive towards the eidetic reduction. The question is not simply whether a sound can present itself *qua* perception or *qua* imagined. Because these modes of presentation are not indifferent to the haptic aspect of vibration simultaneous with these sounds, a different set of possible modes of presentation is needed: perceived sounds with perceived vibrations, perceived sounds with imagined vibrations, perceived sounds without vibrations; imagined sounds with real vibrations, imagined sounds with imagined vibrations without sounds, and imagined vibrations without sounds. Only by bracketing the haptic aspect of sonic modes of presentation, can the musical

<sup>&</sup>lt;sup>28</sup> Schaeffer, Traité des objets musicaux, 269

<sup>&</sup>lt;sup>29</sup> Husserl, *Ideas*, trans. W. R. Boyce Gibson, 70.

phenomenologist be satisfied with free variation as a technique for disclosing sonic essences.<sup>30</sup>

Thus, orthodox musical phenomenology deludes itself about its haptic condition, neglecting the fact that the mode of presentation for sounds is not totalized between real and imagined perception, but also requires another sense modality. But this is not to say that the haptic aspect of vibration is the primary ground for a sonic ontology, for that too would depend on the isolation of one modality from the rest—and the production of such isolation would require its own set of techniques. To praise blindness in order to privilege listening, as Arnheim did, is to substitute the centrism of the eye for that of the ear, while ignoring perhaps the most primary relation of all, that both modalities are not independent of touch. That problem, easy to state, is difficult to conceptualize. It's what Nancy would call a singular plural.

Even Diderot vacillated in his "Letter on the Blind," calling idealism, "an extravagant system, which must have been invented by the blind," while putting these words in the mouth of the blind mathematician, Samuelson: "If you want to make me believe in God you must make me touch him."<sup>31</sup>

<sup>&</sup>lt;sup>30</sup> Notice that, to Husserl's credit, his visual example works better than the sonic example; in the specular situation, the tactility of the object seen is available to the viewer if they reach out to touch it; thus, there is no *necessary* simultaneity between visual and tactile perception, and this is in distinction to sound, where auditory and tactile perception can never be dissociated, even if the tactile is attenuated to the point of imperceptibility.

<sup>&</sup>lt;sup>31</sup> Diderot, "Letter on the Blind," in *Diderot's early philosophical works*, ed. and trans. Margaret Jourdain, 104 and 109.