

The Historical Soundscape of Monophonic Hi-Fidelity

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An article in *High Fidelity* magazine, entitled “Listening is Believing?” and dated July/August 1953, sets forth the contemporary limits of sound reproduction in the inimitable style of advertisement copy: “Technical electronics can go only so far. The rest of the job must be done by the imaginative mind of the listener. That’s not a platitude; it’s a technical specification” (Campbell 1953, 28).¹

The connection drawn between imagination and sound reproduction, that the imagination can be an aspect of “technical electronics,” is meant to salve the “imaginative mind of the listener.” In doing so, however, it betrays an anxiety: the relationship has gotten out of balance, with human imagination falling short in the face of advances in “technical electronics.” The author, John Campbell, puts a firm boundary around the latter: it “can go only so far” (Campbell 1953, 28). But in this arrangement, human imagination is a supplement, an accessory to technology, not vice versa.²

Campbell situates this technical fusion of electronics and imagination in what he calls a “psycho-physiological” approach to music reproduction: “For true high-fidelity enjoyment, the total psychological aspect of the listener is an integral part of a psycho-physiological approach to music reproduction.” This psycho-physiological angle seems to involve primarily a belief in one’s equipment, in its veracity as the best “practicable” equipment:

A man with Equipment System A, who feels that he has the best practicable system possible to him will enjoy his music greatly. Given the same equipment exactly, but the conviction that he was a fool not to have bought System B instead—he won’t enjoy the music as much. Wherefore, for him, System B is in fact better. (Campbell 1953, 28)

In essence, confidence in one’s equipment and a full aesthetic experience are assured only in the absence of suspicion.

The emphasis Campbell places on his equipment—“technical electronics”—marks a formal shift in our knowledge of musical sound. I shall call this *epistemic* in a moment. This shift produces an effect, an aesthetic effect. I quote Campbell again: “A man with a speaker system he knows within himself is *good*, an amplifier he convincingly believes to be top-notch—for him, the music is deeper, richer and more rewarding” (Campbell 1953, 28).³

Campbell's psycho-physiological approach encompasses belief in the merit of technical electronics as a determinant of musical enjoyment. All of this is encapsulated in the following, in which life and sound are breathlessly homogenized: "Know thyself!" must be the ultimate ideal, and the basic instruction for enjoying life fully. But if that's too tough a job—"Know thy sound system" (Campbell 1953, 28). The confusion between life and reproduced sound is worth addressing, and not merely dismissed as bad advertisement copy.

Such a confusion between truth and life is characteristic of what I call here the "historical soundscape" of monophonic hi-fidelity, a soundscape made explicit in the discourse of sound reproduction in the early 1950s. I label this "historical" and refer to it as "monophonic" because of its delicate position: poised between an early realm of sound reproduction prior to the hi-fidelity era and a later realm dominated by stereophonic sound reproduction. Its status as a "soundscape" is assured by the reputed integrity of the sound: the concern for hi-fidelity presumes a sonorous whole based upon veracity, as if the sound reproduced were a whole, or at least wholistic, "chunk of life." Such concern for matters such as fidelity and veracity is pathological; no referential object, no standard, other than the solipsistic listener is invoked. I shall label as "pathological" the mind set that engages both sides of this soundscape.⁴

On Campbell's account, in the reproduction of musical sound, the imagination is a supplement to "technical electronics," which, to repeat, can "go only so far," before imagination must take over. This supplementary relation of imagination to technology reverses the norm by placing imagination in a secondary position. Let us say that sound is normally a product of the musical imagination: the composer's imagination produces virtual sound realized in a performance or recording.⁵ In this putative normal scenario, sound reproduction is an accessory, an action subsequent to an original act of imagination.⁶ This is Campbell's key assertion—"Technical electronics can go only so far. The rest of the job must be done by the imaginative mind of the listener." It subordinates imagination, indeed listening *per se*, to the status of a supplement to an originating technical electronics. In this regard the term *sound reproduction* is a misnomer: the veracity of technical high fidelity is the originating object, to which *imaginative reproduction* is the supplement.

Campbell is equivocal on this point. In the instance of live music, the imagination is original. As he puts it, the act of "knowing" your physical situation, situating yourself concretely in Carnegie Hall is to know imaginatively that hundreds of other listeners are with you: "Part of the enjoyment of the Philharmonic at Carnegie Hall is knowing that you're at

Carnegie Hall, with hundreds of others, who enjoy with you the experience you're enjoying" (Campbell 1953, 27). When it comes to live music, on Campbell's account, the human capacity for imagination is the locus, *fons et origo* of the experience.

When, however, it comes to music "reproduced" by sound equipment, the position of musical imagination becomes fraught. Curiously, Campbell tries to make this clear by analogy to canned peas. Campbell initially poses the question as one of fidelity: if live music at Carnegie Hall is like garden-fresh peas, older forms of musical reproduction (including radio and wax cylinders, presumably) are like canned peas. By analogy, it was never difficult to distinguish fresh from canned in both peas and music: older forms of sound reproduction sound like canned peas taste, "tinny." But Campbell (1953, 27) asserts that such is no longer the case for "modern frozen peas are getting hard to distinguish from the garden-fresh article." He means, implicitly, that modern reproductions of music are getting harder to distinguish from the concert-hall article. With fidelity like this, one might conclude that nothing is left to the originating imagination: listening to a recording, one might as well be sitting in Carnegie Hall.⁷ Except that, as Campbell reassures us, "technical electronics can go only so far" (28).

Perhaps he means that the horizon of veracity in the reproduction of sound will forever recede behind a foreground of technical electronics. On this account, imagination will be ever necessary, albeit squeezed into an ever declining space between the foreground of electronically reproduced sound and the horizon of live sound. On this account, imagination will be given an ever smaller portion of the pie as electronic reproduction reaches ever closer to fidelity to live performance.

Implicit in Campbell's thought, however, lies a far more generous possibility, albeit one given to a less positive aesthetic of hi-fidelity musical appreciation. Consider the possibility that Campbell's imagination is given to worry, to concerns of infidelity. As I shall show in a moment, the task of the merchants of sound equipment in the 1950s was not merely to show that high-fidelity could begin to be equated with real Carnegie-Hall sound. The task instead was to arouse, indeed to enrage the question of infidelity in the mind of the listener. To this end, an imaginative notion of infidelity became apposite. And this brought about a change in the nature of imagination from an originating impulse to a vehicle for growing a pathology.

At work here is an epistemology, or at least an episteme. I mean by *episteme* a system of possibility, more pointedly a shift bringing about a new system of possibility.⁸ Evoking epistemology, I am referring not to rational value or objective form (as if sound fidelity could be measured rationally or objectively) nor to the history of the perfection of under-

standing (as if the perfection of fidelity were something historical). I refer instead to the conditions under which new values might appear, the “conditions of possibility” that might bring about a new valuation of fidelity. Something in the medium of sound reproduction changes around 1950 and transforms the issue of fidelity into an episteme.

The epistemic change lies in what Campbell calls the “psycho–physiological.” The conscious awareness of one’s equipment carries with it a certain anxiety, a pathological anxiety in some instances, which on Campbell’s account has a physiological component. When the norm alluded to above (where musical sound originates in the imagination and is then supplemented by sound reproduction) is reversed, this makes the listener dependent upon technical electronics, dependent upon a vehicle of reproduction whose performance lies out of their immediate, willed control. (Hence the dependency upon the supplementary imagination, to enliven the merely technical.) How could this dependency not give rise pathologically to anxiety?

In what I call the normal state of affairs, the composer and listener are fully compatible, or at least sufficiently compatible to produce an act of musical creation. Sound reproduction is merely a vehicle by which to bring about the equation of two imaginations: creator and receiver, composer and listener. The satisfaction produced by the experience depends upon the balance of the equation, a mutual respect from both parties.

But in Campbell’s scenario, the listener’s imagination must defer to an inanimate object—technical electronics.⁹ If the exercise of musical reproduction is to be consummated, the imagination must enliven the otherwise inanimate vehicle of sound, enlarge it to fit the task at hand. Under the aegis of the pathology alluded to above, the supplementing imagination must engorge the object of technical electronics. The supplement must grow beyond a size necessary for normal (live) musical consummation. Such distortion lends to technical electronics the quality of the fetish.

This is the pathology implicit in the concept of *soundscape*, to which I alluded above.¹⁰ In concentrating upon a putative whole, the soundscape creator (Campbell’s listener) elevates the “scape” above the actual sound in importance. The soundscape creator gives the status of original, or at least originating, to the acts of capturing raw sound and manufacturing a soundscape from them.¹¹ This turns the listener’s imagination into a supplement: taking the sound captured raw in field recordings, for example, as an incomplete technical object, it works to make the raw sound into an originating whole, as if the soundscape thus produced were original. As I have suggested, this inverts the relationship of listener and original.

Instead of mutual agreement, the two are put in a dependent relationship: the soundscape is dependent upon the listener's imagination for its veritable wholeness. This produces what I call the *pathological soundscape*. I follow Emily Thompson (2001, 1), who, in her influential *The Soundscape of Modernity*, seems to make a similar distinction between equipment and imagination when talking about the soundscape in and of itself:

I define the soundscape as an auditory or aural landscape. Like a landscape, a soundscape is simultaneously a physical environment and a way of perceiving that environment; it is both a world and a culture constructed to make sense of that world.

Thompson, however, sees no pathology in that relationship.

In live music, let us say, the direct equation of composer to listener is sustained by the imagination of the latter, even if the performance is bad. The category of performance competence is eclipsed by the question of fidelity to the score: even in a bad performance we can sense imaginatively what the composer had in mind. The sympathetic equation of composer to listener, then, is sustained, even if (and in some instances because) the performance is not true to the score. Infidelity in the form of a bad performance is accessory to the equation of composer and listener.

For Campbell, however, infidelity is as tangible to the listener as it was to Othello. In "psycho-physiological" terms, Campbell (1953, 28) describes a particular source of annoyance for the "high-fidelity" addict:

Many and many a time the addict's wife insists that Bill Jones' sound system is better than her husband's. This frustration imposed upon hubby does *not* stem from [the] inherent cussedness of women, but from the fact that the music system embodies a psycho-physiological approach.

To paraphrase Campbell: the addict's wife insists that Bill Jones' reproductive equipment is better than her husband's. (Let us set to one side the slight of "inherent cussedness.") The root cause of our addict's problem is not Bill Jones per se, but rather the indisputable fact that the reproductive system embodies a "psycho-physiological approach." Freud was right.

My point here is that in the early 1950s, "music enjoyment" came to embrace a kind of anxiety that gave rise to a new musical understanding. Questions of fidelity began to carry with them questions of

infidelity and concerns of performance failure—it was not that the performer didn't get it right but that the reproductive equipment failed to perform. This might be described in terms of an epistemic shift: from listening as an act of sympathy or mindful tuning with an originating human (a composer) to listening as a form of covert labor. (I shall come back to labor in a moment). Given this anxiety, the listener must work imaginatively to supplement the basic material offered by their technical equipment. The listener must engorge the imagination so it rises to fulfill its expectation: putatively to reproduce sound but in truth to verify the veracity of technical electronics. Recall the first clause to my definition of soundscape: a “sonorous whole . . . as if the sound reproduced were a whole” (see above). Given the pathological second clause of my definition, I do not mean the reproduction of an original sonic whole. Instead by *pathological soundscape* in this instance I refer to a whole produced by the listener's imagination laboring to supplement the sound equipment. The epistemic shift involves the reconfiguring of labor: in lieu of the labor exerted by the live musician to create the equation of composer and listener, the listener must now labor imaginatively—and labor alone, without monetary recompense—to create the sounding whole.¹²

I turn now to a long-playing recording, an LP dated 1954 and entitled *Hearing is Believing*. The liner notes speak of “High Fidelity” in terms reminiscent of cigarette advertisements: “There really is no mystery to High Fidelity. It's simply a matter of brighter, clearer sound. You can easily tell it when you hear it, particularly when it is played side by side with old recordings for contrast, as it is on this recording” (*Hearing* 1954). Such unbridled fetishism approximates 1950s ad copy of a well-known cigarette manufacturer: “Try Marlborough cigarettes, fresher and with livelier taste. Most doctors recommend them.”

The LP juxtaposes two recordings of one and the same work; for example, there are two recordings of a Brahms waltz. One half of the track is produced with older recording equipment suited to the Extended Play 45 rpm; the other half uses a technology suited to the new 33 rpm LP. But no exact standard for comparison is introduced. Instead, the standard of judgment applied here is that of the man who links the following two clauses together with faultless logic: “I know what I like, and I don't like that!” The clauses “I know what I like” and “I don't like that” lack any common basis for comparison: they are two distinct judgments—liking and disliking—with quite separate reactions involved. Their confusion, however, produces a spurious whole in the listener's mind.

In comparing the recordings, we would want to ask, “what is the measure of fidelity?” Our answer would be a solipsistic and fetishistic “us.” The liner notes firmly declare this:

Many people are confused about what High Fidelity means . . . and a lot of confusion comes from the technical language sound engineers use when they try to explain it. So in this recording we are not trying to explain the technique that made High Fidelity possible—we are simply giving you a chance to hear the tremendous improvement it makes in recorded sound. (*Hearing* 1954)

Here again is a covert form of labor: the listener, not the engineer, is put to work to discern the difference between High Fidelity and its low counterpart. In the live setting, the listener might have attuned themselves sensibly to the imaginative work of the composer as conveyed by the laboring performer; now, however, they are enlisted into a form of technical labor quite the opposite of attunement.¹³

Implicit here is a paranoia, the germ of what I call *monophilia*. I situate this paranoia in the shadow of impending *stereophilia*. If you can't hear the improvement which the liner notes declare as so very accessible, perhaps you lack the equipment with which to measure. Conveniently, the right side of the liner notes carries an advertisement of record players by which one might improve oneself and one's equipment.

There is a historical balance attained around the time of this recording, which I shall call the “historical soundscape of monophonic hi-fidelity.” As noted earlier, this was a moment of poise. In the years prior to the early 1950s, sound-reproducing media was only a part of musical enjoyment, and reproduced sound could be referred to Carnegie Hall as a standard. Media's role was so new, so diminutive, that it could not provoke the anxiety of fidelity and infidelity that I touched upon above. By 1953, awareness of media had grown to the point that for some (witness Campbell's addict) the question of fidelity could be salvaged only through confidence in technical equipment, through being convinced your equipment was the best possible. Confidence and conviction—these were the key factors a listener brought to this new equation. Both involved unpaid imaginative labor and not just a little anxiety. By the late 1960s, however, such questions of fidelity or infidelity were rendered irrelevant by the exuberance of technologies like Quadrophonic sound.¹⁴

The historical soundscape of media circa 1953, then, existed in a delicate state of balance at the turning point of an epistemic shift. On the one hand, the capacity of media to steer the criteria of fidelity in new directions was not yet fully affirmed, waiting upon stereo sound equip-

ment for confirmation. On the other hand, the whole category of “High Fidelity” necessitated a break with the past, as the experiment conducted in *Hearing is Believing* sought to attest. Transitory moments such as the one just described tend to produce anxiety. In the mind of the monophile, the question of hi-fidelity becomes a source of anxiety that is specifically understood in relation to performance, the ability to accomplish “the rest of the job.” To paraphrase Campbell, this anxiety becomes itself a “technical requirement” of the soundscape. The adherent of monaural sound reproduction—the *monophile*—was forced pathologically to invent an imaginary, mystical realm in which his rapidly-aging mono equipment might yet function with rigor.

This imaginary realm of recovered virility centers upon the notion of high-fidelity that Campbell so brilliantly makes the basis of his psycho-physiological epistemology. In 1953, the monophile, perhaps seeing where technology was leading, sought to justify a sound system that—given the exercise of *Hearing is Believing*—might reasonably be suspect as out of date. On this account (and despite Campbell’s insinuations to the contrary), the question of recorded sound fidelity is not one of veracity but instead a question of postponing sterility.

If *fidelity* in the context of media means “truth in comparison with some thing,” then the term presupposes a “thing,” an object of fidelity as referent of truth. The relationship between the two is fraught, however, since the object need not reciprocate let alone confirm the comparison. Looking at the mirror in the morning, I ask myself: “Is that really me?” I don’t hear the mirror confirm: “Yes.” Yet I beg the question again day after day. Anxiety does not depend upon reciprocity; indeed, as Foucault’s (1977, 195–228) familiar description of the Panopticon would suggest, anxiety depends in large part upon being unrequited. Since the mirror in my bathroom works “one way,” I presume that the fellow on the other side goes about his business blissfully unconcerned about my graying beard and sagging jowls (having been born in the early 1950s). Indeed since he won’t ever reassure me, won’t ever say a word of reassurance, I grow more and more anxious every day. I might try to fool him with hair dye or a chin tuck, but in my instance these would be merely pathological, leading to an inordinate concern with appearance, futile given its present state of decline. I know he would not be fooled, but remain as silent as the Sphinx. I worry nonetheless at his lack of commitment. Such are the whiles of fidelity under suspicion.

A similarly fraught engagement with the Sphinx is happening in the instance of Campbell’s hi-fi addict. I have relatives that embody the type. Rather than simply listening to the music, they are quite involved in un-

paid labor—they work quite hard—checking sound levels and balances, on guard, ever on guard for a speaker wire gone frayed or nasty interference from some errant radio. Ever on guard, lest their equipment should malfunction, flag in its rigor, and let us down.

Around the advent of stereophony as a force in retail sound reproduction, the much vaunted sexual revolution of the 1960s began to pick up. Its principal symptom, however, was not so much an increase in varieties of sexual intercourse. Instead its essence is to be found in the growth of popular and respectable writing about sexuality, in texts such as *The Joy of Sex*, texts that were meant to salve anxieties about sexuality but instead merely enraged them. Prior to the 1960s, let us say, sexual intercourse got along without much sexual discourse (at least where I presently work, in Anglophone Canada), certainly without the plethora of manuals meant to facilitate if not merely enable the act. And so too, I would contend, prior to the 1950s and monaural high fidelity, the field of sound reproduction got along largely without the kind of popular discourse we find exemplified in Campbell and in *Hearing is Believing*. But then along came lubricants, ribbed, colored, and flavored condoms, and high fidelities, and the whole epistemology of both sex and sound reproduction was transformed necessarily to include a discourse about fidelity; not, however, about whether your partner was being “true” to you, but rather whether you were getting the real, full, true experience of sex and sound. And that transformation of fidelity was the root cause of the anxiety I am attempting to identify here.

Curiously, this development in sound and sex—and perhaps even in the sounds of sex—coincides roughly speaking with the advent of what is called euphemistically “artificial intelligence.” In order for something to be intelligent it must measure up to some standard. Prior to the invention of *artificial intelligence*, we drew a simple albeit capricious line in the sand: some people were intelligent, some were not, *tant pis*. The advent of an *artificial intelligence*—and all the fascinating discourse that came along with it—did nothing if not raise the anxiety level of those with mere human intelligence. It posed the unnerving possibility that the most naturally intelligent person, hitherto blissfully unconcerned with their indisputable superiority, might not measure up against a machine’s superior equipment: “Open up the pod-bay door, Hal!”

Prior to the advent of artificial intelligence, those with ordinary intelligence would make their way quietly into the study of quantum physics or the study of epistemology. In a similar way, prior to high fidelity, listening was a matter of taking a seat quietly in Carnegie Hall. Now, with the full flowering of artificial intelligence, we are only slightly disconcerted when Word (with its Biblical initial capital “W”) magically completes our

thoughts as we type, or our iPad, iPod, or iWhatever begins to dictate its preferences in musical repertoire to us—as though they were *our* preferences. Now, with the protocol of the mp3 (among others), we are only slightly alarmed when the sound of Neil Young’s guitar is reduced in its vigorous fullness, this for the sake of cramming several hundred thousand songs onto a portable drive.

I find this moment in the early 1950s fascinating, an ever rewarding field of examination.¹⁵ No doubt, there have been developments in recording and sound reproductive technology since.¹⁶ But these do not permit us to lose sight of a brief historical envelope—the historical age of monophonic hi-fidelity—in which a fraught epistemology of fidelity surged anxiously for dominion over the soundscape.

Notes

1. I am indebted to Eric Barry for this source.
2. This accessory role is not addressed by James Lastra’s otherwise useful distinction between *fidelity* and *intelligibility*. Postulating from Lastra’s account, let us say technology and imagination would be equal participants in sound reproduction. See Lastra 2012.
3. The emphasis is Campbell’s.
4. Which is not to suggest that what comes after—our perennial engagement with stereo as a thing in its own regard—is any less pathological (but this is beyond discussion here).
5. See the account given in Lippman (1977, 150–55), which carries out this notion of composition to an extreme by making music itself an originating factor. Compare Matheson and Caplan (2011, 42–46), especially the passage entitled “Meta-ontology.”
6. The act of sound imagination need not necessarily be realized in concrete terms. This is exemplified in the fugue, whose subject (or *sogetto*), as a product of the composer’s conception, can be realized—made into concrete sound—in many different fugues as a fugal *res facta*. See Dineen 2004.
7. But see Thompson 2002 on the fraught nature of the concert hall.
8. I have in mind Foucault’s (1972, 187) various “thresholds,” most importantly the “threshold of epistimologization,” where a “group of statements . . . exercises a dominant function . . . over knowledge . . .”
9. We cannot address here the role of the record cover in the reworking of imagination. See Auslander 2004.
10. The root of that pathology might lie in the nature of sound itself, especially in its fraught comparison with the visual. See Carpenter and McLuhan (1960, 68) and their concept of “Argus-eared.” For a useful summary of the issue, phrased in terms of “soundscape,” see Schulz 2008.
11. This pathology is not to be confused with the pathology of noise described by R. Murray Schafer (1969, 19–23). Also see Schafer’s discussion of the concept of “schizophonia” (43–47). I find the missionary zeal of Schafer’s approach disconcerting.

12. In fact, through the purchase of the equipment, the listener pays to labor. Here I am adapting an idea expressed by Adorno (1981, 149–50) in his *Prisms* essay where he suggests that Schoenberg's music requires work on the part of the listener, whereas the latter expected leisure. I have discussed this at length in my book *Friendly Remainders: Essays in Musical Criticism After Adorno*, where I suggest the analysis is as characteristic of all music under the aegis of capitalism as it is Schoenberg's. The latter is merely an extreme case (Dineen 2011, 9–10 and *passim*).

13. See Bull 2001. However, despite drawing extensively on Adorno, Bull does not express this in terms of labor. Following upon the work of Tia DeNora, Tim Edensor (2003, 160) addresses the fertile idea of reconstituting listening as a vehicle for the creation of use values, but in doing so ignores the durable nature of exchange value implicit in listening as discerned by Adorno. With reference to Jacques Attali, Jonathan Sterne (2003, 242–43) speaks of a use-value labor of accumulating recorded sound. I disagree: this is a covert form of exchange value. I am indebted, nonetheless, to Sterne who, hearing a similar paper read at Carleton University in 2012, questioned whether the idea of labor I raised here was “automatist” in either the Marxist sense (*operaismo* or *autonome*) or in the sense of Lacan's “automatism.” After consideration, I think it is neither, although both involve a kind of virtual labor like pathological listening. Consider Michael Hardt and Antonio Negri's (2000, 293) term *affective labor*: “This labor is immaterial, even if its corporeal and affective, in the sense that its products are intangible, a feeling of ease, well-being, satisfaction, excitement, or passion . . . Such affective production, exchange, and communication are generally associated with human contact, but that contact can be either actual or virtual, as it is in the entertainment industry.” Their concept, however, is entirely positive, while mine denotes a pathology. See, however, their discussion of “biopower” and affect (364–65). Space forbids discussion of Lacan's concept, but see “Tuché and Automaton” in Lacan 1981, 53–56.

14. The use of four speakers to approximate the experience of being surrounded by sound. It arose in the 1970s.

15. And would accord it a kind of dystopian prescience like that attributed by Frederic Jameson to the thoughts of Jacques Attali. I paraphrase Jameson (1985, xi) thus: the music of the 1950s “stands both as a promise of a new, liberating mode of production, and as the menace of a dystopian possibility which is that mode of production's baleful mirror image.”

16. See Sterne's (2012, 46) discussion of the term *surplus definition*.

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