

Dissolution of the Notion of Timbre

*T*ranslator's note: The two essays by Michel Chion translated in this special issue originally appeared in the French journal *Analyse musicale*.¹ Separated by an interval of some twenty years, they confirm both a continuous concern with and development in thought regarding the value of the sonic sources of music. I would merely add that the essay "Pour en finir avec la notion du bruit," rendered here as "Let's Have Done with the Notion of 'Noise,'" poses a peculiar—and indeed intriguing and heuristic—problem of translation. Of course, translations frequently come up against mismatches between source and target languages. Even words that seem to denote primarily the same objects or concepts will often—almost inevitably—connote differently or cover ranges of meaning that do not fully overlap. Further, where the meaning of a word in the source language echoes perfectly the sense of a word in the target language, there is no guarantee that their semantic equivalence will carry over to the level of discourse—to the level of words embedded in sentences and of sentences in context. It is precisely these idiosyncrasies that are the starting point for the author's reflections, and the reader will want to keep in mind that *bruit*

is precisely not—or rather not just—French for “noise” either in meaning or in use. As for context more narrowly speaking, the reader should recall that the author’s remarks initially appeared in a periodical aimed at readers interested—in both the weak and strong senses—in music in general and the institutions of French music in particular. As the author indicates in the course of his argument, this investment entails a certain passive—and at times active—resistance among the otherwise musically forward looking to removing the otherwise contingent distinction between sounds of illustrious origin and supposedly ignoble noise.

Recently a collection of essays appeared on the question of timbre in contemporary music.² I am surprised that this term—long since inadequate—is still in circulation. Of course, there’s nothing to stop one from wondering about the meaning of “timbre in today’s music,” but if you put the question this way, it is not only the noun *timbre* that is problematic. With its aura of self-evidence, the modifier *today* is no less so. How would one go about locating this “today” of music? If we understand it as the most up to date, the cutting edge, then who—and in the name of what—in the current concert of diverse and not always compatible tendencies will lay claim to it? On the other hand, if it is a question of the totality of different sorts of music produced, performed, and heard in the world in 1988—including those musics written in previous centuries and more often played and performed today than ever before—who will have sufficient familiarity to put forward the least generalization about them?

We can therefore only speak of “today’s music” in a deliberate manner—that is, in order to defend a particular conception. This is what Pierre Boulez did when he published his Darmstadt lectures under the title *Penser la musique aujourd’hui*. Of course we then risk getting it wrong. But isn’t this risk preferable to the current neutralism, which appears objective and thus serves entrenched positions? I mention these matters to clear the ground for the question of timbre today, because in fact no simple and singular response can be given. Depending on the perspective one adopts, timbre is a notion that is either alive or dead, current or outmoded. As long as we remain within the framework of a music grounded principally in relationships of pitch and destined to be played traditionally on traditional instruments, the notion is still of value. If we leave this framework—by the use of new means or new playing techniques on the same instruments—then it no longer is. This is what I will now try to demonstrate.

When the Western system of musical notation and training proposed that the four dimensions of musical sound were pitch, intensity, duration, and timbre, it was not without the knowledge that the last on the list merely represented a qualitative catchall. It gathered together all the perceptions that the other dimensions did not capture—everything that makes the sound of an oboe played at the same pitch, intensity, and duration as one on the piano unmistakably different and recognizable as such. Only recently have we seen the desire emerge in some quarters to give the dimension of timbre at least theoretically—in practice it has been a complete failure—the same standing as the other three: measurable, quantifiable, comparable, and capable of mastery. If we were to believe certain speculative approaches, timbre ought to be considered as the qualitative perception of the harmonic spectrum specific to a sound. Such a spectrum appeared easily synthesized—or at least such synthesizing was imaginable—starting from pure frequencies. Confronted with the acoustic insignificance and poverty of the results of this doctrine, which was put forward at the beginning of the 1950s, it had to be admitted that this was an oversimplification and that—as everyone now agrees, but without going on to infer the consequences—the perceived timbre of an instrument encompasses, depending on the individual instance, many other constituents, such as the curve of the global intensity of the sound, the feeling of a more or less *rough* grain, the presence of a certain vibrato, certain characteristics of attack, and a multitude of givens that are always particular to a specific sound.

In fact, timbre is nothing other than the general physiognomy that allows us to identify a sound as emanating from a specific instrument (or more generally from a specific source, which can be imagined or imaginary). It thus links to an auditory image formed in the memory on the basis of variable and acoustically heterogeneous givens, and this image is often the result of an extratemporal—as it were, carved up—apprehension of sounds that, once heard, are reassembled and grasped in the form of their overall unfolding.⁵ The classical definition of sound by pitch, intensity, duration, and timbre could therefore be compared to the description of an individual by height, weight, age, and general physiognomy (including his or her particular characteristics). The first three parameters provide us with objective information—or at least information that can be rendered objective, relatively measurable, and comparable from one sound to another, just as from one individual to another. But as for general physiognomy (or timbre), it is defined according to criteria

that can be quite variable depending on the person (or sound) in question: one person might be defined by a characteristic body shape, such as long-limbed or stocky, whereas a person of average proportions might be defined according to facial features. If one puts three general physiognomies side by side, each one maintains its particularity; no physiognomic melody is produced until, from the three individuals so juxtaposed, one can compose a little height melody, a little weight melody, or a little age melody. From this analogy we can easily understand why the inherently seductive Schoenbergian idea of a *timbre-melody*—of a *Klangfarbenmelodie*—had no chance of success.⁴ Indeed, timbre is not a musical value. No ordering relation in the mathematical sense, which is the basis for melodic effect, is possible among three different timbres—among three sonic colors.

Having gotten to this point, some may think that the only thing in question is the limited scope of our current knowledge and experience and that we might soon enough discover the physical determinants and acoustically objective qualities of timbres. But this would be to misunderstand the fundamentally causalist character of this notion, for which no determination is possible other than this: that which enables us to recognize (incorrectly or correctly) a sound as emanating from such and such family of sonic sources, a recognition that is only a matter of habit and convention. Just as there is only an individual physiognomy, there is only timbre in relation to a sonic source, either recognized or supposed, unless one understands by *timbre* everything that defines a sound—in which case the term, overly general and identified with sound itself, dissolves all on its own. Some, however, persist in their use of the term by giving it a new meaning. But doesn't one thereby risk confusion, given its weighty historical connotation?

Indeed, what does the expression “a trombone's timbre” mean once one strikes the instrument rather than blowing through it in the traditional fashion? Or, even more emphatically, what does “the timbre of a piano wire” mean when it is attacked according to the various techniques of *musique concrète* and when the sounds thus generated are recorded and then submitted to diverse transformations that entirely reconfigure the acoustic visage, as it were? Even according to classical technique, you could already say that the violin has two timbres depending on whether the playing was *col arco* or *pizzicato*. Current scores produce an even more total scattering of the acoustic identity of the instrument, treating it as a vulgar *sonic body*. At this point, timbre becomes a pure acoustic fetish and a misleading concept that enables musicians to cleave to the reassuring

idea of sonic sources. In truth, however, in an authentic music made up of all sounds, real sources are of no importance. The only things that count or should count are sonic materials, morphological criteria, acoustic forms, textures, and profiles—in short, everything that allows us to consummate the rupture of sound with its real source.⁵ On the contemporary scene and with the exception of *musique concrète*, the majority fears and tries to conjure away this rupture. Meanwhile, there is so much to discover and to uncover in the realm of imaginary sources. For this to happen, we need only allow the traditional idea of timbre to dissolve and to perish, naturally.

Let's Have Done with the Notion of "Noise"

Some twenty years ago, the journal *Analyse musicale* asked me for an article on the notion of "timbre." Titled "Dissolution of the Notion of Timbre" and since republished in my collection of essays, *Le Promeneur écoutant*, this contribution aimed at demonstrating why this empirical and fuzzy word *timbre*, valid up until the beginning of the twentieth century—that is, prior to the recording and electronic production of sounds—has been unacceptable for quite some time. And it is much more than invalid: the continued use of the concept of timbre limits our understanding of sonic and musical phenomena by continuing to treat musical sound in a conceptually *causalist* manner—that is, it makes the description of a sound dependent on its causation—at a time when, with the fixing of sounds by recording, their manipulation, sampling, synthesis, this initial causation and the role that it plays in the determination of sound have completely changed in nature. No one responded to my refutation or leveled a counterrefutation, and let's just say the word *timbre* is still carrying on just fine.

This is because the current musical culture, which claims to be progressive or at the very least forward looking with respect to ideas and

techniques, tends toward conservatism with respect to words. Of course there are colloquia, writings, reflections, and scientific research—or research that presents itself as such—that aim at rejuvenating the old words. But as far as I am concerned, you cannot indefinitely preserve the same signifiers, in the manner of old brands that one might be able to “brighten up” and “revitalize.” In spite of the deliberately provocative title of this essay, then, I ought to tip off the reader that I have no hope of seeing abandoned—or not quickly at least—a word such as *bruit*, that is, roughly, “noise.” It is a word that for my part I never use, that was never given a very precise meaning in French as far as the realm of sound is concerned, and that not so much in spite of this but much more because of this is put to work for the maintenance of certain smoke screens, certain shams to which the prejudiced adhere.

First of all, there is the question—as simple as it may seem—of language. In modern French, the word *bruit* is derived from the past participle of the verb *bruire*, itself derived, as up-to-date etymological dictionaries attest, not from one verb but from two vulgar Latin verbs: *bragere* (to bray) and *rugire* (to roar). In short, a strange hybrid of ass and lion that leaves me perplexed (it would seem that this etymological explanation is a sort of tradition transmitted among dictionaries). This gave birth to the French masculine substantive that we now recognize. As such, it has a history, and as such, it is not exactly translatable into another language, even though there seem to be words in other languages that are synonyms for it: *noise* in English, *Lärm* or *Geräusch* in German, *rumore* in Italian, *ruído* in Castilian. None of these are exactly translated by *bruit*, nor do they translate *bruit* exactly into these different languages.

In works of French classicism, the word *bruit*, which one encounters constantly in the plays of Molière and Racine, almost always designates not a sound per se, much less an animal’s cry, but rather a piece of news, renown, reputation, an honor—or a dishonor—a quarrel, a rumor, and so forth, even if there are attested examples of the word’s use in the modern sense. In contemporary modern usage, the word *bruit* is more often applied to sounds, and it now signifies:

- a) A disturbing sound. In this sense, a piece of music that bothers us because it is played too loud or too late also qualifies as noise, as *bruit*. Children who speak loudly make noise. By extension, that part of a message that confuses or contaminates it (as in signal-to-noise ratio).

- b) Sounds that are neither musical nor linguistic. One rarely speaks of noise or *bruit* to designate words from the moment they are understood. It is only used once several people talking at the same time—or in another language—make matters unintelligible.

Inevitably, the first meaning contaminates the second meaning. To be precise, it does so in French because, whereas in contemporary English one speaks of “sound” (as in the “sound of steps”), in French one says *bruit des pas* (literally, “the noise of steps”), which, even when these noises or *bruits* are pleasing to our ears—even when they are pleasant and lively—stigmatizes them. Indeed, the word *sound* in English gathers together at the spot where the French *bruit* segments, as they say in the advertising business. That is, it divides into categories.

The word *bruit* is really and truly a segregationist word, and in my judgment it ought to be placed in the category of terms that have served—sometimes honorably—but that are no longer fit to do so. In the historical archives, it would join certain words once used in medicine, such as the *peccant humors* of doctors in Molière’s day, or in physics, such as the infamous *phlogiston* by which, in the eighteenth century, prior to Lavoisier, one sought to explain the phenomenon of combustion. These words were not absurd but rather corresponded to a particular state of knowledge and of culture.

The term *noise* appears to some to have a certain scientific legitimacy: they would use it to designate sounds that cannot be heard at a precise pitch because they correspond to nonperiodic vibrations. At this point, why not class as noises the extreme notes of many instruments such as the piano or the organ? This would hold for the extreme high register or the extreme low register, since in both cases one can no longer discern pitch. Then the response comes: but those sounds, as opposed to the stroke of a hammer or the grinding of an engine, come from a musical instrument. And so we slip from a definition grounded in sound and the physics of vibration to a *causalist* definition grounded in the source of the sound. But then why should a sound be ennobled as a “musical sound” for having come from a musical instrument—however ugly or common—while another sound finds itself stigmatized as nonmusical for having been produced from any number of source causes not considered musical: from objects, from natural, bodily, or mechanical phenomena? And who decides what is musical or nonmusical?

In any case, making the criterion for sound precise pitch does not suffice to categorize, let alone to hierarchize, sounds. We hear precise pitches in a considerable number of animal and also industrial sounds: the purring of computers, the buzzing of air conditioners, the rich sounds of trains, and, of course, the clinking of glasses, and so forth. It goes without saying that these pitches are often mingled with sounds without precise pitch, but this holds just as much for a solid proportion of instrumental music.

What is true and remains so is that our ears hear the relationship between sounds that are superimposed or successive differently depending on whether these sounds possess a precise pitch. In the first instance, apparently universal specific relations—or in any case relations that have attained universality—are created that are classed as harmonic or melodic. But when two sounds follow one another or are superimposed on one another but do not have a precise pitch, a considerable number of interesting and vital phenomena—including different comparisons between their respective placements within the tessitura—take place in their relations. These, however, are phenomena that cannot be grasped in terms of exact intervals, even if the mass of these sounds is more or less low (in which case Pierre Schaeffer speaks of “site”) and if they are more or less bulky and thick (here he speaks of “caliber”). For these sounds without precise pitch, the equivalent of a perfect fifth—a pure relationship, translated by our ears as an absolute quality that is independent of the sounds that together create it (between D and A, or between B flat and F)—does not exist. But this does not mean that these irreducible, unsystematizable relationships do not exist or are inferior in dignity and complexity.

It is not a matter of denying the difference between the two types of case. In his *Traité des objets musicaux*, which I summed up and restructured under the title *Guide des objets sonores*, Pierre Schaeffer (1910–95), who invented *musique concrète*, certainly recognizes the difference established for the ear between sounds with a precise pitch and those that do not have a precise pitch. He proposes—the terms can be disputed, but the idea is clear—that we call the former sounds with tonic mass or tonic sounds and the latter sounds with complex mass or complex sounds.

One might consider this semantic nuance hardly useful. After all, doesn't Schaeffer thereby continue to segregate sounds along the same lines as the academic distinction between musical sound and noise? And in so doing perpetuate discrimination? No, because a crucial gesture has been made: in Schaeffer's formulation, a substantive has become an

adjective. The matter of the perceptibility or not of a pitch is now but one of the predicates—one of the attributes of the sound as heard—instead of being identified with its essence. The contrary occurs when we continue to distinguish musical sounds and noises, as if they enclosed an essential, natural difference. I refer here to that which in Schaeffer's *Traité des objets musicaux* and in my *Guide des objets sonores* concerns the notion of "mass," defined as "the manner in which a sound occupies the field of pitch," in whatever way that may take place.

Schaeffer and those who were part of his circle at different periods (among them Abraham Moles and Pierre Janin) thus stepped across an important threshold in understanding and research. If this move has yet to be recognized, it is because the lifting of the essentialist distinction between musical sounds and noises upsets the caste mentality of many musicians—the feeling they have of not having to work with everyone's sounds. It is a bit like in classical French literature, where a solid proportion of words in contemporary use to be worthy of inclusion in poetry or in verse drama had to cede their spot to a noble synonym. Writing or saying *water* was not allowed; one had to use *wave* instead. Likewise with other terms: not *horse* but *courser*, not *earth* but *glebe*, not *house* but *dwelling*, and so forth.

The problem gets more complicated—but at the same time this is quite logical—thanks to the fact that a certain number of artists have, during precise historical periods (notably at the beginning of the twentieth century), reacted against academicism and conservatism by laying claim to noise as their means of expression and have sought to create an art of noises. The most famous of these was of course Luigi Russolo, yet his work *L'Art des bruits (L'Arte dei rumori)*, albeit likable and inviting, is remarkably weak.⁶ It never manages to escape from the contradiction in which it entraps itself from the outset: claiming to liberate the art of sounds, all the while depriving oneself of a large proportion of them, namely, the sounds of instruments. Instead of opening the noise cage, Russolo enters it, shuts the door on himself, and claims that here lies paradise and that all is fine and dandy amid the noises, thereby confirming the idea of an absolute distinction—an essential distinction—between musical sounds and noises. Many initiatives that later claimed an adherence to Russolo have had paradoxically reactionary effects. By claiming noise as trivial sound thanks to its trivial source, they continued to uphold the idea that it is the triviality (pots and pans) or the nobility (violin) of the source that constitutes the triviality or the nobility of the sound itself, whereas

between source and sound there is not a simple and linear relationship. There are many sounds more interesting, rich, or beautiful than others, but this is not because of their source—or for that matter in spite of it.

In the practice of music, to decausalize our relationship to sound remains the most difficult and most revolutionary task, to which many set up a fierce resistance (take note: it is not a matter of wanting to prevent the listener from conjuring an imaginary cause but rather of liberating him or her from the real cause of the sound). I lay this out in my book *Le son* in the chapter titled “Le cordon causal,” that is, the “the causal cordon,” where I propose in particular that we distinguish between causal listening and figurative listening. Pace those who have formulated it in this way and have made it a topic of reflection, the question “What are the relationships between noise and music?” is therefore faulty. First of all, it compares nonequivalent terms: “noise” is supposed to be an element, a substance, a material; “music” an art, a discipline. For a long time, musicians from different countries—and not only in the West—have wanted to believe in the idea that there ought to be in musical art a necessary relationship between the material and the work. Just as a jeweler needs precious stones to work his art, musical art would require musical and premusical sounds (and in Schaeffer’s treatise, the notion of a sonorous object suited to music strikes me as potentially reactionary and contrary to the orientation of the work as a whole). It is not a question—which would be simply a trite reversal—of placing at the peak what had been at the bottom but of declaring the abolition of the sound/noise distinction because it is unfounded and segregationist.

Ideally, for me the word *noise* (*bruit*) is one that we ought to be able to do without, except in its current usage as designating noise pollution (*nuisance sonore*). Acoustically as well as aesthetically, it is a word that promotes false ideas. In the same way the word *timbre*, in my opinion, should not be used in musicology outside its traditional empirical meaning (where it designates empirically the group of characteristics of an instrumental sound that allows us to identify it as coming from such and such an instrument rather than another) because it promotes an instrumentalist conception of music. Likewise, the word *bruit*, similarly vague, promotes a segregationist conception of the sonic universe. The French language has at its disposal a short word to designate that which is heard, without placing it immediately in an aesthetic, ethical, or affective category. This is the word *son*, that is, “sound.”

Above all, we must not replace the word *noise*, which, in the usage under consideration here, marks off a deceptive territory, a bit like the word *race* marks off within the human species beings, categories, families that, independently of the fact that they constitute a ground for racism, maintain the racist illusion, or, put another way, the illusion—scientifically refuted but still tenacious—according to which differences in skin pigmentation correlate to a group of inherited biological and cultural particularities. Yet we see quite well that racialism—the idea that there are races—persists, just like *bruitisme*, for reasons that must not be mistaken or misunderstood. Every form of racism produces an effect among those who are the objects—or rather, the victims. For example, among black people who are the target or victims of racist prejudice, we find claims to *négritude*.⁷ And this explains the *bruitisme* that some profess.

This does not prevent us from informing ourselves about the word *noise*. Open, for example, the *Grand Robert* dictionary in six volumes to the entry for *bruit*. You will find a throng of descriptive and extremely precise French words. (Why here and not under *son*? By dint of lexicographical arbitrariness.) For several years, I have undertaken a census of words for sounds in several languages and have found quite a few. Putting both the public and researchers in the position of “activating” these words rather than contenting themselves with understanding them when read or heard (“passive” vocabulary) is among the undertakings that I am pursuing.

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Notes

- 1 “Dissolution de la notion du timbre” was originally published in *Analyse musicale* in 1986. The essay underwent minor revisions for inclusion in Chion’s collection *Le Promeneur écoutant: Essais d’acoulogie*, and that is the version that is translated here. “Pour en finir avec la notion du bruit” appeared in *Analyse musicale* in 2007. [Trans.]
- 2 See Barrière. [Trans.]
- 3 The term translated above by *extratemporal* is *hors-temps* in the original. Chion uses the term to indicate that the perception of a given timbre requires an act of mental synthesis and totalization and that there is a short time lag between the moment of perception of a sound emanating from a given instrument and the positing

- of the instrument's timbre. This use should not be confused with Iannis Xenakis's theorization of a distinction between the *hors-temps* (outside-time) and the *en-temps* (in-time) in his critique of serialism. Xenakis was troubled by what he saw as a tendency inherent to Western music—reaching a sort of apotheosis in serialism—toward in-time structures to the ultimate loss of outside-time structures, which he likened to architecture. See Xenakis, “Vers une métamusique,” originally published in 1967 and translated as “Towards a Meta-music” in 1992. [Trans.]
- 4 *Klangfarbe*, the German term for timbre, literally translates as “sound color,” a meaning on which Chion subsequently plays. [Trans.]
- 5 In the earlier version of “Dissolution de la notion du timbre,” sources are noted for certain terms used above, and the reader may find it helpful to have this information recalled. Pierre Schaeffer coined “morphological criterion” as a replacement for timbre (Chion, “Dissolution” 8). The term *acoustic forms* refers us to François Bayle's provisional new classification of sonic material in “La musique acoustique.” Also see Bayle, “Support Espace.” [Trans.]
- 6 Russolo's work originally dates from circa 1913. [Trans.]
- 7 *Négritude* refers specifically to the movement among Francophone writers from Africa and the Caribbean that called for an examination—and to a degree a celebration—of their common “blackness” in relation to French political and cultural hegemony. [Trans.]

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