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ARE SOUNDS EVENTS? MATERIALITY IN AUDITORY PERCEPTION

abstract

Whilst arguing for sounds as repeatable objects does not seem suitable to our auditory experience, considering them as events can then help us understand some of their main features. In this sense, sounds are events happening to material objects; they have a beginning and an end; they are ephemeral entities that we cannot grasp as ordinary objects. Nevertheless, supporters of event theory usually focus on the autonomous status that sounds manifest from the things in the world. Conversely, when we hear sounds, we hear what and where they are sounding even in those theories that I will call detached-sound theories; in hearing them we hear how different materials create different sounds. Within the different positions of the event theory to pure-event or acousmatic proposal, the importance and role that the material has in the creation of diverse sounds does not always seem to be recognized. In this paper, I therefore aim to show how the materiality of resonating bodies and objects is given in all forms of auditory experience, not until analyzed the differences between object and event accounts in the philosophy of sound.

keywords

sound, event, object, auditory experience, materiality

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1. Sound: object or event?

Let us start with a simple question: Are sounds objects or events? We hear birds calling outside through our open windows. It is easy to affirm that what we are hearing are birds, more specifically birds in a particular state – i.e. chirping birds. We may not be aware of them if we were not able to hear, firstly because we are now in our room turning our backs to the window and we are not committed to watching in search of something. So, we can affirm that sounds are what we hear by hearing something (1) and hearing gives us information about the environment that overtakes the information given by sight (2). If (1) is correct, then we are inclined to say that sounds are objects of auditory experience. In that sense, they are some kind of object, i.e. audible objects, which for (2) are deeply different from the kind of objects given by sight and touch. Sounds cannot be grasped or reencountered without some sort of intervention in things, in that they are something very different from sight and touch objects. To argue that sounds should be considered as objects, we would have to treat them as *repeatable object*, an ontological conception that I will call – on the basis of Dokic (2007) – RO. For RO, sounds are particulars even though they can be of the same auditory type, based on pitch, timbre and loudness, that are not ordinary space-occupying objects: They have no height, breadth or width, at least with regards to those of visual space (Zuckerkandl, 1973). The RO conception conceives sounds to be repeatable entities "in the sense that they can exist as wholes in more than one place and time. Sounds can have multiple occurrences" (Dokic, 2007, p. 392). That means that two instances of the same auditory type should be considered as the same sound only if they are both caused by the same source and a qualitatively identical sound made by another object – i.e. material object – forms a distinct sound. The opposite conception of sounds is represented by considering them as events happening to material objects. Dokic describes this ontological conception of sounds as *unrepeatable event* (UE). Considering sounds as events means treating them as something that has a beginning and an end, they start and stop at definite times; sounds are not repeatable, simply because:

> an event cannot exist as a whole at different times (or times intervals) [...] the particular annoying sound my alarm clock made this morning cannot also occur yesterday or tomorrow morning. Each morning comes with a brand new sound particular, even though it has exactly the same irritating character (Dokic, 2007, p. 391).

For example, UE should claim that the sound emitted by loudspeakers during a recorded listening is not the same sound as the recorded one. These two different sounds occur at

different times and cannot be – numerically speaking – identical (Dokic, 2007, p. 395). In that case, we could hear two different sounds – that are similar for certain features – just because a particular kind of sound, as well as a particular sound relation, exists, which is that of a sound image: two different sounds share common features, though they differ in their context of reproduction, audible quality, and so on. According to the event theory, we hear happenings depending on those material bodies that allow us to localize them. This allows to hold the essential features of sound in accordance with the phenomenology of our auditory experience. We listen to sounds as something happening in some place, taking time. They are also located in space but without special boundaries and – considerable item – we usually hear sounds as something that are near to or coincident with something like dripping, croaking, creaking, barking, crashing, vibrating, etc. Many are the scholars who support the event theory of sound from different points of view. Some of them consider the event (sound) as the one that intervenes between a source and a medium (O'Callaghan 2007; 2009; 2011a; 2021), which event is embedded in a broader scene. In this sense, hearing a sound means hearing a part of a bigger whole, where more events occur. Such a particular mereology – i.e. the theory on the relations between parts and wholes – creates a peculiar auditory scene where sounds are opposed to what we see (O'Callaghan, 2008) and where the interrelation between different modes of perception creates the unity of our world experience (O'Callaghan 2011b; 2016; 2017; 2019). For O'Callaghan, sounds are particular events of a certain kind; they are medium-disturbing events in which an object or a body disturbs a surrounding medium.

> The strikings and crashings are not the sounds, but are the causes of sounds. The waves in the medium are not the sounds themselves, but are the effects of sounds. Sounds so conceived possess the properties we hear sounds as possessing: pitch, timbre, loudness, duration, and spatial location (O'Callaghan, 2007, p. 61).

In virtue of or by hearing sounds, we learn about where things and events are located in our environment (O'Callaghan, 2010). O'Callaghan defends a mereology of auditory perception, that is we experience sounds as events inside broader events. If sound is a medium-disturbing event, i.e. an event happening to an object that disturbs a medium, when we hear it, we know directly and by acquaintance with other things. For instance, in hearing a car crashing, we hear a car colliding with something else, meaning that we hear what the collision of a car creates by disturbing a medium – generally air. However, according to some, this is something rather complicated for a correct explanation of auditory experience; for this reason, they argue in favor of a more simplified elucidation by claiming that, instead of describing sound as a proper part of a distinct event that happens to an object and that is its source, we can consider sound as identical with the event occurring to its source (Casati, *et. al.*, 2013; Di Bona & Santarcangelo, 2018). That simply means a metaphysical ockhamization of the mereological position. For this view, called *Identity View*, the collision we hear is the sound we hear and there is no difference between hearing the sound and hearing the event happening to a source; "because there is no difference between the sound and the event source" (Casati, *et. al.* 2013, p. 463). The advantage of the event theory, in its broadest sense, is due to at least two points: (1) describing a sound as an event reaches the way we experience sounds – sounds have a duration, they are bound to or fused with their sources and they give us information about our environment and its events; (2) describing a sound as an event explains the way we interact with things – hearing sounds, through the event hearing, presents sound sources as available for direct reference. (2) constitutes a phenomenological principle, called *Phenomenological Intimacy*, which claims that hearing presents things and sound sources available for primitive demonstrative reference (Leddington, 2014). When we hear something, we directly hear

sound sources or sound sources seem at least auditorily available for primitive demonstrative reference. According to the Berkeleyan view, we do not hear sources, we do hear sounds as immediate objects of auditory experience and whatever else we can hear, we hear *in virtue of* hearing sounds (Berkeley, 1999). This is a philosophical stance we also find in Russell (2001). According to it we refer to sound source by deferred ostension; while the immediate object of auditory perception is the sound. Following Peirce (1935), we might call this view an *indexical* relation. Leddington quotes an example that fundamentally belongs to the index class,[1] which reads as follows.

> Consider a paradigm case of deferred ostension. Jonas points at a cloud of smoke rising over distant treetops and says, "That's a big fire!" and so refers demonstratively to the fire. But note that Jonas isn't pointing at the fire, he's pointing at the smoke. He can't point at the fire, since it's not in view (though he can point toward it). His demonstrative reference to the fire is a case of deferred ostension: it proceeds by means of a descriptive phrase such as 'the fire that is the source of that smoke.' Consequently, his ability to refer to the fire, and our ability to understand him as doing so, is essentially underwritten by knowledge of the causal relationship between fire and smoke. In virtue of this knowledge, we experience the smoke as a sign of the fire. But is this model plausibly applied to auditory experience? (2014, p. 328)

In everyday auditory experience, we do not experience sounds as signs of their sources. When we for instance hear the voice of our friend, we do not experience the voice as a sign of our friend's presence: we hear our friend speaking, talking, etc. Thus, we experience smoke as a sign of fire and wood burning out of view, while we experience sounds as present, as showing our friend and as being in an auditory view. If *Phenomenological Intimacy* is correct, then we auditorily know of sound sources by acquaintance. However, there are problems concerning the way we experience things according to this view. Let us consider seeing colors; we do not see colors and then their bearers. Colors seem visually co-present with things they qualify. Phenomenologically speaking, the experience of a color bearer is immanent in color experience; consequently, seeing an object is immediate and never mediated by seeing a color. By contrast, hearing a sound is generally experienced in a different way. Sounds "are said *not* to be heard as in any way fused with or dependent on the material particulars that make them; in this case, sounds do *not* auditorily seem compresent with their sources" (Leddington, 2014, p. 325). This is a negative claim about auditory phenomenological experience; and, in some respects, even in contrast with *Phenomenological Intimacy*, although it is equally experienceable. Call this negative principle *Weak Phenomenological Independence* (WPI). A related, albeit to a certain extent different, is the claim – this time, a positive claim about auditory experience – put forward by *Strong Phenomenological Independence* (SPI). For (SPI) hearing presents sound in a specific way: source-independent. (SPI) is stronger than (WPI), in that (SPI) contains and entails (WPI), but not vice versa. If sounds are present in hearing as source-independent (SPI), then sounds do not seem auditorily compresent with sources (WPI). However, saying that sound sources do not auditorily appear immanently presented with sounds does not guarantee that sounds seem independent of sound sources.

1 The indexical class refers to signs that link to something else by a physical connection. For example, the footprints are signs of an animal's passage and smoke is a sign of a fire burning. The other sign classes which will be discussed later are founded on an arbitrary connection (symbolic), much like street signs are or they are built upon a relationship of similarity between the copy and the original (iconic), just like the portrait that resembles the person it represents.

Since *Phenomenological Intimacy* claims that sound sources seem to be auditorily given, we can maintain both (WPI) and *Phenomenological Intimacy*. (WPI) only requires that sound sources are not apparently auditorily given *in* hearing sounds, while they can be given *alongside* sounds. According to Leddington, this would require rejecting *Sonicism* – i.e. a claim based on the idea that we hear non-sounds either *in* or *in virtue of* hearing sounds and that audition is through and through a matter of hearing sound – which is something unattainable for a philosophy of sound. *Phenomenological Independence* is therefore false in both of its forms – (WPI) and (SPI) – firstly because sounds do not seem to be auditorily independent from everyday objects, as (SPI) requests. In addition, opposite to (WPI), sounds appear co-present with their sources, just as colors do with their bearers. We thus arrive at the phenomenological claim of everyday sound experience: We auditorily experience sounds as linked to, or coincident with, the events that happen to those objects and bodies that exist in our environment. The way we experience sounds strengthens the so-called *Phenomenological Binding* (PB) – a phenomenological principle based on the idea that hearing "presents sounds as bound to, or fused with, their sources" (Leddington, 2014, p. 330). An understanding of the accuracy of what (PB) professes requires a recognition that *objects do not make sounds, events do*.

> The static bell is silent; striking it elicits sound. While you may say, "That's the bell," in identifying a sound source, such a claim is implicitly understood as elliptically picking out an event by picking out an object involved in it. The idea that only events can make sounds is part of our ordinary, untutored conception of sound, and ignoring it can lead to confusion (Leddington, 2014, p. 330).

Thinking of the bell as what makes sound should lead us to conceptualize the sound as something independent from its source; firstly, the sound of the bell and the bell have very different conditions of existence, both temporally and spatially. But, if we think about what creates, or is coincident with, sounds as events, then we do not face this kind of problem. As an event stops, so does the sound. As the event changes, the sound does, too. Hence, if we hear the change in the event, we do not hear it in virtue of hearing the change in the sound, but we experience that specific change in the event in experiencing the change *in* the sound – even if we do not know how and in what regard the event has changed. The relevant point of the analysis concerns the correlation between *Phenomenological Intimacy* and *Phenomenological Binding*. The latter explains the former: We hear sound sources as available for primitive demonstrative reference (*Phenomenological Intimacy*) because, when we hear, we experience sound sources either directly or bound to sounds (*Phenomenological Binding*).

2. Things and material bodies within and without sounds

If our reflections are valid, then sounds seem to be related to a world of things and objects – a world constituted and pervaded by events through which we gather information about the world itself. Sounds are heard as a fundamental part of the physical world; they are not simply part of it, as the lid is a part of the pot, but they rather establish a crucial relation and play an essential role with the world and its interwoven materiality. For instance, we do not hear the metal rubbing as a part of those events happening to the metal due to the action of a blacksmith. What we hear instead has certain features: it is noisy, metallic, and we immediately hear that sound belonging to a cold and hard matter. We hear noisy-metallic-cold-and-hard-matter events rather than events *and* their constituent noisy, metallic, cold and hard matter features. Before any bimodal or intermodal collaboration (Nudds, 2001; for other perspectives see Nudds, 2018; O'Callaghan 2016; 2017; 2019), we gain information about the world and its events or material objects and their materiality. Sounds are not "merely contingently caused by material events. To be caused by an appropriate sort of material event

is part of what it is to be a sound" (Leddington, 2014, p. 331). In order to demonstrate this hypothesis, it is necessary to comprehend some theoretical positions that are in its direct contrast. According to these theories, sounds are, or could be, heard as something completely detached from their sources. This is an opinion, grounded in history of philosophy, which prompts to the common assumption that there is difference between hearing and seeing, that is the eye and the ear. A first problematic argument against *Phenomenological Binding* relates to the philosophical background of event theory, at least according to O'Callaghan. If it is true that sounds are heard bound to things and objects, they are still particular audible individuals, i.e. we could hear them as totally detached from world's things.

> I hold that sounds are particular audible *individuals* to which audible qualities such as pitch, timbre, and loudness belong, and that audible sounds are not *identical* with ordinary material objects or events. Sounds audibly occur or unfold over time; sounds audibly persist through time and survive changes to their qualities. Since sounds audibly are persisting individuals that bear the familiar audible qualities, sounds themselves do not audibly appear to qualify ordinary material things and happenings. Thus, sounds are not identical with ordinary material objects or happenings, and sounds do not audibly appear to qualify ordinary material things *in the way that* colors visibly appear to qualify ordinary material surfaces and objects or in the way that that textures tactually do (O'Callaghan, 2014, p. 336).

Sounds are not necessarily heard as fused with or as depending either on material bodies or occurring events, at least not in the way in which visible qualities are seen as fused and coincident with visible objects and bodies. *Phenomenological Binding* captures the intimacy with which we experience sounds, as something bound to its source, and helps us to explain the way we interact with sounds and sound sources, at first through a differentiation between sources and their surrounding environment – the latter being the main feature and a necessary prerequisite for perceiving a sound, and specifically a particular. O'Callaghan tries to merge (WPI) with *Phenomenological Binding* through his mereological consideration of sounds and sound sources and their relation. Sounds and sound sources are distinct individuals, and the latter are heard in virtue of hearing their sounds. In other words, sounds are heard as bound to their sources (*Phenomenological Binding*) in the manner of perceptible parts and wholes (mereology) and not as audible qualities bound to their sources. This idea, however, is only valid if we think of sounds as mereological parts of complex environmental events that involve sounds which are not therefore heard as fused with sources (WPI). Some evidence suggests that we can hear sounds without hearing or tracking any sound sources and that sounds are available for demonstrative reference while sound sources are not. The claim shows the perceptual phenomenological difference between sounds and colors. While we do not see colors as being detached from their bearers and objects, we can experience sounds as something totally extrapolated from their sources. Let us for instance think about a very common sentence: "this thing is colored". With this sentence, we mean something like "this tray is silver-colored", but we do not experience the silver-colored and the tray; we rather see that silver-colored-tray. If we instead said "this thing is sonorous", then the meaning would be totally different. Saying that "the tray is sonorous" does not mean that when we meet it, we do experience its sound. On the contrary, we just want to say that it can produce a sound. Saying that "something is colored" is totally different from saying that "something is sonorous". A sonorous thing is not just something like a colored thing. While we can only think about silver without any silver-colored things, we can think and also perceive a sound completely detached from things. This statement deeply clashes with what we have argued for, at least in some of

its general consequences. For example, the *acousmatic experience* and *pure event* consideration of sounds show how we can experience sounds as something independent from the world of things. But is this really so true?

Acousmatic experience refers to a particular form of auditory experience where listeners do not hear sound as something bound to things and objects, but they rather experience it as something totally extrapolated from its context. The term was used by the Pythagoreans, who asserted that Pythagoras used to teach hidden behind a veil without permitting his students to see him while he was speaking. The Pythagoreans, as the modern listeners of acousmatic music, were totally focused on sound. Schaeffer and his *musique concrète* found a phenomenological ground for such a claim (Schaeffer, 1966) by hypothesizing that acousmatic experience is an auditory experience where sounds are listened with the very specific intention of cutting out any inter-modality forms of experience so that the focus is only on the sound (Kane, 2014). The Schaefferian *objet sonore* as a sonorous unity perceived through its own qualities and properties – listened by itself without any relation to something else – is the correlate of *reduced listening* (Chion, 1983). The reduced listening (*écoute réduit*), which arises out of the phenomenological *epoché*, enables the listener to focus only on the acoustic features and properties of sound, without linking it to its context. This is a first and very important step for the delineation of a non-signal relation with sounds. If concrete and acousmatic music have their rules and history (Peignot, 1960), what really happens when we hear in a reduced mode is the auditorily placing of the contextual environment and his signs "in brackets".

This specific mode of listening marks the musical kind of listening (Ihde, 2007; Dufrenne, 1987). We can listen to musical sounds in a way that does not necessarily involve hearing or getting information about their sources. That is, we can hear sounds as something not necessarily bound to their sources because sounds can be heard independently from their sources, at least in certain forms of listening. This finding leads us back to the *Phenomenological Independence*, in the form of WPI (musical listening) or SPI (acousmatic experience or pure event consideration of sound). In any case, saying that it is possible to experience sounds in this way does not necessarily imply that we argue in favor of the idea that this is the usual listening mode. On the contrary, it means that it is a phenomenological mode of experiencing sounds.

Departing from such a very specific auditorily thought, Scruton delineates a theory of sound that brings it closer to secondary qualities without renouncing to define it as individual. Scruton introduces the category of *secondary objects*, that is objects all of whose properties are ways in which they appear (1997; 2009a; 2009b). According to Scruton sounds "are objects in their own right, bearers of properties, and identifiable separately both from the things that emit them and from the places where they are located" (2009a, p. 50). For Scruton, we do not attribute the secondary qualities of sounds to those objects or bodies that emit them, but we instead attribute them directly to the sounds themselves. For example, the conception of sounds as independently existing events means that, when we hear a car passing by – as Scruton would say – what we hear is the *sound* of a car passing by – something (event) caused by the car's passing by, which is distinct from any event involving the car. So, he introduces the conception of sound as *pure event*: the sound of the car is not an event in the car or something changing in the car, like a change which the car participates in, it is rather an event in itself. Like rainbows and smells, sounds are objects whose properties are given by the way they appear to us. This theory rejects any static object-consideration of sound. There is no particular object that is identical with sound, e.g. the vibration of the source, as physicalists would think. The consideration of sound as a pure event-secondary object locates sound at the place where it appears to the listener. This does not entail a revaluation of proximal theory of sound perception, it instead points to the possibility that one can hear without linking sounds

to their sources. Sounds can be heard as emancipated from their causes or can be experienced as independent but self-related objects, as it happens with acousmatic experience of sounds, which can involve the formation of coherent auditorily complexes through sounds ripped from their ordinary sources and contexts, as in the case of acousmatic music. If sounds are events and at the same time secondary objects, just like smells and rainbows, their evaluation as pure events is a simple step forward. They are events that happen, even though they do not happen to anything (they happen to themselves), and this cannot be traced back to particular changes undergone by specific objects. Albeit such a claim presents various problematic and interrelated issues, it has at least one perceptive principle on its side: sounds can be identified without identifying any individual that emits them. Scruton points this out in the following terms.

> Of course, our language for characterizing sounds tends to describe them in terms of their normal source — dripping, croaking, creaking, barking. But reference to a source is not essential to the identification of the sound, even when it is compelled by the attempt to describe it. It is in some sense an accident if we can attribute a sound to a particular — to say that it is the sound *of* this thing, caused by changes *in* that thing, and so on. It would be quite possible for us to be surrounded by sounds, like Ferdinand on Prospero's Isle, which we individuate, order, and interpret without assigning to any of them a physical process as origin or cause (Scruton, 2009a, p. 62).

The possibility of hearing sounds as sources-related does not mean that we can only hear in this way. For example, when we hear sounds as music, we hear them as pure events that we can obviously reidentify without any concerns about their sources. When we recognize a melody sounding in another key, or with another timbre or pitch, we directly recognize both the succession of sounds and the particular sound that is now resonating. Sounds:

> become individuals for us, with a life of their own. [...] In hearing sounds in this way we rely at every point upon our ability to deal with them as pure events, while neither reflecting on nor hypothesizing the background causality from which they arise (Scruton, 2009b, p. 31).

In conclusion, we can affirm that sounds can be heard detached from things and objects. According to these positions, which I will call *detached-sound theories*, sounds do not give us information about the world's things because of their detached status. Due to it, sound "does not lead us to the thing, to the cause, to which it owes its existence; it has detached itself from that; it is not a property but an entity" (Zuckerkandl, 1973, p. 273). The detached-sound theory grounds its theoretical position in some reflections on auditory perception. It is in accordance with (SPI) and (WPI) since the former contains the latter and does not require the principle expressed by (PB) even though it shares the event consideration of sound. Simply put, sounds can be heard as detached from their sources. By bearing in mind that Zuckerkandl, Scruton and, for obvious reasons, even Schaeffer, primarily refer to the experience of musical sound, an affirmation of the above-stated possibility does not mean that we always experience sounds in such a way. In any case, we can switch to an acousmatic or without-sources-interested mode of listening in everyday sounds experience. However, at least as it has been largely intended, this should be regarded as an attention shift rather than as an ontological

discussion of what sound is.[2] The sound heard in reduced listening does not sound different from that of ecological audition; the only difference resides in the way we are led to focus on or contextually brought into hearing. Not only do we find everyday sounds in musical works, which are increasingly composed by a (culturally determined) union of silence, sound and noise (Judkins, 2011), but we might listen to the world's sounds as we do with music (Gaver, 1993).[3] So, in order to evaluate a theory of sound and the aim of my theoretical criticism, it is crucial that we show how realistic is the fact that we hear sounds as totally detached from their sources, even when we are unable to identify them either due to musical attitude or environmental impossibility. In other words, how strong should the *absence* of a source be, in hearing a sound, in order to affirm that there is no presence at all *in* it? How much absence do we need in order to hear no sign of what its absence shows? Can we hear sounds without connecting them to their sources? If so, does not this mean that we experience sounds as sources-characterized? And again, does not a sound, totally detached from a source, retain the features and material attributes of its source? Reduced listening gives rise to the so-called acousmatic experience, meaning that sounds are listened as autonomous objects; and, as Dokic says, they are "independent of whatever material object has produced or emitted it" (2007, p. 393). However, is this necessarily true? If we can listen to musical sounds without involving any sound sources – i.e. in a way that does not obviously involve hearing their sources –, sounds are not experienced as bound to their sources. But, what about "having source-relative attributes", as O'Callaghan (2014, p. 337) points out whilst describing the acousmatic experience of sounds?

3. Materiality and source-affected sounds

When we experience sound in a musical attitude or through an acousmatic (auditorily) posture, we experience it as a self-grounded particular with its own features and properties. In a word: we experience sound as *itself*.[4] There is no symbolic or indexical link of sound to a specific context of meaning, which shows it in that kind of auditory experience. To adopt a Peircean terminology, we might call this form of auditory experience *iconic listening*, where sounds are listened by and for themselves without any links to contextual or arbitrary meanings. This kind of listening allows us to open our auditory experience to a new kind of listening where sounds are totally detached from their contextual meanings (Gonnella,

2 This is not to simply suggest that reduced listening only requires a shift of attention – even if from Schaeffer onwards it has been insisted upon. Rather, what we should highlight is that through attentional focus, we can discover the links between musical and everyday experiences. For the focus on listening see Ihde (2007). The abstractness of listening, i.e. in Husserlian terms the dismissing of every *morphé*, has been treated even by Heidegger through its *abstrakt hören* (Heidegger, 2002, p. 8; see also 2010, p. 158).

3 Gaver's distinction between musical listening and everyday listening does not avoid to listen to world's sounds, as we usually do in regard to music. By using this distinction though, as Clarke points out, Gaver "equates musical listening with an attitude of autonomy – attending to the qualities and properties of sounds in themselves, and their purely sonorous relations with one another. By contrast, everyday listening involves detecting the objects and events in the world that are specified by sounds" (2005, p. 133). Psychology, in particular Ecological Psychology, gives us tools to assess the relationships between the subject and its environment. This is through the distinction between different modes of listening – for example, music allows us to listen to sounds without any interest in sound sources, while everyday listening would show those same sources. The philosophy of sound comes to fruition as soon as we wonder what a sound is, and what a sound is made of. See also Kozak (2020); Krueger (2014); Michaels & Carello (1981); Solomos (2020:91 ff); Yost *et al.* (2008); and Casati & Dokic (1994); Casati *et al.* (2020); Pasnau (1999). The aim of this paper is to show how both sound in musical listening and sound in everyday listening are rooted in materiality. In this regard, see also Cox (2011).

4 See Wanke (2017; 2021) for the relationship between musical material and the listening attitude, in relation to the sound itself. Wanke talks about ecstatic materialism, where sound never becomes entirely separated from materiality, and (ec)static listening: a union of static musical material, i.e., atemporal and non-narrative, and the ecstatic listening attitude which is free to explore and move through the dimensions of sound.

2022a, pp. 59-99). This detached listening – that is the musical or aesthetical listening par excellence – permits an auditorily concentration on sounds and their features. We do not listen to the washing machine's high-pitched beep to identify where it is located compared to where we are, nor to acknowledge that the same sound means that the washing machine washing's program has ended. In this new auditory posture, we listen to the sound without any indexical or symbolic reference. We in fact listen to the loudness of the high-pitched beep, in its acuteness and intensity as well as with its pauses and restarts. What happens during a reduced listening is precisely what can be found in the acousmatic experience, namely the failure of an indexical and symbolic linking to a world of things, which does not entail an independence from the material of the object that emits sounds. We still perceive the material body that emits the sound even when we do not directly link the two together or spatially identify the former. In a musical attitude, we can hear at least through two different modalities that involve ordinary sounds, noises and every kind of sonorous thing that we might not normally recognize as musical. For instance, we might concentrate on sound during a musical execution (1) where sounds and non-sounds are organized in a whole composition with a beginning and an end, and they are integrated, modified as well as listened by themselves without any interest in the sources. This is the basics thought behind acousmatic and pure event conceptions of sounds. In this particular view, we can focus on sound sources only to improve our auditory experience. For instance, we go closer to the loudspeaker in order to enhance our sonorous and musical experience. We can also hear sounds – and noises – in a musical attitude during our everyday experience (2). We might hear a sound by itself without interest in its spatial provenience or its meaning. This second form of auditory experience represents a purely aesthetical kind of experience: there is no musical organization or context (the concert hall or theatre), which can mark the presence of a musical moment and its related auditory posture. We simply find ourselves hearing sounds, in a musical attitude, instead of hearing them ecologically. In Edgar Varèse's "Ionisation" we at first hear the siren as something apparently external to the composition, but as soon as the piece goes on, we start listening to it as something coherent and included on a par with the other instruments. What happens here is a change in the auditory posture; we stop hearing the siren as something that has a specific meaning or an identifiable position (symbolic and indexical hearing), and we start listening to it by itself for its own properties. Therefore, if (1) has its own place (i.e. musical place) to show and give life to its possibility (i.e. something opening to a fragility of musical listening due to its likelihood of being disturbed or interrupted by something else (Ihde, 2007)), then (2) has a spontaneous mode of manifestation. (2) can happen anywhere, at any time and with any sounds.

(1) and (2) are two auditory postures and as such they can be changed or modified. For instance, someone could hear an ordinary siren in a musical attitude without taking an interest in its spatial provenience or immediate meaning: instead of "an ambulance is approaching", we focus on its loudness, pitch, intensity, proximal and distal panoramicity without judging its spatial provenience, etc. The possibilities of this listening are tied to the conception of sound as an event. As we have shown, event consideration of sound allows us to explain this auditorily possibility and its sonorous phenomena. An event is something that happens to something else thus giving the opportunity to know and discover information about it without necessarily involving spatial individuations. This simply means that we experience material sound sources *in* and *through* sounds without necessarily gaining information about other events happening to the sources, their spatial location or something else. We can experience sounds without any links to other things, but we always hear sounds impregnated with the material world that emits them. Material, haptic, and tactile presences in sound perception are central in auditorily grasping. We do not hear just a sound, we hear a

dry, cold, icy, solar, wet, peaky, spiky, heat sound. Tactile and haptic features are so essential to sound constitution that we always hear the world's properties *through* sounds. We directly hear the properties of things, objects, and bodies, even if we do not listen to sound sources or spatially identify the things that emit sounds. The sound itself is construed by things' features. Different bodies receiving different events give rise to different sounds.

This is a fundamental phenomenological claim about perception. We experience the world through our senses due to perception and a body embedded in the world, where our body is always in touch with and immersed in the world (Le Breton, 2006; Merleau-Ponty, 2012). It is therefore a world populated by things, which we encounter through sense perception hence also through auditorily perception (Gonnella, 2022b, also for proxemic implications). If the first part of this paper has shown how we experience things and sources through audition, in the second part we have explored the possibility of hearing sounds without gaining any information about their sources or interest in their locations, dimensions or features. It is sufficient to demonstrate how both have something in common in order to expound on the way we experience sounds. As we have already asserted, we hear sounds as something embedded in the world (first consideration) up until they completely adhere with and bind to things, while we hear sounds, with their specific features, up until we reach the point where we hear a sound as totally detached from its environment (second consideration).

The common point of both considerations holds together (1) and (2) – the two possibilities of hearing sounds by themselves. In all these cases, we experience sounds, meaning that we experience what contributes to their construction as sounds, such as: the specific materiality of musical instruments, the raw matter of objects receiving events, the very specific conditions of the environment where sounds arise, etc. We therefore hear the wetness of water living in sound or experience the dryness of a space by hearing the sounds that are there emitted. We gain tactile and material information about the condition of the object that emits a sound through an auditory perception. In other words, we know if an object is made of this or that material, if it is wet or dry, big or small. Even if we do not gain information about its spatial location, because it may be impossible to do so, as the second consideration indeed shows, we hear the world through our ears. Even when we hear as (1) or (2) require, we precisely experience what creates the life of a specific sound – i.e. the concrete condition of the world that produces sounds. Schön *et. al.* (2009) show how even sounds that do not immediately refer to sound sources or things in the world contain expressions of and convey information about the material conditions of their sources. Acousmatic sounds are also filled with haptic, tactile, and material features that belong to the world given by sounds. As scholars reiterate, sounds were generated, recorded, and also resynthesized in order to make it highly unlikely to identify the sources (Ystad *et. al.*, 2008) while they still showed a material presence of the world. In detached, acousmatic, or pure event sounds, the materiality and physical-tactile conditions of the objects persist and remain present giving themselves in auditorily experience. The very specific experience and key concepts evoked by sounds in Schön *et. al.* (2009) were totally bound to tactile and haptic features. Not only are sounds involved in a conceptualization of the experience that forces us to consider the emotive basis of specific cognitive processes (Daltrozzo & Schön, 2009), but sounds, words and nonverbal sounds, therefore also sounds with no recognizable sources – i.e. acousmatic sounds – can also evoke and transmit what belongs to the characteristics of their sources. The research was divided into two different experiments: In the first one, sounds were used as a context and were followed by (visual) words while, in the second one, visual words were used as a context and were followed by sounds. The results show, on the one hand, how concepts evoked by sounds and those evoked instead by words are deeply bound and, on the other hand, how acousmatic sounds can directly evoke concepts and words rich in meaning that involve tactile

and concrete features of things. As the research shows, this can also be applied to musical works. If a single sound can indeed generate meaning, we should therefore question the same possibility within, however, the context of musical pieces.

> The fact that concepts carried by words can influence the processing of a following musical excerpt can be interpreted as a strong sign that the time window of elementary meaningful units in music might be very small, well below the time window of a motif or a theme. Therefore, the model we propose here for conceptual processing of sounds might also be at work in music listening. The meaning of music will, therefore, be the result of a rather complex process, taking into account the structural properties of music, the personal and cultural background of the listener, the aesthetic and emotional experience, and also the structure or matter of the sounds whereof a given excerpt is composed (Schön *et. al.* 2009, p. 1034).

4. Conclusions

Sound seems to be best described as an event that occurs to objects. This allow us, on the one hand, to describe how sounds are bound to sound sources (PB) and, on the other hand, to give us reasons to comprehend how they can appear as something completely detached from things (pure event). In any case, sounds are construed by the world's materiality. Sound matter is embedded in the world structure and gives us information about it. With no particular link to their sources, sounds still evoke concepts inherent to the fields of tactile and haptic experience (Schön *et. al.* 2009, p. 1027). Even an acousmatic consideration of sound holds firm the tactile contribution in sound constitution. We in fact still hear a dry, cold, wet, woody, ferrous sound when we hear an acousmatic sound. To consider the deeply tactile-haptic role active in sound constitution means tightening the links between *Phenomenological Binding* and *Phenomenological Independence*, as well as understanding both acousmatic/pure event theories and ecological/direct perception of the sources' accounts.

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