

The Politics of Sound and the Biopolitics of Music: Weaving together sound-making, irreducible listening, and the physical and cultural environment

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The ever-increasing focus on sound in recent creative practices has ideological implications and seems to reframe and problematise ontological perspectives on music. Today it is possible to contrast notions of music as identical with sound (as in the discursive framework of 'audio culture') with artistic practices where sound and music are *not at all* identical, and the usually implicit hierarchy between them is probably twisted. This article discusses such matters from a methodological position that weaves together issues usually discussed in different areas of concern: it understands ecologically informed notions of sound and auditory experience as strictly intertwined with critical and inventive attitudes on technology, particularly as their intertwining is elaborated through performative practices. It suggests that, in music as well as in sound art, what we hear *as* sound and *in* sound is the dynamics of an *ecology of situated and mediated actions*, as a process that binds together (1) human beings (practitioners and listeners, their auditory inclinations), (2) technical agencies (the domain where means and ends are dialectically negotiated as practitioners strive to achieve a certain freedom in action across the public space of technological mediations and delegations) and (3) the environment (the physical *and* cultural context where sound-making and listening practices take place). The general idea is that the manners by which we shape up our relationship to sound and appropriate the technical mediations involved in working with it, are of *biopolitical* relevance for social endeavours that might (still) be 'music'.

...they [...] had begun to create that public space between themselves where freedom could appear. (H. Arendt, *Between Past and Future*, Cleveland: World Publishing, 1963: 4)

1. INTRODUCTION

1.1. Music and the ideology of sound: sound art and the ontology of music

Along the decades, 'music' has often been redefined in terms of 'sound'. Innumerable practices have developed from an increasingly deeper awareness of the implicated cultural shifts, often in conjunction with the exploration of new instruments and new

technological frameworks. However different among them, in retrospect the various approaches appear consistent with a broader and probably unifying narrative of the ever-growing autonomisation of sound as an artistic medium in its own right. For example, Solomos (2013) describes a path shifting *from music to sound* across the entire twentieth century, relative to both instrumental and electroacoustic music approaches; Landy (2007: vii) describes 'the emancipation of sound', brought about particularly by electroacoustic and computer music, as 'the climax of a list of [earlier] developments' in the history of modern music.

A strong and diffuse preoccupation with sound ultimately seems so crucial and essential to the vast majority of current music practices as to represent a kind of potent ideological frame structural to the actual and material conditions of musical experience in general. This is clear in consideration of a dualism that has recently emerged: on the one hand, various notions of music as in fact identical with sound; on the other hand, the call for a split between the two as distinct domains of creative experience. For some commentators (e.g. Demers 2010: 69–89), interesting endeavours in sound art pursue the legitimate aim of cutting short with music altogether, so they can be finally considered on their own terms regardless of music-related criteria. Evidence is in the increasing number of publications in the theory of sound art – two different examples are Kim-Cohen (2009) and Voegelin (2010), described in Kane (2013) as equally 'musicophobic', though from contrasting positions. Significantly, years ago Hildegard Westerkamp started using the term 'soundmaking' to characterise her endeavours in soundscape composition (Westerkamp 1988). In the following, I use the compound 'sound-making' to refer to creatively devised sound-producing activities, before they get taken in the 'music vs sound art' distinction.

The separation of 'music' and 'sound art' is probably useful in critical and theoretical work, yet it may represent a problematic compartmentalisation as far as

actual praxis is concerned. If anything, in my view, boundaries remain slippery and probably unnecessary. However, I am not at all happy with too simplistic equations of music and sound. Facing such dualities, it may be useful to ask how should we understand 'music' in a larger context where 'sound art' is established as a specific kind of artistic commitment. And what radical reconfigurations in perceptual attitudes and cognitive *habitus* (as stated by Pierre Bordieu) are involved in the experience of music as 'just' sound. I will suggest that, addressing sound as the medium of artistic endeavours independent of music, we are essentially displacing music in a domain of second-order attributes, that is, in a domain of *qualia* not accessible as specific entities or substances in themselves, and yet emergent from situated and embodied experience.¹ Sound art practices certainly represent contemporary forms of subjectivation with their own values and discourses, acting at the same time as valuable symptoms of a thorough reframing of music practices in the present historical situation. Again, now that creative sound-making approaches exist independent of musical criteria and related evaluative constructs, what does distinguish music-making in the broader field of sound-making activities?

It is my conviction that such questions can be fruitfully addressed in perspectives that might acknowledge the ecological epistemology implicated in the particular medium (sound) and that might also value the ontological implications of praxis and poesis (labour). In creative work, sound is nothing natural or neutral: it comes of course with historically-determined empirical and conceptual connotations, typically implemented and made into active cultural factors as specially designed working tools, technical devices, productive patterns. Sound-making practices, and listening practices as well, are always intertwined in the dialectics of power and knowledge inherent in a particular understanding of sound and auditory experience. However, they actively participate in the cultural dynamics that shape up that very understanding, thus contributing to reinforce, challenge and renovate the broader cultural ideology they are born of. Here we ultimately lean on a social constructivist view, according to which 'reality does not precede the mundane practices in which we interact with it, but is rather shaped within these practices (Mol 1999: 75).

1.2. The discursive framework of 'audio culture' and its limits

It is customary to address the historical shift from 'music' to 'sound' in terms of *audio culture* (Cox and

Warner 2004), that is, in terms of the all-encompassing framework set to music in late modern and post-modern times by large-scale phenomena laying at the intersection of diverse social dynamics and technological developments in sound recording and engineering (with their inherent commercial interests). Indeed, sound recording and engineering technologies opened up – and were necessitated by – profound changes and rearrangements in sensory and conceptual dispositions. They quickly revealed productive (rather than merely reproductive) of sonic and musical possibilities – while being in turn produced or necessitated by new sonic and musical ideas. Overall, they started a process spreading virally across the Western societies, eventually inscribing in our ears and minds specific ways of perceiving and cognising sound and music. They implemented a potent cultural mechanism in fact integral and constitutive of audio culture, a larger *dispositif* (as stated by Michel Foucault), meaning an apparatus of knowledge and power that actively structured segments of social and individual life² and impacted on all music-related activities, while being in turn forged and reinterpreted by the changes in musical life peculiar to the social and historical context. Think of the desacralisation (or the 'de-auralisation', as stated by Walter Benjamin) of established traditions of European music. Think of the circulation and cross-fertilisation of musics from all over the globe, beginning with ethnomusicological research in the earliest years of the twentieth century. On a different level, think of *schizophonia*, this newly acquired capability of human beings to cognise and experience sounds disconnected from the time and the place in which they are made, and split from the physical cause and the environment they belong to (Schafer 1969). Think of the widespread cognitive disposition by which most of us experience sounds as if they were readily available data, or reduced to objects or 'sonic things' we can dispose of, channel and transfer causing no changes in them but wanted ones.³

Such cognitive dispositions and inclinations represent some of the *ideological* content characteristic of the suffix 'audio' – today also utilised as a noun, as noted in Landy (2007: 11). According to a widely shared

²Here I am paraphrasing Agamben (2006). I prefer the French *dispositif* over the usual English translation *apparatus* because, in agreement with Bussolini (2010), the latter may be problematic.

³In the context of this article, there is no room for a much needed critique of the 'sound object' and the ideologically charged role it plays in the framework of 'audio culture' (Di Scipio 2014a, 2015a). Some implicit criticism will surface later in the discussion. As is known, Pierre Schaeffer's long-standing and paradigmatic theoretical edifice (Schaeffer 1966) was based on a fundamental separation of *objet sonore* (implying a perceptual focus on the morphology of sound 'in itself', following a pedagogy of 'reduced listening') and *événement sonore* (implying a focus on the sound source as situated in and related to a physical environment). Critical views of Schaeffer's *sound object* and *reduced listening* are found in an increasing number of contributions, most notably including Solomos (1999, 2008), Molino (1999) and Kane (2007, 2014).

¹For a discussion of musical *qualia* merging phenomenological views and the epistemology of 'embodied cognition', see Goguen (2004) and Janz (2010).

definition (Althusser 1969), an ideology defines a field of prevalent or hegemonic discourses and cultural devices that shape up society across private and public daily communications and relations, and sets the cognitive inclinations and ethos by which we understand our relationship to the given or procured conditions of human life. In its ideological dimension, audio culture is rooted in a doctrine of technological determinism – the theory that technical developments determine social changes and yet follow their allegedly autonomous and neutral logics of progress and innovation (Feenberg 1991), providing human beings with effective problem solving through a variety of social interactions.⁴ The politics of sound in much audio culture acts as a carrier of implicit reductionistic notions of auditory perception and sonic phenomena, and does so while apparently also lending itself well to anti-reductionistic perspectives (e.g. most of ‘soundscape composition’).

Yet, the discourse of ‘audio culture’ does not cover the broader range of ‘auditory cultures’ or ‘hearing cultures’ (Bull and Back 2003; Erlmann 2004). Different ways of becoming aware of sound and different manners of auditory experience enact different acoustic communications, different practices and different meanings of music. Cultural ideologies – that is, the constructs and metaphors forging the cognitive and perceptual attitudes of human beings in their making sense of the world – underpin music by structuring and framing in the first place the process of auditory experience, and are in their turn shaped, reinforced or countered by the lived experience of music. This is not only a preoccupation that ethnologists and scholars in ‘sound studies’ tirelessly express in their investigations of cultural patterns distant in geography or history, but also a preoccupation relevant for our involvement with today’s overly technologised world. Outside mainstream currents, several artistic and research approaches on sound and music have developed creative technical strategies and practices at odds with (or foreign to) the prevalent framework of audio culture. In general, this is the case with practices insisting on those which, below here, are designated as the ‘relational’ and ‘situational’ dimensions of sound, where sound is sensed and understood more as a medium of the embodied experience of the world, and less as a material for the fabrication of musical products.

1.3. The relationship of technology, sound and environment: the biopolitics of music

Addressing ourselves to such matters, we can try to weave together what the ideological framework of audio culture uses to split up. I suggest that we have to

⁴In earlier papers (e.g. Di Scipio 1998), I have suggested that the epistemology of problem solving cannot be aproblematically referred to the technical aspects of artistic praxis, as the latter often seem to rather include a strategy of ‘problem raising’.

(1) consider the ‘questions concerning (music) technology’⁵ in an anti-deterministic and more nuanced, dialectical view, and consider technology as the domain in which a larger dynamics of power and knowledge are made into the set of individual and collective mediations involved in actual sound-making; in other words, the technological context should be viewed as the ground upon which working tools are problematised, negotiated, appropriated through either deconstructive strategies or inventive designs. At the same time, we have to (2) consider the ‘question concerning sound’ in an anti-reductionistic and ecologically informed view, with an understanding that sound is nothing that might be really objectified and commodified, and constitutes rather an inherently relational medium for situated explorations of the physical and cultural environment. Notice that, because a plethora of interlaced technological layers count today as ‘environment’ for most of us (including music practitioners and sound artists), the notion of sound as a ‘medium for situated explorations of the environment’ almost inevitably ties back neatly with the questions concerning technology.

In this article, I make an attempt to weave together those two perspectives. I lean on earlier personal observations (Di Scipio 2006, 2008, 2012, 2014a) possibly turning them towards a more general theoretical approach. The attempt leans on a permeable notion of ‘music’ as the qualifier for mediated actions and relationships that we can hear and listen for *in* sound (including actions and mediations involved in the activity of listening). It might be taken to illustrate that *the practices by which we creatively address ourselves to sound and auditory experience constitute a determinant factor in the elaboration of the material and intellectual conditions for the existence of music*. Said differently, the attempt implies that a politics of sound can also perform as a *biopolitics of music*.

The term ‘biopolitics’ evokes the French philosopher Michel Foucault.⁶ He used it to describe the bundle of processes by which, at the dawn of modernity, the human being became the object of political and economic powers that addressed directly the human body – its life, its existential conditions, its health – through an apparatus of hygienic norms and scientific medicine practices (as different from earlier empirical medicine) and through procedures of social discipline and control (birth and death rate statistics, definition and treatment of disabilities and corporeal or mental diseases, disciplinary control of the masses,

⁵This is the title of an earlier paper of mine (Di Scipio 1998), which of course plays on the title of a well-known essay in the philosophy of technology (Heidegger 1977/1954).

⁶See, for example, Foucault (2003). The way I (ab)use the term, however, owes much to its reworking in Agamben (1995, 1996) and Negri and Hardt (2009).

etc.). In a nutshell, for Foucault, modern man has developed a larger framework of knowledge and power in which what is at stake is its own (the human being's) conditions of existence and its own keeping alive, pure and simple.

In the parallel I suggest, in late and post-modern times, the vast and varied range of human activities known as *music* became the object of political and economic powers through scientifically based technologies of *sound* control and treatment, thus effectively shaped up peculiar modes of auditory perception and music cognition. More in general, one may speak of the 'biopolitics of music' meaning the bundle of processes by which we engage with the factual conditions and the ideological constructs of auditory experience understood qua conditions of existence set to music and creative sound-making. The practices by which sound is conceptualised, represented and worked out, participate in shaping the perceptual inclinations and dispositions we use for dwelling in the physical and cultural environment, and thus cast the historical conditions for the existence of music practices (which in turn contribute to shape up inclinations about sound; the constructivistic circle is closed). Inquiries in the biopolitics of music may take the form of either scholarly or artistic endeavours – or a mix of the two, as along lines of 'artistic research' currently being established in interdisciplinary academic contexts. In these pages, I limit myself to a theoretical level, but keep an ear on practice-led research on the relationship between performers, technologies and environment (Impett 1998; Di Scipio 2003; Green 2013; Waters 2013), particularly as conceptualised in terms of the 'performance ecosystem' (Waters 2007, 2011).

2. AN ECOLOGY OF SOUNDING ACTIONS

2.1. Emergent properties of situated and mediated actions

With the noun 'music' we refer to nothing that can be described as a permanent substance or a readily available and tangible entity of sort. Nor do we refer to a specific range of pre-determined actions. With 'music', we refer to qualities *not* of an object or object-like entity, but of *situated* actions and relationships, as they take place through studied efforts of sound-making. Also, such actions and relationships are *mediated* by procured or specially designed technical procedures and larger technological apparatuses. What we call 'music' involves mediated and situated actions and relationships as they become sounding and audible to us (they may even consist in 'making silence' or in doing anything sonorous – at this stage, caring for silence or background noise are tantamount to sound-making).

I agree with anthropologist Tim Ingold when, discussing the perception of the environment, he states

that 'we don't hear sound, we hear *in* sound' (Ingold 2011: 138). In the context of our discussion, that leads to the question as to what do we actually hear in sound. I suggest that in sound we hear the relationships and mediations of situated agencies that bear the event of sound. My thesis is that *it is the overall dynamics in an ecology of balanced and mutually influencing forces and agencies that is (or fails to be) worthy of calling 'music'*. Not by chance, in its Greek origins, the word 'music' was an adjective qualifying actions and performative techniques referred to – or inspired by – the Muses. Shunning any mythological or metaphysical reference, the fundamental notion remains that we call 'music' less the 'sounds themselves' (whatever that means) and more the experienced dynamical interplay of means and ends worked out in an ecology of sounding actions and relationships.⁷

Furthermore, with 'music' we refer to nothing existing prior to our attention and disposition toward it. We could say that music remains for the most time *non-existent*, something *yet to do* – and something to do every time anew through studied sound-making efforts. It lags in the realm of the potential or virtual until the moment it is brought into existence, albeit temporarily, as an array of qualitative phenomena emerging from an ecology of sounding actions relative to specific time-space coordinates. In other words, we qualify as music an array of *emergent properties* in a dynamics of sound-making actions, not a durable entity awaiting to be re-presented or re-produced. Sure sound signals ('audio') can be recorded, stored and played back, but that does not give you music: in the particular case, only the care and the manners by which signals are made into actual sound and presented in a physical context are subject to be experienced as music, thus also allowing for the appreciation of compositional, performative or narrative designs. The potential is made actual by enacting sounds as events in an environment, through a devised coupling to an environment (including the option of total decoupling, itself a significant gesture even if often given for granted). In short, music manifests itself in performance conditions, that is, under real-time and real-space constraints (this does not imply that studio productions, such as 'fixed media' electroacoustic works, do not deserve the qualification of 'music', but it does imply that the way they are understood as 'music' in our historical context requires a thorough reconsideration).

⁷I draw the notion of 'ecology of action' from Edgar Morin's writings. Morin writes, 'from the moment an action enters a given environment [...] it enters a set of interactions and multiple feedbacks' and branches into a variety of possible interpretations (Morin 2007: 25). With that notion, he emphasises the complexity of human action in the social context and the natural environment and related issues of responsibility. Similarly, speaking of 'ecology of sounding action' may let questions of responsibility resonate in our discussion of sound-based practices as practices in and of the social context.

Later, I will argue that the activity of ‘listening’ is integral to this ecology of sound-making actions: no deliberate action in sound comes into its own without a correlative effort meant to care for the events thus enacted. Both performing and listening bear the responsibility of making music happen.

2.2. Technology and possibilities for action

Our attitude towards the means and technologies involved in what we do is not at all foreign to the meaning of what we do with means and technologies. What we do *with* them is not at all separate from what we do *to* them (we should have learned that from the history of electroacoustic music: several decades ago, that was the way for many composers to leave behind a more idealistic mindset).

It might be an attitude of *using* (buying and making diligent use of given possibilities for action), or *hacking* (redirecting given possibilities for action), or *building* (designing or even manufacturing one’s possibilities for action). Or it might be, more realistically, any mix of these. While sound technologies may be of different types and may allow for an incredibly large array of creative approaches, each particular approach is significant of specific individual or collective positions, hopes and visions. Each approach is primarily expressive of the ‘degree of freedom’ one enjoys in the ecology of actions characteristic to his/her sound-making. An artist’s engagement with the tools and technologies of his/her art captures and conveys a wider or narrower *margin of manoeuvre*. Implicit here is a view of the wider technological scenario as the horizon of knowledge-level and value-laden communications and interpretations – in other words, as a ‘theatre of hermeneutic exchange’ (Feenberg 1995) in the context of which one becomes aware of received mediations and technical delegations as culturally biased and functionally non-neutral agencies, and strives to appropriate and reinterpret them to some greater or smaller extent. That contrasts the tendency of deterministic designs to expropriate the practitioner’s actions in the world by relating them to standardised behaviours (according to established knowledge in the particular field). It contrasts the tendency to bias subjectivation towards normal or standard types. To a great extent, ‘sound technologies’ define the context where one negotiates personal or shared sound-making possibilities. Technical devices ‘can exert agency [thus] they serve as scripts for action’ (Green 2013: 69).

The margin of manoeuvre opened up in this negotiation represents an *action potential* of higher relevance for artistic purposes. Art is always made by making in the first place the tools and techniques necessary in its making (Di Scipio 1998). Only through

this fundamental self-referential dynamics can the labour of art also elaborate other goals and acquire broader human significance. Safe in a very idealistic view, no ‘freedom of expression’ can be posited without a correlative ‘freedom of action’, as captured in either received, appropriated or specially designed technical possibilities. That of course applies far beyond the domain of artistic praxis, still the latter can be regarded as a very special domain where the dialectic of ‘action’ and ‘expression’ is worked out and can acquire public significance. Aesthetic issues can be significant but remain secondary to freedom of expression, and the latter in turn remains secondary to freedom of action and related issues of responsibility. An acute awareness of the media and the technologies that frame our life and our artistic endeavours is today a more desirable and urgent requisite in creative work than the important awareness of aesthetics and artistic language.

2.3. Performance conditions and ‘what *more* than sound?’

In their commitment to the technologies involved in their work, composers, performers and sound artists today often find that ‘tools’ and ‘materials’ are not easily separable categories. The typically unquestioned ‘division of labour’ implicit in such aesthetic categories is puzzling in actual praxis, even more so in performative contexts. Called into question seems to be ‘the traditional separation of materials, interface and performance’ (Emmerson 2007) and a number of apparently obvious hierarchical distinctions – such as ‘composer *vs* performer’, ‘work *vs* instrument’, ‘musician *vs* instrument builder’. Even the distinction of ‘performing’ and ‘listening’ is less straightforward than it may seem, in consideration of the dense entanglement of their reciprocal implications (Di Scipio 2015b). Overall, this puzzling of categories is probably not coincidental, in the framework of the uncertain duality we considered at the beginning of the present article – ‘music *vs* sound’.

Practices that strive to appropriate technological mediations in live performance contexts have ontological implications, in that they can bring about a more direct confrontation with the question of ‘what *more* there is to music than sound’, and let us ponder ‘the nature of performance and the ontology of musical works’ (Croft 2007: 65, 59). If anything, it so happens when questions of technology are directly, inventively and critically elaborated, that is, neither technophobically escaped nor technoenthusiastically embraced. Performance is the effort of sharing with others the action potential one is capable of, as s/he explores and confronts with the material conditions and the surrounding environment to his/her work. Performance is the opening of a public space in which the margin of manoeuvre one shapes for him/herself can appear (or better: resound) and be

communicated. It defines a small time-space frame across which sounds being made perform as audible traces of someone's subjective awareness of the means, and make that awareness auditorily perceptible as a humanly meaningful gesture.

My thesis is that *actions, relations and mediations involved in the labour of sound-making are integral to what is heard in sound* (Di Scipio 2006). This is not to prioritise 'causal' or 'indexical' listening over other ways of listening, nor to affirm a particular normativity of listening, but to value the faculty of hearing as a permanent coupling of the human body to the environment, and to suggest that listening turns that faculty into an effective and imaginative exploration of that coupling (Dunn 2007). Contrary to a pedagogy of 'reduced listening' (Schaeffer 1966) and subsequent extensions (Smalley 1997), hearing involves a special sense for the material conditions set to the process by which sound is originated, and listening, by capitalising on that, develops a qualitative and imaginative exploration of the subjective and culturally determined forces enacting the sound event.⁸ There, listening understands sound as a 'cognitive medium' (Di Scipio 2014b), a medium in which we explore our structural coupling to the physical and cultural environment. Sounds are events that 'bind source, cause, and effect together' (Kane 2014: 37), and listening faces them as events *in* and *of* the physical and cultural environment. Perceiving and cognising the *sound event* (rather than the *sound object*) lets music function as a more direct signifier of individual and shared manners of acting in and onto the world (Di Scipio 2012, 2014a).⁹

Practitioners across a variety of sound-making perspectives use to play with the inherent relational dimension of sound in several different ways (including ways of 'bracketing' that dimension, reducing sounds to serve as convenient building blocks in the realisation of independent formal designs). In its medial role, sound functions as an interface among human beings and between human beings and the physical and

cultural environment they dwell in. The catchphrase 'sound is the interface' (Di Scipio 2003) means, in its double entendre, that sound performs the interdependencies and reciprocal determinations among agents situated in an environment. Yet, it acts less as a thin surface separating inside and outside, and more in fact as *milieu* – a dense meshwork of lines connecting among and across agencies and forces sharing the same time-space frame.

2.4. Delegated mediations and responsibility

Finitude and opacity of physical effort and technical mediations are relevant factors in any sound-making process. The personal awareness of such limits, as well as of the limits of personal skill and competence, is not an irrelevant element in one's artistic practice. The freedom one enjoys in one's sound-making is bound to remain circumscribed and never fully attainable; the range and scope of actions is inevitably bound to remain constrained; no practitioners realistically can be aware of, and responsible for, the whole complex of technical agencies and mediations involved in their praxis. At some level, to some extent, direct personal involvement and control is let go and traded-off for intuitive or 'immediate' behaviours. Here, 'immediate' actually means that mediations are delegated to someone else's know-how, so they are operated by black-boxed agencies whose competence rest out of personal reach. In agreement with what we have said before, however, *the lack of control and the delegation of agency – whether they are wanted or unwanted – are themselves experienced as sound, they are heard in sound*. Boundaries and impossibilities, whether material or intellectual, leave audible traces behind, they introduce colorations and nuances. In a systemic view, we not only hear what a system or agency can do, but also hear that it cannot do more. Constraints (sometimes self-imposed) are decisive factors in sound-making; being aware of them is a token of responsibility not without significance to one's efforts.¹⁰

We can summarise this point saying that (1) the elaboration of smaller or greater degrees of freedom in action is a most relevant element in the process of *subjectivation* (or *construction of Self*) that actual praxis performs, and yet (2) that element cannot but remain only marginally developed; of course, no subject can ever be construed to its fullest and autonomous completion, no Self can ever get entirely separated from Other. In sound-making practices, subjectivation results from the range of possible actions one is capable of *and* from the inevitable constraints and failures.

⁸This point connects with a perspective on the ecological perception of timbre, according to which timbre 'is perceived in terms of the actions required to generate the event' (Handel 1995: 426) (see also Balzano 1986; Godøy 2001). This might be referred not only to the sound of musical instruments, but also to a larger view of timbral constructs understood as perceptual correlates of 'an *interaction of materials* at a *location* in an *environment*' (Gaver 1993: 4; my emphasis). Thus, timbral constructs correlate to the 'degrees of freedom' in a sound-generating system whose components move in space and affect each other – a view shared in 'physical modelling' and 'physically inspired' sound synthesis (e.g. Rocchesso-Fontana 2003; Farnell 2010).

⁹In these years, I've frequently argued for the term 'sound event' (Di Scipio 2011, 2014a). It connects not only to Schaefferian theory – where it stands, as is known, in opposition to 'sound object' – but also to recent contributions in aesthetic-philosophical criticism (Mersch 2002; Janz 2010; O'Callaghan 2010; Cox 2011), while at the same time evoking ecological approaches on auditory perception according to which, in fact, 'we hear events, not sounds' (Rosenblum 2004: 220).

¹⁰It has been noted that 'the difficulty, the impossibilities [...] the *finitude* of instrumental performance resonates with wider human experience' (Croft 2007: 62). In my opinion, this may be referred not only to instrument playing but also to all performative practices not superficially engaged with means of action (including analogue and digital electronics).

Inescapably, subjectivation produces an inherent amount of objectivation and alienation.

In this context, the subject–object distinction is not a premise to actual practice but a result of it. The field of boundary conditions set to the performance of the distinction is provided by what we may call the environment. In a materialistic dialectic of sound, one could say that ‘neither subject nor object are primary’ (Döbereiner 2014: 2). In a larger view, one can say that actually none of the *three* – subject, object, environment – is of primary importance individually, *but their audible relationship is important* (Di Scipio 2014a). With this relationship, a sense of responsibility ensues as one meets human or non-human agencies in the environment and acts in it with the sound-making devices one makes available to oneself. The environment ‘at large’ can be seen as the epitome of non-Self, the proximal otherness one belongs to. It connects individual experience to a larger space that is, as we have suggested, at one time material and intellectual, contingent and culturally connoted. Considering the environment at large as constitutive of musical experience (Krueger 2009) is key to interrogating the emotional and affective aspects of musical ways of engaging with the world (Goguen 2004).

My thesis is that *the kind of experiences we denote as ‘musical’, involves – and, to some extent, is defined by – a peculiar ecological awareness, that is, a distinctive human ability to ponder together a complex of interrelated agencies and the (physical and cultural) context in which they operate*. By making auditorily perceptible a certain degree of freedom in a specific context, sounds are *events of relation*, that is, they signify the relational and social element characteristic to a particular form of subjectivation.

3. LISTENING (AS PART OF SOUND-MAKING)

3.1. The performance of listening

The act of listening has been recently described as a ‘process of exploration’ (Voegelin 2010). In the context of our discussion, the question remains as to *what* is explored in that process. Our discussion so far suggests that listening is an exploration of the ecology of sounding actions exerted by human and non-human agencies. Along the exploration, emergent properties of that ecological dynamic are developed and shared. The exploration consists in developing threads of connections and making sense of the belonging-together of things and events involved in that ecological dynamic. Describing this a ‘technological listening’ would be profoundly reductive and misleading. Because sound is a cognitive medium, listening is a process of auditorily cognising the world we inhabit, including the many layers of mediations that structure it.

In a formalistic and reductionistic view, it seems necessary to disconnect purposeful sound-making from deliberate human intents and efforts, attending to sounds ‘in themselves’, for their morphological properties and patterns, thus achieving ‘the elimination of the labour of sound production from the experience of the musical work’ (Croft 2007: 60). In the more materialistic, but anti-reductionistic attitude we are trying to elucidate, we hear the skill, the effort and the potential exerted in the actions that bear and keep the sound event in existence, albeit temporarily. In sound we auditorily experience at least traces of the power relationships behind the coming into existence of events and their articulation in time and space (even when no attempt is overtly made by practitioners to convey any image or pattern of power relationships). Listening is when and where competences and responsibilities imbued in sound-making actions are shared with others, that is, made public (private listening is no exception, it is a gesture of public relevance). The crucial point is an exchange between the perception and the figuration of the freedom and knowledge involved in actual praxis, and thus the sensing and the harbouring (or the rejection) of the subjectivation being developed in and through sound-making practice.

Where and when the conditions are met for that exchange to happen, music can emerge – albeit temporarily and fleetingly. There listening acts as a role *performative* of music. It becomes an active component in an ecology of sounding actions. Music never emerges before one or several listeners – either as individuals or as a collective agency called ‘audience’ – take on themselves the responsibility of establishing a relationship to the sounding ecology being practised. Both practitioners and listeners enact the conditions for music to take place (and that takes time).

3.2. The situation of irreducible listening

This performative aspect of listening can hardly be subject to normative criteria: no true or objective meaning is there that listeners should univocally decode or translate, as an ambiguous message delivered by a sacred oracle. In the above discussion of sound-making, we are far from resurrecting a strong concept of ‘the work’. We are rather looking for a *strong concept of practice* – as a more necessary conceptual tool than a weaker concept of ‘the work’. By including the act of listening in the ecology of sounding actions, we suggest that listening is an open exploration of, and a dwelling in, the continuous flow of interactions and multiple feedbacks of which that ecology consists. The environment is included here as a complex agency, the physically and culturally connoted niche to that ecology.

In a way, what listeners explore is their ‘situation’ – the situatedness of their bodily presence not abstracted from

the field of sound-making actions and related cultural mediations. Listeners do not merely occupy a space or a context, they are constitutive of the context set to sound-making (in fact, as we have seen, they are an active part of sound-making). Their involvement participates in a process that turns the neutral connotations of 'space' into the singular and shared connotations of 'place'. Listeners are not ideal and detached observers or auditors. Their dwelling in sound hardly happens as a 'disinterested' process, and rather functions as a 'being-in' (Latin 'interesse'). A need to separate causes and effects, actions and events – for example, through the implementation of an 'acousmatic situation' (the oxymoron should not go unnoticed) – can hardly be really satisfied: any attempt to implement the separation eventually draws attention on the process operated by the device of separation – be it mythical Pythagorean *veil* or modern *relay* systems (with Schaefferian terminology). Actions and tools utilised to focus on 'sound itself', independent of cause and environment, leave distinct audible traces; they participate in an event of situated experience and make audible a gesture of 'wanting to have done with' the relational element of sound. Of course, only to a heavily biased ear would audio technologies represent or transfer sound 'as is', as they rather inevitably modify it before any intentional modification is pursued by practitioners or listeners. Experiencing the perceptible traces left behind by the process of separating or bracketing reveals the ideological status of 'sound in itself'.¹¹ Listening, as an active exploration of an ecology of sounding actions, is irreducible to the surface of things.

3.3. Reciprocity and ability of response

While 'it's the desire to connect to the place we are in that motivates us to listen' (Westerkamp 1988: 15), today most places we live in host a variety of technological infrastructures. For an ear that binds and connects, rather than separates and isolates, the technological infrastructures are not foreign to the scope of listening (however happy one can be with it). Engaging in listening implies caring for and engaging with the mediations of 'listening tools' and the physical location where listening takes place. The potential for music to emerge is not actualised without the actualisation of the listening body in the sound-making process. Listeners affect each other (relative position in space, sociality of situation, etc.). Moreover, because any act generative of sound requires of course attending to the sound events it enacts (no matter how abstract the approach might be), what listeners

typically attend to does include the activity of listening exerted by practitioners and producers. Listeners grasp whether sounds being made are (or were) listened-to as they are (or were) being made. What would be a music, or an instance of sound art, that were not attended-to by human ears in the process of its making (as is the case with an increasing amount of fully automated routine productions in the music industry)?

In sum, listeners are taken in a dynamics of reciprocity which in its turn is taken, as observed above, in a larger ecology of sounding actions situated in an environment. When carried out in live performance contexts, this process turns then into a meeting of mutually affecting listening agents. We have to include the listeners in the 'performance ecosystem', that is, in the network of human and non-human agencies acting in and with sound, in fact also including the locale environment with its peculiar acoustics and logistics (Waters 2007).¹²

Finally, it is of interest to also note that listening never happens silently. Ultimately, listeners are inevitably a part of the listened-to (they are not 'apart from the listened-to'). We learn, presumably very early in life, to segregate any incidental sounds we ourselves make from the larger sound field we attend to, and certainly from *intended* sounds, either musical or generically communicative. Yet, no attended-to sound event is realistically without the noise listeners make. Listening is never silent because is never disembodied. The extent to which the sonic presence of listening remains a mere nuisance is a question of performance – the listener's and the practitioner's.

We could summarise this overall point saying that listeners are never separate subjects that keep at a distance from objects listened-to, and that the sound event is never complete without the participation of which listeners are able. While the listened-to affects and engages the listener, the latter in turn affects and engages the listened-to (echoes of Heisenberg indeterminacy are often heard in the ecology of embodied perception).

That being the case, the act and moment of listening implies a certain *ability of response* – a certain responsibility. Paying attention and lending one's ear (and body) is necessary for the relational potential of sound-making practices to disclose itself. Beside the responsibility of practitioners over actions and productive patterns, the ecology of sound-making includes a responsibility of listening, too, as an element decisive in order for music to eventually emerge in the process.

¹¹The hegemonic ideological element in the cognitive construction denoted as 'sound object' is sometimes voiced as if it represented 'a kind of universal rule: before signifying something, a sound is a sound and *has* to be mainly considered as that [...] We *should* always look for sound 'itself'!' (Teruggi 2007: 215, my emphasis).

¹²In the context of the 'assemblages of mediations' (Born 2005: 8) we are considering here, speaking of 'non-human agents' only means omitting (temporarily) the humanly devised element of particular agencies (such as electroacoustic devices, architectural designs, practical implements of all sorts) that are of course human, albeit they are maybe not directly acted upon by performers.

4. WHAT IS AT STAKE?

In a world so profoundly structured by unseen, unheard and aproblematically accepted delegations, assumptions of responsibility may be uneasy, and often perceived as disturbing. To many, it is simply meaningless to raise such questions in considering mundane activities such as music and listening. Yet, there we see a political (or simply pedagogical) function of sound-based practices across the broader social scenario: a function to draw attention, through the 'relational' and the 'situational' dimension of the medium, to the social ecology of lived auditory experience. After all, it seems reasonable – and auspicious – to assume that the mutual recognition and the joyful coming together of individuals able to account for their personal involvement are ultimately very good motivations behind our efforts as either practitioners or listeners.

Or – isn't *that* precisely what is at stake, in our commitment to either music or sound art? How can today's forms of subjectivation such as creative sound-making practices also act as 'practices of liberation' (using again Foucaultian terminology)? How can these practices acquire significance in the broader social context and be 'an input to society' (to say it the way composer Herbert Brün would have done, a few decades ago)?

My thesis is that *the inherently 'relational' and 'situational' dimensions of sound define the crucial ecological awareness for creative practices such as music to (still) exist as a domain of social awareness*. Except in too narrow a perspective, the ecological and the social go hand in hand: creative sound-making practices represent a very rich and engaging context where the two hold one another.

Perhaps 'sound art' should be viewed as a novel and more appropriate framework where that connection can be inventively elaborated, and perhaps that would justify a radical split with 'music'. However, the split is less than essential if we consider *both* terms as bearing on sound as a medium of ecological and social awareness. In fact, one could wonder what would be of 'music' were it no longer recognised as a domain where relational and embodied aspects of auditory experience are less than fundamental. Music-making, we all know, involves bodily and intellectual dispositions peculiar and unique in the larger social scenario; it involves a special sense for the passing of time, for the dynamics of the surrounding space, for the coordination and cooperation with other human beings, for a balanced relationship of the body to the tools by which sound-generating actions are exerted in the environment. Grains of ecological and corporeal awareness are central in any instrument playing and singing (they should be deemed central also in designing and using analogue and digital technologies). Being able to negotiate one's partial contribution in a larger performance ecosystem is a distinctive musical faculty. The

harmonisation of technical means and aesthetic ends is crucial in relevant artistic endeavours and, as noted earlier, represents a determinant factor in subjectivation through sound-making practices (indeed, different ways of linking together means and ends nurture different manners of making music). What would be 'music' were it no longer the context of experiences breeding such human sensibilities of intrinsic *extra*-musical implications? Any politics of sound reveals to perform as a biopolitics of music, provided we place music at the intersection of auditory cognition, technology and environment.

What is music when it gets reduced to an ubiquitous 'audio bubble' (Hallam 2012) and to readily available sonic data produced and reproduced in overwhelming amounts, utilised and consumed regardless of *who* is responsible for their production and reproduction, regardless of *how* they get produced and reproduced? What is music when it can be perceived as a kind of sonic pollution, as is frequently the case today? Shall we call 'music' the innumerable audio productions that rather perform the egotistic isolation of 'listeners' (consumers) and even the distancing of practitioners from the 'sonic commons' (Auinger and Odland 2009)? In a time when 'quiet' has become a commodity – as anticipated in (Miller 1993) – a music of 'quiet' almost inevitably acquires political resonances (by 'a music of quiet' I mean sound-making that does not sell images and surrogates of quiet, like various brands of *ambient* and *new age*, but creates occasions for *making silence* and for sharing the experience and the necessity of it). So many decades after John Cage's *4'33"*, a lot of hard work is still necessary to draw attention on the faintest background noise as the *milieu* that both nurtures and consumes the listening body (Di Scipio 2011).

Maybe sound art leaves music there only to pursue those indeed *musical* efforts that might today contrast or bypass a 'disjunction [...] between the body and its [...] environment' long since characteristic of post-modernistic life styles (Jameson 1991: 44), with their inherent tendency towards the virtualisation or surrogacy of reality and of bodily perception. Most politics of sound in the context of audio culture seems perfectly functional to that disjunction. Sound-making practices that escape or deconstruct the reductionistic and anti-ecological dimensions of such a cultural *dispositif*, and its technocratic implications, value and circulate the freedom and the responsibility that, as tentatively illustrated here, are part of subjectivation through sound practices. The space of operation of a biopolitics of music is the public space where subjectivation, dwelling in the medium of sound, set the conditions for the life of music.

5. CONCLUSIONS

In this article, creative sound-making practices have been characterised as a complex and fragile material and

cultural ecology in which we experience the interconnection between the medium of sound, the actions we exert and the freedom we enjoy as we intervene in that medium, and the material and intellectual conditions set to such actions by both the technical mediations involved and the physical and cultural environment – echoes of Felix Guattari's *trois écologies* can be heard here (Guattari 1989). We have characterised 'music' as the qualitative and impermanent features emerging from that ecology of situated and mediated sounding actions. We have suggested that what we hear *in* sound, in this context, is the physical *and* cultural interplay of the processes by which sound events are enacted.

The interplay of ecological and social awareness, so distinctive of music-making and listening, requires of us today to engage in an intense confrontation with the overly technologised dimensions of today's human existence, and to address the perceptual and cognitive dispositions upon which such technologised dimensions have impact. Leaving behind prevalent ideological constructions relative to both technology and sonic experience, we find that there can never be any sound 'as such', and that sounds are always events *of* and *in* a field of relationships (Di Scipio 2003, 2015b), constituted by and constitutive of a larger context at once cultural, political and economic (Kim-Cohen 2009). This is the same context in which we elaborate and practise our freedom as we act sonically in and upon the environment. Practices exploiting technological developments in a logics of separation (of sound, of technical mediations and of the environment) have political or ethical implications more or less neatly following from an ideology of technological determinism. Practices appropriating and developing their tools and technical infrastructures in an attempt to experience the situational and relational dimensions of sound and auditory perception have other political or ethical implications, and seem to deliberately address a 'biopolitical' level: in and through sound, such practices perform the conditions for the emergence of sensuous and intellectual phenomena that possibly deserve to be called 'music'.

This noun – music – returns here as a qualifier, but now more clearly referred to the balanced interplay of ends and means that can be experienced *in* and *as* sound. The coordination of component parts in a whole was called *harmottein* in ancient Greek (the word 'harmony' comes from there). A better balanced coordination and a 'sound interaction' of ends and means is the only harmony we really need to carefully ponder today, and it has only very indirectly to do with questions of aesthetics and musical language.

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