

THINKING WITH SOUND | Building a sociological sonic thinking

1. Refining questions

At the end of the last chapter, I asked if and how practices of sounding might change our modes of knowledge production, not focusing solely on their intellectualised modes but — as Didier Debaise would put it — by »intensifying experience«. I argued that to answer, or at least tackle that question, a shift in the understanding of those practices, and of sounding altogether was necessary. Indeed, the rather classical dichotomy between the acoustic and the visual — which I attempted to understand through McLuhan's thought probes as acoustic and visual *spaces* — might not have been entirely convincing, but it gave nonetheless an important starting point. Its merit was, through a thinking in dualities, to show a certain hegemony in practices of knowledge production, which tend to rely mostly on the visual. However, as seen in Bijsterveld's *Sonic Skills*, this hegemony might not so much rely on the visual in spite of the acoustic as realms of experience, than in a hierarchisation and categorisation of human senses through practice, or rather, in a hierarchisation of the practices themselves. Even McLuhan notes it, the fact that the visual space is governed by reason is no given *a priori*, it did not »appear« with Modern Science. It was built, in the long run, through practices of »inscriptions«, to use Latour's vocabulary again. The text alienates and objectifies, not as such, not in itself, but through the practices attached to it or that led to its production. They are practices of *scientific* knowledge production, still they are not

entirely reducible to the visual. They rather expand, and are also expressed for instance through *sonic skills*. In those cases, sound as an object, or as a tool, is not much different from any other sign that shows, that represents knowledge¹. A variation on inscriptions. In a nutshell, the hegemonic character of how knowledge is being produced apparently remains unchanged.

It means that the use of sound in itself, as methods, as tools, does not seem to be enough to truly challenge and work with the multiplicity of modes of knowledge production. This does not suggest, however, that the endeavour itself is a failure. It rather implies that other questions might need to be asked. On the one hand, the »use of sound« as scientific methods was — as shown in chapter 2 — a form of reification that reduces sound to either »what is to be heard by the human ear« and consequently made sense of by human reasoning or simply posited as another object of inquiry. In the present chapter, a different perspective will therefore be proposed, coming closer to the understanding of new materialisms introduced earlier. This perspective will allow not only to think about sound beyond a too strong anthropocentrism, but to think *with sound, through sound*. As seen with Sha (2013), the focus might lie more on performance rather than representation. More than *sonic skills*, it is a *sonic thinking* that is needed. On the other hand, and directly coming from a reception of *sonic thinking*, the controversy of an alienation of knowledge from materiality — which has been presented in the first chapter — needs to be refined as well. I »inscribed« this alienation in the bifurcation of nature and its resulting dualisms, and consequently, in the modern practices of science-making. But the hegemonic character of what I called, following Montebello, »intellectualised modes of knowledge production«, goes beyond questions of ontology or pure epistemology. It is a certain kind of knowledge that has been alienated, colonised, silenced, deemed unfit, unscientific, unmodern. And it is another, white, male, westernised, that has been the

1 Which would echo how Wittgenstein considers propositions, thoughts, and sounds in his *Tractatus*, as noted in the previous chapter.

scientific intellectualised one. Therefore, asking the question of knowledge alienation — through the lens of *sonic thinking* — also needs to address this hegemony in knowledge production as well as in »sounding practices«².

2. Sonic Thinking as a *thinking-with*

The emergence of »sonic thinking« within academia is a quite new phenomenon. It is more or less a result of the success and expansion of *sound studies*, whose own spread follows the also relatively new domain of *sound art*. However, the advocates of *sonic thinking* make a »point d'honneur« to keep it at the margin of more classical *sound studies*, refusing to remain a study exclusively *about* sound, which would only further objectify sound. For clarity's sake, I deliberately will not propose an overarching and over-limiting definition of sound art (and its separation or not from music) or sound studies (and its existence or not as an independent field of inquiry). Those are mostly questions of textual definitions rather than impacting the *thinking* itself. Nametags presented as *either/or*. Moreover, most readers, handbooks and journals on the matter already discuss and criticise those matters of definition, delimitation and existence quite extensively³. However, among a broad ensemble of definitions and reflections, which, to some extent, include sound, *sonic thinking* as practice seems to imply a particular relation to sound. In the introduction to his edited book dedicated to *sonic thinking*, Bernd Herzogenrath defines it as follows:

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- 2 This step seems even more necessary, being myself a white male French academic working in Germany. On the importance on reflecting on one's own position in writing about sound, see (Schulze, 2020b).
 - 3 For a comprehensive history of sound art published recently, see (Groth & Schulze, 2020). See also (Bull, 2019; Bull & Back, 2015; Sterne, 2012) for a general overview of the field of sound studies — only a short selection among a quantity of monographies and journal articles dedicated to sound studies.

»The project ›sonic thinking‹ aims to serve two interconnected purposes: on the one hand it wants to develop an alternative philosophy of music that takes music seriously as a ›form of thinking‹ (and that might revise our notion of what ›thinking‹ means). On the other hand, it aims to bring this approach into a fertile symbiosis with the concepts and practices of ›artistic research‹: art, philosophy, and science as heterogeneous, yet co-equal forms of thinking and researching.« (Herzogenrath, 2017b, p. 3).

I will come back to the importance of artistic research (or research-creation) — in particular for sociology — in the next chapter, but for now, what is important to take from Herzogenrath is the very basis of what sonic thinking is about: to build practices that are not reduced to one particular field of »thinking and researching«. Following this definition, sonic thinking would apparently allow through »interdisciplinary practices« to think a multiplicity of modes of knowledge production. As I will depict later on, the specificity of artistic practices allow for a different kind of knowledge production that »intensifies experience« and thus multiplies the possibles. However, the question I wish to ask beforehand is: what particularity does the *sonic* in sonic thinking bears, that seamlessly bridges science and art? Or to put it differently: which conceptions of sound — and consequently which philosophical entanglements — are needed to go past the limitations imposed by the reification or objectivation of sound that has been described in the previous chapter?

The concept of a »sonic thinking« or a »sonic thought« therefore demands, first and foremost, to shift the relation between the *thinker*, the *thought*, the process of thinking and the object of thought. Consequently, in »knowledge production«, it means to apply a similar shift between the *knower*, the *knowing* and the »known«, between the practice of knowing and the object of knowledge. Philosophy — as argues Christoph Cox following the »non-philosopher« François Laruelle — has mostly been a philosophy *of* something. In this relation, philosophy objectifies what it studies and (almost fatally) also dominates that constituted object, »claiming the ability to reveal what its object cannot re-

veal about itself: the essence, nature, or fundamental reality of that object. [...] Convinced that its object is fundamentally ignorant about itself, philosophy is little concerned with what that object has to say on its own behalf.» (Cox, 2017, p. 99). Moreover, such a practice of philosophy not only dominates its object, but through this very objectivation, extracts it from the »rest«, in an illusion of independence, of an object that can be taken apart from its »milieu« and studied, analysed in an artificial void. As a result, the illusion of an inert and disconnected object repeats the classical dualisms separating *phenomena* and *noumena*, in the case of Kant, or *Vorhandenheit* and *Zuhandenheit* in that of Heidegger, limiting that object to its human-given purpose and negating its possibility of agency (Harman, 2010). The same argument could be addressed to sociology as a global academic field, within which the sociologies of something also blossom. »Bindestrichsoziologien«, or hyphen-sociologies, sociologies »of [fill blank]«, reduce their practices to an object that indeed, as Cox would argue, does not have much to say on its own behalf, being defined — and thus limited — *a priori* by the theoreticians/practitioners. Their object: an extracted, alienated and displaced *thing*, a void and silent abstraction that loses any grip on reality. An issue that denotes a certain hylomorphic perspective of the object, which fails to address the individuation processes, the genesis of that particular object (Simondon, 2005). The chosen object as preferred field of inquiry, through the choice itself, is already formed. Fortunately for the object, its fate is quite different *in actu*. Even the most strictly defined Bindestrichsoziologien already bear a contradiction in themselves: they never achieve to study just one object, as this object can never be separated from others. A contradiction Bruno Latour unveiled multiple times, not only in sociology but in any kind of practice (Latour, 2005, 2013; Latour & Woolgar, 1986). Those sociologies and philosophies of [fill blank], producing a knowledge of, about something, mostly do so in the mode that I called »intellectualised« following Montebello. They ultimately tend to forget that knowledge in its materiality is also necessarily *in, through and with*.

One could grant that this consideration might seem a bit contra-intuitive at first. Knowledge production is always directed towards an

object that is being known. However, one could also argue that this relation between the knower and the known has been fixated in the practice beforehand thus not allowing the object to be other than known. Any possible agency seems stripped away. Switching from an objectifying *about* to an inclusive, encompassing *in*, *through* and *with* would therefore avoid reducing the process of knowing to an »objectivation only«. Instead, it would allow to create a movement between subjectivation and objectivation (as processes) that does not refuse agency to the »object of inquiry« by fixating and extracting it. In that manner, the idea of a sonic thinking already rejoins Haraway's concept of a *thinking-with*, presented in the first chapter but also comes close to the understanding of experience and empirical methods, as proposed by John Dewey (Dewey, 1958). For Dewey, experience is as much of nature as *in* nature, within which knowledge production as practice is »only« a particular manifestation. In sociology again, both Latour's motto »follow the actor« as well as Callon's principles of agnosticism, general symmetry and free association also weigh against an *a priori* definition of the object and are already to a certain extent a *thinking-with* (Callon, 1986; Latour, 2005; van Loon, 2014). Again, thinking in terms of prehension, the relation linking the knower and the known becomes central, non-exclusive and multidirectional.

However, what Cox proposes for his *sonic philosophy* is not an epistemology but rather an ontology of sound. Through a reflection about the being of sound, Cox attempts to understand how sound and practices of sounding inflect/effect/affect philosophy. In a probable allusion to McLuhan's acoustic space⁴, Cox argues:

»Indeed, sound is omnipresent and inescapable. Lacking earlids, we are forever and inescapably bathed in sound, immersed in it in a way

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- 4 »The ear favors no particular ›point of view‹. We are enveloped by sound. It forms a seamless web around us. [...] We hear sound from everywhere, without ever having to focus. Sounds come from ›above‹, from ›below‹, from in ›front‹ of us, from ›behind‹ us, from our ›right‹, from our ›left‹. We can't shut out sound automatically. We simply are not equipped with earlids.« (McLuhan & Fiore, 2001, p. 111).

that we are not immersed in a world of visible objects. An attention to sound, then, will provoke us to modify our everyday ontology and our common sense conception of matter. Sound lends credence to a very different sort of ontology and materialism, a conception of being and matter that can account for objecthood better than an ontology of objects can account for sounds.» (Cox, 2017, p. 101).

Let's pause here for a moment. It might have already become clear that until now, I never really made any strong distinction between *thinking* and *knowledge production*, as if both terms could be used interchangeably. This has not been a lazy oversight. It is rather a blurriness I thought necessary in order not to fixate too quickly and too soon what is being worked with. At this point however, a further precision is required. Knowledge production is not reduced to the process of thinking. The process of thinking is rather seen as part of modalities through which knowledge can be produced. For instance, in what Montebello describes as the »intellectualised« mode of knowledge production, in which modern science functions, *thinking* is certainly central but not exclusive, it is a process amid a multiplicity of others that lead more or less conjunctly to the production of knowledge — e.g. sonic skills and sonic tools. In that manner, I don't intend to see sonic thinking (or any kind of thinking) as knowledge production altogether and therefore discard and discredit other practices leading to it, but rather try to understand sonic thinking as a particular modality helping to gain knowledge in a way that »intensifies« the materiality of said knowledge. That being said, thinking is also already a doing, a generative practice and doing is thinking (Manning & Massumi, 2014). Knowledge production becomes an entanglement of a multiplicity of practices within which thinking might occur. What now has to be clarified is if sonic thinking is a particular form of thinking in itself, or if it is thinking as a practice that is embedded in a sonic mode of knowledge production, which gives it its particularity? In other words, how and at which point does sound come into the process?

3. Sonic Flux: a new materialist ontology of sound

In the early parts of his book *Sonic Flux: Sound, Art, Metaphysics*, Christoph Cox presents his conception of a sonic flux, which lays the ontological ground for his *sonic thinking*, encountered above (Cox, 2017). If the idea of a fluctuating matter has been already developed in recent philosophy, with a more or less important reference to sound (Bennett, 2010; Goodman, 2012), the concept of a *sonic flux* attempts to build an explicit new materialist ontology, even though it does so mostly within sound studies. In any case, for Cox, it has indeed become necessary to re-think sound to the core and re-inforce its materiality, departing therefore from a cultural standpoint that — as he argues — focuses on human interventions, seeing every phenomenon as cultural construction and representation, which therefore can only reproduce and strengthen the bifurcation of nature and deepen the split between nature and culture.

»A rigorous critique of representation would altogether eliminate the dual planes of culture/nature, human/nonhuman, sign/world, text/matter — not in the manner of Hegel, toward an idealism that would construe all existence as mental or spiritual, but in the manner of Nietzsche and Deleuze, toward a rigorous materialism that construes human symbolic life as a particular instance of transformative processes evident throughout the natural world — from the chemical reactions of inorganic matter to the rarefied domain of textual interpretation — processes Nietzsche called by various names, among them ›becoming‹, ›interpretation‹, and ›will to power‹.« (Cox, 2018, p. 18).

Following Nietzsche and Deleuze, as well as Manuel DeLanda later on, Cox therefore »endorses« — as he himself puts it — a materialism that understands matter-energy-information as »all there is«, a perspective which can also be linked to the idea of a »sonic realism« as developed by Casey O'Callahan: »Realism about sounds — *sonic realism* — is the view that the world contains sounds whose existence is not entirely dependent upon the auditory experience of subjects. Realism about

sounds as I shall develop it maintains, furthermore, that the world of sounds is the same world that contains ordinary material objects, events, and their attributes.« (O'Callaghan, 2007, pp. 9, 10). In this understanding, cultural productions and human interventions are not seen as separated from nature, or from matter, but seen as some sort of particular expressions of them. Cox sums up this idea in the introduction of his book by stating that: »[...] all entities and events in the universe are the products of immanent and contingent material and energetic processes.« (Cox, 2018, p. 6). However, those entities and events are not seen as fixed but rather — following DeLanda's own understanding of history (De Landa, 1997) — embedded in flows and fluxes, a sort of ever-moving magma. Whereas DeLanda sees all there is without *a priori* distinction as flows, from the movement of bodies and genes to the fluctuations of language and money, Cox adds that *sonic flux* might bear a particular importance. As he argues, again through Nietzsche and Deleuze: »Music — and, particularly, sonic difference of discord — makes audible the dynamic flux of becoming that precedes and exceeds empirical individuals and the *principium individuationis*.« (Cox, 2018, p. 29). Music, and Cox expands the argument to sound art as well, therefore does not *represent* the world, it rather takes and samples from a continuous sonic flux, from a constantly changing natural flow, it — and this will become very important later on — *individuates* from that flux⁵.

»Just as Nietzsche conceives artists or musicians as immersing themselves in a field of forces and drawing something from it, so Deleuze suggests that we think of sound as continuous, anonymous flux to which human beings contribute but which precedes and exceeds them — an ever-changing and variegated sonic domain of incalculable size and infinite temporal dimension to which new material is added every moment.« (Cox, 2018, p. 30)⁶.

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- 5 It could be said in that sense, that *sonic thinking* is a thinking-with Deleuze's simulacrum, the sonic flux being constantly changing, the difference itself.
 - 6 The reference to Deleuze can be found just above the cited passage. Here Cox quotes Deleuze: »[...] »One can ...conceive of a continuous acoustic flow ...that

Focusing on the sonic flux — which resembles a fluctuating flat ontology — therefore precisely allows to escape the issues encountered last chapter, among them Vallee's concerns about the objectivation of sound, its reduction to a »secondary quality« as well as its subordination to »what we hear« (Vallee, 2020). This is important because as sound escapes its only function of representation, it also »frees« the practice of listening from any obligation of a human and reason-centred »making sense of«. This is for instance what Makis Solomos calls »l'écoute authentique«, after the Italian composer Luigi Nono, or what Pauline Oliveros understands as »deep listening« (Oliveros, 2005): »[...] l'écoute authentique dont parle Nono est celle qui se centre sur le son en défiant la tradition qui a fait de ce dernier un simple moyen de représentation. Ainsi libéré, le son est également affranchi de son autorité : il est lié au silence. Et l'écoute n'a rien d'une obédience : elle est une ouverture aux possibles.« (Solomos, 2013, p. 222). At this point, Cox still mostly links his sonic flux to aesthetic productions in music or sound art as relatively independent fields. Nevertheless, through the sonic flux, one could ask to which extent sonic thinking can also invest research practices in sociology. This sampling of the real described by Deleuze, which is also a reconfiguration, an impact on the fluxes, already takes part in knowledge production. Not necessarily as in »for us«, but not separated from »our« experiences either.

If one keeps on following Cox's argumentation for a little while, another important aspect of the sonic flux also appears. Sound might escape objectivation »only« but does it escape causality? It is for instance how the composer and music theorist Pierre Schaeffer understands his »objets sonores«, as objects distinct from their sources (Schaeffer, 2002). However, if for Cox, Schaeffer's theory is strongly inspired by phenomenology (which it is), its conception of the sonorous object cannot be entirely limited to it. As Solomos shows, Schaeffer's object-oriented ontology anticipates any »phenomenological turn«, which remains a source of contradiction throughout his work. On the one hand,

traverses the world and even encompasses silence,« he writes. »A musician is someone who samples [*prélève*] something from this flow.« (Deleuze (1998).

the *objet sonore* is not merely a phenomenon perceived by the ear, and distinct from the thing-in-itself, it exists as a whole outside the listener's perception and consciousness, without any »Kantian bifurcation« to say it quickly. On the other hand, however, Schaeffer also sees the sonorous object as the phenomenological object of one's listening. A contradiction which, according to Solomos, Schaeffer apparently never could quite resolve (Solomos, 2013). In either case, the problem remains: it is an object, which for Cox, neglects temporality and multiplicity. In other words, a relatively homogeneous and static being. It denies its faculty to change over time, to become, to be *individuated*. There again, Cox takes from Deleuze's distinction between bodies and events or effects to answer the question of causality:

»In the first place, there exist bodies that have various qualities, that act and are acted upon, and that inhabit various states of affairs in the world. Yet, in addition to bodies, there exist incorporeal events or effects that are caused by bodies but differ in nature from them. Deleuze asks us to think of the ontology of the verb (events) as distinct from that of the noun (bodies) and adjective (qualities).« (Cox, 2018, p. 33).

Thinking sound as an event therefore allows to go past its limitation, its reduction to the effect of a given cause that fixates the relation in an unbreakable bond to the source that produced it, but without arbitrarily separating them into discrete objects either. As Cox notes, shifting from Schaeffer's object ontology to a Deleuzian »ontology of the verb«, grants sound with a particular faculty of individuation, a process of becoming that is not reducible to something exterior to it but nevertheless remains linked to an exteriority: »[...] sounds are not punctual or static objects but temporal, durational flows.« (Cox, 2018, p. 34). Of course, this is true not only of sounds — which are for Cox incorporeal events — but of bodies, things, or any other corporeally more »stable« or »dense« individuals. All undergo processes of individuation, that move, become, and all define themselves in relation to their milieu. Those processes are very different from one another, but can still be expressed in terms of matter, energy and information. In that sense, corporeality is there-

fore »only« a particular physical structure that also became, or rather is becoming, extracted and distinct from its milieu, but still in it and composing it. According to this understanding of individuation, one could say that both events and bodies are embedded in temporalities that distinguish between exteriorities and interiorities, not according to the same »modes«, however. As Deleuze puts it in *The Logic of Sense*, directly referencing the philosopher Gilbert Simondon, from whom the theoretical framework of individuation originates: »Events are like crystals, they become and grow only out of the edges, or on the edges.« (Deleuze, 1990, p. 9; quoted from Sauvagnargues, 2013, p. 69). The process of individuation, either corporeal or incorporeal, can be seen in a movement always happening at the very border of its »structure«, a process that is deeply material and energetic in both cases, linked to a »milieu«, but never reduced to either matter and form or to a unique substance. Beyond substantialism and hylemorphism, it is the relation, the process of individuation that becomes defining (Simondon, 2005). As already mentioned, this conceptual framework has to be traced back to the work of Gilbert Simondon, who had a great impact on Deleuze⁷. However, it is also beyond Deleuze's own use of Simondon, that the original notion of individuation can become central to the *sonic flux* and to *sonic thinking*.

4. Sonic Flux and ontogenesis

As argued just above, reflecting on *individuation* through Deleuze's use of the concept, as Cox did, undoubtedly leads to the philosophy of Gilbert Simondon. Best known for his work on technology (Combes, 2013), with his book *Du mode d'existence des objets techniques* (Simondon & Simondon, 2012), which questions the separation between *culture* and *technique*, Simondon is also a great ontological thinker, as demonstrated in his now well-respected main doctoral thesis and

7 For more information about the influence of Simondon on Deleuze's work, see (Bowden, 2013).

philosophical grounding *L'individuation à la lumière des notions de forme et d'information* (Simondon, 2005). This work — originally written in 1958 and partially published in 1964 — only saw a relatively recent regain in attention, both in France with the republication of the original thesis in 2005 and in English-speaking academia with the translation and broader reception of some of his work, as the books *Gilbert Simondon: Being and Technology* (De Boever et al., 2013) and *Gilbert Simondon: Information, Technology and Media* (Mills, 2016) demonstrate. In what follows, and without aiming for an exhaustive explanation, I will sketch the main lines of his work in order to understand how it may be useful for *sonic thinking*⁸.

Simondon's main philosophical goal is to propose a theory of being that is not reducible to either an Aristotelian *hylomorphism*, where an individual is only the result of an encounter between pre-existing form and matter, or a certain monist substancialism or *atomism* that posits a pre-existing substance forming the individual. In both cases, the issue lies in the primacy of a *principle* of individuation over the operation of individuation that constitutes the individual (Simondon, 2005). To put it differently, in both philosophical traditions, there is a confusion between »being as such« and the individuated being (Combes, 2013). In what he calls an *ontogenesis* — rather than an ontology — Simondon therefore wishes to confront this confusion by focusing on the operation of individuation rather than any kind of *a priori* principle. The individual is the *result* of this operation. In this operation however, the individual is not a fixed entity, a definitive formed being, but rather »relative to reality« (Simondon, 2005), always in becoming, always in relation to a »milieu«. Becoming is a dimension of *being as such* that will lead, through its operations of individuation, to the emergence of the individuated being. Being as such therefore precedes the individuated being, but even then is only seen as a becoming, a magma full of potentials yet to be actualised, a field of virtualities, almost pure subjectivity,

8 For more complete discussion of Simondon's work, see the two quoted books above and of course the introduction by Muriel Combes (2013), which will be used here as well.

not a principle. This is what he calls the *preindividual*, »a system that is neither stable nor instable« (Combes, 2013, p. 3) within which the individual may emerge through »dephasing«. As Muriel Combes notes in her comprehensive and in-depth introduction to Simondon's work:

»The emergence of an individual within preindividual being should be conceived in terms of the resolution of a tension between potentials belonging to previously separated orders of magnitude. A plant for instance, establishes communication between a cosmic order (that to which the energy of light belongs) and an inframolecular order (that of mineral salts, oxygen etc.). But the individuation of a plant does not only give birth to the plant in question. In dephasing, being always simultaneously gives birth to an individual mediating two orders of magnitude *and* to a milieu at the same level of being (thus the milieu of the plant will be the earth on which it is located and the immediate environment with which it interacts).« (Combes, 2013, p. 4).

In Simondon's understanding, being therefore always implies a multiplicity. The individual cannot be thought without its milieu, which appears through the operation of dephasing, or in other words, the resolution of a tension between potentials. However, those potentialities do not entirely vanish, some remain within the individual which keeps on *becoming*. Simondon here strongly uses thermodynamics to explain the stability and metastability of a system and therefore of being. To put it simply, a system is stable when there is no potential energy left, which means, where no further individuation can happen. If an individuated being retains quantities of the preindividual, of that potential energy, it is not stable but only *metastable*, other tensions might occur that lead to further individuation. Furthermore, Simondon understands that operation of individuation as *transductive*, which can be defined as »a physical, biological, mental, social operation through which an activity propagates gradually within a domain, by founding this propagation on a structuration of the domain that is realized from one place to the next« (Simondon, 2005, p. 32; English translation quoted from: Barthélémy, 2013, p. 230). Transduction is central to Simondon's philosophy and this

has consequences in epistemology and ontology all at once. The operations of individuation are not only »subjected« to individuals as beings, but englobe thought and knowledge as well. Simondon positions himself against Kant's theory of knowledge and as Combes notes »before the rupture between the object to be known and the subject of knowledge.« (Combes, 2013, p. 7). One could almost argue that through individuation, Simondon constructs a conceptual framework as well as a methodology that resists the bifurcation of nature described earlier. It also slightly reminds of Latour's reflection on subjectivation and objectivation as processes, which has been encountered through van Loon (2012): not as predetermined realities, but as fluctuations, as becomings. Not in the separation between a nature in itself, and a nature apprehended by us, but in the individuation of knowledge as well as of the individual. Muriel Combes underlines it quite clearly: thinking and being as processes are therefore not much different from each other, both come from operations of individuation, both are transductive at their core.

Coming back to sound, the notion of transduction is also very important both in the practice of *sonic thinking* — which will be presented later — as for the understanding of sound as an event, within the *sonic flux*. An example has been shortly encountered (if not *the* example) of transduction through Deleuze's quote on crystals (see #3 of this chapter). The way a crystal is growing, out the edges, »*de proche en proche*«, is transductive. By reverting the argument that equated the event to the crystal, one can easily see how the Deleuzian event undergoes transduction as well. In other words, the sonic event, as a sample of the *sonic flux*, comes into being through a particular process of individuation, of transduction. A similar idea was proposed by Padovani in relation to Pierre Schaeffer's work, but with a certain distance from the phenomenological *sonic object*⁹:

9 Padovani's article, published in the journal *Interference* is one of the very few contributions that attempts to propose a Simondonian study of sonic practices.

»The very recognition and delimitation of individual *sonic objects* can be related to a *transduction* process that occurs not so much during the mechanism of recording/production, but, above all, in the perceptual and psychophysiological processes that enable us to detach these sounds from a continuum and identify, analyse, manipulate them individually using technical means.« (Padovani, 2018, p. 35).

And to conclude:

»Sound production and perception are by nature dynamic processes that rely on the propagation of an energy to produce dynamic structures (*information*) that acquire and retain their individuality as long as they preserve a clear boundary (*different phase*) and independency (*phase difference*) in relation to the surrounding sound environment. From a Simondonian perspective, we could think in terms of *individual sounds* (or sounds ›in process of *individuation*‹) rather than *sonic objects*.« (Padovani, 2018, p. 42).

The link between Padovani's continuum from which individual sounds detach themselves and Cox's *sonic flux* (apart from a semantic closeness) can seem a bit tenuous at first, or falsely related. Cox's concept is a Deleuzian one, and is directly influenced by DeLanda's own work on fluxes. Padovani himself does not say much about how to understand the continuum, balancing Simondon's theory with Schaeffer, who mostly proposed a phenomenological concept of the *objet sonore*. However, the concept of a sonic continuum might still prove useful, if read for instance through the work of the composer Pascale Criton, in which it regains a certain materiality. Influenced by both Deleuze and the Russian composer Ivan Wyschnegradsky¹⁰, Criton understands the continuum as a pathway, allowing to switch from noise to timbre. The sonic

10 According to Solomos (2013), Wyschnegradsky was the first to introduce the notion of *continuum* in musical composition. It gained in popularity in contemporary and experimental music during the 20th century, with composers like Karlheinz Stockhausen, Iannis Xenakis and Pierre Boulez (»Pascale Criton, Le Continuum Du Son,« 2018). In that manner, and regarding the global argument of Padovani's article, I see both conceptions as close encounters.

continuum is a plane in which sound switches »states« (»Pascale Criton, *Le Continuum Du Son*,« 2018). However, it is not a spiritualist turn¹¹, but a very material conception of sound. Just like other physical beings, other individuals, sound is here being expressed as a fluid, an unstable becoming, in other words, as a being undergoing individuation : »A l'idée que la ›logique du vivant est en devenir — et non pas stable et simplifiable‹ (comme elle l'était pour la pensée mécaniciste) correspondrait donc une musique ›qui se porte sur le multiple, l'interactivité, la complexité du mouvement et la formation dynamique des évènements‹» (Deleuze & Solomos, 2002, p. 41; quoting Criton, 1998, p. 130).

This might have been a slight stretch, but through Criton, Padovani's continuum can be understood in a way that makes sense of individuation and transduction and that indeed comes very close to Cox's sonic flux. Musical practices are transductive practices, they individuate sound, they extract sound from the sonic flux, this »sonic continuum«. This, of course, is true of compositional work, like the ones of Criton mentioned above or any others for that matter, Padovani notes. Interestingly though, not only for composition does it bear importance. A version of the concept has been experimented with indirectly (apart from references to Deleuze and some versions of new materialism) through »radical« improvisation, the way the drummer Sean Baxter understands it: as an »acte critique du *devenir*, en incarnant la promesse d'une rupture progressiste, et en amplifiant les possibilités sociopolitiques offertes par le tumulte des flux.« (Baxter, 2020, p. 15). In Baxter's understanding, improvisation thus becomes the sampling of the sonic flux on the go, formulated through the materiality of objects and bodies sounding. Non-metaphorically. The sonic flux, in short, either in compositional or improvisational perspectives therefore makes sense, not from a theoretical standpoint that wishes to make jigsaw

11 From John Coltrane to Karlheinz Stockhausen or to some extent LaMonte Young, the *sonic continuum* also gained a spiritualist value, which has been strongly criticised. As Solomos (2013) shows, it supposes the faith in a »vibratory unity« with the universe, the access to a higher plane of understanding and consciousness.

pieces fit at all costs, but from the practice itself. The sonic flux thus becomes the basis, the preindividual magma from which sounds can extract themselves or be extracted through the transductive sounding and listening practices, ordered, modulated, recomposed, and become individuated sounds. They are not only »acted upon«, but themselves change the milieu and other beings they are related to. An example could be found in the process of subtractive synthesis. Through an array of filters applied to a white noise signal — which itself contains all frequencies — some frequencies are taken out, rendering step by step a »particular sound«. The filtering individuates the signal into a particular timbre, a particular note, a particular event that is still relating to its own milieu and influencing it, through the characteristics of that filter. However, this example is only for the sake of illustration. It does not mean that white noise is the pre-individual itself, it can also be thought as an individual event (for instance through sequencing i.e. the temporal ordering of sound events), when thought in the scope of an electroacoustic composition. Nor does it mean that only subtractive synthesis (in contrast to other forms of synthesis, like additive and FM) is a transductive operation of individuation. In any case, the Simondonian concept of being, applied to sound in combination to Cox's *sonic flux* proposes a new materialist consideration of sounding practices, neither limited to nor excluding human contribution.

5. From Sonic Flux back to Sonic Thinking

In the sonic flux, sound is an event, or an effect¹². It is an actual occasion. It is immanent, differential, expressed in terms of matter-

12 For Cox, an effect is a particular event distinct from its cause but bearing a certain possibility for repetition and thus »not reducible to their empirical instantiations« (Cox, 2018, p. 34). He takes the work of Augoyard and Torgue (2006) as an example, in which the sound effects describe a soundscape as a »flux of haecceities, recurrent but transitory auditory modalities and intensities.« (Cox, 2018, p. 34). An example of those effects would be the Doppler effect.

energy-information. It undergoes operations of individuation through the practices of sounding and listening, which are transductive (Padovani, 2018). Such a materialist conception of sound is important because it allows to strongly rework the effects of the bifurcation of nature, among them the separation nature/culture, subject/object. Not only theoretically, but in practice as well. As noted above however, Cox's work is mostly directed towards aesthetic productions, in particular »sound art«. It is in those productions, from the musical score to the sound recording and the sound installation, that the *sonic flux* is being expressed, not as a representation, but as a sample, a configuration, a particular individuation:

»Such a materialist and realist account of the sonic arts will enable us to conceive sound as both irreducible to culture and also shaped by it. It enjoins us to suspend the idealist and humanist language of representation and signification that has characterized cultural theory over the past half century, and to reconceive aesthetic production and reception via a materialist model of flow, force, and capture.« (Cox, 2018, p. 41).

This conception of sound reminds of the first principle of Latour's *Irreductions*: »Nothing is, by itself, either reducible or irreducible to anything else.« (Latour, 1988, p. 158). Following Latour, it therefore means, that sound, to exist as a »real thing«, must resist what he calls »trials«, which are expressed in terms of forces. Simondon's operations of individuation become processes of resisting, of gaining strength, of forging alliances with others. To »exist«, sound must propagate in a non-empty milieu, it requires enough power to set the molecules of that milieu into movement, which already involves a quantity of actors. As Latour puts it: »No actant is so weak that it cannot enlist another. Then two join together and become one for the third actant, which they can therefore move more easily. An eddy is formed, and it grows by becoming many others.« (Latour, 1988, p. 159). This is the movement »de proche en proche« at the heart of individuation. In other words, sound, to exist, to become, needs others, a »milieu« in which to emerge, which is itself a multiplicity of actors, or as Whitehead would put it, of actual entities.

In that sense, individuation as becoming is already *prehension*. As transductive, it is »conrescence«, a thickening »togetherness«, alliances in movement (Debaise, 2006; Whitehead, 1978).

»The art of sound is precisely the art of unleashing, cutting and shaping these flows, which are temporal or nothing at all, always manifesting the passage, the relentless becoming-other that is time.« (Cox, 2018, p. 169).

Even in Padovani's article, in Criton's compositional work, or in Baxter's radical improvisation, musical expression is at the centre; it is what individuates sound¹³. However, as Schulze (2018) points out, this *sonic materialism* goes far beyond a new definition of sound art as an aesthetic practice, but encompasses every possible practice of sounding and listening, that are not necessarily defined or culturally coded as »musical productions«. This does not mean however, that — for instance — Criton's or Baxter's works are not *sonic thinking*. In the case of Criton's music, the reflections about the smallest variations, about the Deleuzian notion of the sensible, but also the territorialisation of sound (Solomos, 2013), are a particular instance of *sonic thinking*. For Baxter, *sonic thinking* is necessarily at the core of improvisation, which leads him to think his production with Anthony Panteras and Dave Brown as an »ultra-materialist and anti-humanist music« (Baxter, 2020, p. 15). Nevertheless, it is not only musical, it also reconfigures what is understood as »sonic research«: from *Sound Studies* about sound, to a *sonic thinking*, »with, through and beyond sounds« (Schulze, 2017, p. 218).

Deriving from the sonic flux, sonic thinking is first and foremost a process-centred thinking. For Christoph Lischka, it allows to follow Whitehead and reconfigure the »balance of fluency vs. permanence, of generation vs. substance« (Lischka, 2017, p. 173), to weigh against the bifurcation of nature, to escape the »subject-predicate-object struc-

13 Central, but not exclusive, even in Criton's understanding (Delume & Solomos, 2002)

ture« (Lischka, 2017, p. 172) that determines object-oriented thinking¹⁴. It refuses a certain anthropocentrism as well as a logocentrism and bears spatial, corporeal and »imaginative« components (Schulze, 2017). In terms of sociological research, including a *sonic thinking* thus might lead to tremendous consequences concerning the methods employed — not only of gathering and interpreting data, but on the methodology of *doing sociology* altogether. It changes the *Herangehensweise*, as well as the modes of knowledge production. Following Herzogenrath (2017b), Cox (2017) and Schulze (2017), adopting a »sonic thinking« can therefore never remain enclosed in typical sociological methods or philosophical thought alone. They are *de facto* always already at the intersection of scientific work and aesthetic practices. But they are also a critical thinking|doing, asking what it means to do science and produce knowledge, (Schulze, 2020b; Szepanski, 2020) as well as *speculative fabulation* reflecting on one's situatedness and also who to think-with (Haraway, 2016)¹⁵. The proposal for a *sonic thinking* is therefore not only of epistemological or ontological nature. In the preceding chapters, it has been shown that the alienation of knowledge from materiality could be expressed in how knowledge was being produced, which itself derives from the situatedness of knowledge production and that a silent knowledge could be seen as a particular expression of that alienation. What is being implied in this proposition? How is a *sonic thinking* being performed and how is it indeed challenging existing conceptions and hierarchisation of knowledge production?

14 Presented in that manner, Lischka's sonic thinking sounds quite like what Simondon intended to achieve with his ontogenesis as well as a departure from an alienating and objectifying text-making.

15 *Sound formations*, speculative fabulation, sonic fiction. I follow Haraway, Stengers and others and branch on the *SF* catalogue (see the introduction of this work).

6. Doing sonic thinking?

Rather than presenting an »all-encompassing« listing of what it might be, a dive-in the reality of *sonic thinking* seems more adequate. To do so, I can only repeat Schulze's invitation and technique: »*Sonic thinking* starts here: where knowledge is not mainly gained by academic reading, by discussing, falsifying or confirming, by rejecting or redefining propositions on some object called *sound*.« (Schulze, 2020b, p. 19). The knowledge Schulze's is referring to mainly emanates from Kodwo Eshun's *More Brilliant than the Sun: Adventures in Sonic Fiction* (1998), »a book written out of music« (Schulze, 2020b, p. 83) that helps (re-)defining *Afro-futurism* and challenges a certain hegemony not only in musicology and sound studies, but in cultural theory, science and art practices as well. What Eshun proposes through his book but also through the research-creation practices of the *Otolith Group* co-founded with Anjelika Sagar¹⁶, is a mode of knowledge production that actively engages and reflects on the issues of alienation already mentioned. By means of sound practices, performances, installations, exhibitions as well as academic articles and books, they can weigh against this alienation, not only of knowledge, but through knowledge, against the alienation of bodies. Displaced and silenced bodies. An inescapable materiality, reinforced through the sonic. A multiplicity of modes of knowledge production escaping the hegemony of an intellectualised one, which too often tends to deny its own situatedness. Their work is rooted in aesthetic practices, but they are in their effect, in what they activate, in the knowledge they produce, already very sociological.

This project, this practice, this attitude is also what drives the work of Philadelphia-based *Black Quantum Futurism* and their carriers Camae Ayewa and Rasheedah Philipps¹⁷. They describe the project as follows:

16 More information of the *Otolith Group* at: <http://otolithgroup.org/index.php?m=information>.

17 There is a conceptual, theoretical and methodological closeness between the work of the *Otolith Group* in London and *Black Quantum Futurism* in Philadelphia, even though their claims and situations greatly differ. A passage point

»Black Quantum Futurism (BQF) is a new approach to living and experiencing reality by way of the manipulation of space-time in order to see into possible futures, and/or collapse space-time into a desired future in order to bring about that future's reality. This vision and practice derives its facets, tenets, and qualities from quantum physics and Black/African cultural traditions of consciousness, time, and space. Under a BQF intersectional time orientation, the past and future are not cut off from the present – both dimensions have influence over the whole of our lives, who we are and who we become at any particular point in space-time. Through various writing, music, film, visual art, and creative research projects, BQF Collective also explores personal, cultural, familial, and communal cycles of experience, and solutions for transforming negative cycles into positive ones using artistic and wholistic methods of healing. Our work focuses on recovery, collection, and preservation of communal memories, histories, and stories.« (Ayewa & Phillips, n.d.).

What becomes clear from both artistic groups is their relation to space. Space not only as the outer space — which is nevertheless at the core of *Afrofuturism* — but first and foremost as the situatedness of their discourses and practices. This is what defines *sonic thinking*. It is a *spatial* and *located* thinking. Knowledge production is situated (Haraway, 1988). In the case of *Black Quantum Futurism*, it is deeply rooted in the city of Philadelphia, it is deeply emerging from the black communities living there. The *sonic thinking* that emanates from those spaces, the *sampling* of the sonic flux that bridges through times is located¹⁸. An afrofuturist, feminist queer practice challenging the hegemony of knowledge

were both met was at the Institute of Contemporary Art (ICA) in London in 2019, where they discussed the topics of *Black Chronopolitica* and *temporal deprogramming* by re-investing and giving importance to erased narratives and alienated histories. See <https://www.ica.art/learning/black-quantum-futurism-the-otolith-group-black-chronopolitica>.

18 See for instance their project *Black Womxn Temporal* (<http://blackwomxntemporal.schloss-post.com/>) or *Project Time Capsule* (<https://www.blackquantumfuturism.com/project-time-capsule>).

production. Moreover, this re-territorialisation of experiences and histories, is made possible through the very nature of sound and how it propagates: »any sound event can only be materially manifest in a specific physical situation — be it a concert venue, an art gallery, a tablet computer with poor loudspeakers, or a pair of headphones.« (Schulze, 2017, p. 224). It is never only sound, of course, but sound accompanies the thinking, the doing, it produces and propels it. A *thinking out of sound*. The materiality of the sound event and the *milieu* in which it evolves are central. As Schulze notes, the technologies involved in both emission and reception, the design and architecture of the space in which it unfolds become defining. Thinking sonically and spatially thus »focuses on: *The Auditory Dispositive and the Aural Architecture as the historically, culturally, and materially determined, and thus highly situated and immersive, conditions of any sonic experience.*« (Schulze, 2017, p. 224). This sonic thinking also *activates space*, in the sense developed by James Morrow and Rob Shields¹⁹, not only because it »repurposes« vacant spaces, but because it shows the importance of that space and its community, it shifts the attention to purposes that might have been forgotten, or have been hidden, silenced, alienated²⁰, through a plurality of modes of experience, through a multiplicity of modes of knowledge production. It activates space through *sonic* practices.

Remaining along the lines of Schulze's typography — such an activation of space, such a *sonic thinking* is also necessarily a *corporeal* thinking. The spatial immersion of a *sonic thinking* is — I might dare to say — *de facto* a corporeal one. The situation/localisation of sonic thinking is the situatedness of the body listening and sounding. The body becomes the prerequisite for a sonic epistemology.

19 In their field guide *Activating Space*, Morrow and Shields propose strategies to find »new purposes for vacant spaces«: <https://www.spaceandculture.com/wp-content/uploads/2020/04/Activating-Space-Field-Guide.pdf>.

20 See for instance the *Black Space Agency* project by BQF: <https://www.blackquantumfuturism.com/black-space-agency>. Further from BQF, the work of Emma Warren with her book *Make Some Space: Tuning into Total Refreshment Center* (2019) and the jazz musician Angel Bat Dawid also propose variations on how to activate space through sound (Warren, 2020).

To express this prerequisite, the following paragraph is an illustration, a switch in narration, an attempt to show the corporeality implied in *sonic thinking*, as a kind of autobiographical snapshot. My own sampling of the sonic flux as a direct reference to Schulze's storytelling in *The Sonic Persona* (2018).

The body of the researcher, my body, right here, typing away on my laptop, not sitting straight enough, a bit bothered by the neighbour who starts to vacuum clean her place. Actually, I am not that bothered, I have to confess, I prefer the constant drone of the machine to the »four-to-the-floor« dancefloor techno she was blasting yesterday. It would be almost relaxing if it did not remind me that I have to do the same later. She drops something heavy on the floor, a book perhaps. The materiality of knowledge does sound, apparently. Interrupted by the sudden stomping sound, I drift out. My focus wanders elsewhere. I am now listening to the swallows that circle the house in a mad race. They are hunting, chasing small insects and mosquitoes, easier to catch now than during the afternoon; the humid air of an early summer evening weighs on their thin wings and slows them down. The birds sing. My body reacts, I react to the sounds I am immersed in.

This sudden change of register might feel a bit odd. Incongruous even. Despite the lack of elegance in its appearance out of nowhere, the »out-of-place« feeling it produces also exemplifies the difference between a small piece of narration and the academic tone normally expected. A quick (self-)reminder maybe, about how knowledge is being constructed. This form of storytelling is not centred around a phenomenological understanding of the *sensory experience* though. The human body and »sonic persona« are only part of the sonic flux (just like the swallows outside or the vacuum cleaner upstairs). It follows Schulze's conception, a non-anthropocentric approach to knowledge production through sound. The sensory experience of the body is itself generative and produces knowledge, an experience that can be expressed and intensified through particular forms of storytelling like sonic fiction.

Schulze focuses on Steve Goodman, Jean-Luc Nancy and Eugene Gendlin to express the corporeality of sonic thinking that places »the

humanoid and its body within a dense, materially and corporeally resonating field of possibilities, flexibilities and other relations of the human« (Schulze, 2017, p. 227). Based on this quotation, one could still argue that the focus lies in the human as a particular sensing being and that the approach surely remains anthropocentric. Even the narrative piece would indicate it. However, in that case, the *humanoid* is seen as singularity, but not as the exclusive sensing body. Or rather, as he states elsewhere: the sensory persona is not human (Schulze, 2020a). The practices of listening and sounding are not necessarily reducible to reason-mediated processes. Even then, in this very sentence, I reiterate the dualisms I wish to depart from, by separating reason from experience. It is through William James that one could finally make sense of what is above: »If you ask what any one bit of pure experience is made of, the answer is always the same. ›It is made of *that*, of just what appears, of space, of intensity, of flatness, brownness, heaviness, or what not.« (James, 1976, pp. 14, 15). Thoughts and things being made of »the same stuff«, sonic thinking gains in density. Coming back to Simondon's wording, one could then add that the »humanoid« is an individual being (becoming) on the verge of further individuation. The sonic flux as a flow of matter-energy can become information as *in-forma-tion* (Combes, 2013). Sounding and listening practices are actualising potentialities that could cause further individuations. Taken in that material sense, sound and thoughts are generative within human corporeal epistemologies but not only, and without being excluded from them either. This is for instance what Mickey Vallee (2020) shows in *Sounding Bodies Sounding Worlds*: practices of sounding and listening, *sonic thinking*, *sonic epistemologies* that are not entirely reduced to an anthropocentrism, both in very scientific fields (like bioacoustics) and artistic contexts. A *thinking with sounds* that engages with the plurality of modes of knowledge production, themselves being *thinkings with sounds*.

7. For a sociological *thinking with sounds*

Sonic thinking is therefore embedded in a multiplicity of practices that go beyond classical definitions of epistemology. Its spatial and corporeal entanglements underline and even request this multiplicity of »epistemic practices«. In other words, *sonic thinking* is an acknowledgment and a pursuit of the multiple modes of knowledge production, modes that indeed re-inforce the very materiality of knowledge. What Schulze proposes is to expand what can be understood as »epistemic practices«. Echoing what I described in the first chapter, not only practices deemed scientific are generative and produce knowledge. Dancing, sewing (Haraway, 2016; Manning et al., 2018), walking, cooking rice (Kissmann & Van Loon, 2019b) are not less »epistemic« than practices of writing, thinking, and debating, for example. And of course, practices of sounding and listening are as well. Through his analysis of the work of Kodwo Eshun (to which I attempted to add BQF, amongst many others), the expansion Schulze proposes therefore sounds like an invitation, a possibility to experiment towards a sociological thinking with sounds. *Sonic thinking* becomes a real *proposition* — in the sense of Whitehead — a *lure* that »captures feelings« and »intensifies« experience, a speculative practice that engages with the plurality of possibles (Debaise, 2015b).

»Positioned in sound, in its visceral and material impact, one moves away from a traditional and distant epistemology. An epistemology that imagines some anonymous, objective, omni-erudite and all-knowing researcher as its steering entity — always male and athletic and always in charge, »white, thin, male, young, heterosexual, christian and financially secure« (Lorde 1984: 116). A strange and actually inexistant »mythical norm« (Lorde 1984: 116). From this epistemic idealism one moves carefully, daringly and curiously into epistemic materialism and realism. A sensory and sonic materialism that materializes actual and existing sensibilities and subjectivities of experience — in all their glorious erratic richness.« (Schulze, 2020b, p. 102; quoting Lorde, 1984).

The challenge *sonic thinking* poses to sociology is therefore that of a departure from logocentric practices (Schulze, 2020b). This does not mean however that the *scientific* practices of writing, reasoning, of »doing sociology« should be erased, refused, or forgotten, but that their hegemonic character in the production of knowledge should be questioned. If I understand the practice of sociology as experimental, as »research« the way Latour presented it (1999), then I must reflect on those issues as well. If I intend to practice a sociology that follows James' radical empiricism, Dewey's pragmatism and Whitehead's speculative philosophy, then the expansion of what »epistemic practices« mean is more than necessary. Such an attitude seems central to regain the pursued experimental character but also, as argued in the first chapter, because of the political and ecological urgencies attached to those practices and the critical standpoint sociology can inhabit. As Nigel Thrift puts it in introducing his *non-representational theory*: »[...] the social sciences and humanities suffer from a certain kind of over-theoretization at present. There are too many theories, all of them seemingly speaking on behalf of those whose lives have been damaged by the official structures of power.« (Thrift, 2008, p. 3). The goal thus becomes, from the posture of a thinking-doing, to also question those structures of power. This opening of possibles, of »sonic possible worlds« through practice also implies to rethink how »new materialism« is being used and understood, in order to avoid the same alienating pitfalls that tend to discard a knowledge production that is not white or masculine enough. The quote by Schulze, referencing Audre Lorde makes it quite clear: the need to move »away from a traditional and distant epistemology«. Reflecting on *sonic materialism*, and engaging with the work of Quentin Messailloux and Christoph Cox, Salomé Voegelin also reminds the importance of the situation in the production of knowledge:

»While a masculine new materialism insists on the absence of the human to get to the unthought, and thus ultimately proposes the end of philosophy in its own mathematical probability, a sonico-feminine new materialism brings us to the creative performance of matter and language not in words but on the body and on things: doing, digging,

gardening as a revocalization and rephysicalization of theory through its intra-activity with things.« (Voegelin, 2019, p. 175).

Language not in words. *Logos* beyond the text. This has important consequences in understanding *logos*, which could become problematic and challenging for classical sociological practice, mostly because of how that *logos* in socio-logy has been dealt with. A *logos* which can be seen here not so much as the focus on writing cultures than as the transcending value of the text, of reason, and in the case of sociology, the »always-already-here« quality the social, which is for instance inherent to Durkheim's sociology. As van Loon (2017) shows, this understanding of *logos* and consequently of *nomos* (as arbitrarily opposed to *logos*) only results in a separation between *Spprechen* and *Handeln*, between discourse and practice, and consequently between *thinking* and *doing*. The alienating character of theory Thrift (2008) describes actually results from this split through a denial of its situatedness, apparently even more so as it has been mutating from *Spprechen* to *Schreiben*, as shown with Ong (2002) and McLuhan (2001) in the previous chapter. However, this reproduces the dualism *thinking* vs. *doing* in their *visual* vs. *acoustic* or *literacy* vs. *orality* expressions. Therefore, to escape this dualist *cul-de-sac* that tend to conceive the social as an »always-already-there« *sui generis* reality, van Loon proposes to reshape the understanding of *logos* through *legein* and *typtein*.

Typtein is the impact that makes a difference in a situation. Van Loon here takes the Heideggerian hammer example: the impact of a hammer makes an imprint, it creates a difference, a singularity. »*Typtein* ist das gewaltsame Herausfordern einer Wirklichkeit im Sinne von Differenzieren (z.B. als Selektieren, Unterscheiden oder Entscheiden). *Typtein* ist deshalb das Sich-ergeben von aktuellen Entitäten, die in ihrer Auswirkung individuell nachvollziehbar sind, zum Beispiel in Bezug auf das, was sich als Teil einer Sammlung präsentiert.« (van Loon, 2017, p. 73). *Typtein* is in that sense the individuated sound event, differentiated from its milieu, from the sonic flux. Something moved by the impact, something in motion. But that something is never taken away from its milieu. This is where *Legein* becomes important: »*Legein* ist die

Investition der Bedeutsamkeit oder Sinnhaftigkeit einer Wirkung, wodurch (vielleicht sogar kausale) Verknüpfungen zwischen voneinander in verschiedenen Aktualitäten getrennten Ereignissen nachvollziehbar gemacht werden. Mit *Legein* bekommt eine Kreation (als Gestaltung) oder auch Entfaltung auch eine Kreativität (eine schöpfende Kraft).« (van Loon, 2017, p. 74). *Legein* is a gathering, an assembly of the differentiated through *Typtein*. A form of ontogenesis that allows to think the *pre-individual*. If *Typtein* is the individuation of the sonic flux, *Legein* becomes the *sonic thinking*, the *sonic fiction* even, that gathers. The discourse as gathering is already performative and already a *Handlung*. There is no separation between *Sprechen* and *Handeln*. Consequently, *logos* becomes itself something else: »Logos ist Handeln-Sprechen und Sprachlichkeit ist immer eine immanent-performative Verwirklichung.« (van Loon, 2017, p. 80). The issue with the representation of sound, or the representation of data as sound therefore lies in the understanding of »sense-making« that not only separates words from things but objectifies what it makes sense of. Thinking *logos* through *Legein* as gathering, re-presentation does not objectify what it shows, not to the same extent, at least. It rather unveils the multiplicity of possibles, in which *Typtein* as singularity can be expressed as a particular situated modality, linked to other situated modalities, other expressions of *Typtein*. In this, it comes close to the radical empiricist attitude and the speculative posture endorsed by Stengers and Debaise that intends to intensify the possible. Even more so because the relation between *Legein* and *Typtein* is expressed in its materiality, or rather in the relation between matter, energy and information.

Hence, following van Loon, there is no »escape« needed, no compromises to be made in a possible sociological *thinking-with sounds*. Eshun's book *More Brilliant than the Sun* has been posited as the exemplification of sonic fiction, which, following Schulze, is not encapsulated in the — rightly so — criticised logocentrism. Based on *legein* and *typtein* however, Eshun's book is generative as impact, as motivation, but as *gathering*, as *logos* as well. In other words, the generativity of sonic fiction and sonic thinking receives an even greater value through its *logos*, its ability to gather, to render singularities in their multiplicity, on the sole

condition that *logos* is understood as a creative thinking|doing, speaking|doing. In the quote above, the »visceral and material impact« is a particular expression of *typtein*, an expression of singularity, a particular individuation. As described earlier, *typtein* differentiates (van Loon, 2017). In a *sonic thinking*, it is also *legein* as a gathering of those particularities and differences. If anything, as van Loon notes, this recollection is the result of what may be called the social. In this, a sociological thinking with sounds thus can be positioned at the crossroads between Schulze's heuristic sonic thinking and van Loon's sociology as *Empiraterie*:

»Dadurch, dass man empirisch denkt und sich auf konkrete erfahrbare Ereignisse beruft, ist man in der Lage, das soziologische Denken weiter anzutreiben. Die Empirie wird zwar »genommen« (und von ihren konkreten Situationen entfernt), aber das passiert immer spielerisch und mit einer Vielfalt von möglichen Rückbindungen. Diese Vielfalt ist ein Antidot gegen vampirisches Soziologisieren. Dieses Antidot der Empiraterie bedeutet dann nichts anderes als eine spekulative Begegnung der temporalen Situativität des Sozialen.« (van Loon, 2017, pp. 89, 90).

