THINKING-WITH | A speculative venture between aesthetic thought and research-creation

1. Sonic thinking and artistic practices

For a sociological sonic thinking. I ended the last chapter on this »plaidoyer«, assured that it would make sense, assured that it gained enough value and energy to set into movement, to impact. In order to achieve this call for action, however, I need to circle back to a certain aspect of sonic thinking I left au chaud for further discussion. It should have become clearer now that sonic thinking encapsulates the speculative posture described in the first chapter and could become a strong ally in an exploration of the multiplicity of modes of knowledge production. A posture to which I would add a Jamesian inclination towards experience. The question left unanswered, though, concerned the practices themselves. What does sonic thinking look like? What does it sound like? Bits of narration and references to art collectives could give a hint, but within sociology, is it that clear? Indeed, both Herzogenrath (2017b) and Cox (2018) understand sonic thinking as entangled within artistic practices but do not expand beyond them, or do not say much about their inclusion in research practices, for example within social sciences. A strong link between sonic thinking and art as mediated through the aesthetic (of sound itself, of sounding?), but does it remain within the »art world«? Maybe in contrast to Cox and Herzogenrath, Schulze - who does not reduce sonic thinking to

art — still acknowledges the particular and intense relation between sonic thinking and the sensible (the humanoid as sensing body). A relation, which for him bridges the work of Kodwo Eshun and Michel Serres (Schulze, 2018, 2020b). Sonic thinking — because of what it engages with and thinks through — seems to be necessarily bound to the aesthetic. And more often than not, it does so on what appears to be the mode of artistic practices, even if it is reaching far beyond those particular expressions (Herzogenrath, 2021).

Reflecting on the unfoldings of sonic thinking thus implies to take the aesthetic into account and ask to which extent they are generative practices. In addition and from this standpoint, thinking in terms of artistic practices, as »research-creation« as I will later explain in more detail, may indeed become helpful to tackle some of the issues presented earlier, mostly in terms of the definition of agency, the reification of sound, or the situation of knowledge practices. Such practices could be thought of as »non-representational«, as Nigel Thrift (2008) understands them. More than a focus on practice, non-representational theories convey an understanding of »life«, the »everyday«, and experience beyond phenomenology and a certain anthropocentrism, mostly through a new materialist and radical empiricist perspective. This is interesting, not only because it criticises dualism and hylomorphism, but also because it proposes a concrete alternative. In such theories, the performative is central in order to generate knowledge differently, to engage with other actors differently. It has been already discussed in earlier chapters: practices of sounding and listening are prehensive. One could argue that they are already aesthetic. For Thrift, performing arts are able to »capture« »traces« of actual entities, through the sensible. It is not only a philosophical argument, but a very concrete posture of engagement with those entities, within materiality. In other words, the inclusion of performing arts in social sciences, but also, as I will argue in what follows, of aesthetic practices in a broader meaning, which are at the heart of sonic thinking, thus allows to generate knowledge and thought according to other modes, not alienated from materiality, in short, to fully embrace the prehensive character of sounding. If anything, *sonic thinking* understood as aesthetic practices reinforces what has been seen in the second chapter through Goodman and Vallee.

Such an attitude therefore directly engages with a sense of »wonder«, as Thrift puts it, a certain re-enchantment of the world. As I will discuss later with Simondon, this idea of wonder can be seen as a comeback of the magical, which itself brings a redefinition of agency, and of knowledge itself. It is an intensification of experience, an »expansion of life« that underlines matters of concern. The aesthetic within a thinking-with sounds is therefore not only of theoretical value, but in engaging against neoliberal practices of alienation, co-opting and monopolising aesthetics, and with them, a certain production of knowledge, it becomes critical. In the first chapter, as one intention motivating this work, I asked, through Haraway, how to stay with the trouble, in particular within sociology. I would argue at this point that a thinking-with sounds, which directly and profoundly engages with the aesthetic, embodies such a critical attitude from within the »Chthulucene« (Haraway, 2016). Engaging with sonic thinking as aesthetic practice therefore means to be able to reflect on those questions and how they indeed relate to sociology. To which extent can it be included in sociological research? Do those practices indeed express other modes of knowledge production? Are those modes thus limiting what is being understood as knowledge, hindering its production? Or on the contrary, do they achieve its intensification, and even allow to propose a viable critique of the said »trouble«? Are sociology and art, or broader said even, aesthesis, bound to a subject-object relation or can it be reconfigured into something else?

The following chapter is therefore an attempt to focus on that aesthetic and non-representational character that lies in sonic thinking. Aesthetics are here taken in the original sense of aesthesis, the sensible, the experience, rather than the Kantian judgement of the beautiful. In other words, this chapter will propose a reflection on how an aesthetic thought, as what constitutes a thinking-with sounds, might allow to link sociology and artistic practices and what importance it can bear for sociological research itself. As a consequence, a clear-cut definition of what sonic aesthetics, or practical aesthetics are — again, for instance in relation to Kant's aesthetical judgement — should not be expected

here. Aesthetics is one of the main pillars of philosophical theory-making since Ancient Greece and I do not intent to either propose an exhaustive history of the concept or define it anew¹. I would rather follow another approach. I already sketched the closeness between van Loon's Empiraterei and sonic thinking at the end of the last chapter. I would like to continue and deepen this exploration in the present one, by insisting on the speculative and generative character of aesthetic thought, and of what could become a sociological thinking-with sounds. In this, I hope not to construct a clear set of methods to be applied on any object of inquiry but rather to clarify the *attitude* I could adopt in doing a sociology that is radical and ethical.

»What if we view the world not as a vacuum raisined with corpuscles but as a *plenum* instead? What if we construe and construct our world as a single medium varying through boundlessly many modes of articulation, continually exfoliating in a value-creating magma of experience?« (Sha, 2013, p. 97).

2. Thinking in phases?

A somewhat unexpected but nonetheless fruitful way to think about aesthetics is with Gilbert Simondon, who has been already encountered earlier. Not only a thinker of technology and »ontogenesis«, his interests branched out much further and »his project was to constitute a general anthropology, studying perception, imagination, memory, invention, by situating human originality in each case within the set of living beings.« (Michaud, 2013, p. 121). As Binda (2015) notes, his conception of aesthetics can be linked back to the original Greek definition of aesthesis, which means sensation, sensibility. In that manner, she continues, his reflection departs from a particular philosophy of the Beautiful or of the beaux-arts to encapsulate the whole of experience and to

For a further and broader reflection on aesthetics and its practice, see for instance Herzogenrath's edited book Practical Aesthetics (2021), in particular the first three chapters by Christoph Menke, Katerina Krtilova and Tim Ingold.

question the »specific mode« of how human beings, through experience and through their sensibility, engage with the world. Art, or the sensible experience in a larger sense, are not the direct objects of his thought, but rather a mode through which one can experience the world. It is a slight movement from a thinking *about* to a thinking *through*, which might help in conceiving/practising a »thinking-with« sounds. Moreover, for Simondon, the sensible experience is never »alone« or isolated, but always linked to technical elements, which allow us to »articulate« that very experience, to use Binda's terminology (2015). From a technique/culture separation, another result of the bifurcation of nature, Simondon rather understands a technique|culture co-constitution, expressed as techno-aesthetics.

However, before further exploring what techno-aesthetics are, a detour through the aesthetic thought might seem indicated. Simondon's aesthetic thought, or better yet, his process-oriented aesthetic thinking, is quite particular because it relies on a complex logic that can easily be misunderstood (Barthélémy, 2013), namely that of phases and phase-shifting. The idea of phases and of dephasing has been shortly introduced in the last chapter: it is what Simondon understands as becoming. At that particular point however, I focused on the relation between the individuated being and its milieu (made possible through dephasing) in order to understand the sonic flux. I equated, rather simply, dephasing and becoming without giving much attention to the first term.

Simondon — as Combes rightfully notes — thinks of being as a system *in the process of becoming* and this is where *dephasing* becomes more important: in thermodynamics, a field Simondon often refers to, a *dephasing* system is one that changes states and in so doing thus contains different phases »at once«. Combes gives here the example of evaporating water, which, in its change of state contains two phases: liquid and gas (Combes, 2013). They are two potential »becomings« of water depending on its relation to a milieu, on the »stability« of the system. Those phases, however, only appear through the operation of individuation taking place. They are no *a priori* already determining how the individuation will go. This has two main consequences. Firstly, it means that the pre-individual full of potentialities has no phases yet, they only

emerge from the operation of individuation, and secondly, that phases can only be thought in relation to one another, thus always more-thanone. Moreover, and this is very important, phases are not thought in a strict temporal sequence. Being as becoming is not a dialectical operation, where the negation (antithesis) is provoking change and progress (Combes, 2013; Simondon & Simondon, 2012). The following quotation from Simondon and translated by De Boever for his edited book clarifies this:

»Here, the idea of a discontinuity [discontinu] becomes that of a discontinuity [discontinuité] of phases, which is linked to the hypothesis of the compatibility of successive phases of being: a being, considered as individuated, can in fact exist according to several phases that are present at the same time, and it can change phases in itself; there is a plurality in being that is not the plurality of parts (the plurality of parts would be below the level of the unity of being), but a plurality that is above this unity, because it is that of being as phase, in the relation of one phase of being to another phase of being.« (Barthélémy, 2013, p. 221)².

Through this notion of phases, what Simondon here postulates is a multiplicity of modes of existence (phases are not necessarily limited to two) that not only concerns the already individuated being (a fully-fledged human being for instance, although it is actually still individuating) but also the relations between that being and its milieu emerging through the operations of individuation. In *Du mode d'existence des objets techniques*

Original quote: »Ici, l'idée du discontinu devient celle d'une discontinuité de phases, jointe à l'hypothèse de la compatibilité des phases successives de l'être: un être, considéré comme individué, peut en fait exister selon plusieurs phases présentes ensemble, et il peut changer de phases d'être en lui-même; il y a une pluralité dans l'être qui n'est pas pluralité des parties (la pluralité des parties serait au-dessous du niveau de l'unité de l'être), mais une pluralité qui est audessus même de cette unité, parce qu'elle est celle de l'être comme phase, dans la relation d'une phase d'être à une autre phase d'être.« (Simondon, 2005, p. 307).

(2012), he proposes to analyse the genesis of technicity as »a process affecting the relation of human being to the world« (Michaud, 2013, p. 122), as one mode of relating amongst others. As noted above, for Simondon, being is a system in becoming: it is polyphased. By positing the hypothesis that the human being, the world and their relation also form a system that is becoming, it is logical to state that this system is made of multiple phases as well. The multiplicity of modes of existence is therefore also a multiplicity of modes of »being-in-the-world«, as expressions of phases of the system human-milieu where each term is co-constituting the others. As a reminder, Simondon's perspective in that particular work is to criticise the opposition between culture and technique, as well as culture/nature and technique/nature (Barthélémy, 2013). To understand the mode of existence of technical objects, he thus proposes to analyse the modes of thought, the modes of relations between the human being and its milieu, to which he sees the technical as a particular mode. The human-world system is not thought as a dualist and anthropocentric particularism, but a singular analysis of one system amongst others³. This is through the different phases of »being-in-the-world«, as multiple modes, that Simondon explains not only technicity, but aesthetic thought as well.

In the beginning, then, was the magical mode. A unique and »primitive« mode of being in the world where no distinction between object and subject takes place. In this primitive unity, neither was the world objectified nor were objects »separated and constituted« (Simondon & Simondon, 2012). In the sense of Whitehead, the magical mode represents an unbifurcated world: »L'univers magique est structuré selon la plus primitive et la plus prégnante des organisations: celle de la réticulation du monde en lieux privilégiés et en moments privilégiés.« (Simondon & Simondon, 2012, p. 229). The unbifurcated world as crosslink, a reticular world, a network, a rhizome where particular points have particular powers over the world, like the top of the mountain,

For Simondon, there is no human particularism: humans do not have the exclusivity of »being« just as they do not possess the exclusivity of experience (Chopot, 2015).

the heart of the forest, the centre of flatlands. For Simondon, they are not meant as a metaphors or idols, but imply a union between subject and object, between content and form. They are "focal points" or as Simondon notes, "key points". Magical thought, then, is the pursuit, the research of those points. Exploration becomes magical: "Gravir une pente pour aller vers le sommet, c'est s'acheminer vers le lieu privilégié qui commande tout le massif montagneux, non pour le dominer ou le posséder, mais pour échanger avec lui une relation d'amitié. (Simondon & Simondon, 2012, p. 230). This "friendship" between the explorer and the "key point" is not an objectivation of the top of the mountain, nor is it the subjectivation of the explorer in a domination of nature. Unlike the unbifurcated nature, which is unreachable, for Simondon, the magical mode of thought still exists in modern societies. For instance, he sees the holiday trip as a research for key points, city, land, shore or mountain. The holiday itself would then be a temporal key point.

This cross-linked universe, though, splits. Content and form are separated. This is the bifurcation happening. On the one hand, the key points are objectified as tools, instruments, constituted things. A loss of this original friendship between the explorer and the forest. The forest becomes usable, exploitable. On the other hand, others are subjectified as the divine and the sacred. If the mountain becomes the object, the climber becomes the hero, planting a flag, building a cross, setting a border. Saint Georges killing the dragon. This is the dephasing of the magical into technical (objectifying) and religious (subjectifying) modes of thought. A distance, a »mediation« has appeared between the human and the world. The reticular structures fade in relations between subjects and objects. Both phases, however, coexist, are always themselves related to each other. One phase alone is not all that is, it does not contain all reality, it is not more or less magical that the other. If the holiday retains some of the magical, modern tourism does not, already implying the objectivation of the exotic destination, and the subjectivation of the tourist/explorer/conqueror.

What is striking in Simondon's analysis both of the magical and the technical/religious phases, is the way he defines them. They are in a sort of temporal succession, (the dephasing emerges from the magical

mode, therefore, after it), but without excluding each other out (I already stated that some modes of thought and experience are still partly magical, or in relation to the magical mode). Moreover, there is no linear historiography — the dephasing is not reducible to Modernity for instance — and it does not express a dialectical evolution, or any form of progress in fine. Simondon is himself quite clear on this: the technical mode and the religious mode both only partly contain reality, consequently they are therefore both »poorer« than the magical. If there is technical progress, it is inherent to technicity and the function to fulfil, the operation performed, not in an expansion of reality, as if it were to crawl back into the magical. Furthermore, and Simondon might not present it that critically, but the dephasing is indeed a bifurcation. It is a categorisation, a distribution. It is already an alienation. The alienation of knowledge from materiality, the alienation of objects denied agency⁴, the alienation of bodies reduced to slaves and tools⁵.

3. La pensée (techno-)esthétique

Where does aesthetic thought emerge? As explained above, the technical and religious phases are understandable only in relation to one another and to the magical. However, both of those phases imply a greater »distance« between the human and the world, either through objectivation (the technical) or through subjectivation (the religious). I posit here clear terms, but of course, they are almost ideal-types, it is neither only technical or religious. It is neither pure subjectivity nor pure objectivity. Those are fluctuating quantities, nonetheless distant from each other. To come back to the magical, it is a sort of »pre-phase«, a cross-linked universe, a network of networks, a »reticular« structure as Simondon

⁴ See here again van Loon (2012) to discuss the agency of objects.

⁵ A comeback once more to Illich's understanding of tools. One could ask if conviviality might not be a reinforcement of the magical as well, questioning practices of subjectivation and objectivation (Illich, 1973).

calls it. Aesthetic thought, then, is for him a particular mediation between the technical and the religious that intends to "remind" the unity of the magical, to reconstitute the cross-linked/reticular universe, to re-draw continuities between modes of thought and experience. "It is a question, so to speak, of magic after the loss of magic." (Michaud, 2013, p. 124). The aesthetic thought, which is praxis, a process, is a way to connect what had split through the bifurcation of nature, through the loss of magic. However, Simondon here does not separate the aesthetic from the rest or construct an aesthetic reality above the technical and the religious. Rather, the aesthetic adds to what is. It adds to reality rather than reducing it. Through the sensible, it intensifies the experience and thus, unveils the multiplicity of possibles (Simondon & Simondon, 2012). It is magic, then, as an addition to reality.

»Someone hears a nightingale late at night, or sees a rock with strange forms, and all that remains is the happiness of this experience. A musician captures this song or those sounds to inscribe them in a work of *musique concrètes*, a sculptor makes a statue *in situ*, a religious group builds a chapel in a place.« (Michaud, 2013, p. 129).

All those examples are particular samplings, they lead to individuations, they are particular expressions of experience and thought in phases. In the case of the musique concrète for instance, the sound taken from but still in relation to its milieu is a sampling of the sonic flux, as encountered in the last chapter. Aesthetic experience, thought, practice, is a sampling of the real as magma, as fluctuations, that intensifies the importance of experience. It is embedded in materiality, producing knowledge in a multiplicity of modes. It is local and located, in situ situated, »an aesthetics of sensitivity to places and moments« (Michaud, 2013, p. 125). But it is not mere representation and signification. It would only objectify. Aesthetic thought is already sonic thinking, generative. It is based on the sonic flux. One example would be the work of Maryanne Amacher, whose practice was precisely outside representation and signification (Schulze, 2018). As Cox notes: »Amacher's sound installations, then, suggest that film, television, and comics be read not as representations or signifying forms, but as blocs of sensations and configurations of affects, energies that impinge upon the body of the viewer, reader, and auditor and render it an active element in a field of forces.« (Cox, 2017, p. 41). Amacher's work as a particular and intensive aesthetic thought⁶. An entanglement that shifts what experience is: it does not belong to a fixed, fixated and constant individual, but is always embedded in the relation with an also non-fixed milieu. An *always more than one*, as Manning (2013) explores in her eponymous book, that Simondon also defines as the transindividual.

»La transindividualité fait apparaître et constitue de nouvelles saillances, de nouvelles évidences, de nouvelles marques : c'est une certaine > esthétique < partagée. Ce n'est pas seulement un problème de perception, mais un problème plus vaste de significations, et donc un problème de l'individuation de l'être, c'est-à-dire de création de nœuds réels avec les autres et les milieux — la signification, chez Simondon, n'étant jamais une > chose située dans la tête <, comme une > représentation <, c'est une in-formation de l'être qui prend un sens pour plusieurs individus parce qu'elle est intervenue comme la résolution d'un problème pour eux « (Chopot, 2015, p. 10).

In a letter written to Jacques Derrida in 1982, Simondon proposes to deepen his reflection on aesthetic thought in its relation to the technical. It is what he calls **stechno-esthétique**⁷. It is not conceived as a finished product, but as a draft, or as Simondon even himself notes, as a **zététique* endeavour. The piece is a thought-in-progress, itself a form of *thinking-with* that does bear importance in the understanding of his

⁶ Even if the example of a composer/sound artist was given, aesthetic thought is not the prerogative of the artist as part of a constituted domain. It rather means that every experience, every moment can be intensified through aesthetic thought. It does not necessarily require the artist or the artistic inspiration (Simondon & Simondon, 2012).

In the introduction of this text, presented in the anthology Sur la technique (2014), it is noted that the letter was written but not sent in that form. After finding the extended draft, it has been first published posthumously by Derrida in 1992. It is now available along further reflections on techno-aesthetics in the mentioned anthology.

aesthetic thought, as Binda explains in her article (Binda, 2015; Simondon, 2014). I have already stated earlier that for Simondon, the aesthetic thought is in situ, but it is also in actu, in the practice. It does not necessarily appear in the contemplation of the work of art, but in the production of this work, »un certain contact avec la matière en train de devenir ouvrée.« (Simondon, 2014, p. 384). It appears in the performance. For instance, one becomes aesthetically »affected« even in the act of soldering. There is a corporeal relation, mediated by the tool, a sensible experience, that can procure joy, satisfaction, and pleasure. An exchange of matter-energy-information that can be seen as an epistemic practice in which the tools, the »things« being worked on, are far from being only passive objects. »Le corps de l'opérateur donne et reçoit. Même une machine, comme le tour ou la fraiseuse, fait éprouver cette sensation particulière.« (Simondon, 2014, p. 383). This description almost sounds like a romantic depiction of a worker's body and practice, finding happiness in the realisation of her work. However, it is not meant as the idealisation of craftsmanship or industry, but rather the possibility of engagement, a mode of being reminding the magical. It is a tenuous relation, it can disappear. The alienated body, destroyed by the machine, or rather, by the mode in which to engage with it, is indeed also affected by the relation. But the happiness is long gone in this case, as well as the aesthetic. The distance increases with the pain. The alienation hunts the magical.

Techno-aesthetics is therefore an aesthetics of technical objects, but first and foremost of practices, of doing. Coming back to Sha's quote in the first chapter, not only does the *what* matter, the *how* does as well⁸. Rather than an aesthetic *of* the tool, it becomes an aesthetic *with* the tool, an experience co-constituted. Moreover, it is as practice an intensification of the sensible, of that very experience. This perspective, which Binda links to John Dewey's own conception of aesthetics, presents the technical operation, wen tant que capacité à faire sentir l'expansion de

^{8 »}I wrote this book as an exercise in philosophy in the mode of art, trusting that it can be done, that it matters not only what we say or do, but how we say or do it.« (Sha, 2013, p. 249).

la vie, de la sensibilité, de l'aesthesis, à travers des individuations de plus en plus organisées et complexes.« (Binda, 2015, p. 6). The aesthetic experience is therefore not fundamentally linked to the function of a tool, or the function of the operation itself, in what it does and if it does it »the right way«, but in the process of its realisation. It is an enrichment, an intensification of experience, as described in the first chapter through Whitehead and Debaise. In this »expansion of life«, the aesthetic thought already brings back the magical, as an opening for possibles, an invitation to enchantment.

Furthermore, a multiplication of modes of knowledge production caused by the generativity of the aesthetic thought may also lead to further individuations. Sha's understanding of technologies of performance, presented in chapter 2, can be situated within this frame, it completes it, even. Technologies of performance are conceived precisely to produce knowledge according to new modes, not limited to representation. The goal for a sociological thinking-with sounds would therefore not only be the acknowledgement of aesthetics in existing methods and technics, although that would probably constitute a first important step. The goal would be to also develop tools that reinforce the aesthetic character of sociological practice. This of course brings again the question of knowledge production to the foreground and how knowledge can be produced through the aesthetic experience. But at this point, from the transindividual to the aesthetic thought as intensifying experience, Simondon already gives us a set of tools that allow to think beyond a priori categorisation of subject-object, beyond the primacy of human perception, and beyond the fixation of the individual. The aesthetic thought becomes prehensive, in the sense of Whitehead. As Manning notes:

»For Whitehead, every occasion of experience is composed of feelings. These feelings fold through the affective tonality — the concern — of the event in its emergence. They arise not from the subject per se but from the field of relation itself. Every worlding — every prehension, every grasping-with the world — is a feeling, in Whiteheadian terms. An event is a composition of feelings selected from the panoply of

potential, a complex affective tonality agitating toward actualization. No occasion of experience can be abstracted from its feeling: >The feelings are inseparable from the end at which they aim; and this end is the feeler (Whitehead 1978, 339). The feeler is the subject of the experience, a subject that is in every way immanent to the event. « (Manning, 2013, p. 156).

4. Aesthetic thought and knowledge

A focus on (techno-)aesthetic thought addresses individuation processes gaining in complexity, through the sensible experience. Simondon understands it as the capacity to »make feel the expansion of life« or to »remind« the magical unity that had been lost. Thinking in terms of prehension, as Manning does in Always More than One, aesthetic practice therefore reinforces the importance of a situation in the sense of Whitehead: of an experience as matter of concern. Following Debaise, one could argue that it is the core function of speculative philosophy: »intensifier jusqu'à son point ultime l'importance d'une expérience.« (Debaise, 2015b, p. 106). It is necessary to note however that for Whitehead, the notion of importance is first and foremost a »question of feelings« and that those feelings are not exclusive to human experience⁹. In other words, it means that consciousness only expresses a particular dimension of feelings and therefore of importance (Debaise, 2015b). Debaise, quoting Whitehead, even speaks of a »vital activity«, which resonates with Simondon's own vital individuation processes to which the psychic only represents a dimension, a mode of experience that reminds of James' radical empiricism.

»L'importance est donnée. Elle appartient à tout être dans la mesure où il incarne une perspective singulière sur l'univers, qu'il exprime dans chacune de ses parties les dimensions cosmiques dont il hérite.

⁹ Stengers compares them to affects, more »indeterminate«, without however trading terms, »feeling« — or »sentir« in French — being too important in Whitehead's lexicon (Stengers, 2002).

Les manières de sentir, de se relier, de prendre, ainsi que l'importance que ces manières revêtent, sont constitutives de la nature elle-même. Il n'y a pas d'un côté des qualités primaires et de l'autre des qualités secondes, mais des articulations spécifiques qui se font pour chaque existence dans l'affirmation de ce qui importe ici et maintenant.« (Debaise, 2015b, p. 119).

How can this importance become intensified, then? It sounds metaphysical, but it is mostly a methodological question¹⁰. According to Whitehead, speculative philosophy intensifies the importance of experience through propositions, which he defines as »lure for feelings« (Whitehead, 1978). This lure however, is not any negative deception, but a capture, as Debaise explains (Debaise, 2015b), a form of »gathering«. Last chapter, I proposed to consider a thinking-with sounds through van Loon's Empiraterei, in a redefinition of logos. Reading it again through Whitehead's speculative philosophy, it itself becomes an intensification, a sociology able to work with propositions as lure for the multiplicity of feelings. In a similar manner, techno-aesthetics and aesthetic thought altogether — not only becomes prehensive, but propositional as well. The expansion of life it produces, its reminding of a magical unity, is an intensification of importance, a capture of the multiplicity of feelings, a grasp of the multiplicity of possible worlds that could have been. This is what gives an event, a situation, its importance: the possibles that never happened but co-produced the actual occasions, the hesitations, the doubts, the stumbles and the dwellings. Coming back to what Debaise explains, it is through the narration of those »could have been« that the importance of what had been and of what is emerges.

To be rather blunt, this is what I intend to pursue with a thinking-with sounds, through aesthetic thought, sonic fiction, Empiraterei, through the sampling of the sonic flux: be moved by other narrations that intensify the importance of experience, experiment with practices not less *generative* than classical epistemic ones. Consequently, not only

¹⁰ A question of methods which has been already encountered in the first chapter.

the practices of knowledge production are subjected to change, but the goal of knowledge itself shifts gears. Vinciane Despret and Stéphane Galetic, reminding James' own attitude towards knowledge, argue that it is not so much about explaining the world than it is about enriching it, about multiplying its versions (Despret & Galetic, 2007). Aesthetic thought and techno-aesthetics, as speculative venture, as renderings of the »expansion of life«, in bringing back magic, in their propositional character, are knowledge production in that very particular manner: an enrichment, a thickening, deepening, an account of multiplicities that might emerge beyond classical academic practices. Beyond classification and categorisation, it becomes a way to »stay with the trouble« (Haraway, 2016). Speculative methods are no denial of or escape from what is happening. It is rather the contrary. By creating those »alternative worlds«, as Debaise puts it, it shows the importance of »what we have to deal with«. It resets a certain accountability, a »response-ability«, a way to »live within the ruins« (of capitalism) (Tsing, 2017). It slows down the tempo, invites to change one's pace (Stengers & James, 2013). At the beginning of this work, the premises were that knowledge had been alienated from its materiality, or from matters of concern. But knowledge is also what has been alienating. The knower knowing the known possesses it. Foucault (1979, 1990, 2005, 2008) made it very clear throughout his work. Knowledge is mapping, a cartography unveiling what was still hidden, a database that reduces, objectifies what it is compiling, who it is controlling at the borders and beyond¹¹. Reflecting on those practices, which are constitutive of a sociologist's work, implies to re-think the »possessive« and alienating character of the knowledge being produced. Experience is not proprietary. Think-

For instance, the work of Nishat Awan (2016) reflects on those questions, challenging and reclaiming practices of mapping: https://www.topologicalatlas.net/.

ing with Simondon¹², Whitehead, Stengers and Debaise, but also with James and Dewey, knowledge becomes a co-creation, a co-prehension, a *xco-appartenance*« (Halewood, 2011). Knowing becomes performative, part of entanglements beyond a distribution between the knowing and the known (Barad, 2007).

5. Research-creation

Such a techno-aesthetic and speculative (ad-)venture already exists to some extent and is being experimented with. Perhaps not so clearly within classical established sociological practices, but at the margins, where the liminal spaces between philosophy, science and arts become junctions rather than separators. An openness that makes me wonder if, within sociology, the same could be done. It takes many forms, polyphonic variations on a name — versions of the same? The intents are plural though, as the situations in which they emerge. Some expressions are thought as artistic research, scientific research in the field of art production, research *about* art. At the other opposite of the spectrum, there are artistic representations of scientific material. Art *about* science. But there is also something else, that can be seen as a *thinking-with*, a coordination, a co-creation that is neither nor. This strange plurality now expands in certain parts of academia under the moniker *research-creation*. The term has a history, a geography¹³. Made a category

[&]quot;[...] Il semble possible d'affirmer qu'aucune théorie de la connaissance ne peut être faite sans être en même temps une théorie de l'être, et même une théorie de l'action. Mais jusqu'à ce jour toutes les doctrines donnent le primat à l'un de ces aspects, et lui subordonnent les autres. "(Simondon et al., 2016, p. 214).

¹³ Both Manning and Loveless, who will constitute the main frame for this argumentation, are based in Canada, where research-creation as a »coined« academic practice is mostly present. In Europe, it finds some institutional resonance under the broader field of artistic research, although it remains defined/confined to »research in the arts«. See the Vienna Declaration on Artistic Research, presented by the European Society for Artistic Research

for financing project in Canada, it became an institutional denominator (Manning & Massumi, 2014): »Moves within the academy toward institutionalizing research-creation are inevitably implicated in a larger context where the dominant tendencies are toward capitalizing creative activity.« (Manning & Massumi, 2014, p. 85). But beyond this institutionalised practice, there is a sort of redefinition, of re-claiming of what research-creation can be and can become.

In *How to Make Art at the End of the World*, Natalie Loveless, basing her reflection on an essay by Chapman and Sawchuk (2015), accounts for a particular »category« of research-creation that is challenging how knowledge is being produced in academic institutions:

»By bringing research and creation together in such a way that they unpredictably contaminate and remake each other, in such a way that they render each other uncanny, research-creation makes space in the university for research practices that are grounded in nonhegemonic literacies, thereby challenging the naturalized assumption, in arts, humanities, and social science scholarly cultures, that the booklength monograph or peer-reviewed academic essay is the only valid — or only »top-tier« — means of research communication output; it also challenges perspectives that would argue for artistic production as de facto research. Practically speaking, research-creation pushes at the limits of traditional academic outputs and traditional artistic outputs; it is productive of work that, more often than not, fails to fully register on either scholarly academic or art-world exhibition front.« (Loveless, 2019, pp. 56, 57).

Different from »research-from-creation«, »research-for-creation« or »creative presentation of research«, this particular mode of doing research, and of producing-presenting knowledge is defined as »creation-as-research« (Loveless, 2019). Its classification, however, must be put in perspective. Leaving it as is would somehow imply that research cannot be understood as a creative practice, or rather that it is not

 $⁽SAR): https://societyforartisticresearch.org/wp-content/uploads/2020/10/Vienn\ a-Declaration-on-Artistic-Research-Final.pdf.$

being considered as such. This either confirms the territorialisation of scientific practices as »intellectualised« production of knowledge (Montebello, 2015b), with a willingness to challenge its status or it subscribes to it, by reinforcing the said separation, denying the creative potential of research. According to Manning and Massumi (2014), this is one of the reasons why research-creation is being looked at with mild scepticism and cynicism by research-practitioners: an apparent conviction that research is not a creative practice. One can question this conviction. Indeed, throughout the last chapters, it should have been clear that it is not remotely the case. Each practice, in its singularity, can be creative, generative. Debunking the possible scepticism, Loveless actually acknowledges this generativity. Creation-as-research does not mean that research is not creative. Ouite the contrary. It rather means that research-creation — in its formulation as creationas-research — fully acknowledges the creativity and generativity of research practices, and does so by multiplying its modes of producing knowledge beyond classical epistemic ones. It means that researchcreation takes the experiment so seriously, as in radical-empiricist serious, that it does not exclude anything being part of the experience, not even the aesthetic. An attitude towards research that not only acknowledges, but embraces the aesthetic as part being part of the process of thought and research.

»This idea of research-creation as embodying techniques of emergence takes it seriously that a creative art or design practice launches concepts in-the-making. These concepts-in-the-making are mobile at the level of techniques they continue to invent. This movement is as speculative (future-event oriented) as it is pragmatic (technique-based practice).« (Manning & Massumi, 2014, p. 89).

In this quote, one can guess the contours of the said attitude towards research practices. One can also see how sonic thinking and technoaesthetics start to converge to a form of *creation-as-research*. A hybrid of speculative and pragmatic practices that intensifies the importance of experience. As Manning and Massumi explain beyond the entanglement thinking-feeling, doing is always a thinking and thinking is always a do-

ing (Manning & Massumi, 2014). It is not representation, but as seen with Sha, performance, where »performative activity can be regarded as the articulation of matter in dynamical processes of sense making. This shaping of matter as physical, affective, symbolic material in a rich magma of process constitutes events.« (Sha, 2013, p. 87). Research-creation as it is understood here it therefore comes without pre-conceived outcome, the conceptual work always happening from within — »fromthe-middle« — the techniques being shaped through practice¹⁴. It challenges the classical distribution of labour between theory and praxis. A production of knowledge that does not explain, but enriches, again, intensifies the experience in which it emerges. It becomes value-generating (Sha, 2013), valuation instead of evaluation (Manning, 2008).

In other words, the attitude of research-creation is clearly ethical. In a deleuzian move from the noun to the verb, Loveless leaves behind the denomination of the »artist-researcher« as academic identity mastering its object to focus on the associations made through practice, and thus reflects on their situatedness. Research-creation becomes response-able, as Haraway understands it, as responsive accountability: »It matters what thoughts think thoughts. It matters what knowledges know knowledges. It matters what relations relate relations. It matters what worlds world worlds. It matters what stories tell stories.« (Haraway, 2016, p. 35). It echoes Stengers' cosmopolitical proposal of slowing down, invoking Deleuze's figure of the idiot (Stengers, 2005; Stengers & James, 2013). A response-ability towards the displaced, the alienated, the undocumented, the disappearing from within the ruins of our world (Tsing, 2017). It also echoes the posture towards vital materiality that Jane Bennett describes in Vibrant Matter (2010). It rethinks matter and ethics beyond a too often too anthropocentric notion of »affect«, by reinforcing its Spinozian meaning. It engages with matter, which »is not the raw material for the creative activity of humans or God.« (Bennett, 2010, p. xiii). I am not intending to understand Bennett's work as constitutive of research-creation, or invoking it in order to justify the

¹⁴ This position echoes how Simondon thought of techno-aesthetics: not limiting the aesthetic experience to the function of a tool.

importance of such creation-as-research. Still, I am convinced that in pursuing this attitude, for instance in the way it has been presented by Manning and Massumi, to experiment with it, slowly, leaving urgency aside, within sociology without being exclusive, that it might lead to a shift of focus, to a process of thinking from the middle of the vital materiality Bennett is writing about. An invitation to think-with, which is undeniably an invitation to care. It is not necessarily reducible to artistic practices, but as shown earlier, thinking through techno-aesthetics might propose a different entry point.

Nevertheless, reading Bennett's last chapter leaves me wondering, assailed by doubts. »Is it not, after all, a self-conscious, language-wielding human who is articulating this philosophy of vibrant matter?« (Bennett, 2010, p. 120). Transposing this question in terms of thinking-with sounds, of sampling the sonic flux, or of research-creation would work just as well. It is the same question. The tautological ouroboros of the primacy of human subjectivity and the social construction of (social) life. A question very much known and awaited when discussing new materialisms and Actor-Network Theory within sociology. Already encountered at large in the first chapter, in the debate part of Discussing New Materialism (Kissmann & Van Loon, 2019a). A question I feel I have to ask myself, a question I feel I have to have an answer for in preparing the defence of this work, as if it were my task and responsibility to close the debate once and for all (a bit overdramatic, I can concede that). What are Bennett's answers, then? Give examples of how human beings are already non-human, living assemblages? Or simply »question the question«? »Why are we so keen to distinguish the human self from the field?« (Bennett, 2010, p. 121). As she herself admits, both work and do not at the same time. It is still an important question, though. Not as a warning, not even as an attack I would have to defend myself against. But rather as a reminder. A reminder of how careful, how thoughtful, and also how »feelful« I (we) have to be in my (our) attempts of engaging with the plurality of modes of knowledge production, each step of the way. If anything, and recalling Stenger's proposal, the question also invites to slow things down.

6. Towards an ethico-aesthetic paradigm?

The attitude of what Lunderstand as research-creation — i.e. not the institutionalised capitalisation of art and research but the slowing down of thinking and of production of knowledge — the attitude of responseability, of speculative thinking, the implementation of techno-aesthetics as practice is therefore an ethical, critical and political posture. In gathering, relating, responding. In engaging with the other. In embracing fluid and vibrant matter. Reflecting on research-creation within geography, Derek McCormack affirms »[that] research-creation involves an ethical commitment to learning to become affected (in a Spinozist sense) by the relational movement of bodies, and a political one borne of the claim that we can never determine in advance the kinds of relational matrices of which bodies are capable of becoming involved.« (McCormack, 2008, p. 9). Invoking for instance Lefebvre's rhythmanalysis and Guattari's use of ritornellos in Chaosmose, McCormack shows how performance allow to think-space differently 15. I will come back to the refrain later. However at this point, I would like to stretch the importance of Guattari's ethico-aesthetic paradigm for the attitude profiled throughout this chapter¹⁶.

In *Chaosmose* (1992), Guattari pursues his work on the production of subjectivities and their emergence from what he calls *chaosmosis*: »For Guattari there is always an *a priori* moment of creativity, or simply desire, that prefigures any given entity or any subject-object relation. Indeed, life, in whatever form it takes (organic or inorganic), emerges from a ground of sorts — one that is unfixed and ontologically unstable — that at all times accompanies the very forms that emerge from it.« (O'Sullivan, 2010, p. 257). Knowing the »fluidity« of Guattari's thinking with and without Deleuze, and remembering Simondon, one can

To a certain extent, the importance of performance and research-creation within geography could also be transposed to social sciences in general, for instance with the help of Nigel Thrift's Non-Representational Theory (2008).

¹⁶ Hereby, I am not assuming that McCormack neglected the importance of Guattari's paradigm. Still, I think it might be useful to engage with it more explicitly.

see here how this »groundless ground« producing subjectivities can be compared to the pre-individual within which processes of individuation produce individuals and milieus. Similar to Simondon, Guattari here thinks beyond the classical dualities subject/object, subject/societv and nature/culture that for him have been constituted in a capitalistic fixation of subjectivities. Against those »micro-fascisms« — which tend to become macro on a daily basis — Guattari proposes to shift to an ethico-aesthetic paradigm, to construct a »processual assemblage« that is »post-individual« (Guattari, 1992; O'Sullivan, 2010). In other words, rather than attempting to come back to a »pre-capitalistic« assemblage where no fixated subject/object constituted a trans-individual magma of undefined intensities and focals (an impossible comeback), Guattari presciently wishes for a way to »stay with the trouble« caused by the capitalist assemblage and transform it into a post-capitalistic (chthonic) one. A disruption from within through the aesthetic, which »folds-in« and »crystallises«, produces new modes of experience, and of subjectivity.

To put it differently, the capitalist »production of subjectivity«, possible through the division of labour and the formation of classes in the classical Marxist sense, was also further reinforced through the formation of cultural industries the way Adorno and Horkheimer understood them in their Dialektik der Aufklärung (1988). The production of desire through standardized aesthetics presented and sold as consumable products continued the redistribution of the roles producer-consumer and consequently redefined agency. As Bernard Stiegler puts it, the cultural industries colonised, or monopolised, aesthetics (Stiegler, 2012). The ethico-aesthetic paradigm is an attempt to relocate the aesthetic in the praxis¹⁷. It is not about coming back to the pre-industrial pre-capitalist aesthetic. It is about the responsibility of finding another way, within the actual situation we find ourselves in. This is for instance what Guattari attempts through schizo-analytics but it is far from being reduced to his work at La Borde. In fact, for Guattari, social sciences and humanities as a whole are concerned. Adopting the ethico-aesthetic

¹⁷ A relocation which for Stiegler would happen through technics (Stiegler, 2012).

paradigm implies a critical and political engagement towards aesthetic practices, but also towards the production of scientific knowledge.

I deliberately remained close to Guattari's vocabulary here, but a similar succession of assemblages that are not temporally exclusive has already been encountered: Simondon's phases, here revolving around capitalism. The pre-capitalist machines being expressions of the magical phase. The capitalist fixations becoming distributions of subjectivity-objectivity through the technical and religious phases. The ethicoaesthetic paradigm invoking the techno-aesthetic thought, not only as a reminder of magical unity, but as a producer of multiplicity, of importance. If for Simondon, the practice of soldering, hammering, crafting is aesthetic, this aesthetic has been alienated, taken out by the capitalist production process, or rebranded and sold, idealising the craftsmanship, but destroying body and mind. Knowledge alienated from its materiality. The ethico-aesthetic paradigm proposes to restore it, not in its previous, untainted form, but as something new. In a speculative understanding, it is not about rewinding the bifurcation of nature, but about asking how to work within it. The bridge between Guattari and Simondon (which also includes Deleuze) is not a new one to build however¹⁸. Still, in this particular work, it seems to become another intensive focal in the making of thinking-with sounds. If technoaesthetics were allowing to think epistemic practices differently, enhanced through Whitehead and a particular understanding of researchcreation, Guattari's ethico-aesthetic paradigm proposes a deep political engagement on top of that, that neither denatures a Simondonian-Whiteheadian thinking nor tames the political urgency of »staying with the trouble«. It matters which thoughts think thoughts. Coming back to the controversies presented in the first chapter, I have proposed that the issue of knowledge production is not only a pure methodological question, but also implies to reflect on one's situatedness. It becomes an eth-

¹⁸ The work of Anne Sauvagnargues, compiled in the anthology Artmachines: Deleuze, Guattari, Simondon (2016), already show the closeness between the authors. The work of Bernard Stiegler (2012) also articulates those connections at large.

ical and political question. Guattari's aesthetical ecosophy, coming from a thinking-doing that embraces his work at the La Borde clinic as well as his environmental engagement, thus becomes important thoughts to think with. The ethico-aesthetic paradigm as an ecological "program" linking humans, non-humans, more-than-humans:

»Notre survie sur cette planète est menacée non seulement par les dégradations environnementales mais aussi par la dégénérescence du tissu des solidarités sociales et des modes de vie psychiques qu'il convient littéralement de ré-inventer. La refondation du politique devra passer par les dimensions esthétiques et analytiques qui sont impliquées dans les trois écologies de l'environnement, du socius et de la psyché.« (Guattari, 1992, pp. 37, 38).

»Politics, then, as the force of the more-than where what is at stake is not simply the human but the ecologies of existence that coevolve in the realm of the more than human. Politics as an aesthetico-ethical engagement with the forces of becoming that are fleetingly perceptible in an event's dance of attention. Politics as that which contains in itself a power of amplification (Simondon 1995, 16).« (Manning, 2013, p. 148).

Sociology thinking-with sounds. Sociology as Empiraterei. Sociology as ethico-aesthetic practice. At the beginning of this chapter, I asked if and how sociological research could be understood as aesthetic practices. What does it mean to practice a sociological thinking-with sounds within which thinking-with can be understood as an aesthetic thought? The paths followed through this chapter show, if anything, that it is not about producing a »stylish« new-wave and innocent sociology, but a sociology that matters, that is ethical and critical, response-able, as Haraway would argue. It tremendously complexifies, or rather, it intensifies what it means to do sociology, beyond the scope of just defining it as a possible field of application of research-creation methods. The discussion did not deliver much examples of how it could be expressed. Not yet. It will come. Moreover, beyond the broad ethico-aesthetic

»staying with the trouble« attitude described earlier, I did not propose an applicability — i.e. a priori methodology — either. This, however, I will avoid. Reflecting on Guattari's ethico-aesthetic experiments at La Borde, Sha writes: »There are no blueprints or recipes for any of this kind of playful, rigorous work, and in fact it would be a terrible betrayal to make a method out of this.« (Sha, 2013, p. 158). I am convinced that this does not only apply to schizo-analytics. Finally, I am not proposing a totalising theoretical frame that explains the world, or that affirms how sociology should be. Bridging Simondon, Whitehead, Guattari and Manning, linking techno-aesthetics, research-creation and ethicoaesthetics, weaving Empiraterei and sonic thinking is itself an experimental sampling/sequencing. Possibilities rather than »carapace« (Sha, 2013). A gathering (socio-logy?). A big what if en somme.

7. Does it sound?

The sociological thinking-with sounds I feel drawn to, in a combinatory exploration of what has been presented throughout the last few chapters, therefore goes beyond the scope of sociology in the mode of sound art, or sound art for sociological purposes, even though it might include practices that would be considered as such. Sound Formations as part of Haraway's SF: speculative fabulation, science fiction, speculative feminism, sonic fiction, sound formations. I shortly addressed the political and ecological urgency that is linked to the attitude of staying with the trouble, in resonance with her eponymous book (Haraway, 2016), but also with Tsing's The Mushroom at the End of the World (2017). An urgency to which sound, the sonic flux, sampling, sounding and listening, add something particular. The Chthulucene becoming a Phonocene (Despret, 2019)? A possibility for experimentation. An acknowledgement of plurality beyond the stating of immutable truths in the production of knowledge that is itself political, critical, ethical. This particularity without exclusivity is what Salomé Voegelin strongly works with in Sonic Possible Worlds (2014) as well as in her collection of essays The Political Possibility of Sound (2019) from which the following paragraph is taken.

Not only does Voegelin propose a reflection about the multiplicity of modes of knowledge production which, through practices of sounding and listening, reinforce its materiality, but she does so in a way that is aware of its situatedness and its ethical-political potential:

»Sound's mobile and ephemeral constitution enables and motivates this echographic practice of inclusion: including the formless, the invisible and the barely audible, the unfamiliar and the affective in the generation of knowledge and the knowable. Knowledge is a fundamental engine of political change and transformation. Sonic knowledge, the knowledge of the invisible and what remains unheard, opens politics, political actions, decisions and institutions to the plural slices of the world. Listening as a care for the fragile within the condition of actuality produces knowledge as a responsibility towards the plurality of its possibility, questioning the singularity of its authorship and authority and thus its partisan investment and legitimacy. Knowledge is refracted in the invisible light of sound: more voices come to be heard as barer of information, insight and facts. However, its plural rays do not find easy consensus, and they also do not simply contradict or deny existing ideas but enter into an agonistic game of doubt and speculation, which enriches and augments the possibility of knowledge through alternatives from the plurality of what could be known.« (Voegelin, 2019, pp. 37, 38).

To conclude this chapter, I would like to present one of those possibilities, of how I feel a thinking-with sounds could be proposed and (re-)presented, how it could look and sound like to experiment with the multiplicity of modes of knowledge production. It is one possibility among many, not isolated, but in combination with others. This short introduction can be thought as a sort of teaser, a version of it being part of the following chapter. This version however will not be the application of a fixed methodology, as I explained above (it is not a question of how things should be), but rather an open interpretation, an inspiration of what had been reflected upon, translated into this particular work. This possibility is called the *audio paper* and was introduced by

Sanne Krogh Groth and Kristine Samson (2019, 2016, 2021). They define the *audio paper* in their manifesto as follows¹⁹:

»Audio papers resemble the regular essay or the academic text in that they deal with a certain topic of interest, but presented in the form of an audio production. The audio paper is an extension of the written paper through its specific use of media, a sonic awareness of aesthetics and materiality, and creative approach towards communication. The audio paper is a performative format working together with an affective and elaborate understanding of language. It is an experiment embracing intellectual arguments and creative work, papers and performances, written scholarship and sonic aesthetics.« (Groth & Samson, 2016).

One of the interesting aspects of audio papers is that they are not mere sonic representation of written arguments. They are not just the sonic rendering of a script. Those arguments are present, they are narrated by a voice even, but the voice is not alone. The voices are not alone. Added to them, other sound sources articulate and activate other elements, a multiplicity of layers and bodies that are not necessarily human. The narration escapes the clear linearity of the written text, becomes multiple. Multiple voices and knowledges, multiple temporalities and spaces. In its hybrid character, Groth and Samson understand the audio paper as an entanglement, a »redisposition of Deleuze's definition of thought in science, philosophy and art.« (Groth & Samson, 2021). It is generative, a thinking doing process as well as a technology of performance rather than of representation, an ethico-aesthetic practice where the producer, researcher, and listener positions are being folded onto one another, as many singular subjectivities. Transindividual. As Groth and Samson explain in their manifesto: it is »idiosyncratic«, »situated and

¹⁹ Presenting the audio paper through a manifesto rather than a methodological design is an interesting choice. It defies the idea of a blueprint for institutional application, without denying the invitation to experiment with what it is. As Natalie Loveless notes, the manifesto is a »call to action« (Loveless, 2019, p. 2), but in a different mode. An attitude of resistance and »response-ability«.

partial«, »multifocal«, »part of larger ecologies«. It »affords performative aesthetics«, »renders affects and sensations«, »has multiple protagonists« and »brings aesthetics and technologies together« (Groth & Samson, 2016). Through the multiplicities it encompasses, the audio paper intensifies the importance of an experience, it proposes what Debaise calls »alternative worlds«, possibilities, virtualities.

»[...] we see the audio paper as an encounter between listeners, researchers, and nonhuman agencies alike. As a technological medium and interface, it moves away from a human-centered ideology and the linearity of communicating knowledge as data extracted from the field. Instead, it allows for a variety of cultural, technological, and material agents to speak.« (Groth & Samson, 2021).